

welcome to Vegas guys made it Chris stoked Max Chris Dylan this is the biggest podcast we've ever done there's a lot of people here right now see how it goes dude we all got our planes like you know a couple hours ago yeah right here everybody just landed right yeah for our flight that's fun why don't Chris why don't you introduce yourself start with Chris and then we'll end up at Dylan introduce yourself backstory yeah so uh came from the Legacy Market my name's Chris uh from Ghostbuster Farms came from the Legacy market now I'm in the commercial Market in Michigan in the metric Market there and uh we're on the craft side I'd have to put it towards instead of like the heavy commercial side so uh 300 light facility nothing too big nothing too small but uh you know proud to be part of the fam over here it's been great what you guys been doing isn't you know changed my life so um yeah that's where I'm at yeah me and Dylan have been your spot [Â \_\_Â ] kill it dude so Props perhaps I mean we see a lot of spots and you know Game Changer but Max Brit um I've been working with you for probably a couple years now um like you came from the Legacy Market caregiver stuff and uh ran a couple big grows there in Michigan for a couple years and um you know started my Instagram real early dankem's Hunter and now working with the family dude it's never been better nice Chris Duran formulator here for Athena I work here with these guys this is really what I'm doing I you guys have problems ideas Concepts we try to distill them down into Solutions and you know you guys are kind of here on this podcast today because you know you help find solutions to problems with us so thanks to you guys I'm here oh God Dylan Knapp uh mint Master on Instagram um been with Athena for actually just over a year of facility advisor get to work with with the Growers Black Market grower myself proud to be in Michigan as well so uh glad to be on another podcast it's dope it's cool you're doing genetics though too genetics doing genetics doing uh just doing a little bit of everything getting getting heavier into the genetics you know along with the market which we'll talk about and stuff like that you know just breeding's always my passion do you have a partner in that business I do mobile J shout out he's downstairs taking a nap the second half of this that was my mobile jet yeah yeah so what's going to you guys what's going on with that because are you guys the DEA switched the law on what it is as far as cuttings and seeds you're able to ship online yeah yeah it's crazy so like we personally don't ship genetics I mean that often I mean I hook my homie up once in a while if you need something right but like there's a ton like we're working with some La clone America shout out to clone America they're in Athena family as well um out of Colorado we Jay and I work with them over there they ship worldwide so like we get our genetics over to them right we haunt stuff we find stuff we get it over to them and then you know they take it from there and that's just a personal thing I don't want to deal with mailing it's busy doing enough on the plate you know what I mean but there are a lot of companies now that are yeah legally shipping stuff all over was like the DEA rescheduled what it means do you know anything about that uh a little bit so they basically they're looking at like the THC percentage in it so they're considering it like in between of like a CBD to a THC so yeah or like a hemp wise so it's easier to ship uh and not really I mean to be honest I had some a bunch of cuts shipped to me and I was sitting there and I was at my facility and it was shipping to my personal home address and I'm sitting there and I get a federal agent that calls me and they're like hey uh uh Christopher Michael I was like yes who is this and they're like um this is so and so uh from the postmaster and I was like I'll postmaster okay well what's what's going on they're like no I'm a federal agent with a postmaster we're confiscating your package for uh for marijuana I was like what are you talking about and they're like this is marijuana I was like no it's not I was like there's actual license in there for the hemp I was like so I'm gonna come pick it up they're like well we already destroyed it so they destroyed a

bunch of cuts right there and I actually drove down there to try to get them they're like they wouldn't even let me in the door how long ago was that six months ago yeah but I think three months ago it was so that's how much has changed because I've had stuff sent to me like my personal address since then not even a question and it's coming from the same place that they told me that where it came from they were basically like already like anything that came out of that facility or where those were coming from were getting flagged immediately waiting until it got to the destination but it's crazy that they're able to call your cell phone it was two my my address but they were able to get my cell phone number right which that's really what kind of was like I mean they know everything already is as it is but they already flagged you that's good because the other novelty items the seeds you know so so we shipping seeds is no big deal right so like we ship we ship seeds the problem still lies in with the banking you know I don't want to put too much info out there but we are first C drop let's just say that all that money got seized we didn't get a dime that's because you dealt with PayPal we dealt with PayPal yeah we dealt with PayPal but but trying to set up anything through a bank even with that right now is we've encouraged I mean it's a pain in the butt stay back Banks yeah in uh in Michigan I mean we all have to have it for you know the license side so there's a couple credit unions that are very friendly and uh you know we'll look out for you but at the same point in time uh what you're doing you can still go through the car I can give you the name of the credit union that we're using they'll take it they'll usually use the Cannabis business no problem right but um the problem is for how you guys are going through on like the website of accepting payment you're not just going to throw your ACH information out there right compared to like a click and a pay where it's easy for PayPal and the other places yeah yeah definitely a definitely a rookie mistake for sure a lot okay a lot of money now just from my understanding a few months ago three to four months ago the DEA rescheduled to where you now like a hydro store now obviously check with an attorney right but Hydro Store retail store can sell seeds over the counter doesn't matter the genetic just matters that it's under 0.3 THC cuttings over the counter that's completely legal as long as you can't take that cutting and test it and it doesn't test over 0.3 THC then you can sell it and that's why you're seeing a lot of these companies that are shipping Nationwide um clones cuttings seeds it's just like opening the door and I think there's a lot of people sleeping on it oh they're they're doing my email gets my work email randomly I don't even know these companies bought some place in Boston there's all these clone companies I'm constantly getting spammed emails yeah it's insane yep just because the new regulations so we'll we'll see how that goes I know there's a lot of companies that are doing some stuff right now that that are going to be pretty interesting so we you guys are from Michigan and Michigan Star Race what's the Michigan market like right now it depends you know grow some good weed still get some decent prices you know I have 100 lights in the Trap you know you can still get I mean you got a lot of lights and you still get a good price for it but I mean it's but it's a supply and it's a supply and demand thing like hit or miss I've shut down a lot of lights because like I'm not gonna oversupply right like I'm not gonna like yeah I try to put my heart and my time into my rooms and good good flour just like you know I mean and we still get paid you still get good tickets good fire good weed that smoking it still gets good tickets you know and and uh I know a lot of other guys that are more on the smaller side that they put their time in and they're getting good if it's smoking it's you're getting good prices but there's a lot of people that that you know for lack of better terms aren't getting that that product and that's where when you get when you when you go out of the category of fire and you fall into this we'll call it mids Market you're in that what 600 to 1000. a pound flooded at that 600 to a thousand on uh like metric side right you know there's a there's a lot of issues there there's a lot of people that if you go and talk to them like as a facility wise and you ask them like where their Labor's head and what it costs for them to like uh produce a pound like trim done like it doesn't matter like what what's your you know PPE what's your licensing costs what's

everything I think I've had maybe three people be able to actually answer that question out of that and a lot of people overdo uh where they're at on that and then they're just putting out what they need to put out and they're just trying to hit numbers but they're not even doing that because hey okay you know I was with a facility that their whole entire thing had hop Lane set them back I don't know how long they're back right now their whole entire facility went down like the entire and it's a huge facility and like I don't want to say anything on camera I'll tell you guys who it is off camera because uh but yeah I mean this devastated this company and it's uh it's it's it's crazy what can happen in the market you know there's nothing for error right no there's zero room even if you grow good weed too you gotta have a name for yourself you know so yes any new guy that walks in still growing fire like it just doesn't really matter you know so some of these guys that have been around that have a name for themselves or people know you know they can sell their weed so it's really it's really where the markets are in metric you look at the you know Chris you know he had a you you had a Brandon you know yeah right there's a lot it's called what it is [Â \_\_Â ] I had a brand in the Trap and that's where you know I came from and I think it's also the respect from that and I'm not going to put something in a bag that isn't going to that I wouldn't smoke just to get a number on it if it doesn't make the I've had I've had buttons I still remember that phone call yeah I've had runs where I've gotten hit genetics from breeders and literally had like 36 lights going on 100 light room I'm like I'm [Â \_\_Â ] running all of this into hydrocarbon like I'm done I'm not doing it not putting anything out with my name I not a live person like just like trim like you know flower it's it's not worth it because that's where you can really mess your name up in the market there's not a lot of cultivators that aren't looking uh and doing things different and instead of saying like I run 10 tables 100 light room 100 light rooms and I'm not like now I'm looking at it I'm like okay this one's gonna be for rosin this one really is good for hydrocarbon so I'm gonna use these two tables these two tables and all this is sellable flower that I'm gonna you know pre-pack and do whatever with there's not a lot of people that are trying to think of that and scale of that and get different you know skus out and try to actually make it but if you're not working with the the right people in the right company and the like I mean like with you guys this like facility advisors too like not just like you know Athena is like a company itself it's different like it's different than any other company that I've ever worked on not it's more than nutrients you know like that's the thing it's it's way it's it's so built above that like I can call either you guys and I'm sure I could call you Brandon or Chris even at like whatever time you know say hey I'm having a problem this is what's going on you know and I'll get that answer or at least be able to bounce it back with somebody and sometimes it's that second voice it's not we don't know everything right but if we bounce ideas off each other we can figure it out together I mean I've talked with JJ I've never met like him personally but like I've like been like yo Dylan and Max are ignoring my phone calls there have been multiple times where like bro so so like you may call me right and what you don't see is like I call Max and Max can't figure out he calls Henry Henry's like I don't know I'm calling Chris you know Chris is like no it but then and then it relays back all back to you no Henry Henry's the best builder though he really is he's like no I've got this this is fun yeah I'll never forget the time where we were sitting in a meeting and uh you know they were a company that we were talking to was like I mean what's stopping us from breaking this down and making this ourselves and you were like you're looking at it you know These Guys these guys right here you know so it speaks volumes you know what we what we do as a team not just the product we put out so it's experience so you're saying mids are between 600 to 1000 right now in Michigan I'd say that's legal and Blacklist is caregiver on par with metric look yeah it's they say about the same pricing across the board yeah yeah it's the same pricing yeah but I'm I'm I think that it's just like me being honest I think that that caregivers grow better weed uh I do I hate to say it like they they don't have as much to manage yeah well but it's it's listen there's

so much and I I'm gonna take that back I don't hate to say it because the thing is is that there's so many you know corporate sides that are just looking this as like a a nominal amount instead of like putting it it like love into it I mean [Â \_\_Â ] I talked to Jay and it's like that's the only guy I can call it like three o'clock in the morning and he's up in his room because that's when he works yeah so you know he's a late night kind of guy but that's that's it it's like there there's uh caregivers like the caregiver crafted is I think that some of the best you know Market stuff that's on the market right now personally yeah because I mean me you our homie can work in our garden you know not compared to 20 employees sitting there trying to all do the same thing I mean I have four feet of ownership I have four people that run 300 lights in my facility right I'm one of the four exactly yeah so uh you know like you there's uh it's crazy because like getting into this and now it's like you're like playing like you're playing God in these rooms because you have so much uh availability to change things and sometimes it's like too much like it's too much data and that's where you start getting lost in things don't get me wrong there is there's some uh there's some big facilities out there that crush it you know oh of course and they got talent but you know most of them most of them choke so it's just too much to handle Michigan doesn't have any tax on cultivation they have a 280e that they do have but you're able to it's stores can't stores get hit real hard on like the distros basically get real hit real hard on the taxation processing facilities get a different tax bracket and cultivations get they can write off basically a large amount yeah the for not like how it is in California like because in California it's crazy what you guys have to pay there for my understanding in Michigan there's no cultivation tax no oh no there's nothing like for example here in Nevada where I grow there's uh 15 for the state three percent for the city a total 18 gross of just cultivation tax that's cultivation tax see like no we we have our 280 like everybody else there's no cultivation tax so I have to pay 18 while you guys pay zero yeah and they're getting more I mean I mean we're getting to that yeah right I mean so what for sure yeah we're if you're growing fire without a brand what are you getting per pound without a brand fire not in bulk no exactly like like folks like like and that's let's say both like A's and B's right so that's like how the Michigan you'll consider it so you have your A's and B's and your C nugs right so like instead of just like everything going together in one they'll separate it even where you have like you're like Prime like packageable will be your bulk so and they're getting like like even less even less than that that's about the same on the on the I I can't I have homies that hit me up that like are new into the market that are like like dude my lights are about to get shut off I need like six eight hundred and it's like good weed it just hurt my buddies grow some fire and they get 1000 to 1200 man yeah I was on the plane sitting next to a guy that owns like 16 dispensers in the US for Michigan he said he can get nice ass pounds all day in Michigan for 600 bucks says he does a deal right now check this out I don't know that I forget the name of his his uh his dispensary but they do two and a half ounces for 99. out the door retail retail wow yeah but here's the same thing at the same point in time that like that dude was telling you ten percent of the truth so like what he's actually getting he's getting that [Â \_\_Â ] he may have gotten like say he got like 200 units he got 10 pounds at that price maybe and then the other 190 is remediated nasty like like nasty like nasty nasty like I can't even get into it like it's like I've never seen one of these ounces and I I go to stores a lot because you know I have to go there and I have to talk to the owners because I also take care of not just like the cultivation but I'm also there online the retail side so like I go in there and make the connections and like talk with the store owners and there's never been one time that I'm like holy [Â \_\_Â ] I need that 50 ounce right now you know it's like it's booty it's seated yeah they're not even putting it out are they I mean that's all just no it's in a black Miler so no one can see it and it's sealed so they don't rip it open in there and then everybody events there's a market for it though there is a market for it yeah market for it there is what are you getting right now packaged uh package right now 25 and 8th wholesale so that

comes out to 32 a pound that's good you could do business at that yeah no you can what's your cost to produce uh 456 a pound about the numbers because there's four people that are at the cultivation uh and at the same point in time it's it's the the ease of having it automated but you still have to be there like okay we have four people in a day-to-day basis we do Outsource when it comes to trimming we hand trim everything so we have trimmers that come in and that's also put into that pound price so like that is you know average right now in Michigan and is anywhere from like 100 to 150 uh a pound trimmed like when you break down the pound price so you had that impressive yeah so when you break that into it you think that's cheap oh that's really cheap let's see I think that's ridiculously expensive everything for cultivation has gone up except for the price of weed my my highest cost for 50 bucks it's higher than my electrical how many how much do you know how much you're paying per kilowatt delivered uh seven cents you're paying seven cents yeah no yes seven cents seven cents and then like and then it's like what electric bill right right no but like there's other ways of doing it and like this is just like me and this is I hope everybody listen to this because like when you're sitting there you can actually like in any state that you're at you can actually get a Transformer so like once your primary or secondary power right so if your light grow is uh secondary you're coming in straight to the poll to your CT cabinet and then it goes into a Transformer from there but now if you're a primary you're actually having it run into a Transformer outside that you personally purchased and then it runs into your CT cabinet well then they'll start to change your your your cost of what it is either 11 14 you know like what wherever you're let's say if you're at 14 cents a kilowatt uh coming in from the poll and then you buy that Transformer and it drops down to three cents or it drops down to uh it takes three cents off so you're at 11 cents let's just say after you do that you actually have that company owned by a secondary LLC that's where it's going to get tricky uh and you actually charge back to your cultivation like the three cents a kilowatt hour so it's almost like you're writing off you're writing off more writing off more on I mean but it's there's another LLC it's a kilowatt of electricity on Cali what I've heard is about 17 cents and the highest I've heard I've paid up to 42 cents it's uh around 10 cents because we got a smaller Municipal Power Company and that's not PG e everybody who's listening knows how bad PG e is it's awful out here in Nevada where I'm located I pay six cents delivered right damn which is really good which is great but that's but that's the thing is that like they literally so like where we're at we're in a municipality uh and that's in like a rural area and that's why yeah and they had to build this up how they had to build a um a substation for us like it's crazy like we have more power than the township does in like a couple of girls there's a grow right down the street from us that built a co-generation plan in order to do it you know in Sacramento PG e was paying people to build Cogen plants and that way they could as long as they had access to turn it on if there was a power outage they could use it to support the grid so people were making that trade do you think where the Michigan Market is right now is a sustainable for you obviously yeah what I think needs to happen is I think that they uh you know this is gonna probably piss some people off that watch it but I mean it's just me being real I think that they need to do like moratorium on licensing because they're handing them out there's these access grows out there that it's great but they're not do okay so they own 20 licenses right 30 licenses uh but I I mean what do I think they're really doing I think that they're back door in packs in and then just [Â \_\_Â ] the whole market up uh that's a real thing in Michigan for sure because listen it's it's different this isn't Michigan's not Nevada it's not California they don't have that season that you need to take it for an outdoor to be an outdoor so like you can't get that little extra burst you know this year was actually a lot nicer I mean it was just up 70 up until like four days ago but uh they don't have that and a lot of people that come from like out of state like come come from uh uh you know like California or uh you know uh Cali or or I'm sorry Kelly Nevada Oregon Washington they try to come grow in Michigan and they have it's a rude awakening yeah yeah the humidity and the cold temperatures come fall is no

joke yeah and and they don't know how to do it and then they can't get it executed fast enough and they don't have referred trailers and they you know they're they're trying to put everything into like uh you know make hot dog water out of it or discip you know so yeah I know a lot I know a lot of big farms this year that killed it um that did really well and I know a lot of big farms that that came up severely short on their projected numbers like severely short like hardly made money short yeah because they just try to pad the pocket of their investors and then after they do that they just flip it back around you know so they try to get the investor money out then everybody else kind of loses a little bit those fat cat uh you know numbers my cost to produce here in Nevada with tax is just about 750. but in Nevada they have a fair market value per pound of bulk and the fair market value is like two grand okay and so they charge you 18 on two grand not even for what you really sell it oh my God so not only do you get smashed on the 18 percent more than what you really sell it for yeah 350 bucks so but what you're saying though because like it you are a light up right yeah okay so you're like that and you have to put that in consideration as like indoor yeah that is actually getting that number exactly and I'm sure you you know I know I've seen some of your product you know what it looks like so but still if there's somebody else that's you know lower on the totem pole they're paying that price yeah the big my biggest problem out here in Nevada is I don't do packaged flour I just sell bulk right so what what I need to change as a business is packaging my fire because as soon as I package the flour I get between 18 to 22 dollars an eighth right um so it brings it up to like 25 20 to 2200 bucks right so that's what we're starting to do now then I'm paying fair tax because I think what's going on is what what is going on is that I'm just selling bulk for 1400. other people are packaging it you know and making the money out why I'm getting hit on the tax of that two thousand dollar tax yeah yeah exactly why not make it worth two thousand yourself and at least get taxed out that's that's what we're doing now I know there's a you know there's a I've white labeled for a couple other companies myself you know yeah where they've done that and I've you know bulked out you know 10 to 50 pounds to them and then they put it under their own and then they're like oh don't worry we got you we got you and then all of a sudden I look at the retail price I'm like what you know so yeah you know there's there's a difference it's a play out there yeah I think the BlackMart in Michigan Black Market Michigan is definitely still sustainable I mean um I know for me personally I mean um and a lot of guys I know I mean cost per pound you know in the black market about 250 to 300 a pound if you're automated to produce to produce yeah super cheap no you know like I I gotta I I mean I have you know 60 to 80 light spots that we check in once or twice a week you know it's it's it's it's not um as demanding as as something something like Chris is at right um and uh I think it's it's sustainable but I think people have to watch how much they're they're producing I mean I know a lot of guys that went hardcore like hard hardcore for a lot of years and I just don't think that that's that that's not sustainable I think if you start over producing and that's that's kind of what I'm seeing the people that are over producing are the people that are calling me or you know hey um can you help me can you help me can you help me it's like stop producing so much you know what I mean you don't need that much right now New York does but I mean that's the thing is that like you know uh coming on that for us we just look at it a little bit different what's now going into rosin what's instead of just being a cultivation side what's going in Horizon uh if there is a good uh like hydrocarbon that actually does very well we'll do that and then the rest is into usable flour so you just have to figure out where you're at but like the thing that kills on the the like Stateside and like the metric side is the cost to test thing the cost of this so if you're running like 10 varieties a room you know you start to add up and every time that it's a batch over 50 pounds too then they take like a quarter pound of weed after every 50 pounds and then they start I mean there's just always numbers that are coming out of that and you know like something hits the floor like in the Trap if like I mean sorry guys something hit the floor I'd be like well all right no but like you know in the in that and the legal it's not like that like

it's like oh I've thrown away more weed than I've ever wanted to I'm like oh yeah you know it sucks Chris Duran I get to answer more questions this might get to sit back and watch these guys grow I got more questions for you for sure myself yeah yeah let's do this why are we here fade so we've been working on it when do we start working on fade nine months I think was when uh we first started giving out some of the goodies for testing yeah yeah RNG it for probably eight months nine months yeah yeah so I'd have been in discussion um you know I don't know who who the idea started with but it had been a discussion for a while and how we effectively moved to get this out I think it really started on that podcast that we did a long time ago and you started talking about the nitrogen discussion and just less and less and less yep and then people started doing crazy stuff change in ratios converting plants and then we had to stop some of that I think is where this kind of came from so we had to come come up with a viable option to um not get Bud rot let plants finish naturally you know and uh get all the nitrogen out really I mean it's where we're at flushing is such a controversial conversation with so many Growers some are saying flush some are saying not what do you think it is about flushing that some Growers deal like what I think the concept of a flush is is still solid right there's you're kind of doing a couple things here you're you're trying to reduce certain nutrients and you're trying to stress out a plant you know get some genetic expression right we're all trying to stress we've talked about this and uh but what kind of stress are you really trying to give the plant you know there's certain stresses that the plant can can manage and it's going to make it express and you're going to start to get this finished this is where where fade actually came from was you know people were doing like two week flushes three-week flushes and starting to get crazy well it's like a recipe for Bud rot right you know calcium losing a lot of these micros and we're all growing in cocoa and rockwool at this point nobody's growing big old pots once a day watering or anything and then they get these cool looking giant nugs and you know it's all about rock butter rots but try this everywhere and that's just it's tip burn you know it's the same thing um happens in all kinds of crops this is super common you know you guys grow in human environment a tip burn Bud rot whatever it is it's more common in humid environments get less transpiration you're talking about killing it with managing the environment that's what I bet a lot of the new Growers are having trouble with all that humidity you know and they just have damp rooms and then I mean the list of problems just goes on and on and on right from there and it's like you know that's an issue so we're trying to find a way to keep the plants you know well fed with calcium um drop as much nitrogen out of them and give the plant everything it's needed that's non-mobile within the plant and then let it let it translocate this nitrogen and what we're finding you know you guys did a lot of preliminary testing on this that's why we're all sitting in this podcast together um you know preliminary testing was was great you know you guys are getting good results weren't seeing any problems modified formulations a little bit um you know I think you had some some numbers that you got over to Henry from all of your testing yep we take all that and then we distill it into a nice experiment at jungle boys and we validate you guys because we love you but we have to trust but verify yeah so we take all this information we go okay well is it just Athena love or is this is this really working the way we designed it so we bring it in and we run an experiment of jungle boys and and we can risk running it in a way that you know if one of the one of the two trials if we're doing side by sides doesn't work and we have some crop loss well that's okay because we're paying for it on another end that's the cost of doing better is doing research so you know you guys can't always run the same exact side by side but we can but those onion layers of like validation that you have like that's what I love like we have we have those layers right the layers of validation within the company that you know that's where it should end yeah so the jungle boy's like okay now it's validated for real let's do big rooms side by side yeah that's the only way to do it and we do it actually all uh intro room it's all shared room so we actually randomize within the same room so the clients as uniform as possible we try to get rid of anything the only

difference is one product we once we get to the very end we distill it down to one variable only and that is it yep so and that's I don't think you can get a better result than that so anecdotal is great we love it trust me that's what keeps us going but we have to go go in there and verify this stuff because there's a lot of crazy talk out there all the time too so you guys are on Instagram right with the with flushing is calcium the main cause of botrytis and butter rot that in your opinion yeah so there's I mean yes that's the main cause for sure is if you've got Calcium deficiency and it doesn't happen overnight right if you're in if you're in Cocoa it takes a little bit of time right because there's cation exchange sites so you have a little bit of time and a buffer um and we we expect that you know when people used to grow bigger pots there's more calcium stored in that root zone as you shrink the pot because a lot of people are finding out smaller pots get you know better results for some of these these grows you know you're you're a big fan we've talked about this a ton you know yeah a little bit smaller pot stop going so big same concept is in hand so get a smaller pot there's less stored cations in there so if you're going rockwool I you should not flush you should like never go for a zero flush maybe the last day um because the plant has enough left in its vascular system but otherwise no calcium you start getting weaker and weaker cell walls as soon as you have one cell wall to collapse now you have a ruptured cell it's damaged and there's always but try to spores floating around right butter rot's just an inch away so and then at that point it's just again it looks great on the outside but it's because the plant is actually dying at that point yeah the immune the immune system of the plants what you couldn't have you couldn't have it I mean the the inside of the cell is now coming out you know the is in then it you know destroys From the Inside Out can destroy the cells next to it and calcium is the main one there are other immobile micro elements too that that add to that equation you know the calcium is there calcium is one for the cell walls yeah the other ones you know like like iron and manganese they can potentially get shuttled around stored in the cell vacuoles um and get moved around get a little bit more buffer there it's not huge but a little bit they're not really mobile um so calcium is the biggie that's the one that we were really pumping first but we we found a few make sure you have everything in there it actually gets even better results you know like there is that next step it's not just that simple and then you know we're just looking for expression in these plants and if they start starving of nitrogen it's an indication you know we've we've seen it people want to go that direction we just wanted them to do it healthy not ruin the crop Max what's your experience with with flushing in the past and what you're doing now I mean I've flushed for you know straight Ro I mean I think we've all kind of done this I've done three weeks two weeks one week you know zero um you know since I've been using fade I actually get like even distribution of fading in my plants compared to like kind of like you're saying like tip burn on those leaves that are really close to the buds you know so um instead of just running super low EC or straight water through I'm seeing just a different expression using it which you know totally makes sense from the standpoint of the chemicals so yeah you got to get that nitrogen out of there what's the plants translocate you know from fan leaves other green tissue that trans translocations just the plant's noticing you know it's acting accordingly so in I just was at my spot in Nevada or just you know two hours from here about three hours ago and every single grower in the facility is saying they're never the the dry rooms have never smelled as loud the packs have never smelled as loud when using fade what why is that what are they why is that happening stress the plants vanish in its life we have more you know available cannabinoids more terpenes like we've tested it we've verified it we validated it in the side by side you know the that's the whole same thing start cutting out nitrogen keep the potassium High you start getting the genetic expression I mean I don't want to don't want to stop and act like if you can just reduce nitrogen that you're you know your trash 1994 strain is going to be like fire you need good genetics but if you want them to express you got to pull the nitrogen out you know and it's we keep seeing that you know everybody's seeing it now and now we finally got the test and we have the data



right yeah that's what we were all waiting for was to get like hard data and it's just genetic expression and if you want to get more expression then you gotta activate it what is it about the nitrogen that takes away from the natural flavor of the plant I don't know if it takes away so much as as uh it delays in essence right this isn't just in cannabis this isn't a lot of other crops if you provide late nitrogen for a fruiting or a flowering crop it's gonna it's gonna decrease basically and delay flowering and plants in essence and so if the plant it just keeps lingering around it doesn't go fully into a regenerative State it's going to stay vegetative to some level you know it's not just dedicating its resources whereas now if it's getting resource restriction it's being encouraged you know it will it knows that with no nitrogen life will come to an end anyway and so now genetics are going to take over and say all right let's get to the end so it's just extra stress yeah but a good kind of stress yep you know it if we were all just growing for just Leaf biomass by all means just run nitrogen all day long it's totally fine you know and and part of part of the testing you know we talked about this is really the timing of when you want to run the fade you know I mean plants still need nitrogen to survive where they're getting that nitrogen is important if you make there's too little nitrogen for too long you're still going to probably have some some total result decreases so we don't want you running this like the whole time you have to still give your plants nitrogen until they get to the end of their life and then you cut it off into fade and keep them with everything else what is fade uh calcium and micronutrients really it's it was designed to be a four Pro Line initially as a core replacement that was that's what we were hearing from everybody running Proline was they kept changing ratios to a point where things were getting out of hand and so we said we've got to do something better because this is getting you know I hear you but we can't have we can't have you basically butchering your crop in the process of getting better weed so we this is where we came up with this was for that and to replace core is a direct swap at two pounds per gallon we tried to make it as simple and easy as possible and then it's also got the complete micronutrient package just like course so you're not losing out on that well and that's where we started was with the Pro Line yeah well there's also a big difference too like just with the micronutrients with that compared to just running the you know the pale the powdered calcium chloride there's a huge difference I've seen in this thing like you can't just like it it's not just like taking one to one right yeah like what else do you guys have inside of that and like we started getting different like hash increases you know like of your final hash uh you're like 40 to 70 or you know you're 40 to 120 you know and that's what I even asked Brandon I was like hey if you ran hash have you checked out your yield set because it's there is you know if you're looking at like I think our last one was an increase of 1.3 percent from so uh so from it was like four point uh 4.2 to 5.5 finish so when you start actually looking at that uh yeah how much money is that plus yeah he complains when he goes down like point two right he tells me all the money he's losing so 1.2 is a lot of my new washing yeah when we do the test wash it's like 10 000 grams and then it's normally like a wash is like a minimum of us sending out likelike anywhere from 20 to 120 000 watt grams so um you know it makes a big number especially if I mean what what is right now in Nevada what is the price of like wholesale price of hash is there a big rosin Market here I don't do any Ash so I don't know what are you getting per gram uh 30 or up 30 or up 30 30 a gram or more yeah that's what it is right now it's like 30 35 black market so I mean that's what I'm getting right but like if you change one percent you're talking hundreds of thousands of dollars in a year dude I mean yeah going from three percent to four percent it's a game changer like you can everybody breaks down so like dinner's on you tonight yeah exactly that one percent but they but they have what inflation but but they they have it where you you can break down these and like how it goes down is you know they're your uh you're wet pounded like five wet pounds is technically considered one dry pound uh for like when you're talking with Ross and producers or I mean you've ran you've been running Rising a long time too uh 10 years something yeah exactly so you know those differences when

you get even a half a percent difference it's big numbers yeah there's a huge market for it Michigan yeah there's a huge there's a huge market and then there's I mean then now all these people that are doing this like donuts are like a big thing here right now big thing right now so um I do I I see it more of like a niche and I see it more of like uh like if I wanted to like have some donuts like I don't think personally myself it's like um for where the market's at I don't think people are really gonna just every consumer because a lot of people are stuck in these like 50 ounces 60 ounces 75 ounces do you want a one dollar or do you want an 80 joint that you're gonna smoke or do you want an 80 in smoke a whole ounce of it right I want the 80 joint I do right yeah right if there's a market for everything right it is and uh but it's still a big market so people what they're doing is they're taking their 40 and 70 you selling those uh and then as as rosin and then selling it like that and then after they do that they take you know anything up to like 120 they're either putting it in carts or they're putting it into Donuts or I mean [Â \_\_Â ] now what people are doing is they're actually taking distillate and mixing it with rosin and calling it full spectrum rosin infused pens nice was that was that flower that you brought and showed us was that was that grown was that off a recent batch yeah yeah fire yeah thank you yeah fire so you you were you were with us from the beginning Chris on this stuff yeah and and you tested calcium chloride calcium chloride yep you did obviously you ran Pro Line then we gave you some calcium chloride did that then we ran some fade and you did that what was the major differences between calcium chloride and fade the the micronutrients uh the addition of that and also when your yields go up you know a quite a percentage and then noticing because the calcium chloride the difference is is that that stuff is horrible to work with first off yeah man I mean I I hope you know we had a lot of conversation about this about sending it out to you guys and like I think you were the one who got the instruction because Henry was I think uh conveying a lot of this was like you know the with the powder you're gonna melt your melt your tanks if you're not paying attention it gets uncomfortably on the side and then it blows out and then you're in trouble so no I I won't say that it happened but it did so uh I guess those instructions didn't make it through so well it wasn't like that so but I called him I was like is it supposed to be this hot dude I made it like two pounds a gallon it's hot and uh my five gallon bucket was like flimsy dude the nicest the nicest thing is uh you know like I never talk about like uh any other nutrient companies and I never will on this side of it but this is like something that can be used with every nutrient line like that that's the difference with this product and it's not just specific to you know like an Athena product it's something that can be used with every single company that's out there I personally think because there's a lot of lack this is the first product in my personal opinion that is like an actual finisher because every everything runs crazy hard on nitrogen and when you're looking in in these uh um you know everything that they're doing and all the products that everybody's running in every line in other lines too so I think this is the changer it's it's hard you know there's positives and negatives to that the negatives are that we haven't tested it you know and it's like we haven't tested with Blended yet we're testing a little bit Yeah but but your point is it's hard to we won't come out and say use Fade with Blended because we don't have enough data to back it up we look at it as these Growers livelihood depends on what information we give them so if we just go out and say hey use it with Blended it'll work great because of what we see on numbers and not in the cultivation we're putting people's businesses and lives in our hands and that information could hurt them right I agree but I'm gonna look in this camera it works [Â \_\_Â ] great with Pro-Line so you know I know because I run Proline and it makes a difference and and the difference is is I can't speak on Blended so I can't but you know I have somebody that runs a a competitive um nutrient right that we're homies with and I I gave it to him to run I didn't tell them what it was and he's smashing with it he knows like the the makeup of it he doesn't really know like I explained to him what what I was like here put this in your plants you know I explained to him what it was but I didn't tell him who it was from or what it you

know the owner indeed had the r d on it yeah yeah yeah so like and he's like blown away right and he was able to adjust it to his nutrient like that he's running the reason why we're stickers on that is because we have three tech tech Team guys well we got 14 facility advisors Nationwide and then we have three guys that are on the tech team that answer DMS emails phone calls and when they're dealing with hundreds of Growers a day whether it be you know whatever communication chain and these Growers are like well I'm using Proline but I'm adding Cal Mag and PK and this and that but I'm having lockout and my shit's dying I don't know why and it's well how do I help you like how can I how can I help should I give your phone number out no I'm just saying no I get enough of those all right so like whenever somebody gets a hold of me that's running Athena whether it's Pro Liner Blended and the first thing I always ask them is are you only using what we suggest because if they're not my flow chart for diagnosis goes like [Â \_\_Â ] over it's like okay now when you got to take that into consideration what's your then right away I'm usually saying especially if they're using like a monoslic acid I'm like where's your pH in your room Zone because I know it's [Â \_\_Â ] up right so it's like it's a whole different it's a whole different diagnosis rock wall it's definitely [Â \_\_Â ] up if you're using cocoa IT Coco is a lot more forgiving than rock wool there's like I said in the when we first started talking in the beginning was there's so many different variables that people aren't like looking in in the in the just the sensors and the data that you can get back it's crazy right so like I went in somebody's running like I went into a facility and they're having a bunch of issues with their dry backs and trying to figure this out and like I I straight up I'm just like pick the pot up I'm like it's [Â \_\_Â ] light you know a lot more water more you know and then they're like huh then I'll squeeze the sides of it and pull out the and I'm like yeah water more like you're you're chasing this dry back and I was like where are your sensors so they have like 40 lights in this room okay and I'm a d guy so I run D's and like I'm sitting there and I'm looking at it his sensors are right up in the front okay so you have like one light here one light here one light here you know that you're actually getting and then there's space out even farther but like the plants that are having the problems and reading the wrong or middle of your [Â \_\_Â ] room so it's just like you're not getting the data because you're not looking at the plants everybody's just thinking oh the sensor is going to tell me this is what's going to tell me it's like no you got to go there start to feed it and then if it starts to look I mean you have three days to like really to see if there's something that's actually validate Those sensors hardcore yeah and and that's like you're gonna sit there and run something I pick that up and I'm like up yep here you need to you know water it more they're like do I have these see I'm like no [Â \_\_Â ] water it more like what what's going on like keep it where it's at and just run it like you guys need to start looking at this and then they're like well the sensor says this I've got I've gone to the point using these sensors where I could look at my sensors and be like this room's [Â \_\_Â ] crushing you know temperatures here humidity is here your moisture is here I have a lot of experience using them for the last few years now kind of thing right you probably validated the sensors who said run the cycle and you stared at it and felt that pot oh I got this tiny little room yeah and you did this for 20 minutes and you're like okay this is what the sensor means right when they're done right though they crush and you still obviously got to be there I walk in my room five six times a day you know just open the door to look at the plants and see how they're looking but you know I could now I could you know when I'm gone here for seven days I can pull my app up and be like Yep they're in the zone you know EC's swinging here moisture's here I'm at this point in the plant's life you know so I no I agree I mean that like I said the sensors are not I think it's one of the that people just trust everything so much without validating the sensors like sitting there and actually running and oh this new varietal that I got from here that uh is it's supposed to be running like this you got to know like this strain likes this EC bouncing between this or you know this dry back too so everything's a little bit different you know if I run I run two strains on one zone and you know this one's bouncing here that one's

bouncing there you know most of the time they look different because one one likes it better than the other so there's a lot to it but they are nice yeah for sure for sure I mean Max you're running a blended line and you're using fade I am yeah yeah so I've got almost two full runs of it right now I'm about to harvest here in about 10 days um but just the difference in like the smell in the room the expression of the plant um you know like you said like I I personally do huge dry backs towards the end too so as much stress as I can give them but since I've used fade dude like my leaves are like that you get that good golden color towards the end that you just don't get like the dying Decay like you do just flushing with straight nothing or you know really low core you know whatever but it's a it's been a big difference dude for sure yeah I don't have I don't have any side by sides you know I've got one room with one zone one tank I don't have a side by side of running fade versus not which you know that's the true side by side but from what I'm seeing right now like yeah it totally makes sense from you know a mineral standpoint too so well we appreciate you testing for us because yeah well Brandon just said you know we have to give you the right info because it's also your livelihood and your business you're willing to risk it on some trust for us so we we do appreciate that you know I can't oh yeah say enough from the rest of our R D team you know to shout out to you guys to you know put a little bit of your livelihoods on the line knowing that I love it yeah I mean there's a risk right I'm running 100 lights on it without even a blink of an eye I know you know well I'm running 300 lights on well 200. yeah we almost melted your tanks and here you go you're like whatever the thing is it's like if if you don't try it you're you're never gonna know where you could be at and this is like I mean before when I was running I was pulling core off like and I was that guy that was like pulling core off at that point if it made sense yeah you thought it made sense yeah well it it does to some level right but that's when I was having the calcium the calcium chloride powdered instead before that right and then that's like that's what ends up happening is you're doing that yeah and then there's also a lot of things that you know like what we're talking about what you brought up uh uh the defoliation a lot of people did do defoliations at a certain point you're taking a ton of nitrogen out from that and then you start running the fade like I do a heavy defoliation and now this one we're not doing a heavy defoliation like right towards it and so I'm gonna do basically I'm gonna try to do a heavy defoliation like right at the end like right there at the end so that way I still have the nitrogen pulling back on the nitrogen and then do like a quick defoliation heavy defoliation two days before crap yeah so Chris you saw yield increases in hash right and then where were your testing numbers up THC THC then it's not like some [Â \_\_Â ] testing numbers anybody that knows me I don't test and try to dry it down to like seven percent and so people know in this like podcast like what a lot of people are doing is they're drying their [Â \_\_Â ] down so they can get those test results like I gave uh you know Henry the test results that I had and and uh Taylor and everybody of like hey this is the actual moisture content and it's like at 11 11 and a half percent moisture content and hitting like I think like 29 like THC not total THC THC so like when you're starting at that and I know it's a THC driven Market but it's still it's it's the uh the the number one thing it's not dried down like those results were back and then I had you know side by side of two different varieties actually yeah two different varieties two different tests and uh you can see actual the cannabinoids the Terps everything I mean it was all in all uh like 30 percent higher so you can say three percent four percent five percent but it's thirty percent like total if you want to talk let's start from the beginning Athena Pro Line no calcium chloride what same genetic same room same app you know what were your THC number total to you uh like like THC let's say like this is just I like I have I know that like Taylor has a data so a hundred percent she does but I'm just going to use this as an idea of just running like the Pro Line like the first time that we were in it 3-0 all the way through right three all all the way through one day flush I'm one of those guys that don't believe in the heavy flush the the 7 14 days like I'm more of like I I don't even really believe in the hard taper either personally myself I like to have it where I'm running 3-0

then a little bit like start to gradual down a little bit and then keep it I I don't because I can flush my whole entire make the median Domino like nothing um uh in in one flush just around and punch through it uh now so let's say let's get back to where we're talking with THC content running straight through is like let's say uh a varietal at like 23 24 THC just like three all the way through um and then doing pulling off core uh at that point in time at like they like 52 uh going from there uh it was an added like two percent increase so then it'd be like you know uh 27 28 and then now going uh uh from that and using the fade r d with the micronutrients yeah the full one the Job the full one yeah is is like 30 plus now all right yeah and that's like but you have to look at it it's in the in the differences of the tests that were actually sent over the moisture content it's funny it's like the ones that are like higher are that are lower or at like 10 10 and a half percent moisture content in it the water activities like lower and then the ones that are like the higher THC is a higher moisture content wow yeah but that's that's that when we were talking you hit I look at everything as you have to we did not change anything so we did not change any variables we kept all our controls the same and we used that that was the variable yeah so it's a sequential trial and that's as close as we can get from most of our external testers right I think it'd be real hard to ask to be like all right hey just give us two benches in your room and let's just just let us know yeah nobody's doing that but I've seen it I'll give you [Â \_\_Â ] two benches before we started this no I think I think that the Trust on the side of like what you guys have here's you know from switching over with running over with other nutrient companies and other lines and like you know I know you guys are facility advisors you guys all work together like I'm uh you know not a facility advisor I'm a cultivator I I you guys support me I love supporting your product uh I I don't get paid by you guys there's nothing on that right like the difference is is that when I run nutrients where there's no [Â \_\_Â ] biofilm in the in anything there's like it's super sterile in the environment that I have to have for passing testing at you know the colony forming units and for total use of mold that we have and how stringent it is and you know all the things it's an amazing products yeah and it helps my business so it feeds my family like listen I'm not doing this for like myself or cloud or anything I have two kids Partners have kids you know we're doing this like so that if you know like I always tell people if I if my sons want like to be a social worker or like something like a ballerina or like anything it doesn't matter and they can't afford to have what they are able to do uh I want to be able to help do that and you guys are the ones that are helping do that for my family and other families there round too thanks appreciate it but like now this this is real talk this is like uh I I it's a game changer and I know you guys I I noticed like I've been watching how you guys talk about it you don't want to put out anything crazy but like I'm telling everybody it's [Â \_\_Â ] real so it is I know you guys won't put anything out until it's a hundred percent at the point where you guys are at but it's real it's I if it wasn't we wouldn't even be sitting at this conversation you guys wouldn't be running with Ivan in any of his rooms I I mean that's my personal opinion yeah so so we have like other than Chris we had like a lot of other homies you know like like you know that within the family that ran at smaller scale like some other cultivators from Michigan smaller scale um guys that you know you know and it was funny because like my joke with uh my joke with Henry is that we kind of made him like Pablo Escobar we like seriously not listen oh it is it was responsible Brandon says send it to this guy send it to my homie over here Henry starts lacing up all these people right well you know we're it comes down to it's like okay we gave you your sample you run it well these guys are hooked like crap yeah yeah we're sharing messages regarding like bro I need my where's where's my face where's this stuff at like you can't give it to me and then because the people are the same results that you're seeing a lot of my other friends are seeing you know they're seeing the same results and it takes a little bit of dialing in to get to that point because it's that's not like just the first round that was a couple runs right yeah so I've ran it for a couple runs but I think Henry's more if you

guys ever seen the movie Usual Suspects so Kaiser so say he's Kaiser so say so he's gonna love that yeah the other day he's going to be revealing a new look at the show yeah I just love the even senescence that I'm seeing that's like the biggest thing I've seen in my resume you even heard one person say I want more and that's I'm getting hit up non-stop yo I need more money it's kind of work with the manufacturing you guys all know this right like very Hands-On with that part of this um and it's been interesting because Henry is like a drug dealer right now for sure he's like needing to get his picks all the time and it's like I'm busy we've got other things in the schedule man and he's like I know we need it now and then he'll show up at the door basically to get his fix and I'm like it was just you know it's it's telling when you know we're giving out an r d product right it's it's beyond pre-release at that point it was it was an r d product still an rdd product officially um but the demand was already there and that was a little bit interesting I think it was the missing link of any nutrient line yeah it was I think it is and I think that like I come from a background you know this I'm a tweaker like that's I know you've ran everything underneath the sun in combinations everything and like we're always trying to perfect this craft always and I know that we're we're huge on that here right like we're always trying to get better continuous Improvement what can we do better what can we do and this is a huge piece to that huge piece to it huge piece that's the best part about working with this company man is this r d that we do on the back side and the you know yeah we're coming out with with fade but like constantly trying different things and it's not just something that we just were like oh we're gonna go we're gonna make it and we're just gonna throw it out so you guys gonna drop a new bombshell or something else so you guys see possibly coming out with is there something else there's other things that we that we as opposed to confirm tests and find out if they work and put out there's a lot of things that that just get tested to prove that they don't work and that stuff we just tested trash yeah we just test and bury testing very testing 30 I mean there's no point in going out the purple spray yeah but you know we we do test and bury because we had to try there's a lot of stuff out there that's what we do though right well and to try we have to validate whether it's real or fancy and a lot of this comes down you know one obviously part of jungle boys heavily there everybody's sending them the coolest [Â \_\_Â ] under the sun right they come up with some hair brained ass ideas and I'll get a call from roach and he'll be like Chris tell me tell me about this that's not how roach sounds at all but and he'll be like I need you to explain this to me he was like somebody's sending this DM over here and and so we walked through it and we set up something to trial it and you know he's he's willing to jeopardize his plants and and oftentimes it is jeopardizing on those ones and it's like all right I'll send it to you but this doesn't put my name on this anywhere like this is this is this is someone else's bad idea you know but we'll test it because you never know what if it works protest everything yeah we run R D's just to see how it does and for the fun of it too you know yeah like obviously we run it because we think it's going to do better or it has a chance you know but or somebody told you it would yeah true you know this industry's built on that I know try this I know a million times oh me too all right buy two supplements get one free two we've got storage units full of [Â \_\_Â ] that just you know tried and can't get rid of it so interesting thing with fade that I've seen at my spot is that you look at some cultivars and they'll yellow out but others get dark purple black yeah have you seen that too yeah and I I've noticed like it's so what here's something crazy like you you can a lot of people do it when they start to like add like colder water and they start to like do certain things like I'm not changing anything different but like there's a couple of varieties that I have that like I've never seen them like change like I have some with like like crazy black leaves and then all of a sudden now they're starting to like yellow out from the like inside out but just like running streaks online I'm like [Â \_\_Â ] hey you know like it's like it's crazy it's like art Expressions I'm seeing her 100 different yeah so like all my manipulations before at the end of flower running running Proline for for years

were based on environment taking temps down really cold taking my humidity out to get that to get that that ex that color exchange that I wanted to get a lot of that's what I've relied on for the expression right I'm getting that like these rooms I'm taking I'm not even dropping my temps hello I'm running like 73 74 degrees I'm not even going as well I used to get into like mid 60s low 60s to really try to get that black that purple I don't even have to do that I got rooms that are like day 50 just already just purple and falling over at 76 degrees Yeah I was a little worried because I did take a room down a little bit and I thought I was going to turn some weed black for a second because how how dark it was going on I'm not like I'm like uh did I just [^\_^] this up yeah you know like it's a lot of lights out it worked out [^\_^] phenomenal so yeah it's well that's what I thought and it was like no it's just like that's where the expression took it to it brings out their true genetic yeah that's that's what I think the difference is in this product that it actually brings out what it supposed what EC are you running right now with fade just all the way to the end so that's what I'm experimenting I've done the taper yeah so I've done the taper and now I'm doing the 3-0 all the way through and the 3-0 all the way through is [^\_^] banging like in uh what a test results don't lie I haven't smoked it yet it's just actually getting caught right now at the facility at that 3-0 so yeah uh thanks guys appreciate it that's what we validated that we did 3-0 all the whole run through yeah yeah so the first run I did Trio second run I tapered this one's surreal all the way through with now the environmental is like how I normally run them because I didn't want to run anything too cold colder water at the end like a couple different you know like that I normally had run through now I'm just trying to throw everything at it and it's I mean they're like I mean colas are like because I even took it where I started like looking at the colas and like uh like cutting them to see if there was like any botrytis or anything because I'm like this thing has to be [^\_^] loaded I mean like like this right yeah like outdoor colas yeah typical try this Bud yeah and then I'm kind of an opener I'm like nothing and I'm like all right I'm not gonna go scavenge this room and like cut up everything turn off all the good ones but like normally you would sit there and you'd something that you would think would have it would have it but it doesn't that's what's pulling the nitrogen I just took down my first decent sized LED room for the first time I think ever LEDs I struggle more with with botrytus than anything D's not has never been as big of a case for me but LEDs um just present a different it's a different ball game more biomass way more biomass under LEDs and when I say I get I would get botrytus I'm talking out of a 20 light room I would end up with maybe like a quarter ounce we're not talking like right but I mean I have it's something that you're normally not used to seeing it's just like the swell that you get of those yeah three rounds in a row no three rounds in a row using fade and not either age is going to water or or B pushing the nitrogen and the core way too much and getting giant buds at the end of flower and hitting that senescence right and and running it straight at first time in under LEDs I haven't got rot like over and over three times Raw three times in a row in the same room so it could just be luck maybe but at the third time I'm like all right like there's there's I mean and to your point the Magnesium the iron and the and the calcium and keeping those ratios in check all the way I think it's super important yeah super super important but the other thing that I'm saying is like normally I would do like heavy defoliation I think that right now I think I'm gonna have a better on uh yield percentage right now with not doing a heavy defoliation than doing a heavy defoliation so I can keep that nitrogen in that plant while I pull the nitrogen off yeah pulling out of the root Zone instead let the plant do its translocation I think I think that translocation is important for what you're seeing not just the lack of nitrogen because yeah you can get rid of it you know by defoliating right and that's part of what you're trying to do but but actually forcing the plant to go I have none in the root Zone I have to I have to change my behavior translocate nitrogen to finish the plant I think that that sequence of events is part of what we're attributing to to the results yeah you know and I without doing more more scientific experience in genetic work I don't

think we can prove that portion but it seems to be true across the board for everybody who's trialing it right but like you know how Brandon was saying like you know they get calls and calls and calls like the number one thing it's like hard to tell somebody because now you start to get you put out an amazing product right so you put out the amazing product and then you have those guys that are doing their you know a default like at like you know either day 45 day 52 day 54 like in indoor so they pull all the you know large families during the whole entire thing but then they're pulling out all that nitrogen that they actually still need because they're pulling the nitrogen off yeah from the plant from the plant so it's almost it's very hard I can see on your guy's side of being like hey this is this is when you're because you're giving it's funny when I talk to people and then they're like oh this is a feeding chart I have and I'm like so you're just following a feeding chart and any nutrient not just like Athena like you name it and I was like but you don't know what's wrong you think you have this so you're throwing more stuff at it you know like this is your deficiency and it's like [Â \_\_Â ] feedmore no that's but oh yeah yeah well I'm running a 1-5 I don't know what the problem is right right but but the the whole thing is is that like I can see where you guys are at on that because like and that was with talking with you downstairs when we're um having a bite to eat and we're saying like hey you know like now instead to keep all that the actual nitrogen from the plant without defoliating because we do it so we'll do the heavy defoliation so that way when it comes to like actual Harvest day it's coming through it already has its well it can just be cut quartered hung you know yeah so uh it's easier for us now that's where laziness starts to come in because it's easier for us so I'd rather have it or this time we're running it all all the way through and then we'll have it where we'll either defoliate and the Harvest days are going to be horrible sorry guys for everybody coming up soon but or it's going to be you know uh you know maybe a day before and then pull it and it would be fine at that point right right I mean you're not there's not much happening at that and when we did final validations of this we changed nothing from the rest of the practice everything else was identical between the control and the fade plants all the all the cultural practices in the room were identical so the defoliation was occurring at the same time everything was identical except for fade so we're we simplified it to follow feed chart EC3 all the way through because we want to make it simple for not just you guys in here expert Growers who love their plants and live in there every single day but everybody else who's maybe not a savvy so that they can get in there find a good starting spot and then you know you know hone in those last three days when are you going to defoliate now are you going to defoliate now that's that's the number one thing I think that's a the thing that's going to resonate most is like you know you don't like my my lowers that I have like and I don't really have lowers in the side of it but a lot of people just kind of let it go right you know we'll clean it up but my blowers are like the Expressions that the flowers are putting out now it's crazy like it's just different down there you know it's it's it's just like they actually you know I won't say like Top Candy like dogs but the finish of them I'm like damn you know yeah they look they look finished even if they're not going to be that's what I'm dancing heavy but they look right they're not just that light green fluffy lime stuff anyway yeah yeah well we got some cool stuff actually going to be done at the show that's what I'm like smiling you know we're talking about the look and everything yeah like there's some good stuff going on yeah I met with Rob I caught him on the way in and I I'm happy with what we got going on down there yeah yeah it's gonna be a good time yeah good time uh we were talking about hop Lane viral we'll just finish with this segment um but we were talking about hop late and virate in Michigan is it a big problem out there right now for the people who don't test it's not a problem yeah because they don't know see the thing is is there's you know my screen my whole entire thing is is that there's and I'm not gonna throw anybody on blast I really would if this is like a different type a podcast and throw some names out there that like I really on the Michigan side that I really want to throw on blast I'm still like friends with them but if I ever saw like two



of these guys I would knock their [ ^ \_ ^ ] teeth out because I've purposely selling HIV yeah I like what so what they're doing is that they're claiming that they're getting negative tests which they are right they're getting negative tests until they stress that plan out just a little bit and then all of a sudden it's like exploded right and I had it happen to we we brought in some cuts from it we tested it thank God but you know we've had some Cuts where we've gotten in and like we got there and when we're like sitting there we're like it doesn't look right just throw it like you know but but we have the test results from and it's like okay well I'm done like trusting like anybody it doesn't care who it comes from like and it's going crazy because there's people like I literally just had somebody hit me up for a state license facility that wants um uh 4 000 cuts their whole entire facility just got hit from it and I was like what do you mean you want 4 000 cuts and then I was like Dylan hold on I'm gonna holler at you after this podcast dude it's crazy though because like there's a there's this I don't know if you guys are MMA fans I'm a huge MMA fan and the Diaz brothers have this saying that like everyone in the UFC is on steroids they're like [ ^ \_ ^ ] everyone's on steroids you know because there's a whole debate about Ceres and I feel like that way with HIV with cannabis like I'm like no matter what you do with how much cuts are sold the rate that they're sold how many legal facilities depend I know I know a lot of facilities they don't even veg they depend on you or your clone shop and I want Flats of clones and you're opening yourself up for that that possibility of of just of damage right from from this from this virus from this virus and and like I test and we test and we test them but sometimes I feel I'm like the best thing I can do is use my eyes the super sanitary and and try to practice and and when I bring things in segregate them because I've tested things through to me I've tested things locally I've tested and tested and gotten different results left and right left and right I've had something test positive that I've ran it was the strongest plant and never and then I've tested that through another organization and it was clean I've tested stuff that passed and then we ran it and it started out right so I've just seen so many inconsistencies as well I just it's it's a it's a huge problem I think it's a play I think the only thing we're gonna have you have to make meristem tissue culture a standard period yeah a hundred percent is the key word yeah tissue culture has to be a standard in the industry at every single facility anywhere if they're bringing Cuts in if their everything comes from meristem tissue culture right it's the only way it's going to be able to be fixed and I honestly I don't even know if that's going to fix it I think it's so far past at this point in time with breeders that have bred with it and have it going on right now I mean there's studies coming out that they're finding it in seeds lots of lots of diseases are spread via seed coat yeah and so you have to do seed coat sterilization but you you get what I'm saying though on top of that so I think you know someone background right UC Davis heavily um and we fought with disease all day long people were keeping uh lineages of plants for decades that were just contaminated and sometimes you would have to grow them just so they could get the genetic expression out of them because they needed to basically just turn over the next generation of plants and so you do seed treatments you have to accept some of it you'd have to Coal plants we would do batch testing you know you'd test take 40 plants together and test them all as one and if that batch failed then you throw all 40 of them out and like you know you got to get efficient with your testing also you can't test every cut but you got to find a way to do it but you know there is a way to clean up plants it's just not simple you know I mean there's entire Industries built around cleaning up plants and genetics that's you know go look at the wine industry you want to see what it looks like look there because that's that's been a huge part of what they do is giving out clean stuff you know and I'm using the wine industry because I'm from UC Davis is is my background but you know they have a foundation plant program they provide clean plants you know and it's a big deal and they fight viruses all the time this is multi-billion dollar industry also high value crops you know it's it's there it's much more mature and they're still fighting that problem this industry doesn't have that kind of support right now and everybody's

everybody's a good grower they exist we have great genetics we don't have a lot of the foundational work on the other side and I think that's if this if this industry is going to mature in that direction that's going to have to happen yeah how did they do it at UC Davis tissue culture was a lot of it and testing and they would cycle through again so the original stuff before they did a lot of the genetic testing they would actually use rating scales so a lot of these nurseries started this work back with different flowers they were looking for viruses and they would take it in and they'd basically do duplications in tissue culture and they'd have a one through four rating system they use the best sensor on the planet the human being and that's what they do they look at the plant they'd make a judgment call and then they bring it back in and read tissue culture now they can do it a little bit better they'll take tissue culture from you know a couple cells from a meristem you know and then sometimes they'll treat it with different antibiotics or antiviral chemicals to try to clean it up and kill the disease off and then you start with a couple cells of meristem meristem is where it's at yeah you really have to I mean otherwise there's too many cells if you're getting something you know even a micro propagation is too big you got to get down there like tiny you know and that's and then you got to come back and that takes months you know it's a slow process but that's probably the only way you can truly get past it you know some of these sometimes you can also breed make a cross and if it's a disease that's not transmitted inside the seed only on the seed coat then potentially you can do seed coat treatments and you can get some things going on there but obviously if you're making crosses you just change your genetics you know it's a clone heavy industry I know for a lot of like you know for me not being in the legal market like you know I'm I'm a caregiver grower you know and like I've had anywhere from 10 to you know a couple hundred lights and anywhere in between and like I don't it's like for me like when I started thinking about like this other Avenue thing I got to think about now it used to be just like mildew and bugs that was all I had to think now it's like this whole viral thing it gives me a headache like when I got to start thinking about I gotta I look I got a quote it the other day like 50 Grand to put this lab into my barn a full tissue culture lab I had this company come out 50 000 fully outfitted and then I would hire somebody to pretty much run though I don't have the time to do that right Jesus Jesus 50 G's but it was a big room mini splits yeah there's a lot of people in Michigan that are trying to do that and get in full tissue culture and to be able to do it it's getting the varieties in right but other than I'm talking like how I've had we've had a couple people come talk to us like it's not just like the hood it's not this it's not that you know like it's there's a lot of other equipment that they're trying to bring in and do that and then starting but it's either that or you pay like I was and I have you know in my stable right now and I know I have more than most but probably somewhere between 60 to 70 different genetics so if I got to get on a monthly testing plan what am I looking at I looked into it I'm spending thousands a month to send in to either to me or Deep Roots local to continue to test cultivars and then what's the best best practice with that I I would just take clones and from a small plant I'd take it as early as I could take my sample and send it in and then then two weeks later I read something online and says oh you got to take it from my big plant and here so it is the headache it just gives me as is like a guy that's just trying to survive right in the industry I think so you I think for you and having a genetics business you and mobile J I think tissue culture the 50 Grands worth it all day oh it is it is and it's something that we're gonna it's something we're going to do for sure it's either that or I'm just gonna go back to like model crop and Gorilla Glue because worst thing I've heard all day the the insurance policy on if you because you any tissue culture you have tissue culture you could do meristem tissue culture it's just a process yeah right we want to do in our own genetics that we're bringing yeah 100 that's I'm looking at the future of like you know but there's but there's a lot of Home Growers that we deal with too like that have been decimated I mean I got you know six eight like guys that like they're they're they're like can't pay their mortgage now because they got hlv and I got to

tell them hey well you should get a lab it's gonna cost you like 50 correct you know what I mean and they're and it's just now you got to worry about it from seed and it's like I mean it's that's I know some people that that's decimated some of my friends like small 10-12 bike rows where they're that's how they make their their money to support their family and it's like you know and then they spend six months trying to diagnose what's wrong taking runoff numbers this was a year or two ago we didn't know it was as relevant in the industry you know they're taking runoff numbers for you know three four weeks thinking that's something they're doing why are their plans studying why is it you know yeah um yep it'd be nice to see if you could have something like uh if someone would come out even a non-mayor stem uh like TC to be like affordable to people because a lot of people don't know who to reach out to there's not a lot of like open tissue culture facilities that are you know like caregivers would be like oh here I'm sending this here I'm doing this there's a lot of people that are doing it themselves you know but there's not enough education out there not meristem though that's the thing mayor stomach has to be at unlike at least on the commercial level nah I mean does meristem has to be on a commercial level depends on how good you get I mean it doesn't it depends on the size your mirror stem and how clean you can get Could you teach Max how to do meristem yeah all right the microscope yeah extra to do meristem culture as a microscope yeah right and a steady hand in person you know and then it's the follow-up you know you're talking about how do you protect your genetics right I mean that's that's a big deal and how for you it's going to probably come down to isolation you know securing a facility yeah and and getting it away basically and you're gonna have to get in protocols in place because a lot of the big places that provide genetics they aren't actually testing everything every every month every year that's like you just said wildly unaffordable and the tests only have you know an accuracy of 90 well that's not good enough anyway so you have to come up with a different program and you have to come up with rating plans and and you know we'll talk about this after the podcast too but there's there's a lot of work that can go into it and I can probably point you in the right direction so for programs you should replicate yeah that would probably help you at least avoid 80 of the problems you're right huge [ ^ \_ ^ ] headache yeah like I I grew plants in research greenhouses that were intentionally infected with some of the nastiest diseases in California like tomato diseases in the middle of tomato country and rice diseases in the middle of rice country in California and that was their goal so we had to operate around them while keeping things that were adjacent clean and happy and healthy and so I feel your pain when you say it's a huge headache because the people who do the work on that they run around dirty handed touching doorknobs all day long and wearing their same lab coat in the place every day and you know I'm having a heart attack and a headache so you know people training protocols it's a lot of the work and it is huge work and you know those genetics are your livelihood so then you just need to plan for what you do if they do tests or they do have some problems if you had your choice would you put a tissue culture lab in your facility I just Outsource it at that point in time why would you Outsource it uh just because it would be something more added on unless like I I if I knew uh there are some very reputable ones right um I think it's I I'd become too OCD uh it and want to oversee the whole thing personally myself than trust somebody else if I came into that in the TC was you know what I think I think that these dudes charging 50 Grand washed all of us I think so I think they brainwash all of us into telling us that it's too difficult and you can't do it that's what I think I mean that's so they could charge us the 50 Grand so like personally yourself what do you think I mean you've done ordering here some wise yeah maristamwise I mean you've dabbled in it yeah it's it's doable I mean they teach they teach undergrads to do it all day long it's really just about sterile technique but what would the cost to put something not just like the Personnel to run it the cost of something to put something like that together personally with the right equipment you're culturing plants luckily and so then a lot of the expense and difficulty comes into different plants are much harder to initiate growth right yeah so it can take years for

certain certain species of plants if you've got a meristem could take years cannabis is not that it's not going to take you years you have to be patient but there's nothing there's nothing that's actually going to stop you from doing it like you already possess the skills you just told me how anal you were about your room we just talked about this beforehand you know we talked about some of the frustration like you know what you deal with um if you already have those qualities you're qualified to do it right it's just a matter of following a procedure following a protocol and that's what it comes having the proper Sops but like some I'm just talking about like the cost like what would you see the cost in placement to do something like that five grand five grand I mean how nice would it be if Athena came out with your own uh mayor stem you know I'm just messing with you no I'm just messing with you but like that's the thing is that I yeah right yeah Stoners dude I I think a lot of uh the the problem is is that it gets sold to that and it's like that and they're like oh well here you need well no you know this Hood you need this you need this and then also don't forget about all the HEPA filter Vector you know like yeah they've been terrified everybody's been terrified because they think that failure is going to be some catastrophic thing so you think failure failure mostly comes down to you got to throw away some petri dishes right what what is that at the end of the day that's not a huge failure right then you try again that just means that your protocol was a little bit off but it's not like you created more disease right you know you didn't the worst case scenario is just not that worst case I think is what it comes down to its time without a doubt but the flip side is you know the risk reward right if you get it right now you have a clean mother plant that you can take thousands of cuttings off of that you know are virus free right and what's that worth hey Chris can I ask you a question yeah um so like in a different industry like you mentioned Tomatoes or let's say leafy greens or anywhere else are they going to go pay 50 grand for tissue culture are they going to be like dude you're [Â \_\_Â ] and you're just getting you're you're in the wrong industry is it like industry to Industry for instance like you can go buy rock wool grow down rockwool a tomato farmer does not pay what we pay for road at Rockwell right like I I um there's there's green taxes real right but it is definitely a real thing so sometimes you know even even when I was getting this this quote done I did have that moment where I'm like am I just getting treated like this because I [Â \_\_Â ] grow pot lab equipment all this stuff is everything's on wildly expensive to some level right um because I always approach things and never tell people I need anything for cannabis it's just for research um so you're getting a little bit hosed on that end but what the size and scope is dependent on the difficulty of the tissue culture right so for something that that's more easily tissue cultured it's going to be a lot cheaper and then it comes down to was it developed over years like something like if you're doing like grapes it's a longer crop and we're not talking about a short-term annual it's going to be a different thing you're shooting for you know and preserving genetics that are 100 years old or something it's a different process it might take two years to go from meristem to plant that's a long time so that is going to be obviously a very different process and procedure and so it's going to be more expensive if you're talking about something like tomatoes you can grow diseased tomatoes harvest the seeds they're and just do seed sterilization technique for most of these things anyway and then we'll just select the good ones you know like it's it's a different process so I think it really I told you not to call um so since cannabis is such a fast-growing plant It's relatively easy to do tissue culture tissue culture at least from what what I've seen you know and talking with with jungle boys and other people who do Tish culture and cannabis it is not a challenge you know it's mostly follow the procedure it's sterile technique now you're back down to sterile technique and that's something that people can get trained to do you know that that's it's that simple you know and like I said what's the risk you throw away a few Petri dishes you know no I hear you I I haven't even tried to think about it on the side because honestly I get I got more deterred it wasn't the the price it was the length when I'm talking to people and they're like oh like we can if I'm

sending it out they're like oh it's you know six months to a year for you like get it back right and are you gonna get one plant back or what are they giving you back I mean I guess that's the real question too that's the whole entire thing you know and then come with a certification that it's clean that's you know this is where all these are for that don't you yeah of course and then it might be more months and then they pay you they uh don't forget about the storage fee the storage yeah it might take that long if you have primogenetics and you only have one plan and it is you know it has virus you might take multiple meristem cuttings to get to the results you want you know that might be a true case if you want to save that genetic that might be your only last choice so then it might be longer you know that's that's again that's a risk but it seems worse if you have to Outsource that and have somebody else do it you know that's obviously more expensive right if you had your own lab then it's mostly a little bit of time um and then the testing itself but you're going to be paying if they're cleaning up a plant for you you're paying for the testing also because it's not like you're getting testing for free they're going to charge you double yeah because they're to double tax that's the way it's definitely going to happen so I think I don't know if it's available I bet people would use it I think a big one too is retaining your your genetic library because going up to my spot I'm walking through the garden I'm like Hey where's the where's the sherp head uh we got rid of it low THC tester beautiful plant I'm like man [Â \_\_Â ] like we should we should have kept that right and it's gone forever and we don't have it well we could have just done a tissue culture cut and held it on the shelf for two years and not touched it right right and it would have been fine man that's sick I don't think about that enough oh because you can because I may come back teammate teaching numbers and it may not matter in 18 months you're going [Â \_\_Â ] where's that sherbet yeah she was a banger in every other area you could be you know say you have a list of customers and everyone's asking for that sherp head like okay let's bring it back bring it out or if you've got a better breeding program of course like maybe you want to get that for some crosses like there are reason to preserve genetics for sure yeah JB does that pretty well with bringing back stuff like they'll re-run like a genetic they have in the years yeah I love that when they do yeah genetics forty five hundred four to five hundred oh I was about to say fortified you got to step your game up they also keep their mouths yeah they also keep their mouths if you want to have a breeding program you have to have good ballad from a male yeah I hear you but I mean that's a lot of stock if it's not in tissue culture it's like I'm just thinking the square footage so it would take up uh exactly tissue culture it's what two three cloning racks right you know no it's it's how many pictures can you put in it that by that you know that wide sure yeah I mean you need somebody to curate the collection for sure you know but it's not like trying to take more cutting you know you're just maintaining a population in a totally different fashion and they're sealed nobody's touching the actual plant so it's not getting re you know affected or infected by disease all right think about it you know jungle boys does a cross and they did it with a male and the seeds that came out of that they sold and everyone's just producing some of the craziest fire from that mail but then they don't have the mail anymore yeah but now they do because it's all in tissue culture no I hear you and it's you know it's crazy on some of the varietals that people just like oh we lost that or hey you got let go or it did that because there's definitely some that like I Let Go 10 years ago that now I'm just like damn I really wish I had that cut and even though it's a cop from 10 years ago it doesn't matter it's just like I still you know could have done something with it and I think that's the other thing what I thought like hash strains there's a lot of things that people are overlooking on the hash wise yeah so yeah for sure anytime I want something back I just call Dylan pretty much and then I just cross I'm just crossing my fingers I'm like [Â \_\_Â ] I hope I'm not giving out hlb I mean I I swear I talk about HRV more than anything else for sure I mean I understand I know I know I know it comes a bit you know so now I think the biggest two benefits are the clean genetics and then storing your genetics for years without touch I've never thought about that because right now instead of

having those 80 I'd have like eight yeah the other 72 I'll be like well I'll bring them back next year they're sitting on ice this one you don't have to once you've tested it down and keep cloning your testing program just changed right yeah well right here and I hate to say this so like okay how is it for testing for you guys you guys have likes in here in Nevada is it stringent microbial and THC and all that kind of stuff yeah if you guys visited your testing facilities that you guys go to like has anybody have you personally visited I haven't personally know okay so I I visited a couple testing facilities in Michigan right so what they do is on Monday like you have your Harvest you get it yeah it's all you know you you get your like 14 day like we do a 14 day hang and then after we do a 14-day hang it's normally about another like 10 days of trimming and then after that it's like make sure like while it's getting dropped whatever gets dropped and bucked and trimmed at that point in time then it just gets like bagged and then it just gets opened after that with like the terp block bags or whatever it is until the whole entire Harvest is done the whole entire Harvest is done I just tell by just you know you have a hydrometer you can do whatever but I feel good to test right that's where I wanted the moisture content these [Â \_\_Â ] do what I found out is if you go in on Monday what they do is they plate it first for microbials but they put your [Â \_\_Â ] in a refrigerator they don't just do like straight like oh here we're gonna test for THC we're gonna do this we're gonna do that so if you get it on Monday at the end of the day then put it they and they don't plate it they put it in let's say they pull it out on Tuesday morning so then whatever moisture content that you have in there it goes three days four days in there and then they test for THC maybe on day five so it's sitting in a refrigerator and I was like that's where you keep my [Â \_\_Â ] weed yeah you know but that's what they have to do for sterile purposes and I'm like oh [Â \_\_Â ] I was like why don't you just test the THC content first with the moisture content what do you guys test to see what the moisture is at and they're like whoa yeah you know I know there's I think there's too many variables here on the testing Market other things because I was like you know because they can't manipulate a sample and no one wants someone to manipulate a sample but when you're talking about a THC percentage like a lot of us do because even though you really probably love that flower probably yielded gray and it was a low tester yeah that's the only reason it got X is because it was a low tester um now let's say you talk to a testing facility and you're like hey I know you can't manipulate a sample you can't physically like dry your sample down you can't do that but why can't you have like some crazy D Hues that are inside this room just drying like you pull your sample out and soon as you do that it's like you know there's so many different variables that they're that these testing facilities are doing so there's some testing facilities that are getting crazy high THC percentage numbers and some that are getting low because they're doing those variables they're plating it right away as soon as they get to the as soon as they get there they're doing THC right away and then they're plating it for the microbials for the colony forming units for it but then there's other facilities that are like oh here we're going to Plate it and then we're going to leave your [Â \_\_Â ] in the refrigerator for four days I mean How's that gonna affect your actual potency from it are you sending out the same sample to two labs simultaneously from time to time just to kind of oh yeah so like we like those results that pisses me off more than anything I know I know how bad those are like it's a lot of samples but but here's the difference here in Michigan the lab comes there and picks the samples so they physically come there there's no [Â \_\_Â ] on it like you can't just be like oh yep I'm putting this sample in the bag oh these ones are going like here you go yeah same one same same here in Nevada there's other states that aren't like that you send your samples to them oh they just roll it around and Keith and send it on its way that's but but you get what I'm saying there are 52 right put a little too much kief on that one yeah you know the that's that's what some states are doing I mean like I've heard crazy [Â \_\_Â ] from what people are doing you know drying it down to like six percent moisture kind of time and then like like you said like keeping it like doing like whatever but then I I ate a homie out in uh OKC they did the

exact same thing and he did it dude his whole everything failed for heavy metals because you have a chance a higher chance of failure because he's like the Wild Wild West right now down there dude so um yeah I don't know it's it's to let go of varietals because of certain things like that it's just heartbreaking because it's like damn that's some some of the best smoke that I've smoked in my life's like 16 17. testing wasn't an issue until like the last couple of years I'm a fan of low THC weed lower THC weed I like flavor but yeah these days so yeah me too you guys get me [Â \_\_Â ] ripped and wasted Henry's gonna be here he's gonna get me [Â \_\_Â ] faced in about one puff everyone's got to keep it I don't know how this is gonna go you seem to like look what I rolled you you're right it's gonna be a [Â \_\_Â ] ass joint only no this is a it's a good podcast guys well I appreciate you for uh having us yeah it's just the beginning we literally just got off planes we're too [Â \_\_Â ] starving again we're gonna go to uh starving he's super hungry after this yeah no joke it's gonna be a big week tomorrow's first day of the show a lot of things dropping we got three things dropping and we're really excited about it we've been working it on it all year yeah I need a break buddy yeah it's been a long time don't worry hey you don't know what it is I don't know what it is inside this makes it all worth it for me though you know yeah this does I think a confirmation though I just gotta I think I got enough to just have dreams at night about what it might be for us like just a tip yeah it's it's uh it's cool to do stuff that's real and that's really genuinely impacting people's lives in a major way I want to ask you a question before we get done yeah what what's your no it's not about what's supposed to be released um what is your what's your uh a passion what's what's your passion behind all this like where where does it come from behind all this I think because I think I think a lot of people just I think I know but I think that uh I just I think it's something I want other people to hear where your passion comes from shopping at a hydro store I think is like 21 22 and getting Knowledge from the guy working the counter and I go and I put all of my debt on credit cards to build a 16 hour rent a house move out of my parents you know when I was like 19 and you know rented a house put myself in a ton of debt on credit cards because I knew how to build my credit at a young age and saved up all my money to do this and get advice from the guy behind the counter at the hydro shop and I'm not saying all hydro shops are like this but you're relying on the information given by that person right and you go and you put your life on the line and you throw it all in and flops and you go and you look for more knowledge and flops again and you just next thing you know I'm 200 000 in debt because I've been spending money on nutrients and fertilizer and rent and it's housed while trying to run a small pressure washing business that I you know was I was a pressure washing and cleaned Windows right that's that was my main business where I made money click decks and stuff I pressure washed like gas stations nice malls nice yeah I had like two trucks I'd work from you know I'd start about midnight and get off about three four in the morning sometimes later just depends go run my hydro shop check in try to sleep a little bit in the middle of the day do some lights run had some lights and I just think that from my personal experience losing everything and having to file bankruptcy because the knowledge I was given and how much I invested into this grow these different grows and putting it all on the line and just failure after failure like I don't want anybody to go through that [Â \_\_Â ] and so when so when we're giving out knowledge as a company I think what drives me and I think you as well and you our team dude is driving driving other people's success yeah I mean the reason why I started my Instagram was to go find knowledge you know I was on the forums back in the day Ivan you know all these guys and um I took this job to help the next guy you know um it's I was in a lot of these guys shoes you know and I put out information just just to help people and and that's why I have the Instagram following I do whether you use it or not whatever but I just like helping people so that's why I took this job you know and it's been a blessing man yeah it feels good great company dude there's a lot more important things in life than money no there's there's time there's it's hard work that's period you know and passion like the the one thing I love about uh you know working working with this

group and and one thing Iris I've always respected because I knew you were going to say some along along those lines it's and now it now when you just said that story now I now I know I just instantly thought of Owen he's not here but Owen's story that he told last year about going to Home Depot and going in debt on a credit card to build this grow no no I knew because he's like Brandon sent me lights and so I just all these things that they just make sense to me now about like once you probably saw in him when you heard his story right because you were there yeah right you don't want to see anybody else go through what you had to go through and you don't want to see him go through what you just went through not in the same way you know what I mean I take time out of my day to try to like for us this this information this Collective knowledge that we have as a group on people if they want to accept it because like you don't have to stumble you don't have to fall and like we'll be here to help you you know and we're gonna and we're gonna put in the time like even with fade we put in almost a Year's worth of collective stuff behind it's not just a white bottle that they're going to see in a five gallon jug right it's like round after round of around we're risking crops we're like we're gonna [Â \_\_Â ] do this we're gonna make it right we're gonna keep trying you know just just to put something collaborative collaboratively together you know because we want we want we want to produce better stuff for for everyone it's [Â \_\_Â ] sick I think Athena as a whole the villain of the the villain that we're up against is misinformation yep that's that's what we're fighting damn that's deep I mean like really when you actually think about that I never really I mean that is it's a problem a lot of things that I I've personally myself seen and talked with people that are running certain things they'll message me and I'll answer it I'll be like hey what's going on and I'll give the time my wife hates it like absolutely hates it but uh it's I know personally I've changed quite a few people's lives from being uh because they put in the time to it I I gave them the pieces they put in the time so not just like oh I change it just from spending like you know I'm talking months like there's a guy over in Africa right that like this is what he does right so I actually got some cuts out to him believe it or not and he's like respect yeah exactly in Africa hey this guy's the Clone plug in Africa now they got you on recording are they [Â \_\_Â ] right right well hey it's all good there's uh there were hemp but uh you know like the whole entire that shit's legal I think I mean that's good anyways something like that yeah but the whole point is is like it changed his life right I mean the guy's probably trapping like crazy not there but that he didn't like he had this like uh it like what do you send him a cop huh would you send them coach fans yeah yeah I'm serious I did that's the highest testing THC we have right now yeah but it also smashes at the same I mean Greg's going to be here in a little bit too but um that that one that one smashes on yields especially and everything the whole point is is like it changed this guy's life and to be able to do that like where you're just saying I mean I had it where I mean I got at one point in time I got just a lot to my head and I got robbed to like 15 units and I needed that money to pay my electrical and then like make my money that I was gonna make for like everything at that point in time and then I'm like coming home and I'm like what the [Â \_\_Â ] am I gonna do now like how am I gonna hustle in order to like make this like I have like five days and lights are turned off like how am I gonna put this together like I needed that and then it's like it happened right yeah so that's just where it comes from so I resonate from that I mean it's a big thing cultivators have so much adversity if you really think about I mean which worried about the law how do we pay this electric bill it's too high do I pay it in cash or credit card trying to find the right place to cultivate worried about the landlord you know you're worried about HOV all these factors everything you said actually he just heard hlk so the one thing that you don't want to worry about is the information that you're getting from the company that you're buying from for sure that's always been our thing right I mean it's the disinformation you know I sat here and for me this is how we found each other right and I want to go back a little bit of that is everybody in this whole company loves to help people like almost to a fault right we'll all you talk about your wife



getting mad I'm sure we've all had that conversation with our significant others right of like why why now because they need help and now is when they need help right and but that's just what we do you know I mean that's part of our culture entirely and why we're all here I want to help and part of that is getting rid of the misinformation right the BS the 32 bottles all this thing 140 different greenhouses and research projects and nobody grew a single research plan with any of that [^\_^] zero you formulate across the board and no single scientists believed they needed any of that BS so turns out you don't need any of that BS and then you grow fire crops so I you know for me it was frustrating that's what got me into this is that I just none of it lined up you do actual science do actual research and it all says you do this and then you would go and look at cannabis industry and they'd say do all this and it was none of this and I'm like I don't know what the hell to make of all this and like you know so that's a it's a shock when you're like I go to the grocery store same thing I'm like what is none of this works with what's supposed to be done and then it's migrated right and slowly just keep pushing the same tell the truth give the right information let the grower do their job and stop fighting them clean simple clean simple nutrients yeah with with the right information behind it and with proven results and a track record of testing things you don't have to add all of those things my grandpa used to say keep it simple stupid yeah it'd be like huh yeah you just call me stupid I think there's a misinformation too with Athena because I got a lot of people that hit me up and they think it's like some company I'm like I don't know what other nutrients you guys have ran this is the easiest thing I've ever done in my life seriously they're like I don't understand your stacking and I see Max's chart I'm like whoa let's back up a little bit as far as the you know the feeding chart and the inputs it is the easiest thing so easy well that's so simple the nutrients are simple and so that way you can focus on those other pieces that are going to do the work right nutrients should be simple we help you focus on the plant stacking easy different cultivation techniques yes that's that's more of the work that we're trying to help you out right it should be simple on the new friends yeah and that's what we're trying to bring out there kind of want to talk about Pro and Blended a little bit too kind of coming off that you know you talk about simple they are simple don't get me wrong but Blended is simple you know like you can push no runoff heavy runoff and you're going to see good results Pro you know there's there's a fine line you could push little no runoff for three days and your EC is high in the medium which is it's not a bad thing it's a really good thing you know you can stack like you know heavy Bud sites come stretch doing that so you gotta obviously play around with it but bro like the stuff itself is it just kills it no matter what so yeah cool yeah it's gonna be a long week guys yeah right yes sir I'm excited for it all right appreciate it let's go get some food yeah rock on all right oh thanks guys

so bro first of all i don't think you get enough respect on your [^\_^] name and what you've done and i'm gonna share just my personal opinions like i don't speak for [^\_^] anyone else but like i think my opinion is very strong and like has a [^\_^] just deep cemented you know place in our industry because of like what i've gone through and like what i've watched happen from like the hills for those who don't know like you've been [^\_^] building badass [^\_^] companies for cannabis for a very very long time and like you've been in these trenches endlessly since the very very beginning like myself but like the [^\_^] you've done is [^\_^] legendary and like you have a spot in the hall of fame at the very [^\_^] top and i just think it's important for you to hear that from someone like me thanks bro i really appreciate it like thank you dude from [^\_^] air conditioning days and starting your own company and like the [^\_^] mind and the pivot and a lot of this [^\_^] like i talk about and then like at the hardest time in the [^\_^] world to like come into an oversaturated crazy cutthroat

[^\_^] market like this and and be like i'm forging my [^\_^] way and we're gonna start a lighting company like then it's the best lighting company in the [^\_^] world you know and then to follow that up with like nutrients is like insane so you're a [^\_^] goat times a million you're at the top and like i don't give a [^\_^] how you feel or what you think about that but like it's the truth bro and for me it's just inspiring to be able to sit here and like have conversations and like now in my life like be able to be on a team with like [^\_^] great commanders like you thanks bro i really appreciate that of course you know it's it's all about the being in the garden just like for you for sure um but it's more than that because like to take that kind of like weight like it's different than like being in a garden like a company in california on top i mean like it just keeps [^\_^] compounding and compounding and compounding like the splinter effect is [^\_^] crazy yeah you know i think a big deal is is the what drives people you know and different things drive different individuals and what drives i think the most successful people aren't driven by money i think they're driven by the desire to create something out of nothing to do something that nobody's else done before and and really just to to make an impact you know on either the industry or or you know for us it's the cultivator so thanks man i really appreciate those kind words for sure thank you and i mean for those who who've been in this and know like you're [^\_^] if you think money is gonna run things if you're getting in this for money like there's a million better things that you can do you know what i mean like i'll never forget this time in in my life it was probably like my earlier 30s i'm gonna turn 39 this year and up until like for so long i carried so much like [^\_^] just worry like immense worry in my life like growing up like is my spot gonna get hit will i lose my income how much money do i need to make to to [^\_^] be able to be safe like my my time growing up was not spent like oh i want to have a commercial facility i want to [^\_^] have a brand like i was different you know i came up totally different my [^\_^] point of view is different my whole time as as a young man i'm thinking what do i have to to have like what do i have to accumulate to to be free like the last [^\_^] job i feel like i ever worked i was like 19 and i'm like okay like if i want to be a free man until the day i die like how much is that number like how much do i have to make and like there's so much worry and [^\_^] for years and years and then one point like i want to say late 20s before i got raided and [^\_^] something like clicked in my head where it was just like i i shifted my momentum to just grinding it out and [^\_^] doing as much as i can and like my focus changed and then like dude it just started coming and coming and coming and it's come ever since then because it's not been like my main [^\_^] priority and my way of life is just worrying about money and how much i have and can i pay my bills and what am i gonna do you know yeah your 20s is a critical you know time in your life when i think a lot of us are trying to figure out the direction in life where we're where we're headed where we want to go what drives us like what what excites us you know and yeah and i've seen a lot of my friends that have found their niche and gone with it and you know i was lucky enough to find something that really drove me to to work hard and be passionate about something and you know back in when you're 19 and you're going through your 20s i mean um that's where it all happens you know you can either you have two different roads ahead of you you know you take this road you end up you know for sure and then you take another road and you end up killing it so now i appreciate it thanks for being here bro of course thank you i'll be here [^\_^] anytime i'll be anywhere else like i'm a [^\_^] soldier for my team you know what i mean like the for me like it's important like i'm my life is full of fantasizing you know and for me like i i love feeling like i'm this like [^\_^] black knight we're like i'm part of the team i might not be here on the day to day but like when you need me like i come in [^\_^] uh as a [^\_^] sword baron you know how often are you traveling right now because you've been traveling that a lot i have been traveling a lot like i travel right now um about once a week i go to michigan once a week once a month for a whole week seven days i'm not really traveling outside of that like i was going to oklahoma michigan

arizona mississippi like different places that like you know hired me for coaching or consultation i hate using that word you know but um i was doing that for a while and i've just kind of like backed off that to strictly focus on like the project projects i have in michigan so something happened like you really exploded starting about a year and a half ago like what was the change mentally what happened it wasn't even like uh mentally for me it was just like i was coming from the black market you know like i just had my license farm in calaveras they just banned it so like me and my wife had gone through everything to get like that place licensed and and it was self-funded and i built everything myself and they came and banned it and so like when that happened i was like [Â \_\_Â ] dude i'm i'm done like i'm not doing this [Â \_\_Â ] again like just seems like it's been so much [Â \_\_Â ] work through the meat grinder and in and out and i'm like dude i'm gonna pack up my horse and [Â \_\_Â ] slowly ride into the right into the sunset and right at that time brandon from mercy wellness had reached out to me and he's like man i've got these cultivation facility coming online and we just hung the lights and you want to take a look at our plans and i've got some other projects you know i want to do with you and have you a part of this so like i made that shift right then and i just started like showing my instagram stories every [Â \_\_Â ] day like all day long like through the build process and then every single [Â \_\_Â ] day there was no day where like i skipped or did anything so like i was on this and and up until that point some people had followed me and then i went to like what i consider this grand level you know like it's like i stepped onto the major leagues for the first time and i'm the [Â \_\_Â ] rookie and i was picked like 99th out of a [Â \_\_Â ] hundred into the draft you know what i'm saying i'm coming into this big stage two years ago where shit's fairly you know fairly new and everything and i just laid it all out there you know like my who i [Â \_\_Â ] am my attitude my outlook on [Â \_\_Â ] just everything all day long and just people started gravitating towards that and and i built i had a lot to do with building this spot i'm in doing the plumbing [Â \_\_Â ] building the kits the irrigation kits like showing my trials and my tribulations my fails my successes but like crushing it you know what i mean like [Â \_\_Â ] crushing it when i say crushing it by myself with one other employee named alex doing all the metric all that [Â \_\_Â ] sourcing our cuts like i basically went into that and took over this building you know what i mean because i was like look brandon [Â \_\_Â ] hiring a cultivator like i can prove myself like let me show you you picked the right [Â \_\_Â ] person yeah reading through the questions that we got in you have a [Â \_\_Â ] massive fan base people are like massive it's it i don't even think about it as fan base because like to me i'm just a regular person like i'm another [Â \_\_Â ] guy in the trenches my story unfortunately like i've been through a lot more [Â \_\_Â ] than the average average person but i've always told myself like well like i carry this burden because i can handle it like any situation i [Â \_\_Â ] get into you know now later in life i realized like i do well in [Â \_\_Â ] up situations like me we don't want to be in in them but like i can keep my [Â \_\_Â ] together and and and just get right into the right mindset of getting out of it and so for me i've just felt like i i carried this burden you know for a lot of people basically i think what sets you apart is you have zero filter you speak it like it is there's no [Â \_\_Â ] this is what it is like it or hate it take it for sure yeah and like you don't have to like it to still win and a lot of people don't yeah but you still you [Â \_\_Â ] roll with it they still [Â \_\_Â ] with me yeah they still follow me they still want my tech they still want to [Â \_\_Â ] be a part of like the [Â \_\_Â ] i'm doing and that's cool like i'm not here to make friends i don't want any [Â \_\_Â ] friends in my life like who who's part of my life now is who i've got like i don't need no one else i don't need to hang out with anybody so if you [Â \_\_Â ] with me right now like you're winning like you're gonna win even if you don't like me you're gonna learn from me you're gonna learn from like [Â \_\_Â ] i've been through you're gonna learn from my actions you know you can you can just i'm not gonna block people like when people talk [Â \_\_Â ] about me and [Â \_\_Â ] like i'm not gonna block them like i don't give a [Â \_\_Â ] no what's impressive is uh how you respond to him like you welcome it you're like

let's go boring as [ ] sometimes like like look at razer ramone and [ ] ravishing rick rude and like i've always been drawn to these heels you know what i'm saying like these are bad dudes but like we like them like there's something about it venom you know what i mean like [ ] um who's batman's [ ] crazy arch nemesis with the mask and [ ] uh joker and then was it bane i don't know bang so like just like we like that kind of [ ] like [ ] everyone want to be cookie cutter and be like bro like it's gonna be so good dude like [ ] love you and then like you know what i'm saying like [ ] that guy like jesse's a punk [ ] you won't share that cut you know like just [ ] be real like yeah like i'll sit at at a table and break bread with [ ] snakes and and evil [ ] people just stay in your basket or i'll grab your throat you know what i'm saying like like we're cool as long as like you show me your true intentions and be who the [ ] you are where did you grow up at where did this all where did you where did you start cultivating where did you grow up what's your story so i grew up in mendocino county in this small little town called walala had the most amazing [ ] childhood like anyone could have like me and my brother were born in this log cabin like half the size of this room and like that log cabin was like trees that my mom and dad like [ ] cut down with an axe skin the bark carried these [ ] logs to the site chipped it and like built a log cabin like [ ] abe lincoln style no power no running water you know no flushing bathroom [ ] like that and like we were born by candlelight way out in the [ ] woods natural birth brother born at home in a log cabin in a log cabin with no power no electric candle light you're [ ] savage well my parents all make sense now my parents are sad this is all coming together like my dad is a [ ] another animal like just watching him like grow up in like the memories i have of him he was a [ ] savage like he came from new jersey like in the 70s with like a dream with my mom and they got this this um you know the good good earth almanac have you ever looked at that book no [ ] badass book like dude this book is like a picture book of survival and like he got this dude it's amazing book it's paperback i don't know where you get it now but it's it's sick i'm gonna write it down i listened to the west point um yeah last night 25 minutes on the way home dude that [ ] savage and he made a lot of good points amazing like ev the end of that i i suggest anyone listens to that it's the [ ] uh 2022 commence commencement speech of west point graduates amazing and like he touched on so many amazing things with just the camaraderie and who we are as americans and what we believe in and like that's what america is [ ] to me and we'd have no problems if everybody took that oath that lived within our borders yeah 100 when did but going back to growing up yeah so we're born in this [ ] log cabin me and my brother so very humble beginnings as you can tell you know like my dad's splitting firewood and selling firewood to make us money and so we grew up like just imagination like my imagination was everything and i was so into like [ ] nights in the round table and you know my name's lance and my mom told me i was named after sir lance a lot and just like put a lot of [ ] into my head from like a very young age you know instead of like dinosaurs i'm into [ ] cowboys and indians and vikings and and all that kind of [ ] so growing up was just that you know when my brother was six and i think i was two my parent or my brother was two i was six my parents split and my mom left my dad started over again so like they sold that place and then we started on a raw piece of property and we lived in like a plywood shed a quarter the size of this [ ] room so just very very humble beginnings and like all imagination and like playing out in the woods with sticks and me and my younger brother did [ ] everything together everything and so like that's just you know like that that that's the principles of like what i as i'm becoming adult like that's the [ ] i'm into imagination and and these [ ] badass warriors you know in the past no i was thinking about it last night just because hanging out with you you you're a really smart guy and you know and you're a different type of smart though you have a mouthpiece that blows me away i mean you that you just speak right off the tongue you don't miss a beat and when you were talking last night and telling your story about growing up and and kind of being

bored and creating your own you know imagination and doing all this stuff in the woods and and i was like we're real big we i have two little girls and we have a four-year-old she's almost five and a lot of her friends have ipads for sure they facetime each other and you know one of the other moms are like hey get your you know daughter and ipad so she can face time with my daughter and my wife and i are like you know we kind of want her to be bored a lot of the times i'll come around the corner when i'm home on the weekends or something and she'll be in the garage and ha just tear the garage apart and just be playing her own little thing by herself you know creating her own little world doing her own little thing no ipad no tv you know she's only allowed to watch tv at night before she goes to bed and i think it does something to the brain where it makes you more creative and it makes you build a different kind of i don't know mindset for sure social media in iphones and ipads are an another level of like a different level of addiction like yeah i don't have an addicting personality i can [^\_^] and i'm good and sober nowadays and everything but like i can party with you all night and never like touch a drug again or be like oh i want to do that or like i've been very lucky in my life to not have an addicting personality right and there's these vices that other people get stuck with and they get addicted to dude what they've done with like our phones and ipads it is by far the easiest like if addiction of alcohol cigarettes coke pills all that shit's like right here it's this much easier to get addicted to that and like the whole world is addicted like you see grandmas like in the airport like when i'm walking around and looking around and it they're scrolling it's like a [^\_^] phenomenon addiction yeah yeah and like i'm bad at it too you know like you might go to do a couple [^\_^] and then like you're stuck and like you gotta snap the [^\_^] out of it because like that's all wasted time that's like minutes in our day you know what i'm saying and like we have to strike [^\_^] now with anything we're doing do not wait you know what i'm saying i make a to-do list right and at the i have a to-do list i look at every day you know i have my calendar and my to-do list at the top of my to-do list says don't waste time on instagram 1000. i mean you got to be conscious of it and i want it to hit me in the face every day because you'll get lost in there and just kind of get in your little zone it's so important to balance it out and it's worse than it's ever been yeah our our feeds are full of [^\_^] ads we suggest this and this and this all this [^\_^] i don't want to see i don't even see people's posts that i'm following my response rate has gone down my interaction level has gone down like it's a [^\_^] cancer dude and they're like they're not on our side but like we have to play the game like for those of us relying like myself i rely on instagram for business business created my company and my business because of [^\_^] instagram and like in such a hard time and and this crazy [^\_^] [^\_^] we're going through in our industry and times and rising costs like it's [^\_^] hard enough to do business yet they make it a thousand percent [^\_^] harder for you as a distraction they're like hey let's fill your boots with water and sand and climb the sand dune like it was hard enough bare feet but now like i've got these [^\_^] weights attached to me it's just so much harder you know now it's just important to stay conscious everything in life is balanced for sure you got to balance everything so i'm trying to like my main focus and thought behind of like what everything i'm doing is like i want to do [^\_^] for people you know what i mean like anything i'm doing or listen i gotta make [^\_^] money you know what i mean like you have to make money to live you have to make money to have events and and companies and be able to do all this [^\_^] and employ people like i've got to make money can't do it for free so i'm trying to do things that people really like and want to engage with and do things more like that help benefit other [^\_^] people and i and and i'm just on the philosophy that as long as i continue that is my mission and helping other people grow and doing things for like the general good of the community and [^\_^] like that i will be favored and people will [^\_^] with me that's exactly how you do it you know that if you want to drive success you for yourself you drive success for other people first and that's the most rewarding yeah 100 the the biggest rewards and like i'm on another [^\_^] level right now than i've ever

been in in my life and that's because like so many people are sharing in my success whether they realize it or not anyone who [^\_^] spends some money and gets me on the phone for 30 minutes or buys one of my [^\_^] kits or a 20 hole punch or anything like is a part of my success and whether you [^\_^] like me or you don't or you want to put me on mute you're going to win with me and your [^\_^] corner whether i'm holding your water bottle or i'm [^\_^] mopping up after you when you're done training in the ring it doesn't matter what the position is or cleaning the [^\_^] toilets 100 you know as long as you have me on the squad you're gonna do better than if i'm [^\_^] not on your team yeah when did you start growing when was your when did you plant your first plant so very interesting about that like from like i knew that i wanted to grow when i was like 19 because i'm like buying weed and slang and i'm like bro i need to [^\_^] getting this who's growing it where is it coming from like i planted like everything i do i plant these seeds and like sometimes it takes years for a [^\_^] plant to grow everybody's spoiled with cannabis and [^\_^] hits in 90 days from the time you plant a clone and they think everything in life's like that but like it's [^\_^] not you know what i mean and like if you can have that mentality and that focus and you can remember your priorities okay i planted that seed okay well [^\_^] in order for me to like achieve that seed like i've got to go through all these other miniature crop plantings and these other successes because like you can plant a seed and you can't get to the [^\_^] fruit that that that seed bears you have to have other [^\_^] built to [^\_^] get up there you know what i'm saying like i like setting big [^\_^] that'll take years and so like when i was 19 i'm like man i gotta [^\_^] get i gotta get a grow like i'm selling weed like i gotta [^\_^] get a grow but even at that age i'm like man i'm not gonna get a [^\_^] rental house i'm not gonna go put money into this like money was so little dude when i'm talking 19 i'm making [^\_^] seven dollars and 25 cents sweeping a floor of a body shop like your paychecks are like 300 bro you can barely live and you're like 19 in this new world and you have no [^\_^] skills and it's like [^\_^] dude this is going to be a long road to the top like i need to do something else like this isn't isn't the way so i remember just knowing like i have to get a house and i have to own that house so nobody can like tell me i can't grow in that house you know like i can't be putting myself in some situation where i'm gonna learn and figure this [^\_^] out like where i can just get booted or or taken so i officially planted my first garden when i was 23 years old 24. i just turned 24. so i bought a house in sonoma county when i was 23. saved up making like 15 bucks an hour saved up save saved up some paper i didn't even have like a lot of paper saved up i had like dude when you're selling weed and making like [^\_^] five a sack and like you smoke heavy like i do like there ain't a lot of profit in it you know what i'm saying but like you gotta keep moving long story short i saved up like nine thousand dollars right and i went to my dad and i'm like dad i gotta borrow 11 g's and my dad's like you know when are you going to pay me back how long is it going to take you know and like he brought me this crusty ass [^\_^] money that like just smelled old and [^\_^] like the oldest bills you've ever seen you dug it up dug it up or had it from the same you got to remember like my dad came from extremely humble beginnings he was a hard-working contractor blue collar started his life over again you know when i was [^\_^] six my brother was too what he's what he felt is starting over he dude he was this crazy woodsman and handcrafted this [^\_^] amazing redwood house that he was building like eventually building this house for us to move into in this amazing [^\_^] shop with big beams he cut himself and like when my parents got a divorce he never got to sleep in that house one night and like left that and like he left with a lot of [^\_^] just anger and i can't imagine that kind of anger when like you've worked your whole life for something and then it doesn't work out how you want and it's just gone well actually i do i do know that but not on a level where like i hand built this [^\_^] insane like i mean like hand crafted cut all his own [^\_^] wood for the house with his own mill bro crazy story my mom and him were milling that [^\_^] wood like cutting woods deep in the [^\_^] out in the woods and [^\_^] and like

she somehow something [ ] happened when he was cutting and and people they didn't hear each other and she bumped into him and he spun around and ripped the chainsaw up her [ ] leg from her ankle like all the way to her hip like so lucky she lived through that like that was before i was born and they're out in the middle of nowhere like could you imagine [ ] hitting your your wife with a [ ] chainsaw and just go right up her leg like just blew through her leg like nothing that was [ ] insane intense so like he's been through some [ ] you know and then restarting he was really just intense yeah tense angry like a lot of my childhood i dealt with a lot of that [ ] i don't know where i was going but he dug that up and and i remember we were in redwood credit union parking lot in uh roaner park and he he hands me this money and he's like you need i got this [ ] contract you know and i i looked at this contract and it said i landed my dad has this very distinctive handwriting you know he's wrote me some letters over the years and you know just like a straight contract on a piece of paper i lance guy and promised to fulfill this debt by this date you know no like payments or anything like that but like that i'd pay him back you know and sign that he gave me that money so i could put 20 000 in a in a a bank account because that was like one of the you know i wanted to show that i had this money for a year because i'm gonna apply for this house like in a year and i paid him back that by the way but i got a house how long did it take you to get the house no to get paid back within the first year of having the house so i get the house i'm granted i'm making like [ ] 15 an hour like there's no way you can get a house so like i had to fully fab all the [ ] loan documents w2s pay stubs [ ] everything full-on made you know like i'm like a [ ] like an outlaw at heart like straight robin hood outlaw and what i consider a robin hood outlaw is someone like i don't need [ ] anyone telling me what i can and can't do and like rules written that i have to [ ] follow [ ] you know what i mean like there's no reason someone can say you know what to us you can't afford this so we're not gonna give you a [ ] loan you can't have a place to live well the rest of this society does like [ ] if i tell you i'm gonna pay you i'm gonna pay you every [ ] penny like i honor all my obligations so bank or person like i just didn't feel that it was fair that other people who had you know cookie cutter [ ] and look good could have this and so i was like [ ] it dude i'm gonna do whatever it takes if you're gonna make it you gotta break the rules for sure period but i don't [ ] with rules that are like against you know humankind and my brothers and sisters and fellow people like i'm not going to step on you to get that but like i'm not going to like let a company decide if and when or if i even can get a [ ] loan so like i'm going to do everything in my power to do that and i got a full doc [ ] loan on a 500 000 house when i was 23. gangster and as soon as that [ ] happened bro the day that paper was signed i went to the [ ] hydro store with nine thousand dollars cash and bought everything from my first room so like i've been planning for three [ ] years i was planning this raid like the way i look on like my whole descending of like the cannabis community and [ ] like it was like this village like the size of this [ ] table and for the last three years i'm up on the [ ] hill like you know practicing my [ ] sword skills and and fighting [ ] logs and fighting little combat [ ] with villagers and [ ] raiding parties and [ ] all throughout the land and like that day when it came when i got to buy my hydro [ ] dude like full [ ] a million miles an hour down that hill on my steed like ready to cut as many heads off as i could i've arrived dude straight up and like my fur like i didn't just like put a [ ] light in my closet you know what i mean like i i do things differently how many lights did you do first four yeah so first thing i did is like i got this badass like at that time really nice house it was right outside of the sonoma county city limit so it's not as cookie cutter farmland brand new home i was the first to live in it so they had this beautiful piece of land they put this [ ] house up and i was like dude that's mine i gotta get it whatever it takes like dude i went through [ ] to get that house like not only did i you know first of all the w-2s like my friend did shout out to my friend

allison she's a beast she would do like books she was a badass accountant so like i went to alicia and i'm like allison like i need your help and she's like what do you need and i'm like i need my [ ] pay stubs like i need you to write a book dating back two years ago of what all my pay stubs would be taxes everything if i made this much money an hour i mean dude that's a lot she started with that two years prior every two weeks a pay stub all the california deductions federal deductions net pay pay period like all those numbers matched up for two [ ] years i went home blew my pay stubs on the computer copy pasted numbers moved all that [ ] around did my w-2s like now i see where you get your design skills from bro it was [ ] work and like i don't have those kind of skills like even like when you're like man you're like really smart and she's like i struggled in school my spelling's terrible all my posts are one thing about me though is i've embraced it like it like when people are like oh man this is spelt wrong this is spelt wrong dude you learn how to [ ] spell like i'm doing my best and that's like all that someone can do so kick [ ] rocks like look at how strong i am in this [ ] field who gives a [ ] if i can't use the right there or this and like i was i was self you know like aware of that in the beginning then i'm like dude [ ] this like i've done so well and so amazing at these other points in my life like i don't need to pay attention to that [ ] there's two different kinds of people in life this kind of person that would get that feedback beat themselves up and it'll hold them down in life and there's the other kind of person that'll get that feedback it'll make them work harder it's [ ] fuel for sure like you just put a you know fuel on that fire and now you're just crushing for sure non-stop but i embraced like my weaknesses yeah like as much as i've tried like i'm still gonna always [ ] that up like that was a part you know like dude we do we come from a a different place like i went to school in point arena point arena's this tiny little [ ] ocean town up in mendocino coast like i graduated pre-school with 20 of the 40 people i graduated k-12 with you know what i'm saying like very small when i was a sophomore my english teacher one time like dude this is like what my school's like close the door we had this dude named kyle kyle was like a year above me and he's like just rips ass in [ ] class like mean like oh [ ] and do we have this teacher miss mercer god bless her heart insane [ ] energy you know and like he rips ass and and she had like [ ] just like 1970 rocker hairspray and she's like dude like like she heard him rip ass and like this [ ] vampire like spins around like where did that come from like dude it was weird and she goes over and she's like you want to fart in this class do it in my face and like spins him around like grabs by the waist and like slams his ass like over her face and just yelling like fart like wanted it like i just tell that because like that was my english teacher so dude i'm missing out it is what it is do you know what i'm saying like i would have farted in her face i mean like he was trying to push i can't quite remember but like that's the [ ] i remember did the same teacher one time like took some pills like before class dude i've been humbled they don't [ ] around up north this is mendo so i'm like below like it you know there's the triangle like mendo's like the first county you know what i'm saying like yeah they don't [ ] around no holy [ ] no one time she [ ] took some pills like at the beginning of class and literally i like just saw her like did this thing and then just nodded and crashed her head into the desk and this girl jennifer bowles jumps up and she's like oh my god we need to get help and i'm like shoot your [ ] ass down everybody remain quiet and like just had no one do anything so like we just i mean in hindsight it's pretty terrible for like for that 45 minutes we're just [ ] around she's out like [ ] up and i'm like i don't want to wake her like everybody just chill like keep the [ ] door closed you know what i mean like after class we can say something an hour and a half later like over the loudspeaker it's like lance can you please come to the front the front principal's office and i'm like [ ] dude that [ ] [ ] ratted on me you know and like i get there and he's like we just want to commend you on on taking control of the situation and calming the class down and doing the right thing and i'm just like oh [ ] yeah like



for once like the bad guys win she just crashed out crashed out some sleeping pills pills some [ ] back then dude it's it's a hard life to live also like it's a very very rural area you know and like people don't get it like i've watched people i haven't really seen anyone do great on the hill that i've ever hired like at a certain point most the time like everybody succumbs to [ ] you know what i mean like the mountain virus you know when uh when did you start focusing on cannabis full-time quit your job like this 23 when i got that house i'm like this is what i'm doing i've been i've been selling weed you know what i mean like i've been wanting to grow for three [ ] years i just got this house dude it was [ ] sick too like i didn't just hang no [ ] plastic and [ ] like from the very beginning like i had the [ ] in my mind like my dad was a craftsman before this i was in car audio like before 23 i was doing like fiberglass and running wires and i got to work with like one of the baddest installers in the world like one first place in world sound quality championship in a car in a mercedes that he built um top 100 installers year after year after year so like i took a liking to this guy like when i started working at the car stereo store and everything he [ ] did was pristine like he'd do just the basic amp install and it'd take like four hours and they only charge like 70 dollars for it but like you can't say anything to scott like and and you like look over and his [ ] wires are like perfectly in a straight line with a zip tie every [ ] six inches with the head of the zip tie facing the right way and like pristine like nicer than the car wiring and [ ] itself you know and so i was just at this right age where like at that time first i wanted to be a pro wrestler after i realized like i probably couldn't make it against these giants like i was like dude i want to do car audio for the rest of my life like super into car even in high school i was building systems subs so like very fabrication loving fabrication and [ ] and so working with this dude i just absorbed like everything he did and how he did things and so my very first grow room was [ ] pristine you know it was in this room i pulled the carpet up i put a [ ] you know a tarp down this is a brand new house like in my back bedroom you know what i'm saying but like i didn't know where else to build it and back then like i'm not gonna [ ] all of a sudden never open my garage and let people see that like people don't understand like when i came up it was dangerous like you didn't have friends you didn't have a click you didn't have anything like my best friends at that time who are my best friends for years i would never [ ] tell what i did yeah that's the biggest difference we growing up and growing i didn't nobody knew like nobody the only person that knew was my brother and my [ ] parents because like i've always been open with them and like i went to my dad i'm like look dad like i'm [ ] building this grow room in here like you can make sure i don't burn the house down or i'm going for it yeah i had dated girl a girl for years and she had no idea what i did she had no idea that there was a grow inside the garage so you know you'd never tell that check bro and still like to this day like how [ ] dare you look me in my eyes and tell me i'm doing something if i tell you i'm not like if you want to [ ] with me you ask me that one more [ ] time you ask me that one more time i'll never talk to you again and you'll be dead to me like i was don't what [ ] no i don't grow [ ] that you have to be that way and like i'm saying like dead locked yeah yep that's a dumb [ ] question i remember a big thing for me growing up through the industry was the first time i sold pounds elbows i sold four pounds to a dude in long beach um named john he had a collective for five grand each walked out of that you know office with with 20 racks in my backpack i think i was like 20. [ ] changed my life forever i was like i love growing i love growing this plant i love everything about this plant but now i can go bigger and buy more lights get another spot when's the first time you sold elbows dude so i had i had an experience like yourself but went terribly the opposite way it was five pounds it was the first time that i'd ever sold a pound before i was 19 years old and i got shot seven times in that whole situation [ ] insane very first time i was 19. never sold pounds up into that point wasn't even looking to sell pounds my best friend at the time who was also my

roommate you know came to me was like hey man my cousin's coming up from arizona like can we sell him five pounds and i was like [^\_^] you know like i'll look into it you know see if i can get it and found out that like i could get it you know and and he said that he set that deal up and those [^\_^] dudes tried robbing me and like i basically fought [^\_^] back you know because i was so scared of like what was gonna happen to me from like the growers you know like i was i was like [^\_^] dude these guys are gonna kill me like i gotta put up a fight and try to get this back and dude these guys went for broke and i didn't even think i was getting shot honestly because there was a silencer and like i thought i was getting you know like when when when something that extreme happens to you like you go into this just crazy fantasy [^\_^] different realm you know what i mean like you're you start at least for me like you start and i've always kind of done this where like when [^\_^] happens i'm like all right dude it's gonna be okay you're gonna get out of this like i immediately like my self-conscious starts like this [^\_^] like fighter this fight mode where like no matter what's happening like game face [^\_^] it's game time you know what i'm saying and like i just remember immediately like it happening and never in my mind could i believe like first of all somebody would ever come to like rob me let alone shoot me let alone do this like this can't happen to me so i thought i was getting shot with a pellet gun and i just [^\_^] blew up into this fit of rage were you inside the car so what happened was these guys were supposed to come earlier in the day and meet me and i worked at the body shop still you know where i was making like seven [^\_^] dollars an hour and they just kept pushing it off and pushing it off and and pushing it off and then like i got woken at like 2 30 in the morning and i had this terrible terrible feeling in my stomach and man like [^\_^] thinking back to then like you're just like young bro and and so [^\_^] naive and stupid and you don't like dude i came from mendo like i came from this such this safe [^\_^] place like the safest place in the world like nothing happens to you out there except like crashing your motorcycle you know what i'm saying like and so like coming into the [^\_^] real world and never having experience where like like trust your gut and always follow your like i just didn't know and like in my [^\_^] mind at that point i remember just being like dude i just got to get this deal done like i got to get this money like oh i got to go to work in like a few hours like i just need to go handle this real quick and like i walk down the step of the [^\_^] house and i had the [^\_^] bin you know with me and i remember like opening the door dude and the dude who shot me is like like i'll never forget like there's images that are burned in your mind forever and like i remember just opening the door and he's standing there and like just like there's this frozen moment you know what i mean i just see it like i see it now you know like looking at you not saying like that's it but like i can picture it it's so dark and there's like this [^\_^] devil devilish red glow like behind his [^\_^] silhouette and he's standing there and i'm like hey man i got the weed right here like you got the money's like oh come out the car i'm like [^\_^] come out to the car like let's just [^\_^] do this like where's the cash he's like dude i got in your car i got it out here in the car and i'm like [^\_^] so like i grab the bin we head to the car he pops the hatch i put the [^\_^] gray container back there close the hatches like hey man your money's right over here on the passenger side and like dude it's just like red flag after red flag and i'm just like i just never forget i'm like oh my god let's get this over with like just go count this [^\_^] money real quick and like i've never sold pounds before you know like it's a lot of money to count and there's this money bag like you know bank of america the zipper ones like on the floor and i sat down there and it's the right shape and [^\_^] i pick it up and it feels right i unzip it and i look in and like it was literally like a stack four inches thick of just cut white paper and like i look at it and like i look back up at him and he's got a [^\_^] gun in my face and i'm just like dude my first thought is like [^\_^] i gotta get the weed back like that's the first thing i thought of cause you got that on the cuff got that on the cuff it's my first time like you don't [^\_^] like dude back then you wouldn't tell a grower like hey bro i lost

your [ ] like no dude there was stories back then of like people getting buried and [ ] when when they didn't return with their money especially up there you know like it wasn't like and like i had this this insane sense of [ ] word like at such an a young age of like doing what i said i would do at all [ ] costs you know what i mean no matter what and like maybe even more than my life like it was the word that i'd given you know what i'm saying like like i told it like that so [ ] terrible in hindsight you know what i'm saying i don't know what have happened if i just like let it go but i just remember like looking at that guy and i'm like man you're a [ ] piece of [ ] [ ] you he's like get the [ ] out of the car i'ma blow your [ ] head off i spit at him i'm like go [ ] yourself i'm like dude i'm gonna count to [ ] five and start screaming bloody [ ] murder and wake this whole [ ] neighborhood up you know and he's just like kind of start shaking and i just like they're trying to pull me out of the car he's grabbing me like by my sweatshirt trying to pull me out of the [ ] car and like i sti it was an integra so i stuck my hand through the head rest and i'm holding the head rest and i'm like one two and like right when i like he took a step back like right when i started counting he like took like three steps back there's like a [ ] curb here the driver is like it was so weird because like when i was sitting there i looked behind me and there's a dude in the back seat and and this dude's like freaked out and then there's a the driver the driver is like these dudes aren't acting the same as this guy like obviously they came here they had a [ ] plan they were in on it but these dudes were like like almost frozen like i remember like looking right at the dude behind me just like staring at him and he was just like like this crazy fear they were not expecting you to [ ] they weren't probably not expecting the whole thing so like i just remembered when i said three i [ ] dove over the driver because his door was open dude and is immediately as soon as i made my move that [ ] dude that dude trying to remember his name his name was i don't even remember his name but he leaned in and just [ ] unloaded the whole magazine into the car and like as i jumped through and was getting the other side seven of those nine bullets hit me thank god below my waist i've been [ ] what happened after that did did he empty the whole clip did he come around and try to the whole thing like and it happened so fast by the time i had gotten over the driver or like my feet are dragging over him like a snake like i already been hit i felt all this [ ] hitting me you know what i mean like it was time you thought it was a pellet gun yeah he had a silencer on it like thank god it was a 25 caliber it was like a desert it was a small handgun you know like a 45 or a 9 would have been done terrible destruction to my body and definitely would not be here today but luckily you know it was it was a small [ ] caliber um had a silencer so i thought he shot me with a pellet gun like coming out the other side i was extremely angry one of the like if i can remember a time in my life like i've never snapped before like this moment caused me to snap but like i recall it and all i could think still was get my [ ] weed back like i'm going to the back of this car to get my weed and right at the time dude when we came around the corner like he's still pointing this gun at me which i thought was a pellet gun and dude i just attacked him like [ ] just went up and [ ] through this elbow hit him right like by the bridge of his nose like right into his eye he went down and i just blew through the glass of the back [ ] window with my forearm and grab my [ ] grab my little my container and start trying to get back to the [ ] house you are a [ ] gangster and like at that point like my legs aren't working like they should they can't carry me my left leg shattered i've got [ ] two bullets in my right leg you know like i'm like falling but like just just [ ] all i could think was to like get in the [ ] door and assess the situation but i got the [ ] weed back like mission accomplished like relieved it was weird dude like i felt this sense of like relief for just a second then i'm like okay i got a whole nother problem and i have to deal with like [ ] dude like i'm how am i going to get these pellets out of my leg without telling anyone without going to the hospital i've got work in the morning like in that mo like

dude this is what i'm thinking about heading to the front door is like i got work in three hours i don't know how i'm gonna get these pellets out of my [A\_\_A] leg i'm not going to the [A\_\_A] doctor i'm not going to the hospital let's just get inside and assess the situation i mean bro there's gun shots in the neighborhood screaming like did you end up calling the cops ambulance when i came into the house the first thing like i it's the first point i see light and like i get in there and drop the [A\_\_A] thing fall at the head of the steps and at this point i'm like okay my legs aren't working like they should like something in your brain you're starting to realize something's wrong you know but so much other shit's going on and i've got work in the morning like let's just figure this out and like then that's when like i looked down and like just this insane like my legs were gurgling like it reminded me of like a 7-up bottle like upside down like gurgle and spit and like kind of spitting like they were just i was wearing shorts and like there's [A\_\_A] blood everywhere all over me i can't and like i was like oh my [A\_\_A] god my immediately thought is like [A\_\_A] like my my deposit this [A\_\_A] house like like my my dude i'm just like [A\_\_A] dude like i gotta get to the bathtub you know if i can get to the bathtub everything's gonna be okay like that was my next thing i'm like just get to the bathtub you'll stop the bleeding everything's gonna be out like dude i remember it very vividly you know and got up to the bathtub and now i'm laying in the [A\_\_A] tub and like [A\_\_A] starting i'm starting to shiver and my legs are gurgling and i got a towel and i put the towel on my legs and i'm like okay like i'm gonna be okay like i'm stopping the bleeding you know like telling myself this and like that's when my first roommate came in immediately had this [A\_\_A] panic attack you know not the guy that set it up he had a panic panic attack my next roommate stephen orpasa came in he played uh college uh football he's playing for the jc he's like we got to call 9-1-1 i'm like dude whatever you [A\_\_A] do do not call 9-1-1 do not call the cops like we're okay and he's like no dude you're [A\_\_A] really not okay and then i'm like take me to the [A\_\_A] hospital then like at that point we sat there for like a little minute i'm like you know like this towel is just like very heavy and like blood's thick that the tub had folded up like started to like it got this like goopy and it was like filling i was losing a lot of blood you know and like i lost my vision at that point [A\_\_A] was getting really [A\_\_A] heavy like i felt like bricks were getting stacked on me and i was just like dude take me to the [A\_\_A] hospital like take me to the hospital right now they drove me to the hospital dear that's insane people don't realize um the industry 19 bro that we came from 19 i would dude that house i'd lived in that house for [A\_\_A] one week it was the first house i ever had dude before that i was living in um some friend's backyard in a tent which like people like oh dude that sounds so bum like it was amazing i'm 19 years old i just got to [A\_\_A] santa rosa like place is gorgeous you know i come from the woods all this shit's happening i didn't have a place to live these girls that i uh went to pre-kindergarten all the way to high school had [A\_\_A] this house in santa rosa uh east side santa rosa really nice place i'm like dude girls like can i put a tent in the backyard and like pay rent for like 200 bucks a month for like three months until i find a place to stay and they're like of course lance like yeah you're more than welcome and bro i'm back there in my tent you know i got my [A\_\_A] queen size inflatable bed my tv extension cord selling weed hanging out with them smoking like life was amazing bro i was on top of the world when that situation happened and like i got shot and i'm i'm really young like i felt like after that like the day like i was in the hospital for a while you know and like once i got out of the hospital it was a very very dark point like in my life like when that [A\_\_A] happens and and you're in a hospital for all these days and you're you're arrested in the hospital and and you're on [A\_\_A] drugs and they're showing you facts lineups and and you're you're supposed to try to track down these people that [A\_\_A] shot you and your your family's so [A\_\_A] disappointed in you and you're embarrassed so [A\_\_A] embarrassed like dude the [A\_\_A] that we had to live with like [A\_\_A] all this other stuff like the sense of at least me like the the sense of embarrassment for some reason that i carried through my whole

life because like i was a cannabis grower and didn't want anyone to [^\_^] know and and you know people would be ashamed or you're a drug dealer or you're this and everybody would look at you differently and dude i i i carried this even though like that was my life like this public perception of great shame you know and then when [^\_^] happens very very very shameful you know at that point that was very very shameful for me and and when i got out of the hospital i was in a wheelchair and i remember like i left the hospital and took a [^\_^] taxi to see these girls like that's all i wanted to see like i'll never forget how like just [^\_^] gutted i felt until that moment where i was like i'm gonna go see the girls and like it's the first time since this moment happened where like i felt like that love and that light like in my chest and and just could take a breather from the hell that i was in you know and i [^\_^] took a taxi there and i've never been in a [^\_^] wheelchair and everything's [^\_^] awkward you think it was more the heaviness of what you were going through mentally was more because of the strain and what you're putting other people through i mean dude it's everything like it it's unfortunate like how when certain things happen like because at the time you you lost the pounds the dude i got fresh charged yeah you got charges you got you got charges you lost your boys pounds i'm a disgrace like embarrassment to my family my dad's like i don't want my [^\_^] younger son around you yeah you know you're you're you're and he like idolized me like you know you're it was it was tough you know i think it was more of just you letting other people down well dude that but like that's the heart but i'm [^\_^] i'm [^\_^] bro like my legs don't work i don't even know how long this is gonna take or what i'm gonna go through or like who does this ever get normal like dude my life is completely changed and it's just like a lot you know like it's a lot of [^\_^] like dude facing a case is hard [^\_^] like on its own adding everything else and so i remember getting out of the [^\_^] taxi the taxi leaves my heart's racing i wheel up to the door i ring the [^\_^] doorbell and one of the girls like opens the door and like you know i'm like i'm not even going to mention any names but i i like put my hands out like like [^\_^] oh my god it's so good to see you like give like this and like the door didn't open the screen just stayed shut and i'm like open the door you know like kind of like trembling and excited my heart's pounding and she was just like you can't be here and i was like what she's like because of your situation and and what's what's happened and and it's just we we've just decided like this isn't a place where you can come you can you can't be here and [^\_^] close the door on me damn it's heavy and that was like dude when that happened like it felt like the [^\_^] the earth below me just [^\_^] fell out and i i just fell there like dude i just sat there in that chair like just staring at their door for probably like an hour i don't even like i don't remember i was just like i didn't know what to do i didn't know where to go little did i know like behind the scenes someone started like a thing where they're like dude everybody stay the [^\_^] away from lance don't talk to him my roommate warren who set this [^\_^] deal up was in that house like had gotten there first and you know girls yeah got into the girls house and after setting you up thing goes he didn't said it no he no he didn't mean to set you up like he he connected the dots correct to for that situation to happen correct but even after that he didn't have your back no he got arrested i bailed him out my family bailed him out of jail but bro like you can't like i don't [^\_^] hold things against people like i couldn't imagine what he was going through he just moved the [^\_^] and i just moved him to california this [^\_^] happened like [^\_^] it i get it like every man for himself like some people are gonna have that [^\_^] mindset like again you know like as long as i know who you are and like you show me your true intentions like we're [^\_^] cool whatever side you pick but you're [^\_^] dead to me as soon as anything like that happens in life you realize who your real friends are yeah because everybody else scatters can i get some more ice thank you so that was just like a real heavy heavy time and like [^\_^] only place i could go was that house like i didn't have anywhere else to go thank you so much so dude that was hard like i just got out of the [^\_^] hospital like i go back to the house that i was shot in you know they've done their

best to clean it up like the parents and family and i'm trying to remember like why i didn't go home you know maybe it was just because of i can't quite remember thank you i can't quite remember but might have been something with my brother owen and you know my but man those [^\_^] nights sleeping in that house on on a [^\_^] air mattress downstairs with my legs all [^\_^] destroyed was like [^\_^] insane like the most vivid [^\_^] dreams like waking up and i'm like [^\_^] dude he's in the house you know and laying there and ptsd dude when you're little so [^\_^] weird when you're literally you're like dude if you just [^\_^] lay here under the cover the monster's gonna go away like same [^\_^] [^\_^] when you're old dude i'm just laying there i'm like dude this isn't [^\_^] real he's not here like you know and i can't like just i can't get up i'm [^\_^] on the mattress like it's an ordeal for me to get up i i've never done anything like this i've never been in a wheelchair i've never had any of that experience in my [^\_^] life dude you know like just going to the bathroom is is a incredible chore was there anybody there to help you out the strength of like trying to get yourself in like you just you're not aware of anything you know what i mean like yeah was there was there somebody there that that was there to help you out i remember like my parents were there like you know like for these split kind of parts of it you know what i'm saying but um no one was like staying at the house with me and like i only stayed there for i think like a week and a half a week and a half and then at that point i think i came down to long beach for like a month and uh stayed with a friend she was really [^\_^] cool she was like hey lance like come down here stay at my apartment she was going to um long beach university she's like i think this will be a good change for you i'm around a lot of [^\_^] people like you're not going to get judged down here you know like there's everybody your age like i just think it'd be really good for me and it was really [^\_^] good for me yeah i get out of the small town it was really good for me yeah so at that point um my legs still were like healing you know and this had just happened like i couldn't i had like like they couldn't like [^\_^] cast my leg like they were just leaving my leg i was on like i didn't i couldn't handle the wheelchair i didn't do very difficult did you get the bullets out no nothing was removed at this point so you have seven bullets seven slugs in your right six they removed one later down the line they removed the one in my kneecap so what what happened with the cast i couldn't get the leg casted because i had all these open wounds and like the way a bullet wound has to heal is like from the inside out you know and so these wounds for like two [^\_^] months just like pussied and oozed and bled all [^\_^] day long like it smelt like a corpse so like i was super embarrassed about that like who wouldn't be you know super [^\_^] embarrassed and robin was like hella cool she's like dude don't sweat it like that's [^\_^] badass like you're [^\_^] lance like you're an animal bro like this and i was like no like i'm [^\_^] ashamed of this like this is [^\_^] disgusting like it was disgusting bro like like just like on people put those bullet stickers that's what my leg looked like scabbing around and just liquid yellow and [^\_^] the nastiest mucus and blood just like leaking out of it and just terrible smell so i'm like spraying my legs down with like axe body spray and [^\_^] just so like try to hide the scent i was very aware of it you know i'd have to go change these bandages [^\_^] dude eight times a day you know right unwrap throw away oh dude i would take my trash with me everywhere i went because i was so [^\_^] just ashamed of like myself you know and everything but she just was instrumental um in [^\_^] you know like being there for me and helping me through that time and um then at that time uh it was time for me to like finally like get my leg casted you know i'm i think i'm i'm going on like the end of like month two at this point you're still you were you down in soca i was ready to leave long beach you know what i mean like it just wasn't for me you know they're partying every night and there's people everywhere and let's go to this party and that party and you know i'm going through this traumatic situation where like i'm on [^\_^] crutches and everybody was so nice dude like everybody coming up and talking like dude i was in this amazing college atmosphere that i never experienced you know and but it was

just too much for me you know like like it got to the point where i was like okay like i need to get out of here like there's too many people people stay up too late people go too hard you know like i just needed to get out of that and so i decided that i was gonna go um back to santa rosa dude just everything's just so crazy how things have worked in my life like i went back to santa rosa i'm in this [^\_^] cast i got nowhere to live i'm staying like at people's houses and i went into this this [^\_^] used car place drug my ass in there my crutches total [^\_^] hardened casted leg and there was this girl there katrina it was like her first day she just graduated high school she's like 18. it's her dad's business and like i go in and she was like [^\_^] beautiful beautiful girl and like dude i just hit it off with people you know what i'm saying like we just start talking and this and that and like like we just hit it off like me and her and she was hella [^\_^] cool and we were like vibing and we were friends and then like the next thing you know we're hanging out for a week and not like any kind of dating or like romantics or any kind of situation like that just like [^\_^] friends you know like like it was very instrumental at these these times that i have like real people like real people in my life and like women as much as they didn't show up showed up you know what i'm saying like you know my my stepmom my mom um robin katrina katrina who i'm still friends today i introduced her to her you know she met her husband because of like me and just cool [^\_^] but she was like let's get a place together and i was like oh [^\_^] dude yes please i got nowhere to live like dude could you imagine how like her family was like this [^\_^] dude comes in to buy a car just been shot he's your [^\_^] beautiful like tailored like 18 year old daughter who's like done everything right straight a's perfect family girls like i want to move in with this guy and they're just like what the [^\_^] you know like i can't blame them like dude i'm like a terrible candidate on paper terrible you know and dude against all [^\_^] all judgment everything she got a place with me and from that point when i got that place you know like i went back to the first of all the cast had to go uncomfortable awkward can't put pants on [^\_^] this cast dude i just lived like three months without the [^\_^] cast why do i need the cast on so i took a [^\_^] grinder wheel and a grinder and cut the [^\_^] cast off my leg and i was like okay like we got this like i'm aware of it like you know life can go back to like i cut that off because like i wanted life to go back to normal like for me it had to be normal like this cast was holding me back you know what i'm saying and like i was out of the cast for months [^\_^] the cast like i'm gonna do this my way we're gonna be good everything's fine [^\_^] cut the cast off the next day went back to the body shop marched all the way up to the stairs to the owner's office sat down like right in front of him like i could see like out of the corner of my eye there's like a pressed democrat there and like i'm on the [^\_^] cover and shooting and all this [^\_^] and i was just like jim i need my [^\_^] job back and he was like well uh you know i remember him kind of like like looking under the table and [^\_^] i'm like dude i'm good like you won't notice a difference my leg's fine he's like how can your [^\_^] leg be fine i'm like dude just like just [^\_^] i need my job back like i need you to give me this job back i'll be here tomorrow morning at 6 30 like i was a hard worker you know what i mean like did really good great with customers like you know took pride in my [^\_^] and i'm like dude just and he's like well you know and i'm like i need the [^\_^] job dude you don't understand like you have to give me this [^\_^] job and he's like all right be here tomorrow morning and like dude i had to go to like the bathroom every like six hours and do with my [^\_^] leg and dude in the beginning i just [^\_^] ate eight uh ace bandaged uh bamboo steaks like just with whatever bracing like i thought like when you [^\_^] wrap your [^\_^] hard enough and like ace bandage it like pulls it all together you know and so like i went and got the [^\_^] i'd wrap it like pat it so i wouldn't feel them and then i'd [^\_^] wrap the bamboo sticks like to my knee and then wrap them on my [^\_^] tip down my tibia and had my pants on and [^\_^] went to work that way so i could bend my knee went into the bathroom all the time sneaky dressed my wounds took everything back to my car axe body spray and [^\_^] went on with my life dude you're

[Â \_\_Â ] savage and the whole time i'm thinking like dude i gotta like it had no effect on my weed grind only like more like more now than ever i remember being in the wheelchair and being like [Â \_\_Â ] i gotta get a bag like i gotta do [Â \_\_Â ] that i only knew how to do certain things you know like i gotta get the bag i gotta start selling oh man i don't know who's gonna buy from me but like i gotta get this [Â \_\_Â ] thing moving again you know how long did it take after you know the shooting the you know the the police situation to kind of get your name back so you could start dealing with people again i don't think like my name like ever really came back it just like it just almost kind of gets forgotten about well well i think you kind of have to earn your stripes it was different it was different back then because like i was such a petty little dude just like i wasn't selling like tens of thousands of eights you know i had my seven dollar an hour job i'd sell like you know four bags after work it was slow yep but after that i realized okay like to make this dream happen i gotta get this [Â \_\_Â ] house i gotta start making money my car audio career kind of started like i just got into car audio but like my next three years was selling weed car audio and like straight [Â \_\_Â ] mission whatever it takes get a house start growing so for three years all i could think about was getting a house getting a house homes and land every day fantasizing looking at these house my vision board had [Â \_\_Â ] houses pinned up to it you know i go to open houses on sunday and walk through and they're like uh you know who's your agent like what are you doing here i'm like it's [Â \_\_Â ] open house [Â \_\_Â ] i'm shopping they're like shopping for what you know you know like you're scratching three-year-old kids walking around looking i have my like skate shoes on you know like what was it back then at knees the big blown out tongues yeah fat [Â \_\_Â ] yeah everyone rock does you know that's what i used to rock how was the how was it with your family your your mom and your dad did they grow growing up as a kid yeah so um yeah but secretive you know what i'm saying like the the first memories i have of my dad growing was not like him sharing or ever knowing that he smoked or anything like that like dude i remember i was like way cut throat about this [Â \_\_Â ] remember like i was telling you earlier like if someone's like man dude do you grow the [Â \_\_Â ] did you say do i grow like dude i had that same mentality like that's just me right and i'll never forget it i was a freshman and like i'm in line i just paid my 40 cents for my [Â \_\_Â ] commod meal you know you get your yeah you know i wasn't free lunch you know you didn't quite qualify for free so i paid like 40 cents you know and we're in the school line you know and i remember just [Â \_\_Â ] out of nowhere this chick in my class ayuda was like lance's dad has the bombus weed and like dude i heard that in line and like this [Â \_\_Â ] switch flipped like you you [Â \_\_Â ] [Â \_\_Â ] what did you just say and like i had no idea like my dad grew and long story short like my dad used to sell to these family friends the howls and like they would let the kids just smoke all [Â \_\_Â ] day and like even at that age i was like no like i'm good on smoking you know like i don't want but they would just be getting ripped and high and she's all dude and i remember just like [Â \_\_Â ] getting out of line and like going up and like in her face where we were like nose to nose and i'm like you better shut your [Â \_\_Â ] mouth and never open it again my dad does not grow weed and like walk back in line so like i had no idea really you know like and to me even if like i had this you know inclination at that point like [Â \_\_Â ] no taking it to the grave without being told that when did you find out that did your mom grow too well at this point my mom wasn't like in the picture she thought she was living in montana so like she wasn't a part of this when did your dad bring you in and never did never no he never brought me in i did it on my own all those years you the first time i found like it's weird like i i remember finding his plants one time when i was in middle school you know and like just out in the like so like in mendo and like these dry hillsides and [Â \_\_Â ] there's a lot of of you know brush and trees in manzanita and so back then they used to [Â \_\_Â ] grow their plants in the trees like up in the trees or they'd have it like hidden throughout the manzanitas and like dude a small plot like the size of like this is big back then like the helicopters and mendo are looking for something this small like it's crazy you know what i mean



like they see a plant they're coming you know so he had strategically had these little [^\_^] plants and i remember this mexican kid in class junior was like man do i need to get some weed and and like showed me a picture of it and i'm like a leaf you know because we didn't know to smoke buds and [^\_^] and i'm like i've got those at the bottom of my property i'm like yo bro i'll bring you one and i remember like getting up early and like sneaking to the bottom of our property and busting this five finger leaf off put in my rl stein book took it to school and sold it to him that's awesome but nothing after that you know what i mean like nothing transpired from that i didn't think anything of the plants never went back there never was interested in smoking them but the whole time like my little brother dude this dude's like clipping nugs hanging them smoking in [^\_^] paper like taking binder paper and rolling like buds around it scotch taping it chiefting behind the shop like [^\_^] savage dude my little brother is savage uh describe the moment that you came up with the craft store and then also the whip kits so i felt that um when i was in calaveras i was redtail farms like that was my thing on instagram i think it was redtail underscore farms private quiet didn't do stories rarely posted scared you know i was i was busted by the feds on like another thing just like a couple years prior or something like that and like as these events happen and things happen like you take a lot of [^\_^] with you so i was like very very scared for my [^\_^] freedom and and convinced that they were watching me and and a lot of weird [^\_^] happened through the time i got busted and then [^\_^] with me and coming to my house while i'm on probation and pretending they're putting cameras and mics in my house and just like they a lot of times like over and over and over just like [^\_^] with my head and and reprogramming my mind and [^\_^] with my wires and [^\_^] and making me believe things that weren't happening and this stuff what did you ask me i'm sorry oh crap farmer yeah when did you go with craft farmer and the whip kids dude i [^\_^] build this amazing site in calaveras [^\_^] greenhouses mix-like greenhouse when you look at the way i build [^\_^] every [^\_^] thing is pristine everything is craft like i think of every little [^\_^] thing like when you walk me into someone's facility and and we're look dude i look at every [^\_^] wire i look at all the zip ties i look at anything and like these little things are like don't have anything to do with like the way the flowers but like coming up in car audio and [^\_^] i'm very like perfectionist dude and i stayed up with headlamps like till 3 a.m every [^\_^] day working on that farm doing [^\_^] in the greenhouse wiring i wired that [^\_^] thing myself hung all those lights like did my own control system built the other greenhouses like every [^\_^] thing like every bulb would have to be adjusted and bent so it hung in a straight line like i built this super [^\_^] pristine place up there put everything i had into it and then they [^\_^] banned it and i'm just like everything i had i invested into that you know and i'm just like [^\_^] dude like [^\_^] this i'm going back to where it [^\_^] came from and like people don't understand like i'm not from a city like where i come from like it's very hard like you're growing in a garage and you're only getting other garages from people i'm in sonoma county wine country dude commercial space is extremely expensive we're not like oakland where you can get cheap ass [^\_^] buildings and blow em up and all this [^\_^] so like wherever you are in your tiny little territories all you have access to like i never had access to bigger [^\_^] until i created it you know what i'm saying and so i put everything into this everything i had like all the work i did myself and like when they pulled the plug i'm like i'm i gotta go back to what i know i'm not doing this again i just lost my whole [^\_^] property like i can't be redtail farms like i can't be on instagram and show anything like i was legal then illegal and so like i changed calaveras i was when i was in calaveras i changed my i changed my name to craft farmer at that point because like at that point too like everything i do is [^\_^] craft like my attitude is craft my [^\_^] mindset is craft my [^\_^] expectations are craft anything i'm doing with you is going to be like this [^\_^] specific way it's going to be consistent everything i do is [^\_^] craft and nice and right you know what i'm saying and like i was doing ferments at the

time making all my own ferments out of scraps and vegetable like a spin on korean natural farming and like i thought i was the most craft [^\_^] there was you know and so i was like man i'm gonna be craft farmer and at that point i'm vending like hundreds of pounds to mercy wellness you know like the way that relationship happened was like amazing in its own thing because like i'm a [^\_^] grower i'm a vendor you like i don't have a team on the hill where i can just go around so like when i came to see my wife on weekends i would try to hustle packs and it's like dude if you didn't sell anything by then bro like it's back to the ranch like you can't sell anything on the hill you know and so yeah randomly one night i had stopped by [^\_^] mercy at like 8 30 i hit up brandon randomly i'm like bro are you here and he's like yeah i'm in my office i was like i've got some packs on me should i stop by he's like yeah and go into his office he looks at my weed he's like [^\_^] dude this is some [^\_^] fire indoor this looks amazing and i'm like no that's my mix light and he's like holy [^\_^] like it wasn't even it was just turning into it uh 217 had like just happened right there's like this transition from 215 to 64. in 2017 it was right in this transaction like people weren't just blowing up mixed light it might have been like the first mixed light they saw and my [^\_^] looked like [^\_^] inns and they're like dude we want this and i'm like oh [^\_^] cool like this five pounds and he's like i hope you have more than this and i'm like well i got like 70s like i'll cash you out on all of them and i was like don't go anywhere like you know us like yeah dude rule number one bro when it comes to sales you get the money when the money's available i'm not waiting till tomorrow for some other [^\_^] dude to come slide through and you buy all his packs and then i arrive and like you can't bro when i when i sell weed like when i used to and like i'd sit down at a table and everybody's got their packs there and [^\_^] like my [^\_^] weeds getting sold like i'm in your ears your opening and i'm like god damn look at that [^\_^] like that's better than these other [^\_^] dudes at the table and like dude i was i put it on thick you know what i mean so he's like i'll buy these i'm like wait let me go get them all right now when him got him handed me a box of money i'm like look dude i got one thing i want to do and he's like okay what i'm like look everything in your [^\_^] dispensary has your name on it i'm going to give you a 520 grand pound for the same cost that we just agreed upon on a regular pound and i want every [^\_^] one of my packages to have four grams in it for 35 dollars an eighth on the shelf and he's like no problem that's [^\_^] genius and you put your name on it redtail farms and i sold hundreds of pounds just by that extra half gram dude not only that but like 35 dollars and 2 000 [^\_^] 16. 35 for 4 grams yeah [^\_^] on other indoor like around it like my philosophy too bro like since day one bro call me the [^\_^] bottom feeder or the guppy or whatever the [^\_^] you want the [^\_^] river fish like my packs sold for less like even dating back to like when i first started and had my [^\_^] warehouse and before i got federally rated all these [^\_^] broke boys want to complain about selling packs for two thousand dollars for 1500 my [^\_^] was already priced that way because i didn't want to meet people and i didn't want to deal with [^\_^] and i wanted my [^\_^] silent and i just needed my [^\_^] to move the moment i make a phone call and say it's done so all my [^\_^] sold for hundreds of dollars cheaper than anyone anyone and i built my entire [^\_^] life on being the dude at the [^\_^] bottom through hard work determination i don't give a [^\_^] if it says lance on it craft farmer my logo oh you want it you need me to grow for you no [^\_^] problem cut the [^\_^] check this is why people love you bro that's exactly it do you speak it like it and so many people are caught up like oh dude i need a brand and i need this and this whole bag [^\_^] thing yeah and [^\_^] all that if you grow fire bro and you stand out [^\_^] you're gonna survive with the market in the end of 2017 beginning of 2018 we saw this downturn right yeah now we're seeing a downturn right now i remember selling fire packs in 2017 for like 1400 bucks yeah it was like the end of 2017 because the beginning of 2017 was cool but you had that you know the october flood that flows into november and then you're not even moving weed good luck thanksgiving you're adept back then at like eight hundreds oh yeah

thanksgiving you're [^\_^] you know december january february like i remember being like okay this is going to end right like christmas is over no okay new year's eve in 2018 it just kept going it started in october and it kept going all the way until like the beginning or the middle of 2019 for sure you know um we're seeing a bit of a downturn right now you think it's worse than 2018 or about the same i mean it's definitely worse because way worse it can't they can't be compared like the way i look at it like 2017 was this terrible wildfire right now we could technically be talking about like a prehistoric extinction it's a much different conversation so you're thinking that this could be i don't think i'm thinking like we're seeing all the [^\_^] you know a lot of them like they call them like you know the the heritage growers and and the homesteaders and everybody in in [^\_^] humble and mendo all these all these places that got licensed where they got like some garden beds and flowers and they do you know mendo perps and they got all their their homemade strains that they've made over the years like they're real real ganja growers you know like and i i i mean no shade on this but like breeders and different companies and [^\_^] you see like mass produced [^\_^] in in central valley and hundreds and hundreds of thousands of seeds and strains and all this [^\_^] like if you just follow the history it goes back to these very unique people who risked their freedom because they believed in this plant and their homestead and their family lived off that and and they weren't like doing any amazing [^\_^] or had some special house or car like they barely got by and like these people a lot of them rolled in and were barely still getting by because they're like being able to do [^\_^] under the table and like it's just gotten much much much worse the industry's not supporting this kind of flower very few of them are are doing okay you know and and we're watching we're watching people die off you know in in like parts of this industry becoming heading towards extinction yeah that's where i'm going with this and like i don't like it and like i don't i don't think it's right and i don't think it's [^\_^] fair but like what can you do about it like the world is ran on [^\_^] corporations there's barely mom and pop [^\_^] they're like [^\_^] just sprinkled sporadically but like every [^\_^] you drive down the freeway here like business after business like corporations like what defines a company as that like that's what our entire [^\_^] world is based on shame on us for thinking like every little [^\_^] person was gonna get passed through and and gonna make it and stand with these [^\_^] behemoths do you feel it'll bounce back no on pricing [^\_^] no you think the pricey how low do you think the pricing will get i mean it's like [^\_^] is it's like outdoor is terrible outdoors like 200 a pound you can't give it away like a month ago dude this [^\_^] dude was like all land like for to a group of people like i just overheard it i'll land a semi truck where you want it on the arm thousand pounds just tell me where to [^\_^] where you want this thing to be dropped and people are like don't want that you know what i'm saying like nobody wants that [^\_^] my buddy george shaman extracts people are hitting him up be like dude we'll bring you thousands of pounds of fresh frozen he's dude he said vans were showing up just like to dump [^\_^] off and he's like what the [^\_^] is this and like i never authorized this like send this back no no no just keep it you can have it like that's [^\_^] insane like we're watching [^\_^] die on the vine like [^\_^] no it's not gonna get better yeah the difference between 2018 and the current present time is that we were still able to move weight for sure in 2018 for sure this is the first time that we've actually seen wait just sitting there for sure and i think that's that's the major differences no because like you got more and more people coming online more companies coming online you ever watch [^\_^] shark tank and someone comes in with a great cracker idea or a [^\_^] drink and they're all like oh this tastes good no one wants the [^\_^] deal because they're like how are you gonna get the shelf space it's no different difference to us you know and then like when you get the shelf space like dude if you're not like somehow have a following where like people are gonna support you and [^\_^] like dude even if you only had like [^\_^] 100 lights selling that many bags every [^\_^] you know 60 days like dude it's tough and then if you want

help they're gonna tax the [^\_^] out of you help with packaging help with distro  
bro i tried doing all that [^\_^] myself when i moved my little packs to [^\_^]  
jungle boys and ivan threw me a [^\_^] bone and by the gave me a great number and  
like when i got it back like i'm like looking at him like jesus christ like  
[^\_^] not from them nothing that jungle boys did like all the other fees were  
just like just depleted my little bit of profit and i'm like okay this is not the  
move for me personally how did that happen how did you start working with ivan um i  
mean i'm like just everyone else [^\_^] love the jungle boys you know what i mean  
like i'm older so knowledge was was very you know hard for us to find and back then  
it was only forum and i was too nervous to like post and too scared to post and  
dude ivan was just like dude i remember like watching him and being so [^\_^]  
inspired you know and me with hundreds of people like you here all kinds of just  
the most amazing people talk about [^\_^] ivan you know and like when i obviously  
there's a team to all that and [^\_^] like that but like i don't i don't know a  
lot of those guys but jungle boys as a whole you know like i think of their leader  
ivan you know and just like dude he did everything like anything there was to try  
to do he did he shared the information you know me i'm extremely passionate about  
[^\_^] knowledge and sharing and teaching people a lot of people aren't they  
don't want [^\_^] no one to know anything and don't feel like it was earned and  
all this [^\_^] and dude he's been like super open and extremely inspiring like  
over the years just like watching what he's done and in his artwork in his  
packaging and just like everything they do is on a whole [^\_^] new level and who  
he's inspired i mean i think you can almost name like everybody in our entire  
industry and like all the the big people and like instrumental and inspiring  
everyone instrumental in in doing it first just and then on top of that having the  
burden of fighting just the longest never-ending [^\_^] battle you can imagine  
you know what i mean like just [^\_^] war-torn shield broken down blades broken  
blood all over the [^\_^] place you're in a a [^\_^] battle where there's just  
like thousands of dead carcasses all around you and they just keep coming over the  
hill and like at like not to fall on your sword and just be exhausted and just  
continue to take [^\_^] throats and like we've just seen that like look what  
happened to them still to this day like unexplainable [^\_^] [^\_^] and like  
remember like earlier in this conversation like i just felt like sometimes like  
i've had to carry the the just the bearer of being able to handle terrible [^\_^]  
that happens in this industry and i feel like you know ivan's a really good  
[^\_^] person and he's super solid and he's had to carry this burden that he  
doesn't deserve he's just one of the ones that can carry that [^\_^] burden and  
is strong enough too so the grow gods have bestowed that terrible [^\_^] task  
upon him you know what i mean yeah and so like i've just always followed them and  
liked them and um everybody was like at that point talking about how dude nobody  
can get flower on the shelf and it's impossible and like this [^\_^] the system  
and dude yeah okay like all that's [^\_^] true whopty do it's always been true  
but like i'm tired of hearing it you know what i'm saying like i'm tired of seeing  
the same [^\_^] again and again so i was dead set on you know what i'm gonna put  
my own [^\_^] flower out i'm gonna put flour that i grew i'm gonna [^\_^] buy  
it back i'm gonna select it i'm gonna [^\_^] hand trim it i'm gonna design my  
bags i'm gonna get it packaged i'm gonna make the [^\_^] sale i'm gonna do all  
this to prove to myself that it can be done and prove to everyone else there that  
you can do it you know what i'm saying like i was hearing enough and enough and  
enough like how nothing's possible and all this and so grew out of [^\_^] bag  
seed that was gifted to me first time like ever kind of you know doing something  
like that it was a [^\_^] banger and um i had already had this in place but not  
knowing like where it was gonna get sold to like we're coming up on like getting it  
[^\_^] trimmed and [^\_^] like that and you know i was like man like i gotta  
find you know someone to sell this to and telling my wife this [^\_^] and she's  
like man do you should bro you're always talking about like the [^\_^] jungle  
boys and you're always looking at their [^\_^] and like you should reach out to  
them and i'm like just a stupid ass idea you know like like dude me and my wife

have like this dyn like dude for the [ ] i mean all women put up with [ ] but like you know like i'm a [ ] extremist dude it's like hey honey the feds are raiding us you know hide all your guns you know like just the the burden i've put on her i've put on her over the years like like okay like this is what my [ ] life's gonna be like i'm always forever like kind of [ ] because this is my man and he's like a [ ] extremist and he's just doing [ ] that like [ ] ruins families yeah you got a solid chick you know what i'm saying and so like i'm like dude sarah like i don't need your [ ] right now like i'm too [ ] busy like with other [ ] dude she's like right like 99.9 of the time you know what i'm saying like [ ] hate having to hear i told you so like she should just record that and have it on repeat bro and so randomly i go to like my little [ ] garden you know and i'm doing things and and i remember i smoked some weed and i went back uh to the to the facility and like people think like i'm just like this like in front of cameras and [ ] like i'm like this 24 [ ] seven all the time like just [ ] let's [ ] go and and [ ] viking burial and and sword fighting and and [ ] fight to the death kind of [ ] you know and i [ ] go there and it's like you know it's the afternoon and the place is empty and i [ ] open that door and like i'm just i close the door and i'm just like jesus [ ] christ i'm the [ ] man like i'm looking at that canopy and just being like you're the [ ] man dude like like this is [ ] incredible like where you and like this was every day though like every morning i came in throughout the day afternoons like my videos always shared that you know like holy [ ] like my shit's pristine you know and just can't [ ] believe i'm here right now and can't it never set in which is amazing like still to this day you know i'm driving around i'm like dude i can't [ ] believe like i'm i'm i'm partners with athena and like you know like i [ ] with legends and and the people that i believe are in the hall of fame and and i'm just like dude you're the [ ] man you're a [ ] forever [ ] thinking you can't call like [ ] dude reach out you [ ] you know and so like right in that moment you know like i sent him a dm and i was like yo what's up ivan not like you know who i am or anything i'm this little cultivator up in northern california i run this facility i'm doing my own drop i grew this flower out here's some videos of it picture you guys think you're interested in buying a couple bags or you know putting it in any of the stores you know just something like that and so like i go home and just like on the couch and [ ] and i look at my [ ] phone and dude there's like a message from jungle boys like within two hours you know and you don't even think like your message will even get to them you know and he [ ] clicked you know read the message and was like yeah bro we know who you are we [ ] with you like i'll take all of it and like i read that dude and i lost it like i blew up off the couch and like you know when like bad [ ] happens to you and like i always need to react in like [ ] go into defense i'm like off the couch doing the juke because i didn't know like which way to go you know like yeah and like sarah was like oh my god are they coming here and she's like screaming and and i'm like like jumping up and down in the [ ] living room and and she's like use your [ ] words like she's grabbing paper files and [ ] and i'm like jungle boys responded you know she's like you [ ] [ ] i thought we were getting raided like she was in full raid mode you know like i pack bags and [ ] you know like by the door like i'm got [ ] instilled in me to run you know what i'm saying like i've ran before like i've gotten away you know and so dude he just said that and i was just like i didn't even like oh my god like this is insane i'm just like looking at this message and i didn't know how to respond and he just [ ] he said send me your personal number and i texted him and i didn't want to say anything to him or like bother him you know or just do anything like that and then like the next day at like three o'clock he texted me and nate and was like hey nate this is lance buy all the flour that he has arranged pick up like dude just like that and and um i talked to him for like a minute on the the phone and i was just like look dude i know you don't know who i am but i'm [ ] different than anyone you have in your life and anyone you [ ] know

and we didn't even work together like i was no part of athena or didn't push athena or anything you know what i'm saying i was like total nobody to him you know no correlation for us no nothing and i was just like look man i don't know what the future future holds but i always get what i want and like i know at some point i don't know what it'll be but like you know i hope to just work with you someday on [Â \_\_Â ] something and like i'm the dark knight you've never had like if you ever [Â \_\_Â ] need me if shit's ever going down like if you're ever in battle like i will come there and fight to the death by your side and i don't think he really knew how to take not to take that you know he's like dude this dude is weird and i was like thanks bro i appreciate you yeah and i've harassed him here and there since then you know i'll send him like a video kind of like i send you like if i'm thinking about you guys or something like that like i do [Â \_\_Â ] like that you know like i don't if the afternoon comes and i'm thinking about you or thinking about somebody for whatever reason like i let them know at this point yeah i think one of ivan's strengths is seeing talent and recognizing it you know i remember the roach story is [Â \_\_Â ] insane and just yeah just you and and sorry to cut you off no i remember when uh i had my hydroponics store and i was with my wife and all i would do is come home and be like i'm gonna get the jungle boy account i'm gonna sell jungle boys hydro equipment watch it got to a point after months of that she'd start making fun of me and walk around the house like she's jerking off and being like oh the jungle boys and i'm like [Â \_\_Â ] you watch me like watch watch me get it watch and so after over time after time finally i got a meeting with ivan and i was like look dude like you know he was working with a few hydro a few hydro shops and um gave me an opportunity to work with them and i started selling hydro equipment and from then on like i think through that time he was kind of filling out well i was earning my stripes on customer service you know honesty support and i had a few lighting companies before that i had opened and started manufacturing lights overseas and designing lights and there's this the slide design that that that i found on a reflector and went down to his office when he was at 58th street and um got a meeting with him and we pitched him i pitched him lux and uh we went 50 50 and that was it [Â \_\_Â ] incredible crazy insane yeah super crazy like i said at the beginning of this conversation like what you've done in this [Â \_\_Â ] space is [Â \_\_Â ] phenomenal thanks man it's a unicorn like there's [Â \_\_Â ] that happens one [Â \_\_Â ] time never never again and like what you've done even before that like that hustle and air conditioning and [Â \_\_Â ] being in the like literally being in the trenches your whole life you know like it's [Â \_\_Â ] remarkable like dude like say you're gonna start a company in such a saturated environment where like all this shit's happening and then start it and [Â \_\_Â ] build it on these principles that none of the other people have and and then to [Â \_\_Â ] sell it and like i was a hardcore advocate for you guys just crushing it and you know i feel like it was undervalued personally like i thought it should have been twice that [Â \_\_Â ] price range yeah but not here for me to say but i was with you guys all the way like that's amazing you [Â \_\_Â ] deserve that i hope you got like obviously i think you undersold the [Â \_\_Â ] thing like you know what i'm saying like i don't have any hate is for the [Â \_\_Â ] weak minded and the heartless you know like i have i have no place in any of my being for hate towards [Â \_\_Â ] anybody you know what i'm saying and like so when we see things so [Â \_\_Â ] monumental just crazy to witness you know and then know the people who like did it is is [Â \_\_Â ] incredible what a lot of people what a lot of people don't see is bro it's the best fixtures you you did the you made the best dude that's insane you didn't just bring a product [Â \_\_Â ] nuts like yep insane that that d e fixture is hands down the best dude you can put it side by side on a gavita and the [Â \_\_Â ] lux rooms crush harder yeah no it all comes down to r d at that point you know and you're seeing the same thing at athena is like you walked in here and you've met two people that run r d like we spend so much time and energy and effort on trials and data and testing just like we did with lux and that's how we you know we created a lot of the fixtures through that you know we we created the the new veg bar spectrum this the veg bar with lux is astronomical difference in veg have you have you seen them have you used them

yet just seen them dude it's it's insane and we just did that by at jungle boys with trial and error trial and error and you know making a lot of mistakes and that's that's the thing it's like everything we did to get to this point all the mistakes we made all led up to create lux like people think oh well lux just was created you know overnight four years later you know second biggest lighting company in the industry and and it just happened right but they don't see all the lighting companies that were created before all the testing that was done before all the failures in the rooms all everything we learned about light and disbursement of light on the canopy before that to create lux was was where where it all happened so yeah it was a wild ride and now we get to put all that energy and r d into athena so excited about that what are some of your personal goals moving forward now i mean the biggest goal in front of me right now is getting michigan online and and just [Â \_\_Â ] flowing and in the facility going um i'm working in michigan on on a pretty badass [Â \_\_Â ] deal all these crazy things have happened in my life just like at these certain times of possible uncertainty or these shifts and you know and things like that and i had an incredible person come into my life from out in michigan you know and just more incredible more incredible about the opportunities just like our relationship like when i met this guy and like few people come in your life or like you meet them and you're like dude this is my brother you know what i'm saying like very very rarely like you know and this person came into my life marx avaya and like we just hit it off you know like on a on a humerian humane [Â \_\_Â ] level and just that first time i was out there dude i said i would never grow in michigan and i wouldn't do this and i'd do that and like he's like man lance i've been trying to [Â \_\_Â ] get you to work with me for a couple years and sending you messages and all this stuff and i wish we would have started a year ago and i was like dude not me like bro like if we would have had this conversation a year ago i wouldn't even mentally be here and like be on the level that i'm at right now like it wouldn't have worked we would have never got to know each other like it happened right now for a [Â \_\_Â ] very specific reason you know and so dude my goal is to [Â \_\_Â ] murder it in michigan like my [Â \_\_Â ] battleship is set to arrive very very soon and i'm coming for [Â \_\_Â ] blood you know like i'm landing in a new territory and i'm looking to [Â \_\_Â ] fight to the death that's big you know the michigan market i've never been in a market that's had more culture for sure you know i i haven't spent a lot of time up in mendocino in that area and i can imagine that the culture is [Â \_\_Â ] strong much different culture that's what's so amazing it's like you know when you go to different parts of the world and you meet different people different cultures yep like dude that's what the most amazing thing to me about cannabis is is i grew up in one very small little area and i've been there my entire [Â \_\_Â ] life now i'm going other places all over the place and meeting other tribes yeah you know what i'm saying and like conquering new [Â \_\_Â ] land and like when i say like going there for blood and like that's just mentality [Â \_\_Â ] and like that's market share and [Â \_\_Â ] like that i'm not [Â \_\_Â ] talking about scalping people and yeah and strangling people it's just like this is what gets me excited like you know cool on you for whatever gets you excited but like dude mma fighters like better go into the cage like i'm gonna [Â \_\_Â ] this dude up and knock him out tonight dude if you're going in there and being like oh dude [Â \_\_Â ] this guy's gonna [Â \_\_Â ] me up you've lost the battle yeah you know what i'm saying like i'm going into [Â \_\_Â ] enemy territory you know what i'm saying like everybody's gonna be cool with you until they're like dude this dude's a threat or whatever it is but that's what i'm most excited about because i feel like that'll that'll bring out someone in me you know what i'm saying someone like almost like a like a snake losing [Â \_\_Â ] it's it's skin like i can just see it dude like these rooms that i'm building are [Â \_\_Â ] incredible you know what i'm i'm saying and i never had these opportunities in [Â \_\_Â ] california you know and so like dude i'm going there and i'm working with with people i've wanted to work with like the peers that i [Â \_\_Â ] look to david preferred gardens as my partner on that project like i went and got him you know and i was like look if this does if these people there's two people i went to for

that project i was like look mark if these people don't do this with me i can't do it i'm not willing to take on this kind of situation i need these other two people to do it and i went to them and they're like let's [ ] do it so that and then obviously just education and craft farmer like i still want to continue to help people inspire people i'll always do that till the [ ] day i die yeah just two weeks ago i went out to michigan and i remember back when i got in the industry here in southern california i felt like the culture was a bit different way back then you know just felt it just felt like i was part of a community of cultivators and we all you know i ran the counter at the hydro shop you know guys came in we shared knowledge i used to have a keg behind the counter come have a beer just felt like a real strong community culturally back in you know 2011 12 13 you know coming up and when i went to michigan a few weeks ago i got to hang out with all these cultivators and i felt like i was back in socal in 2011 you know just felt just felt different you know and it was cool it was cool to be there and just go to dinner with all these guys and and just feel the energy it was it was uh it wasn't like everybody was trying to like i don't know it just felt good you know i really enjoyed it and and reminded me of socal quite a few years ago and like socal was way different than my experience in norcal like what was happening down here was not happening the same for me up there you know like again we're removed like do when i went to the hydro store nobody talked you didn't talk to anybody in the aisles like it was way way different like what you guys were doing here and having a place to hang and we did not ha i didn't have that i didn't see people hanging out in the hydro store up north like just different you know and so like i always wanted that you know especially at that young age where like where you want to interact with people and you need to have friends and you know like i've always wanted that kind of thing and like seeing michigan like seeing how they are when i go out there and seeing how like they [ ] treat me so good dude and and like it just there's there's a culture out there that's been missing for like my whole entire adult life you know like dylan mitten master is one of my best friends and i [ ] he's from michigan you know what i mean like i talk to him all the time we'll talk for an hour on the phone i don't talk to nobody you know what i'm saying like i'm normally one of those weird people on the phone were like want to get in and get off you know what i'm saying but like i met him out there i met him through this like he's one of my best friends yeah dylan's uh dylan's a legend for sure yeah dylan's special like he literally like when i met dylan and like hung out with him the very first time like i felt like we were dude long lost brothers like we were two clans that were like separated when we were four and went on our barbaric [ ] ways and and were grew you know grew up in different clans and then like one day like [ ] met each other again in the battlefield and we're looking at each other and just something seemed like there's like this memory like this this this resurgence like i know this [ ] person when uh i was i used to run the tech phones for athena when it first started because we're you know trying to get these we're changing an industry as far as what they thought about nutrients you know we're usually a nutrient company would just say hell add this and add that and do this and do that and it doesn't matter you know so what what we did was just kind of tailor a program and i remember working with dylan you know on how he was using it he was using i think a little bit lower of an ec value on the pro line and and worked with him on on raising the ac ec and then he called the hotline yeah he caught me that's how we that's how we met so we met through the tech support line at athena and dylan to further more what you're saying is like when he wants to know something oh he's all in it yeah he'll figure it out he's like more than very similar to he's similar to you but in that but on another level like yeah i don't go to the extent that dylan does no he called me probably several times a day dude we met each other on a consultation he paid for a consultation and we're talking about other [ ] and i'm just like i wrote this dude down i'm like [ ] dude i talk to people all the time like there's something about this guy like i remember writing his name down and circling it you know and yeah we were talking about dogs and everything else but i'm like dude this dude is [ ] smart like



just the way he articulated his words and always had a response and i'm like okay i'm gonna remember this name like this guy's special right here yeah he's driven really drunk extremely yeah bro he feels like like when i watch dylan work it's different you know what i'm saying like it's like as if he took the oath to the [Â \_\_Â ] president like when he came to work for athena like this dude works so [Â \_\_Â ] hard if you are ever at a point where like there's just so many employees and [Â \_\_Â ] so big he should be the dude that gets played on the jumbo screen the jumbotron for every new employee and is like talking about the fundamentals of athena and what we stand for and like yeah another level what what made you come to the athena team because we met through dylan right and that's why i bring it up and now now we're working together closely on athena what is it about athena that well the very first thing i planted that seed probably like a year ago like maybe a year and a half ago now because we've been working together for we've been working together for half a month but i just remember thinking to myself like dude these dudes are [Â \_\_Â ] making making waves they're the hit squad like i'd think of athena's the hit squad you know and i'm in the [Â \_\_Â ] bleachers i'm a dude like i'm i'm a [Â \_\_Â ] home run king of my own you know i'm on the opposing team yeah i'm visiting i'm sitting in the bleachers you know there's some camaraderie you know i know these guys and i'm [Â \_\_Â ] watching watching their watching the squad at bat and i'm just like damn dude i [Â \_\_Â ] belong on this team like i should be batting number five six in this lineup you know what i'm saying yeah i'm not gonna overstep myself and but like i see a spot for me on that [Â \_\_Â ] roster like like these are my people dylan's on the [Â \_\_Â ] team so i planted that seed being like okay i'm not gonna be the guy that ever reaches out ever calls you says like yo brandon like put me on you don't know who the [Â \_\_Â ] i am i'm not gonna ask dylan i'm just you know what i'm just gonna be organic i'm gonna let this [Â \_\_Â ] thing unfold how it unfolds but that's where i'm gonna end up like i'm gonna be batting for this team and i'm gonna be hitting bombs and i was going through starting to deal with like a lot of self-sabotage [Â \_\_Â ] you know and like i think i think it's a topic that doesn't get talked about with growers a lot in cultivation and it happens so fast and it's so redundant we're doing the same [Â \_\_Â ] things every single day in our life and and sometimes it it just feels like we're stagnant and like in those moments of stagnation you start doubting yourself and then the moment you have a problem you really doubt yourself especially when this community holds you to a higher [Â \_\_Â ] level and oh man i dude i remember that i remember seeing people's profiles be like oh my god dude can i grow like that like that looks so sick like jungle boys being like [Â \_\_Â ] dude can will i ever have a bud that looks like that you know and when things start going wrong and you have all these people that are relying on you and you're sharing information and you're [Â \_\_Â ] answering questions like self-sabotage starts sitting in and i was like going through this thing without kind of really saying anything being like dude i don't i tell a couple close people like man i don't feel like i feel like i'm losing whatever skills i had and my [Â \_\_Â ] rooms aren't turning out right and shit's kind of [Â \_\_Â ] hitting the dust and like the the middle of my runs and and [Â \_\_Â ] my drippers are always clogged and all this [Â \_\_Â ] [Â \_\_Â ] and i'm just like going back to the manufacturer and they're like bro isolated problem like we don't know what to tell you it's you it's your water and i'm like what the [Â \_\_Â ] dude i got no water like it's big boy like how much more can i do and dude my my runs had suffered and i was embarrassed and i've got this [Â \_\_Â ] patreon where i'm teaching people how to do things and consultations and drawing facilities and the self-doubt is like starting to set in more than it ever has in this level of my career you know what i mean and dude by like the [Â \_\_Â ] grace of the grow gods [Â \_\_Â ] and we talk often but like uh dylan just reached out to me out of the blue like a little before christmas and he's like bro i need to have a conversation with you and i was just like yes like i i knew you know what i'm saying like i just [Â \_\_Â ] knew he just got back from the christmas party he's like bro and i'm sitting there just [Â \_\_Â ] disgruntled and i've just thrown away a thousand drippers at this point over the last four days like my soldiers like i'm i'm in

michigan and the [^\_^] soldiers are calling me like bro i'm about to walk off this the drippers are clogged again i'm like stay in your [^\_^] in the zone like keep fight just hold the trigger down [^\_^] do not let that [^\_^] machine gun stop firing like hold the [^\_^] line by any means necessary you [^\_^] walk off the battlefield you're dead to me do not [^\_^] leave your post you know like had one of those and i'm just like [^\_^] dude i'm so and like dylan calls and he's like bro dude like i just went to l.a and he's like these [^\_^] guys and the jungle boys and roach and everything and i'm like dude that's [^\_^] amazing and i'm just thinking to myself like dude i can't wait to [^\_^] can't wait for my day the [^\_^] draft guy or whoever the [^\_^] is the scout finds me and and brings me to [^\_^] it was dylan at that point yeah and that's what he said he was like he's like dude your name came up in some conversations and he's like are you ready to stop [^\_^] around and like to do this with me like that's what he said he's like are you ready to do this with me and i was like man dude i thought you never would have asked that's awesome and then i had like a conversation with you the next day yeah no i thought um i didn't think there would be a chance that you joined the team but i was stoked to hear that you would so and i mean i don't i don't i think we kept it pretty straightforward i don't know if i said anything to you like that day about did i get into anything like when we were talking about just like no i think like mentality you kept it pretty clean the first time we talked but then after we you know it it changed i think like i i come off strong yeah of course i mean you're craft farming and i remember like talking one time and i'm like i'm gonna do this and we're gonna do this and like dude all my [^\_^] dude my my war gear is ready like and you're like dude let's just just pump the brakes and like see how the next six months go i said do a run first yeah yeah yeah but i had already been running it yeah you had already been running it for like uh i saw dude you were running it for what a year or six months i'd run it for like about four months at that point like i was buying it from grow generation myself like i just went and bought it then and like after that first the like after the second run dude i felt like a [^\_^] palette of bricks were lifted because like you can always do something one time but you got to answer it and like you were like you guys were like a lifeline to me honestly like with everything that i was going through and and so many people relying on me and i felt just all this self-doubt and like i can't [^\_^] recommend [^\_^] to people and do i even feel confident in like what i'm going to tell people you know like i take a big pride in that like when you do just like giving someone bad clones and then they have hot plate and virus and you're like sorry bro like i'll just replace your cuts [^\_^] you yeah like you just [^\_^] me i'll never get that run back in my entire [^\_^] life yeah you know what i'm saying like so i was like just so leery on like giving people bad advice and this and that and so like dude athena turned me into a whole different kind of [^\_^] animal yeah i've uh i gave my neighbor a athena sweatshirt and dude's shopping at the grocery store he has doesn't even not even in the cannabis game doesn't know nothing about it but i hear this all the time but he calls me he's like hey uh this guy just stopped me all passionate he just wanted to say you know how i got this you know shirt and i just told him you're my neighbor and [^\_^] and he wanted me to tell you that he said thank you for changing his life and he's able to spend more time with his family and his kids now and he just wanted me to call you and say thank you i'm like what the [^\_^] you know dude you'll never know like the totality of the effect that you've had ivan will never know the totality of the fact that he had like it goes so far beyond any kind of thing that we can think about in our [^\_^] mind and like that splinter effect just what you guys have done from inspiring to the nutrient line to the person the people that you guys are to your fundamentals to just all that [^\_^] has just like that's why like i feel like when when we're lucky enough to be put in certain positions of any kind of empower or influence like we have like a [^\_^] code we've got to live by because you're affecting other people then yourself whether you realize it or not the advice you give out affects other people you're tremendously so passionate about the advice we give out dude we give out a

tremendous amount of advice between your whole [^\_^] team and just since i've joined and like dude the dms are like like non-stop you know what i'm saying and like real people giving real advice and like i'm gonna make something very [^\_^] clear right now i'm not unpaid i'm not a paid employee i don't have a job with [^\_^] athena um i don't [^\_^] take like bribes like when someone's like hey man dude use this product you can make 60 like i'm not a [^\_^] car salesman i only sell and use [^\_^] that is in my [^\_^] garden i'm not a i'm not a hydro store i'm a [^\_^] specialist i have a very unique set of skills and i only offer what i [^\_^] believe in a thousand percent and that's why i [^\_^] sell athena i went to you and said hey dude do you have any issues with me selling athena i want to sell the [^\_^] nutrient because i can recommend it and i know that [^\_^] it can crush yeah that's the difference between you and some other and i've gotten that [^\_^] like bro you paid [^\_^] no yeah i'm not paid yeah i don't even get free nutrients for my grow you know what i'm saying like i'm on the [^\_^] team because this [^\_^] made my life better and made me a better [^\_^] cultivator yeah and my [^\_^] flower is real and my [^\_^] sells and in an environment right now where if your [^\_^] is not [^\_^] smoking you ain't [^\_^] my [^\_^] smokes and my [^\_^] [^\_^] moves yeah what motivates you at this point personally in your career i mean for me strategic relationships and other people and bigger picture [^\_^] than than just me you know like being on a [^\_^] team um being able to work with people that that i've manifested into my life you know what i'm saying through projects and and things like that and and then just the results of people in the community [^\_^] with me you know coming to my classes coming to my uh events signing up for patreon like that motivates me like seeing other people win when when when you get those messages and you see those [^\_^] canopies and and people are calling themselves canopy king and you see them taking pride in their their their [^\_^] canopies and their grow and like that's the most satisfying thing to me like i get videos from people in their tent and they're so [^\_^] excited and so pumped and they're like they can't express themselves this way that they feel like they can express themselves to me like okay lance is a [^\_^] viking and he talks about cut the check like i can send him a message like in front of their tent you know like sending me a video like i'm [^\_^] crushing it man because of you like so excited dude like that energy is [^\_^] contagious bro and when you get to act like that like dude we're [^\_^] monkeys like at the end of the day we're gorillas i'm a [^\_^] silverback like i want to pound my chest and [^\_^] rip some [^\_^] off the wall every once in a while you know what i'm saying like i want to tell my plants like i'm the [^\_^] man i'm your god i will [^\_^] put death in your [^\_^] village if you don't follow my lead and do what i say i will strike down upon thee you know what i'm saying like i control your [^\_^] light so just having that energy and like that energy is is contagious in other aspects of your life not just your [^\_^] garden where you're like a uh a [^\_^] secret cut the check dude and and talking to your garden and [^\_^] like that but like if you allow that energy to you know reflect in other aspects of your life like other amazing things will happen yeah absolutely right now what's your favorite cultivar that you're growing um definitely right now probably like the cutthroat candy which is a strain that uh ian uncle dad vibes bread originally like i named this fino cut throat candy because you know i'm always doing cut cut the check you know i'm the cutthroat [^\_^] king and um he's the head of cultivation for finest and some other companies and and just a [^\_^] amazing breeder you know he's quiet um really self-reserved and just makes just amazing flavor like all his [^\_^] crushes on another level like every single thing i've tried from him crushes like he he breeds for terps and flavor and and just has a different look on that you know what i mean like the anti-fuck boy [^\_^] he does like just whatever he's feeling like and whatever he wants and bro he just keeps coming out with hitters i just love growing his [^\_^] do you know what the crosses are on that one the cup throw candy yeah i do it's um it's like a daily driver to skittles to wedding cake to sunday driver to runts i believe nice what do you think about

what are you what are your thoughts on the new york market [^\_^] i mean it it's really cool for what's happening out there you know what i mean like i'm not in new york you know i'm just getting to michigan but regardless like where it is when these places like open up i mean new york's massive could new york potentially be larger than [^\_^] california like like i don't like our state is so big but as long as i was growing up everything was going to new york yeah so i mean dude if you have an opportunity like it's very important to strike in these opportunities when they're young and coming to fruition than trying to [^\_^] get into them when they're oversaturated so if you have any play in new york if you have any way to be a part of a play in new york if you have a way to get your bags and every single [^\_^] side shop there is like do anything you can to be a part of that emerging market some way and sometimes it's better to supply the picks and the shovels than be panning for the gold i'm a [^\_^] pick and shovel supplier yeah you know what i'm saying like i was in the creek [^\_^] going for gold for years like i got this [^\_^] crazy little whip technique where i can slide my sand around and [^\_^] find the the gold in the quartz and now i've got a shop in [^\_^] deadwood where i sell my picks and my shovels and once a week i [^\_^] gather everybody in the community together and show them my whip tech so they can buy all their tools from me and go to the [^\_^] river and hunt their gold but the difference between your picks and shovels is your picks and shovels comes from the garden for sure 100 and that's where it has to start going back to you asked me earlier like what starter craft farmer like that was the craft farmer name and then when i came into this facility and i started doing those stories every [^\_^] day it blew up and then my website were these hats i remember like telling my wife like dude i need you to help me start the store i'm gonna like i don't have any hats to wear you know i'm not a [^\_^] walking billboard for anyone else i want to wear my [^\_^] i want craft farmer i want ferment farmer i want canopy king i was coming up with these cool little things and i wanted a [^\_^] marijuana leaf on them and i'm like dude i want to sell these hats and i remember started like selling hats and like i sold like a thousand dollars in hats one month and i'm like so excited to my wife i'm like dude we're selling hats and she's like i [^\_^] hate it i'm packing these hats every day and boxes in our garage and your [^\_^] accounting's all [^\_^] up you're telling me to send a who and has this person paid and you're doing venmo and it's a [^\_^] we're starting the store shopify send everyone there do not take any more personal orders lance you [^\_^] everything up and like that's how it started you know i had my little shopify and then every day in my videos you'd see my whip kits on my wall and my manifold and like everybody was like dude what is what is that where did you get that and i'm like i made it you know i went down to my local store and got some [^\_^] and found a better filter and this really good cam lock and put this water delivery system together and then i had my poly tube and all this [^\_^] and i'm like people kept asking for it like dude can we get a whip kit like because i call them whip kits in my videos and so many people had asked for it like i gave parts lists out and they're like we can't find these parts and we don't want to do this like just can you [^\_^] put it in a bag and i'm like bro i'm a i grow 12 hours a day like and it just became so overwhelming like people were asking for whip kits and it was a it was january 9th or january 10th of 2020 and i'm like [^\_^] it it was a friday thursday night i'm about to head to my ranch it's like three o'clock i did a story on instagram like all right you guys you asked for it here's the [^\_^] whip kit i'm selling this whole package with all your table fittings everything for your poly your poly tube and your dripper is going to be all a cart that's the turning point dude sunday 64 000 in my venmo account [^\_^] and i haven't bought an elbow and i'm like holy [^\_^] dude i think i have something here [^\_^] the hats like sarah put on your red panties i'm coming home sunday night [Laughter] and i was just like holy [^\_^] so january 70 000 february 90 000 march 120 160. in february someone reaches out to me and it's like dude can you please start a patreon do we like you've taught me some like can i just send you money can i just [^\_^] send you money because you've blessed me so much like dude you need to

start a patreon what the [ ] is a patreon yeah you know and so i look at patreon i'm like [ ] is anyone gonna [ ] what is it patreon patreon is like this membership service where like artists gamers all kinds of people with some kind of like talent or substance can have a an audience come and sign up and pay monthly to be a certain level a patreon of whatever services you have and so i signed up a patreon patreon.com forward slash craft farmer and i started putting all my tech on there for a monthly subscription and obviously the self-doubt set in right away like if people don't sign up like this is going to be a flop like you're going to look like this and you know that little [ ] voice yeah you know yeah so i [ ] shut that voice up and i'm like [ ] this dude your craft farmer like tired of you like disrespecting yourself like you you do whatever the [ ] you want to do it's it's for the right reasons people are gonna [ ] with you doing patreon you know is six thousand eight thousand eighteen thousand thirty thousand forty thousand you know so patreon kicks off craft farmer irrigation is kicking off last year i did two point seven million dollars on craftfarmer.com selling my whip kits and nutrients the difference between companies like yours and companies like athena is we don't we don't just offer and sell a product we guide help and create success for sure and if you buy a whip kit and you buy athena nutrients and you do what i say on my patreon no matter how good you are or how much experience you have your shit's going to be on a different level than you're used to and like i've proven that like every day in the [ ] dm like cultivation facilities and big time growers and small-time growers and like wow my shit's never looked like this yeah you're selling success exactly that's what it is what's up with this belt so uh i got raided by the [ ] feds all my [ ] happened very large asset forfeiture case like my world as i knew it [ ] ended the moment that [ ] happened and brought on this very grueling long three-year period after that happened and that happened i think i was 28 or 29 when that happened every [ ] day in my life i worked my grows i had some warehouses then like i didn't have a team dude i used to [ ] sit and trim at the table for like three days for 14 hours like for the p like everything i did i did when i'm talking about cutting clones and planting and growing i did [ ] everything i was so paranoid about having people in my [ ] or the wrong people knowing or anything else you know and when i got busted my whole life that i knew of ended in that day and i felt i had this very long three-year battle you know and like with this addicting personality i have of like work and and focus like i had to have something to turn to like weed was just taken away from me i didn't know what to [ ] do and a very inspiring person a good friend of mine badass [ ] dude named jessie hardcore into like bodybuilding and all this [ ] like amazing physique i'll never forget the first time he like walked into my store because i had a fake car audio store that was all blown up you know and but i was running the car audio store and this dude like walked in and i was like mesmerized with his body and like his physique and he's like hey yeah i'm here i'm interested in stereo and this dudes like six six to seventy massive you know like [ ] childhood wrestlers never seen some dude like this and i was like dude can i touch you it's so funny it's so weird but like that's like i just want to touch his arm you know what i'm saying like dude like no homo can i [ ] touch your arm and he was like dude this guy's weird and but you know we became friends and when that happened he's like look man you're gonna [ ] die if you don't change all that energy and put into something else he's like weightlifting and bodybuilding will take up all of your time every [ ] hour minute you have in a day to do it and i went extremely [ ] hard like meal prepping [ ] um crossfit it's like i got and i had a lot it was a perfect switch for me in my life you know what i'm saying like i had to have something that took all my focus and all my action you know what i mean to focus on that and got down to like 170 pounds you know i was like 210 lost all this weight in crossfit and then started putting the weight back on in muscle and i was a [ ] machine dude like six foot one you know 185 pounds cut like [ ] ripped out looked amazing amazing when everything finished from that case an asset forfeiture and dealing with my [ ] and getting off of

it a friend of mine brought me this [Â \_\_Â ] belt and he was like lance like i just want you to know that you're a [Â \_\_Â ] champion you're the heavyweight champion in my mind like i've never seen somebody so [Â \_\_Â ] resilient work so [Â \_\_Â ] hard like never complaining never [Â \_\_Â ] poor me you were gonna bro i was looking at like 12 years in san quentin it was a bad situation like i wasn't getting any offers like we were we went to we were going to trial you know what i mean like i didn't get by the grace of god some [Â \_\_Â ] happened where i [Â \_\_Â ] got a blessing you know like in this whole court thing two days before we went to trial and i ended up making a a deal that that favored me greatly but i mean i was prepared like dude if if my peers don't agree with me i'm going to prison for [Â \_\_Â ] 12 years you know like and at the same time i stood up for what i believed in they had offered me this other deal and i wouldn't take it over the asset forfeiture and there my family's like dude like the lawyer's like lance you got to take this deal what were they offering you they're offering me like a felony you know six months complete asset forfeiture everything they took and i'm like i'm not [Â \_\_Â ] doing this i'll never take a felony i'll take a wobbler because i'm like my whole life will be ruined or if i'm trying to do anything or i'm not a [Â \_\_Â ] felon man i'm not taking this [Â \_\_Â ] deal you know what i mean like that's not me i'm not i'm not that person and go [Â \_\_Â ] yourself telling me you're gonna take everything that i've worked for my whole [Â \_\_Â ] life yeah these nuts yeah not happening i'm not [Â \_\_Â ] signing that deal dude i used to walk around with this little tiny eight by [Â \_\_Â ] 12 bulletin board with like picture of my bronco my cadillac my boat [Â \_\_Â ] idiot here comes lance with this [Â \_\_Â ] five-year-old boy [Â \_\_Â ] bored of his old possessions dumb [Â \_\_Â ] you know i don't give a [Â \_\_Â ] dude like i got my house this way i'm getting all my [Â \_\_Â ] back not you know my lawyer's like dude what what are you bringing this [Â \_\_Â ] board every can you i'm like dude what do you why let me tell you something chris you don't know who the [Â \_\_Â ] i am i don't question you i hired you because you're the best don't question me we're getting this [Â \_\_Â ] back you brought your board to court not court but every everywhere else yeah in my everywhere i went i brought my board looked at my [Â \_\_Â ] remembered how [Â \_\_Â ] hard i worked bro i had some bad [Â \_\_Â ] 67 caddy drop top original seafoam green my duramax motorcycles [Â \_\_Â ] bad boat i'm like i'm gonna get this [Â \_\_Â ] back you know and long story short when i was in trial we were about to go to [Â \_\_Â ] trial we were in jury selection the prosecution has this card where they can throw a card and get a new judge and like i had all judges come from the prosecution side it's never favoring you you know what i'm saying like judges are former prosecutors prosecutors throw the [Â \_\_Â ] biggest sentence at you and it's their job to [Â \_\_Â ] you and hold your head underwater and kill you if they can like they're [Â \_\_Â ] hyenas prosecutors are hyenas and coyotes they [Â \_\_Â ] serve themselves on dead carcasses their job is to [Â \_\_Â ] your life up and give you the harshest sentence possible private attorneys try to [Â \_\_Â ] get you the lowest sentence possible block it you know and so we had a judge where they're like dude we're gonna pull this card we're gonna [Â \_\_Â ] this kid like maximum sentence you know in this judge right here former marines former [Â \_\_Â ] hardcore prosecutor you know [Â \_\_Â ] werewolf like eat your neck out in the courtroom and he's like oh man this is not good bro they're gonna [Â \_\_Â ] he is telling me and they're just so smart he's like dude they're gonna pull this card we're [Â \_\_Â ] and there's no deal anymore lance they've pulled the deal off the table you're like you better [Â \_\_Â ] hope to god that we can convince you're gonna have to get on the stand bro you need to [Â \_\_Â ] convince them that you're not this [Â \_\_Â ] piece of [Â \_\_Â ] drug dealing you know like they bring up my shooting this dude has been [Â \_\_Â ] running these streets like some [Â \_\_Â ] hyena for 10 years pure cannabis charges yeah cultivation cultivation i was really into gun training at that time so like doing special ops courses and [Â \_\_Â ] like that and so like when they came in you know had my vest no [Â \_\_Â ] illegal firearms no firearms no magazines nothing illegal you know what i'm saying as far as that goes but just more [Â \_\_Â ] ammunition for publicly hanging you yeah in front of your [Â \_\_Â ] city you know what i'm saying dude this

[^ \_ ^ ] guy was out sick like randomly like got a cold and they [^ \_ ^ ] brought up a traffic judge and it's the only judge sitting on the bench that came from private practice and my [^ \_ ^ ] attorney was like bro you just got like a [^ \_ ^ ] hail mary punt like the only thing that can come out that could even happen that's good right now just happened to us this is amazing this is a this is this is a man that comes from from traffic court where he has sympathy for some people depending on what's going on he comes from private practice he understands what what's happening that it was just a so what is a godsend so what happened from there the moment that happened and they announced this they came to me with an offer like 10 minutes later and they're like our deal's back on the table we can just take care of this right now and i'm like [^ \_ ^ ] no do you remember the first time i denied that offer give me your [^ \_ ^ ] pen and pad this is the only deal i'll take wobbler six months return my money return my [^ \_ ^ ] boat return my duramax you can have the cadillac the razors the motorcycles and they came back and they're like we'll do this deal we want the boat and i'm like done signed it [^ \_ ^ ] and then that's when he gave me the belt so that was the end of thr i was [^ \_ ^ ] yoked i just came off of this i i walked out the courtroom feeling this different thing and like two days later he's like dude i just want you to know like you're an absolute heavyweight [^ \_ ^ ] champion i've always wanted a belt my whole life you know and he was like dude just watching what you've done how you overcome things he's like you're the definition of a champion you get taken out stripped down build your way right back up get a championship get knocked out build just like a ch a champion in my eyes isn't someone that just reigns supreme it's someone that handles immense adversity knows how to [^ \_ ^ ] treat people has valuable um tendencies has a good heart like all these things make up a [^ \_ ^ ] champion you know what i mean we're all champions walking amongst the world there's a lot there's there's people that stand out and and just you're you're a champion for just being a [^ \_ ^ ] person being someone people can count on being there for your peers you know what i'm saying and yeah he gave me this [^ \_ ^ ] belt you know and it was just extremely dude it was just heavy getting this it felt like the greatest triumph the greatest reward i've ever received in my life and then um fast forward like seven years randomly last year i just started wearing it in the garden because like if i wasn't fooling myself enough you know and saying like you're the canopy king there was this like video where like i got interviewed by a roy or something i've got like my belt on in the garden people are like who's this [^ \_ ^ ] idiot like my mentality is on another level but now that you know the story of the belt and and i felt like and and never before have i felt like more of a champion i'm looking at my garden in room after room after room after room is [^ \_ ^ ] firing and i'm motivating people and people [^ \_ ^ ] love me and i'm inspiring people to do things and inspiring people to [^ \_ ^ ] grow and then i thought to myself dude i'm gonna start giving this away like i'm gonna i'm i want to do so i'm always want to do things differently and i'm like i'm going to look within our compu our community and i'm going to find people who stick out to me who i think deserves this qualification of a champion you know in my mind they're a [^ \_ ^ ] champion and just like a month and a half ago i crowned uh dylan at toledo garden supply and gave him his heavyweight championship belt you had one made yeah that's awesome and i think he gave it to his little brother who's fighting cancer awesome that's rad dude so for me you know like i'm watching too you know i see who's doing things and there's so many [^ \_ ^ ] people deserving of there's a long long list now the belt was well deserved you know hearing the story and just telling the story people don't realize being in the thick of that and holding fast when you have the doj about to put you to put you away for 12 years for cultivating cannabis like when i got busted there was no money we're not even talking lots of plants i did like 12 plants a 4x8 so like i only got caught with like 220 [^ \_ ^ ] plants like dude they got me on the money laundering money laundering was bad the story keeps getting worse like i was facing those charges and dealing with that and then like dude six months into it i opened my mailbox one day and there was like this packet this thick from the court and that's when i learned i was being charged with like 63

counts of money laundering and like when i read that i could handle the other [Â \_\_Â ] but like [Â \_\_Â ] got very real very quick when every single charge is six months cultivation is a non-stackable offense so like they might have raided and got me in four locations but it's one charge i can only serve time one time for all those things that they bust money laundering is an individual six-month felony charge so i had 63 felonies yeah that i was [Â \_\_Â ] going up against yeah respect 53 of them i got thrown out a year and a half into the trial like big cases are full of little battles you know yeah yep respect bro crazy yeah mad respect thank you so i really appreciate uh you coming down and and letting me interview you dude of course it's it's been a [Â \_\_Â ] pleasure like i said like we're working at the we're working together because of how inspiring you know you are and the company is and these other hitters that i'm in the lineup with and so i'm i'm just super [Â \_\_Â ] grateful that you know you [Â \_\_Â ] with me and you know you support me when when i come to you for anything you know you've been very very supportive you know we're just getting to know each other and and you know like i've told ivan i'm a [Â \_\_Â ] soldier and if you ever [Â \_\_Â ] need me dude i will be there and i will ride in [Â \_\_Â ] hard and it will be bloody and we will win you're a legend bro respect alright that was awesome what's up tyler how's it going good man now thanks for making the trip out dude and i know it's a long uh i know you got a lot going on right now so awesome having you out here and thank you for the tour yesterday absolutely you guys are always welcome yeah appreciate it charlie it's a pleasure yeah pleasure meeting you guys thank you so much for having me out yeah yeah for sure um you guys just had your seven year anniversary yeah crazy yes we did yep that's awesome congratulations thank you now turn you guys a spot it's one of the nicest facilities i've ever been in um you guys have a gym and an in-house chef can you talk about how that how the gym got started it's all about productivity man right so the more we could stay on site you know the more things that we could do that kind of adapt into our everyday lifestyle the less we leave the less we kind of stay together right that's kind of the concept of eating together every day uh michael king the founder of the company is uh basically a professional athlete right we all just try to keep up so he wanted the gym on site and he takes his hobbies very seriously so that's what you get you get a boxing ring in a gym right i think covet had a little something to do with that yeah yeah yeah as soon as the gym started closing down and everything you know changed uh the gym instantly popped up in the shop and it's grown a little every time every month something's added right and every week we end up in a different sport or whatever but yeah i mean every time i come out there's there's a new piece of equipment where it's expanding yeah i guess another wall is coming down some things are shifting around a little bit yeah we had an original agreement that was for like i think i don't call it like 500 square feet at max you know my mike said could i just carve out this one little section over here and like yeah no problem that's fine every week it's grown more and more we've justified it though i feel like yeah yeah 100 100 charlie what what's your role at king's garden what can you introduce yourself and what's your day-to-day look like yeah yeah certainly so my name's charlie kiley i'm the founder one of the founders and ceo chief operating officer i'm more or less responsible for all of the day-to-day operations so my background is cannabis um i've been in a space i guess you'd call me a legacy guy if that's the the term that seems to be appropriate now that everyone's using um so been in the space been grown cannabis for 20 years now born and raised in the coachella valley and went to orange county to go to college after high school spent a couple of years there that's where i got my first experience with commercial grows set up a grow in costa mesa and then in westminster california in 2003 set up a dispensary and um ran that for about a year and a half ultimately ended up selling off the dispensary on the grow to move to willits california bought about a ranch up off of third gate road in the sherwood community up off of uh in willits and uh spent the next like seven years there just growing um with a couple of good good friends good partners and basically just evolve that one ranch in willets and do a couple thousand acres spread out between laytonville kenton palm um the ruth lake area so did that for



several years [Music] got a little tired and lonely up in the hills anyone who spent enough time up there knows how that goes saw an opportunity in palm springs my hometown the city was being pretty proactive they were speaking and starting the dialogue as it relates to licensing obviously all medical at this time so i came back home to have some conversations with some people i knew and one thing led to another and my efforts and attention kind of shift um to opening indoors and my hometown the desert um not too long after that became my focus i linked up with mike king through a friend of a friend not even a friend but through an acquaintance and an acquaintance one of those you know seven people removed type of situations we ended up in the same building had a good conversation realized that we were both on the same mission to do the same thing he had a financial background access to capital i had the cultivation and uh cannabis experience and so it was that minute that this relationship was formed wasn't king's garden or anything at that time it was just a just a partnership and a common goal so we set out to you know achieve greatness in the cannabis space it was very quickly after that i had known tyler um one of the growers i was like consulting for in palm springs tyler was running successful indoor operations in palm springs we were kind of neighbors in a sense we ended up in the same building and so uh you know he was one of the early one of the first people to come onto the team we recognized his skill set and his value and so you know he was one of the first ones to come onto the team but yeah that's me in a nutshell no you guys that's awesome to hear that you've come from the traditional market and and know the background because a lot of the times you're seeing a lot of people come in um just with capital and and no background so you're one of the original founders yeah with you you are the original founder that's me and mike king are the the two original founders yeah that's awesome yeah and um to your point like there's a ton of people coming into the space that that you know don't have anything other than capital um they are threat obviously for their own reasons but at the end of the day um without the ability to grow a good product and consistently produce um you know just having the capital will never get you to the finish line 100 but i also think you know you guys have built king's garden on quality product you know hands down i mean no influencers no you know crazy partnerships with anybody famous you guys just done it from good quality cannabis well that was the goal sorry let tyler jump into but that was the goal originally i recognized that there was this huge misconception that you could not grow good quality cannabis at scale right this is like a misnomer that's been thrown around for so long and i saw it when i was up on the hill i saw it when i lived up there for years and experienced you know what i was a new grower you know quote unquote uh chatting with people who had been in the hills for 20 30 40 years and if you asked any of them the general rule or the general consensus was that there was no way you could ever grow you know good quality cannabis at scale it just wasn't feasible and i recognize that statement just to be so flawed just and just on the principle and you don't have to look very far to recognize that like any agricultural product not any but as far as i'm aware any sort that i've encountered so far it is scalable yeah is it easy no is there a certain is there a right and a wrong way to do absolutely but is it scalable like yes absolutely and that was the mission we set out to prove was that we could in fact you know stay true to our roots of producing good cannabis not just in a 100 or 200 300 light facility but in a 3 000 um light operation and growing from there tyler what about you how did you get into the industry and what's your background yeah so uh i moved out to california from florida my hometown in 2011. so i just recently broke my 10 years of being in the industry uh i had an opportunity with some family my cousin was running a you call it on the traditional market at the time a large-scale co-op i didn't know what i was moving out for at the time who i was going to be working with what i was going to be doing i just remember my first day walking in the grove seeing all the the umbrella hid lighting and and uh kind of hopping in first day right i worked my way from the bottom one thing led to another having to move getting you know closed down left and right ended up in the desert uh palm springs like charlie said in the neighboring facility um him and i kind of in the team that

he was with kind of shared a lot of the same genetics and tech and just growing methods and stuff like that so that's kind of how we met timing right place right time being connected to the right people is how i ended up meeting mike as well and when they had an opportunity to launch something on the recreational legal side that's when they called me and joined their team instantly what's your day-to-day at king's what is your role yes so i'm the head cultivator i oversee all 3 500 flowering lights we have currently 42 employees underneath me every single one of our facilities has a respective manager on site that i talk with daily weekly monthly basically sending them templates schedules and things of that nature uh to keep every facility on track with with our growing methods and to keep everything on the same cycle so my goal is to look at all 10 of our operations as one facility right it doesn't matter there's 50 something grow rooms but they're all under one company and one brand so i have to run those as if it's in one operation right so we have like a floating team and we use kind of centralizing things as as like kind of a super power to us right it's how we can remain efficient in a lot of ways so at standard called a thousand light facility for us only has five full-time employees on site because there's there's a lot of times that i don't need 15 20 people there but there's you know big harvests or buck downs or green work that needs to happen you know de-leafing or things of that nature where i have to direct a large crew you know to one facility or to the next to you know accomplish every single goal every single week so it's it's a it's a per day and a per week kind of scheduling that i that i stick to on top of that it's it's you know the the standard troubleshooting that every grower needs to know how to do how to identify a product a problem like a mechanical failure things of that nature have the approach to be able to fix it correctly or know when there's something wrong so so things like that so i'm on site at every single facility most of the time at least once a day at every building kind of just driving around now that we're expanding how many buildings do you have ten so one of them is a is a thank you a uh nursery uh mother room the other nine are cultivation facilities so all different shapes and sizes some of our facilities are as small as 220 lights and some of them are as large as a thousand lights the new ones that we have coming online we have two 2000 light ground up operations being built in palm springs right now and then a 4 000 light operation being built in san bernardino with those things like charlie was saying you need to find a way to become scalable at an easier cost right so boots on the ground for somebody like me every single day seven days a week is going to be a little bit harder so that's when we're going to get a little bit more fine-tuned with kind of the mechanical side of things that we're implementing you know more facility controls irrigation controls fertigation controls where i can tap in with remote access and kind of guide our team and give them the resources and tools necessary to be able to succeed yeah right nice um because it's going to be harder for me to kind of be spread out right yeah charlie you you said you had 3 500 lights going right now what does the expansion look like and how many lights are you guys have in the plans so yeah 3 500 lights flowering right now all of those are in the coachella valley um so they're within like let's say a five to ten mile bubble of each other um the expansion that we're that tyler mentioned right now um in palm springs kind of an expansion of one of our existing facilities um is an additional 4 000 lights that's already broken ground the grading has begun um they're starting to do all the underground now so um and then in addition to that we have currently under construction um a project in san bernardino that's another 2000 light excuse me 4 000 lights so once san bernardino the palm springs expansion comes on there's an additional 8 000 it's gonna add to the 3500 that we have right now so we'll be at 11.5 holy [ ^ \_ ^ ] a lot of lights and so that's why you know to tyler's point when you ask him what he does it's everything but i think like the biggest thing so obviously sops are what allow you to scale right so having very very very strict and concise and clear sops so that everybody knows exactly what they do when they do it right we're not trying to um we don't we don't hire like for quote unquote seasoned like master growers right we hire people who um fit the the kind of family vibe that we got going on and who are trainable and smart enough

to understand like this is how we do things this is why we do it is there more than one way to do things absolutely right but this is our way and we have to stay true to our way these are the sops that we've written this is what has allowed us to scale this will be our success is dependent on following those sops so once you have those sops and they're so clear and they're so concise it's the it's the rinse and repeat right rinse and repeat rinse and repeat so what tyler has done just phenomenally which is probably one of the actual hardest tasks to do is effectively just schedule and manage what's happening on what days we know that it you know at this point we d-leaf we know that at this point we um you know clone we know that at this point but making sure that that's what's happening when you actually have that many facilities going on and using that floating crew that's our kind of um like migrant workforce that just moves from facility to facility making sure that they're at the right place at the right day doing the right task like the scheduling is really has to be like precise right absolute precision and so that's a big big part of what he does he's the head cultivator so he's responsible for you know everything as it relates to cultivation including like getting these workers to the right place and getting them doing the right tasks and that's not that's not easy no and then it with those sops and the foundation that you guys created i'm assuming you guys have the ability to kind of bring you know talent up through your through your your operations and you're you're you're you're developing people based on knowledge that you've learned so instead of hiring like a guy that been growing weed for you know 10 20 years or whatever you're able to take a brand new guy and kind of move them through the ranks yeah we do we do that most of our managers are people who all of them really are people who have started at lower positions and move their way up and some of the best workers that we have in the organization period like um packaging managers and trimming managers and stuff like that are people who started at the most entry-level position either in packaging or in trimming or in the cultivation team just doing you know the floating crew work um so everybody has a shot right um show your worth show your ability to just follow basic you know workflow stuff and you definitely have and with all of the expansion that's coming in you know tyler reiterates that to these guys all the time like there's a lot of management positions opening up there's a lot of uh you know vertical movement that can happen here shortly as these new facilities come on so do your duty and nice tyler i'm assuming you you're the one developing these these people what do you look for in someone what qualities do you look for in someone as you're as you're bringing them up through the ranks yeah that's a good question uh to charlie's point like we hire everybody entry level right so nobody really in the company besides myself and a few others which i think i just got lucky because you know to charlie's point we're not hiring people that are skilled cultivators already right because we want to be able to groom them to do things the way that we like to do them not saying that it's the only way or the right way it's the way that works for us and for us there's no we don't want you testing out things in our facilities right so i'd almost rather have somebody with little to no experience that i can groom and what we're looking for is family values right we're very big on that uh we need to be able to work well together we need to be able to get along and you need to be able to take direction and follow notes and like what i'm doing on the back end of things is i'm trying to give the growers and the buildings as much data and like scheduling as i possibly can so i'm not looking at myself as the train anymore right i'm not i can't physically be in there operating dosatrons or irrigation skids and things of that nature i can't do it anymore i look at myself more as like the train tracks right i'm trying to guide everybody to success but just like here is our way of doing it right now with the big change of implementing athena and all of that stuff you know everything's kind of changed we've had to switch sops and that stuff but only to our benefit yeah alex how did you you worked with these guys i mean to make not you guys don't make a lot of changes and i respect that and i i'm all about that but to make a change from how many bottles were you guys using before 16 different bottles at one time yeah eight at one time yeah not at once obviously but like through this growing

cycle yeah and that was a dumb down like that was what i had come up with to be more simple than some of these you know full lines that we were seeing right like we've tried it all i've i've i've run i've tried the full line of advance and connoisseur this and i mean we tried it all we've always wanted thank you guys for finally doing it we've always wanted you know a more basic and simple way and i knew i i guess i probably left out i did for a small period when i moved to orange county um i was working at a nursery and i got kind of plugged into the um that world the agriculture the agriculture side of things and um i learned a lot there that kind of you know transferred over obviously um but one of the things i picked up on pretty quickly was that we were all being misled at well just we were all being taken advantage of not necessarily misled but taken advantage of um by these nutrient companies right um the idea that somebody finally formulated something that was you know for for cannabis and so we had to use this or that and if you understood npk's and what just those just alone if you understood what those three numbers meant you you already were off to a better start and then if you understood you know the idea that there's only so many ingredients to make those numbers up and there's only so many source sources for these ingredients and stuff to begin with you started to recognize that like you know this there was way too many products being marketed just for the sole purpose of exploiting us from our funds yep and so um i tried it all i tried veg bloom when that was you know like a thing early on um in hopes that like finally somebody mastered this salt thing right um so we always knew that like or i always knew deep down that somebody would be able to figure out something that was more basic but that 16 bottle system was was dumbed down right that was like leaving out a lot of the other rubbish it was like you know what we believed was important in those times our beneficials our base our beneficials some boosters and stuff like that um some silica like it was it was all the things that we had been trained to think that that was what we needed so anyways that's a i guess a thank you to you guys thank you to alex over here yeah you know just you know just here trying to you know steer them in the right direction and make it simple i mean that's that's really what it is is simplifying the whole process at scale that's that's what it is so our trial run was small right we didn't to your point we don't we don't just dive right in and make changes um it was a slow process it's been two years yeah but i don't think the truth is the trial run didn't go perfectly the first time right tyler no you know what um so to charlie's point you know he did a really good job formulating our original recipe by taking like all of his favorite products from all these different brands right so whether it be botanica or house and garden this and that it was a plethora of other things it got us to where we were at today could we have continued to scale with that and produce what we were doing with that sure um but was it it wouldn't have been scalable at an easy cost by any means um that many changes throughout the plant's life pulling this out and that a lot of moving parts a lot of moving parts a lot of different doser stations now you're talking about you know single source basilious with with like uh beneficial bacterias and then feeding them sugars now we're in the world where we have to recollect all of our water and strip it of everything and reuse it so that became a huge learning curve for us cleanliness is a huge part of your guys skill yeah for sure every scale you have to have 100 sterile so we were successful with what we had but but you know the first day a good friend of ours chris lundgren uh great friend of ours we do a lot of stuff together dosatron chris everybody knows about uh nothing by he said hey he actually just called me around this podcast oh yeah that's funny shout out chris yeah yeah um he called me one day said hey i got a couple buddies in town i think rob was supposed to be there but he couldn't make it but but uh brent and alex i just want you to meet these guys right and so they came by the shop and immediately alex was like you got calm deficiencies right damn alex just like that bro just going to start talking about it you know i see what i see and you know it's easy but but that day you know we sat down in the office and recognized and charlie you know put this really well when having this conversation was uh we're not really open to changing much but if we're gonna test those waters

with anybody it's gonna be with you guys right because you guys put in the work on the back end with the with the r d uh specific to what we're trying to accomplish here right it's not another nutrient bottle that's just like hey buy all these things you're gonna get thirty percent more and yada yada which is like when has that ever been true right how many claims have we heard like yeah right increases yield by twenty percent yeah all day [Laughter] well the conversation that that was had was even if we could produce the exact same thing with what we were doing before yep you're winning we're winning yeah and or if we can get close and and pick up on efficiencies or be scalable at an easier cost to have less bull crap down the line then it's worth it right our first run was by no means a failure definitely was a huge learning curve for us because of the you know trying to build up and in the way that we irrigate and things of that nature we might be a little unique uh but it wasn't a failure by any means adjustments needed to be made and now we're at a point right now where i can confidently say we haven't even unlocked the full potential of what we can be doing with these products but again it's a long time in the making right we've got a uh already a workhorse of a brand out there that we need to be cons consistently producing the same product and or better so we can't just like hey let's rip everything out and change everything overnight so it was slow r d process but now you know we came to a point where it was like find something that's kind of like your base that you that i can roll out everywhere right now right and it's it's something that plays well with everything every single one of our genetics every single unique difference and maybe each grow room it works well with everything and we're producing the same and or better with what we were doing before it numbers don't lie right numbers terpenes all of those things if success is measured on like if if we went into it with the idea like tyler said like if we just match what we were doing and b but it was more efficient to get there it was easier for us to get there then that was a success like that was that was the the openness that we had right the reality is an increase in yields an increase in um quality at least certainly with specific strains and things like that um so i think we can say that you know we we definitely hit that part of you know getting that or or better and and better would be you know where i say we landed so much so that we have gone ahead we are 100 transitioned now so the whole 3 500 lights has made that transition alex's point it was a long you know two years to get there um but we had we had to make sure that um you know we were doing the right thing once you got to a certain once we had a certain level of confidence it was just a matter of actually getting it it was a matter of like getting it through you know uh rso getting it through the the whole rest of the facilities and stuff like that it just took time right yeah but um we're very very happy with where where we're at um and the same thing applies to the deluxe side of things right like i just like i always wanted there to be a better nutrient solution i we i think tyler and i also agreed we always wanted there to be a better lighting solution um you know we grew under everything that you guys have all experienced right we're on parabolics we ran magnum air-cooled hoods um eventually ran you know double-ended hids which still are hanging in a lot of our facilities obviously um but we always hoped that something would come out that would reduce the electrical demand and additionally reduce the heat load um we tried random things like those satellite ufo uh leds leds right just little bits here and there never through you know whole room or whole facilities into r d but definitely like open to the idea that some light was gonna come out and finally you know disrupt what we knew so just like with the athena side the deluxe side effectively did that we put it into an r d with the 645s and um and then i think we were one of the lucky few to start to yeah you were one sample some of your 860s yeah you steezy and jungle boys all got rooms at 860's and we're absolutely loving those things right tyler can speak on details of those but so it's another example of like um you know us knowing that or hoping and and praying that something would you know it would be a solution and and there is what do you tyler what are you seeing with leds over the hps and on all the new builds are you guys going all led now and getting away from hps completely yeah good question uh everything that we're doing moving forward even

like additional rooms in some of our existing facilities that we're currently building out led 860 watt extra red spectrum leds um first run on those without having adapted to any learning curves and things like that in an existing grow room that was operational for four years that we had data going back on with hid lighting um you know i think i shared this information with alex is with our old lights and our old nutrients we produced x grams per square foot pounds per light implemented athena we watched that ticker kind of go up and then went basically light for light with that same recipe with the athena and with the 860s and we watched it just go up even more but what was interesting with that was the the learning curve was minimal granted i'm still learning here um and i've had a lot of good people like brant and roach and a couple guys like that that have given me some pointers and some things that that i've seen kind of differently room control is definitely a lot easier maybe because of the fact i'm coming in at you know point six tons per per watt or per light right per thousand watts that was our calculation previously yeah for sure um so i've got i've got full capabilities of doing whatever we want in that room uh but just when you talk about like light penetration and actual like light absorbed by the plant that's beneficial when you're running an hbs if you there's you used this term yesterday uh yield dilution there's a point where you could produce too much plant matter in a room or like man these things are booming they're huge they look good but at a certain point there's kind of diminishing return on quality with that we didn't see that as much with the led not only did we have more product out of the room it was better quality top to bottom just maybe the light penetration the bottoms filled out more we saw more color throughout terpene production was higher we had test results proving that terpene production was higher than the hid room so it was a success across the board so all 12 000 lights that were uh or sorry 8 000 lights that we're designing right now is all designed with 860 watt leds yeah i learned about yield dilution from morgan patterson and it's an actual you know verb you know word in agriculture and i think the two things that are going to affect the quality of cannabis uh regarding yield dilution is what one ppfd too much ppfd too much light and then two is the whole crop steering you know the advice that some companies are giving on crop steering you know we don't like saying crop steering we say irrigation strategy and when you pump when you pump the ec too high and you're you're driving your drybacks way too much yeah your yield goes crazy right and you pump you know high ppfd on the canopy your yield goes crazy but yield dilution terps and thc goes down you know i think we've always used the term i like that term we've diminishing returns right it's a similar similar like concept right more is not always better better better i mean um did you going from the 15 part recipe that you guys were using um you can be 100 honest did you see a negative impact on quality going from 15 parts organics organic inputs all these different microbes mycorrhizae trichoderma sweeteners all this stuff to a two-part athena with cleanse 100 honesty did you see a negative impact on terp testing thc testing bag appeal it got better it got better yeah it got better on top of other things that you're not mentioning like cleanliness right which that in and of itself is huge right so we've had because we used beneficials so much tyler mentioned we have a couple of our facilities they're on we've kind of dubbed these zero waste facilities but ultimately what they are is they've got wastewater skids reclaimed skids and we're treating all the water and and reusing it and not only like the impact that it has on that reclaim skid but obviously all of the irrigation components the pe pipe and the emitters themselves any piece of pvc so just the cleanliness side alone right huge huge huge advantage the ease right so now instead of to your part the 15 things it's the two things like so the ease makes us more efficient which has a huge huge huge you know benefit to it um and then to your point that i think you were originally asking the quality of the finished product yeah that's what the terpene nug size bag appeal uh you know smell all that which obviously goes with terpenes has been on point it's we're we're killing it um you know we've always been proud of the product we produced so it's not not to say that like you know we were growing [ ^ \_ ^ ] product and now it's amazing or anything like we've always

been proud of it but no you've always guys but you guys definitely like looking at this stuff and saying wow like there's some examples of some of this uh recent harvest and recent batches being like just phenomenal some of the best stuff that we've ever grown so awesome dude yeah i'd like to tackle that a little bit um i think the concept behind it too for us what's most important is yeah you want to talk about grams per square foot pounds per light all of these those are all great right but for us it needs to be a consistent product that hits the shelf every single time so take an example our gelato it's one of our staples in our in our grow that gelato needs to be the same every single time a consumer buys it and opens it with the method that we were using before it was kind of like a like a stress based recipe right you're adding certain ingredients at certain times you're taking them away at certain times you're trying to play this game with you know a give and take throughout the eight week cycle with 100 different genetics right the concept behind something that's like athena that it's just an extremely stable well-balanced diet that you give your plant all the food that it needs and it's going to take what it needs when it needs it you're not stripping your plant at certain times of things where it's like hey i kind of still wanted a little bit more of that you know what i mean where you go in a room where there's 10 different strains growing in 150 light room and you're like well this one's got a little bit of calmag deficiency to alex's point but for us it was it needed to be super streamlined for what we were using and it had to be cookie cutter we couldn't treat things differently within especially within the same grow rooms because of just scalability right yeah so if one strain needed a little bit of something else for a little bit longer like hey is the end result of that genetic gonna be good at the end of the day with what we're running with it if not it's just not gonna make the cut with with our program right what we're seeing with something like athena is it's a lot more well-rounded because granted you need to you know still plant things accordingly by zone or by room because certain strains or genetics are not going to eat the same but you're giving everything the same well-balanced diet that's more than enough for what it needs uh to thrive off of and i think that's the concept there for us with what matters the most is that it's it's just very stable in in balance right and that allows us to bring certain strains back into the mix that maybe didn't do so well um under the you know previous um lineups so yeah the ability you know there's there's a lot of strains that we would love to grow that just don't fit our model because they're too long of flowering is now the primary reason previously it did we did have certain things that like well this you know this was a little too finicky and it would require you know a little more nitrogen and we didn't have the ability to feed a special blend to adjust these when everything else they all needed to eat the same and so you'd pull certain things and strains that we knew we'd love strains that i grew up growing right even like some of the hazes and stuff like that and and um now this in theory minus the you know we still have the constraint by the time right we we have a really strict business model and scheduling like we kind of talked about earlier and as such um you know some of the longer or none of the longer strains really work for us some of them obviously can be manipulated into finishing you know in a shorter period but a lot of things that we would love to grow just don't work when you only have eight or nine weeks to flower yeah and it really makes sense too you know like going from a 8 to 16 part and really relying on the nutrient side and changing that bumping it up taking it out um now it's it's it's like we flatlined it it's flatlined and we're not relying on a band-aid or an additive it's just flatline and really falling back on the genetic and letting the genetic do what it's supposed to do and what that makeup is and having it fit in the staple if it doesn't you know that's you know that's why we're final hunting you guys i know you guys have that going but it's it's it's like taking the back seat to where we don't have to find a band-aid it's it's it makes the end user's job extremely easy um which is exciting and like you said to tyler's point like you guys have you know the athena line under your belt it's fully running on 3 500 lights and you know the exciting part for me is he's like it's we haven't even unleashed what we feel the potential of

this model is um on a two-part which again is exciting to you know get up to you know over 10 000 likes is it's gonna be you definitely have to be willing to like you know listen to you alex and and listen to the facility advisors and be willing to kind of let go of some of these things that you know especially as it relates to the stacking and the these high numbers when people start throwing around some of these ecs that previously people will be like [Â \_\_Â ] no what are you talking about right but then when you understand like i i i'd like to think that we're all intelligent enough like tell me why talk me through it there's a logic you have to be able to explain it and you guys can actually do that and when you do you're like ah it makes right it makes sense right so now i'm like okay right but you definitely have a willingness to you have to have a willingness to like kind of let go of some of those things and that goes back to like i said before like i'm now i guess i'm kind of that person i talked about on the hill where you're like oh [Â \_\_Â ] no you can't do that you can't right and um tyler's gonna implement a lot more um you know kind of remote accessibility at least for viewing but even probably for controls um than we've ever set up because we're setting up in san bernardino and we're setting up and there's so many and so that's another example of me having to like let my guard down and be like you know yeah the systems are now proven to work and there's things out there that we know can actually do it but you know you come i like redundancies and i like like mechanical things as opposed to like so yeah um there's definitely a you know you need to be you need to be able to i guess change grow with the times on the uh you were you were going over the filtration system you guys were reclaiming your water i've heard of this right i mean what do you think the percentage of facilities i mean is it a california regulation right now are they you have to reclaim water or you guys are just ahead of the times we're ahead not 100 by choice our two largest facilities are on septic tanks we're not tied to the sewer uh but it's kind of a blessing in disguise that that this happened to us and that we that we took this route uh because it is going to become mandatory i think what is it 23 well it's another example you have i think you have state legislation you have municipalities and water boards and all have varying degrees of like what they want to see done um so [Music] as an example in cathedral city right like they're they're making it they're implementing um you know an ordinance that requires that no ice water be discharged to the sewers so effectively everyone will have to figure out somehow to either haul off site or treat is that a city ordinance and that's a city right that's that's that's an example of a municipality who's decided something but then you also have the have the authority and the regulations of the water boards so in palm springs we have two different water agencies the desert water agency is our water provider for some of our facilities and coachella valley water district is a provider for some of the others and they have varying degrees of what they want to see but i think it's safe to assume right so one we have this we have the ability to do it now we've proven that we can so i think we have some obligations to be good stewards to our land and our resources um but i also think that you know you're going to see a lot more regulation come down the pipes as it relates to that stuff and so we're kind of just one step ahead yeah and we've worked with some really cool people along the way to figure these technologies out and we're working with even you know better people now um to help specifically figure these issues out hydrologic has a skid just for water reclamation right tyler can tell you all about yeah i want to talk about it just because this is something that you know cultivators in california you're gonna have to pay attention to don't you think oh yeah yep great point uh hydrologic makes this good that's what we currently use at any of our sites we currently have three operations that we use hydrologic reclaim skids so basically how it works is all the leech water from our our table runoff which is 15 20 plant runoff right and then you've got other things waste from you know switching recipes on a dose or things of that nature that's just going to go down the drain on top of that you have the waste of the city water skid with the the concentrate that that's going to put off is also collected into uh the weight the head waste tank so it's going to kind of dilute your tds a little bit with with the waste of the uh the



concentrate of the city water excuse me the rose city aro skid it runs through a set of a bunch of different things a chlorine injector which will strip the iron out of the water we also use that measuring millivolts on orp to kind of try to disinfect to charlie's point earlier on our old lines feeding sugars and beneficial bacterias right it was hard to combat the biofilm that came in that high tds water what were you seeing were you getting more wastewater with more organics or is just harder to get that orp up in your treatment uh both it was it was hard to get the orp in the treatment and it was harder to uh prevent biofilm from from popping up in our in our permeate tanks on our product inks it basically inhibited the the wastewater skid from effectively doing its job yeah right it puts so much burden on the wastewater skid that hydrologic scale all of a sudden is like whoa yeah right so talk about membranes and and all that stuff just high high high high maintenance at that point yeah runs through a green sand filter carbon filter and then a set of high tds membrane so just an advanced ro membrane bringing stripping all of the nutrients and minerals that we've just added to the water fed our fed to our plants went through the plant stripping it back out for reuse close to zero ppm on top of that we collect all of our condensate water we're in the desert it gets to 120 in the summer our acs run like workhorses we collect a lot of condensate water i'd say about 40 50 percent of our actual water use comes alone from our condensate water which is dehumidified so a lot of storage for those you guys saw the water room right there's 15 000 gallons of storage alone in a 1 000 like facility so you do the math on how much we're going to need yeah with scaling that's a lot of space that it takes uh but but reusing condensate water is pretty easy we like to ozonate the water just to get those orp levels up condensate water could be kind of gross right so we want to disinfect it get those levels of orp up a little bit higher run it through a hydrologic makes another great product uh it's called the arc scadia and that just treats all the condensate but that's a zero waste there's no it treats one hundred percent it treats basically other than just like membrane back flushes which again that will end up in your waste tank for to go through the reclaim skid so you kind of get to milk that for what it's worth anyways uh it's as close to 100 as you're going to get on on condensate reuse well that condensates pretty clean to begin with right yeah yeah of course could have pathogens especially depending on if you've ever looked in the condensate lines of an hvac unit like you tend to see what grows on those things so we're treating it not for tds or ec but obviously for pathogens and things like that so uv and ozone um but you're also having a treatment plant come pick up water yeah so the sorry uh the discharge off of the reclaim skid it's about a two to one or a three to one on any given day right where uh it'll give you three gallons of discharge which needs to be hauled off site and or evaporated at the time the evaporators were not whether economically uh useful to us or not allowed or just didn't fit the space that we had uh so we just put a tank there where once a week a third-party company will come and and pick up our water and they'll do what they need to do with that just so they can dump it whatever it is they do with that is that is that expensive no yes at scale it is uh but it's definitely less expensive than a lot of these people hauling 100 of their waste water whether it be the municipality not allowing them to dump anything down the drain and or uh not having the experience like we do of actually successfully reclaiming that water for reuse there's a high capital expense associated with buying a hydrologic wastewater skid yeah i mean they're not cheap right we're talking six figures to start oh really for something that's going to process the volume of the water that we're after yeah absolutely yep yeah so uh there is a return on your investment for buying that and not hauling all of your water but some people just can't can't do that up front you guys are doing some some final hunting how many seat pops do you have going on right now and who what what uh breeders are you are you popping right now yeah so i'll touch on that uh we're we're in a pretty you know high demand market right now for very specific things california is the most connoisseur based customer in the whole entire world right it's the biggest wheat economy in the world uh so people like what they like and they want a high variety of very exotic things so uh we've got 125 just off top

125 different phenotypes um being tested right now um kind of scattered around done strategically right we're not just going to fill 100 light rooms with all these different seeds and things that we don't know how they're going to do right so biting off little batches at a time but about 125 different phenos kind of in the works right now some of the breeders that we're working with for some of these are in my opinion and i think charlie can agree some like the best breeders in the industry right now uh you know compound genetics we're looking for stability right when we're looking for a good genetic we want something that you know somebody might produce something that's super fire for a couple of runs but then all of a sudden just something goes left or right and it's like well why isn't this the same product right and for us that's important it's got to be consistent so compound genetics um they're they're doing a lot of cool things right now yeah seed junkie's another cool one and then we've got a lot of old school things too that we're kind of throwing back in the mix from seeds that we've gathered over the years that we just had sitting in a safe for a long time where like hey let's bring these out and finally yeah finally yeah well now now's the time he touched on it and you guys are all aware right now this market is the cr i've been doing this a long long time i know most of us in this room have been doing this a long time this has got to be the most volatile um you know marketplace for finished cannabis goods that i've ever experienced it's just insane and so um obviously you know you got to give yourself any competitive advantage you can quality is an easy way to do that not easy to get to quality but if you have the quality it's that's a that's step one yeah it's step one right um and so we've seen more and and i'm i guess i'm probably guilty of this um i we waited a little too long to start some of these things because i'm recognizing now like like the demand for just new and ever-changing and you know we hopped on the wrench train but we probably got there like a little later than we should have so we're still doing runs and runs is great people you know but like um hopping on the jealousy train um but we're gonna do a better job of being earlier to it um but part of that goes back to the whole idea that these sops are so strict and so like precise and and already existing that you know we we did what works for us so where we slip behind a little bit there most certainly i'll be the first to admit it was with a little bit of that genetics stuff but we are well underway with a hundred plus new flavors coming this year now nice the biggest i'm on week seven right now right starting week seven this week for a lot of our new new stuff so the bigger the ship the harder the turn i use that the analogy it's like making a u-turn and a cruise ship right like i can do what we need to do to guide us but like i can't do it like you know pivot just 90 degrees and one at what it takes us a minute right we implement something it starts with because tyler and i talking it through and then where are we going to start and how's it going to roll down again it's not all one building or one facility were spread out all over so just figuring out like the like rolling out athena it's not just like okay turn on the lights tomorrow and athena's on right we gotta look at scheduling and when are we harvesting here and when's the right time to like you know so yeah it's harder the bigger you are the harder it is well also i think our smallest harvest is right around 100 light mark right so it's like okay you want to roll the dice with something on r d we haven't really been big because we had proof of concept going into this right we we rolled this out with with in and with charlie's formula and his proof of concept and it's like this is the way that we're designing these things and we're doing them um so we kind of shot ourselves in the foot a little bit and like the r d side of things where it's like we didn't give us much room uh to kind of test things without because you're not going to feed different things in one room right now you got to make the change and now you're talking 100 lights where it's like let's roll the dice here and there's there's big money right 100 lights on our lights um but to kind of touch on the last thing too to charlie's point um it was one of those things where it's not broken don't fix it right um so we grew a lot of you know we might be a little bit behind on some of these things but looking into the future it's like okay with what we have right now 12 000 lights you know is that could are the consumers gonna want triple the amount

of the same things that we have now right probably not right so we need to expand our variety uh just for the sake of our expansion because you're tripling the amount of the same genetics that you have so that's why we're we're going all out right now because we're kingsguard man right we don't do anything half-assed we're to do it extreme and now's the time like everybody's operating under the same guidelines right now everybody's switching to other like the leds are a thing now right so everybody's using the leds or if they're not they're using the same hid lighting as everybody else everybody is hopefully people are starting to move towards that you know moving towards salt lines or clean lines and stuff like that so if you put everybody in the same pool and everybody's gonna grow the same what's gonna set you apart one it's gonna be your sops it's gonna be your troubleshooting skills and how to identify problems as they happen or before they happen to try to prevent those things your ipm game uh and then your your genetic demand right like those are the things that's really going to set you apart so that's why then your costs and your cogs yeah your cogs yeah um so that's why we're doing you know so many at once it's like okay well if you're gonna do something now is the time to do something drastic and and you know we're gonna do it strategically we're gonna roll this out uh to where we're not gonna shoot ourselves in the foot and it's the end result for us is going to be good yeah yeah just not taking you know rolling the dice in this time of the market it's it's scary can't do that no it's just don't have time i mean especially with like you're saying charlie like just the market is so educated um they and they always want something new like every week and it takes us you know a quarter to to roll out something new that is proven consistent stable you know that we could throw in the lineup yep so it's you know we're you guys are fighting uh you know it's time you know and then it's especially frustrating when these trends are fads and not all of them are there's plenty of like really good we mentioned a few like the breeders and stuff that we that we love working with and that have you know but when a trend or a fad is born out of like some influencer or rapper or something like saying something on a song or doing something and then that becomes the trend it's it's beyond frustrating for somebody in in our position to be like well first of all why the hell is what so-and-so has to say you have any influence and now why do i have to pivot to you know based on what he said yeah yeah so like at least i respect it when it's coming from you know the people that you that we all have our own people that we know we respect and whether it's a breeder or even an infant whatever but if it's coming from certain people you you'll react a certain way it comes from somebody else and it seems to rub you a different way yeah you kind of have to try to like to charlie's point too like if you're trying to chase things and trying to trace trends and stuff like that imagine for a large scale operator like us 3 500 lights right now uh how long do you think it takes for us to get one seed to market at scale after r d and making sure that it fits in our sops and our formulas and our growing methods okay this is the one or two whatever that we selected it takes almost a year for us to actually get that to market at scale right so it's like at that point is that genetic here for this is it here to stay right within the market that's why we're late sometimes yeah you know we were on it when it came out and you all wanted it but it kind of ship has sailed right so there's a few staples that definitely haven't gone anywhere that have stood the test of time and you know those are the things that we're after things that have a little more longevity behind them because they're truly good genetics that people want so upping a variety with those is kind of the goal right now yeah it's vital you always have to be popping you always have to be popping beans do you guys have any uh storefronts are you guys planning on doing any storefronts retail's never been our thing right so i told you i i started a retail in westminster california in 2003 um it was called the rancho collective right back in the days of everything just being an acronym trc the rancho collective where what casa mesa no uh westminster west manor westminster yeah westminster boulevard corner westminster rancho uh so i got a little experience there specific to cannabis retail and i had some retail experience like in the nursery side and stuff like that i recognized pretty early on i'm not the person

that wants to be doing real retail um i'm not a great forward-facing you know this whole idea that the customer is always right has been [^\_^] to me forever i'm like no there's some customers that are like wrong and like i want to be the one to tell them that they're wrong but i can't supposedly apparently so um so no it was very clear early on that like retail is just a headache right it's a huge huge huge headache but more importantly like than it just being a headache i recognized like you know the value so i you know if kind of step back and assess you know the situation this is again going back you know 20 years ago the the person who was gonna be you know better off from my perspective after doing my like thorough evaluation was the cultivator right there was lots of retails that we could go shop our product to we always of course had the traditional patient side you know that we could go to there was lit very little interaction with um you know people to begin with and definitely had the ability you know to disguise and kind of again you got to think of like the time that we were in right and um trying to be kind of behind the behind the scenes i give a lot of credit to the people who were early adopters like jungle boys of early adopters of like they've been doing this for a long long time they're not new they're legacy guys but they jumped in and said like we're gonna kind of show you what we're doing um long before a lot of those people like we're willing to do that right myself included so um my partner mike wanted to put um i remember years ago the conversation came up we're building these beautiful buildings they have these state-of-the-art cultivation facilities and he's like i want i want a big old illuminated king's garden sign on the side of the building something you can see from the tin freeway and i'm just like oh [^\_^] right this is a thousand light grow you want to mark it with a king's garden logo on it so i've just come from that era where like we don't like no way right flash forward to now every one of our buildings has a big old logo on it we're proud as hell of it um i'm so glad that he convinced me to like that that was the right decision but um yeah coming from an era where like we didn't want to put ourselves out there quite as much right not coming from a new kudos to all those who did oh for sure you know coming from an era where you know you're out at a bar you're with your homies and everyone's asking oh what do you do for a living construction yeah and it was true that construction was a very big part of what we were doing anyone who was setting up grows and stuff i mean like you know you basically became an electrician and you basically became a mechanical engineer and learned hvac and stuff like that because you were you didn't have access now look we get to call and now we have the biggest you know union companies and stuff like that salivating begging for our work and stuff but we couldn't call a local plumber before without risk or fear of like i mean even you know something having somebody having something on you yeah yeah it's so nice now by the way to be able to like pick up the phone and call somebody when something breaks like i don't want to do that okay we're going to pay somebody to do it right we were never lying yeah we learned all the traits we did yeah we we talked about this a little bit yesterday how i was giving you guys props and praise of you know just doing this here alone because this is something this podcast and and what you guys are doing even with like the facility advisors and and just access to information for people in our industry whether it be people in the caregiver market and or people like us that are large scale operators right we came from a smaller scale at one point 16 nights 16 likes well yeah even smaller than that at some places right how many people had to grow in their attic or garage right so um access to information has always been super limited nobody has the answers for everything right this is farming and there's always different things that pop up and occur uh but to have something like this where it's it's not reddit right and it's not like before grow shop counter at the hydro show which we all which we got great advice what we had it's what we had no but but something like this with some of the top growers and professionals in the world in this industry specific with the amount of like r d backing that they're doing for this uh to have something like this at just in arm's reach that's not a social media platform that's just like visual based instagram right which people have gotten on off of for years right got their information from from people like the jungle boys and and

miami mango and guys like that that that put all their info online because they want to help and teach people and kind of bring the industry up so like people like us can really appreciate a platform like this where you know you could just listen to a couple different podcasts and it's things that people aren't talking about right charlie and i you know i've been doing this for a little over 10 he's 20 50 you know 25 years into this thing uh old-school methodologies right like you would tell me not to flush my plant to tell you you're crazy tell me to feed a clone at 2100 ppm i tell you you're right so there's a lot of things that's kind of like breaking our cycles into what we thought we knew or what was right to us at the time with changes in in the industry and you know what we have the resources that we have to be able to implement different things that we're kind of shamed at that time right um to learn those new things it opens up the book a little bit more for us but when you guys back that up with like facility advisors right like that's the differentiating factor there you're not just saying like hey this is what you should feed the plants or this is like you've got like legit people who are out here in the world like showing up in our grow and talking to us and these are people who have as much and more experience as any of us and it's it's extremely valuable and it's not just a sales pitch as the other like like you know often times where you know you get as much customer service as is needed to get the sale or attached to the sale yeah right they kind of go hand in hand but then but then it's kind of that's it right so the idea that you know you guys are sharing this information and the jungle boys and ivan and roach and these guys are are an open book and they're allowing you guys to help and you're allowing us and like it's it's the idea now that we can all kind of share information with each other and i'm sure at the end of the day you know i used to say and i don't get to go in nearly as many grows as i once was but you know i've never walked in a grown not learned something from it and that includes the shittiest grows that i've ever seen 100 right and um so getting like minds together to just bounce ideas the most productive conversations that we have as it relates to our operations are tyler and i just kind of like bouncing [Â \_\_Â ] off of each other and like well i think this and this and right and that's plug more people with more experience and i.e alex and whoever else like yeah [Â \_\_Â ] man and that's the opportunity i think that that i saw that you know brandon and i came up with this idea was you know being in sales my whole life it was you know you got a product you sell it it's sold collect the money done and you know for the fas to be able to put their eyes on the garden and see something else that you guys don't see and then just be able to bounce the ideas off each other and figure it out is you know obviously something that we've never had in the industry but something that has has really taken the fa team to the next level and you know a lot of the growers i mean they respect it they love it you know it's it's something that is we're able to push the envelope you know a lot further than we have ever done just with multiple eyes experiences um walking into places instead of just verbally talking over the phone you know it's it's huge it is it's the technical side of things too where i could like for somebody like me that that's seeing something that's kind of out of the norm okay what are my variables here what what am i doing differently well starters i've changed our whole nutrient line right yeah um so to have somebody that's from that line to be like yo i'm seeing a little bit of this and his response is send me your runoff numbers okay so there's a technical answer that's gonna be following this it's not just oh well you're doing this or that just an assumption it's let me see remotely inside that substrate let me exactly let me see what that is so that i can actually give you a proper answer not just give you some [Â \_\_Â ] just run around to try to get you to buy more of something right and uh like i said we haven't had a failure on the program yet and we haven't unlocked the full potential but some of those small conversations have gone a long way because maybe it was exactly what was said in that conversation between the two of us or maybe it just unlocked a little idea and something clicked where i was like you know what i need to do this a little differently um so to have that as a tool is just to anybody the biggest growers in the world are the smallest growers in the world um to be able to hit the instagram

or something and you know uh get a response back like hey this is you know i always got really confused when i'd go on a nutrient company's page and it'd say oh we don't answer our dms i'm like what does that make any sense you know it's like we're here to like we got three guys full-time answering dms you know it's so important get the the right knowledge out there um with with the fas and that experience what's cool about it it's it's like we don't always have all the answers but i think that we collab together and communicate to find a solution and a lot of these guys you know sometimes alex how many times have you called chris duran and you're like hey i have a problem here and i need to get to the bottom of it weekly man yeah and again it's just you know always evolving and learning and just not being stuck in your ways and just being open-minded to that there could be a different solution a different route um and just getting a different perspective on that problem um you know at hand yeah i think it's there usually always is a different route in another million ways yeah i think it's important for our fas to always have humility you know because it's we've we've we've had you know a few more ego you know personalities on the team that didn't last long mm-hmm um but with that humility you're not afraid to go out and say hey i don't know the the right answer to this question before i tell king's garden to do this i'm going to call you know we're learning every day exactly it's we don't have all the answers but we have the team uh to find the answer for that specific problem for sure yeah we yeah exactly yeah are you guys uh you guys are in california are you planning to expand to any other states or anything in the works that you feel comfortable talking about nothing that we're really you know so we're so focused on right now this expansion what we're doing in california we have always known that california was like the make it or break it place right so it's home to all of us to begin with so it was important you know but it's you know to tyler's point the most discerning market and it's gonna chew up and spit out a lot of cannabis companies in the next couple of years yep um so we've always you know been proud of the idea that we can succeed or have been succeeding in california we want to prove that we can continue to do that it's really really hard for me to think of how we can expand into other states while maintaining the integrity and the and the like devotion to the way that we do things in sops so of course we love the idea the concept right certain states more than others obviously um are really intriguing it's highly highly likely if you ever see us in another state which as of right now is not you know the case but if you do see us in another state it would likely be under like a licensing type of model um because again the idea that like tyler and i can go to florida and be there all the time is it's just difficult for us right now with all the expansion and stuff that we've got going on so potentially through some sort of a licensing deal or something like that um but no we're just so focused right now on this this local expansion but kudos to those who have figured out ways to uh to make that happen yeah in particular the jungle boys been following them like in their florida expansion looks like they're about ready to open up retail looks like they've got their first harvest already come down and so super cool to watch um people that we respect be able to pull that off and do it not under this public mso model um you know we we know all too well how that works and and um so the idea that they pulled that off you know the way they've pulled everything off stressed it is just just like you guys you guys are the same way you guys are operators yeah you know to the core like you guys are cultivators your operators um the same exact thing as as ivan and the boys so it's it's awesome to see do you get a lot of inbound on your instagram or inbound in general from a state that's like hey like when you come in here when you come in here i know you guys do we see it yeah we see it and neither one of us actually are running the social media so we see it less but the states that i've heard people are always asking about are actually the states that you they're they're the right states to be in it's the floridas and the the jerseys in new york's and stuff but again most of those with their idea of the vertical integration and the need for vertical being vertical i'll say it again we're not retail operators yeah um and that's another reason why it would be like through a partnership and a licensing type deal

like going in to grow fire product in another state like using our sops and our kind of um you know system that's i could see that doable but going in and running you know multiple retails because you have to be vertical and stuff like that that's it's not our expertise i'll be totally honest with you i don't think i could successfully pull off a retail i think you'd want to and i know i don't want to i ran a retail hydro store for like 12 years and uh i lived there for four of those years yeah so and that's what it really takes to get you know the retail customer satisfaction and and the whole customer front facing is uh is difficult what uh what advice would you have for a new brand coming up new cannabis brand that's coming up what what advice would you give a new brand coming up that that wants to make it big in this state in california i'd wish him luck buckle up yeah buckle up yeah it's gonna be a wild ride it's tough to say but i ultimately think that the companies that are gonna succeed in any state um and some and this isn't like you know the only ones that will but i think a big part of it's going to be um you know just remaining loyal to who you are as a company and starting out like the kind of family feel and what we have the the workplace vibe and just what happens there is is such a big part of what king's garden is and if you lose touch of like i started growing weed because i wanted access to more weed to smoke and of course to sell on the traditional market and stuff like that but you got to remember why you started and i have a dear friend of mine who we lost on on the hill working um one year but we'd be in the middle of like busting our ass maybe running miles of poly pipe through a forest trekking up a hill rolling water tanks uphill to get them to the high spot digging ponds developing springs you name whatever pick the backbreaking job you were doing on that given day and um carlos would look up he's charlie there's got there's got to be an easier way to smoke a joint right and so you got to remember we did this because we wanted to smoke more joints we did it because i wanted better weed i wanted more weed eventually it was i want to provide for my family and myself but if you lose touch to the idea that that this is all about the plant then i think you're destined to fail yeah and if it just becomes a rat race uh where you're staring at the books all day and trying to squeeze a penny out of this or juice another dollar here um if you don't at least have that doesn't mean you have to consume i'm a big consumer but at least respect and love like some things change maybe i won't be able to consume my whole life i mean i hope i will but maybe i won't but at least having the respect for it right yeah absolutely i think a lot of companies are going to fail just based on the idea that they have no love to begin with for the plant and therefore really have no business in the space yeah yeah they don't understand it maybe i'm wrong maybe they'll all succeed and will fail i don't know you saw it happening you saw you saw it happen in canada yeah you know you saw it i mean canada is a perfect mirror of what the united states could will probably be you know because these now you're seeing a lot of these smaller craft farmers my buddy chris is one of them and he's got a small little hunter lighter up in canada he's putting out fire he's running athena and he's and he's he's got a good solid business there but these big huge aurora and canopy growth they're i mean i talked to a lot of guys in canada and they're like they're failing hard but it's a matter of how long they have access to public capital allows that drowns to be a much slower process they were failing years ago i checked out these i was in canada we almost went public and that's a whole nother story for another day but well five years ago these places were growing garbage and talking about how they were working the kinks out talking about how they've got gmp certified facilities that can't grow crap like it's it's dog [Â \_\_Â ] excuse my so true uh very cool to hear that you know somebody's finally figuring it out out there oh yeah i guess my point in that is that yes i hope that if anyone's gonna fail it's not your friend growing fire and that it is the ones who are you know but the reality is your friend doesn't have access to unlimited capital i'm guessing and some of those guys just keep going back go back to canaccord and raise more money yeah right and yep i had uh autumn carcion loved that did you yeah yeah thanks that's cool they uh so i had her on and we talked about tax reform and she's got a big movement are you guys doing anything to get

behind tax reform on cannabis i'm i'm following autumn's lead i'm using her boilerplate um templates to get them to both of the cities that we're in palm springs and cathedral city cathedral city's already received theirs i work i'm actually on the task force the cannabis task force in cathedral city um so i'm very vocal in that in that particular city and pushing hard for it it's very interesting topic um it's dealing with local i loved her approach right she's like we're gonna start with the cities and and they've had some great success with some of these bigger cities oakland and san francisco and things like that right little city of cathedral city the response is and don't this isn't me accepting it we will continue to push but the response is that they've already baked in so we're saying you got a lower they're they're some of the highest cannabis taxes in the state they're 10 per 10 percent gross revenue for dispensaries and they're 10 per square foot annual for cultivation so some of the highest in the state and we're pushing them to say it's aligned with some of the neighboring cities and some of the other just cities in the state closer to five dollars a square foot and closer to five percent gross revenue their immediate response is that they've already baked in the revenue from that they're expecting from this ten percent and ten dollars per square foot into the next two years budgets so if you tell them we're going to reduce the taxes by 50 they're looking at a 4 million whatever it is like deficit of where are we gonna where's this money coming from so the council the the policymakers the immediate response from them is show me where this other money is coming from which i didn't know i was supposed to be their accountant now or they're you know so they're not they won't accept just on the surface that we need to reduce our taxes because that's going to throw their budget out to which our response is watch what's happening to your taxes right now already month over month they're declining don't do it kill the businesses in your city and then what are you gonna do where's the money coming from then you got zero you got zero right so we're trying to like be so dealing with policy makers on a small city where the only responsibility like that they feel they have is to the constituents who you know elected them and that's it they just think and so it's tough it's an uphill battle in these little cities i think you're gonna see more success and autumn is like amazing for being able to do this like in these bigger cities that have a more like liberal and progressive thought and ability to kind of think down that road than you are in these cities that are like oh you're just talking about taking my money away like that's how they see it right i'm just i'm just asking for a reduction in taxes because so much so that we have some of the community task force members who are like well it's not our fault if you guys can't run a good business this is what happens in any new business like you guys obviously just aren't good at business so you'll fail and someone else will take over your spot and like and then you got other people you know and they're like saying like guys if king's garden is failing like your whole cannabis in the city or valley is at risk right and right over the red we'll keep trying we'll keep trying and we won't stop but i don't know how successful we'll be at where price at where the price of cannabis is right now and where your tax structure is for a cathedral city is it sustainable no i didn't think so absolutely not so you know the market needs to adjust or the costs need to go down for us to come out of the red yeah right i mean i think i'm not ashamed to say it i think that anybody who's in this space right now is is seeing the same things we're a very very lean company and we're very very good at what we've what we do as a result we've been able to put some money into savings when times were better but the way things are right now we will burn cash and i believe most companies will until the point that they can't anymore you're not the only one yeah i know i know i'm not jungle boy jungle boys is having the same problem mm-hmm yeah everybody yeah it's not sustainable these taxes are not sustainable that's not that's crazy and and the cost you know it's it's it's one of two things right it's like i said i mentioned lowering the cost we've done that thank you to you guys again for a lot of that like help and guidance there we have done that um but that's not like we we've skinned that thing down so much like we're really really lean and really really good at we what we do our costs aren't



we don't have a lot of a lot of ability to lower costs what we need to do is lower taxes yeah yeah because the costs are pretty damn fixed at this point yeah i think i think the net i think 2022 especially 2023 um if things don't change on tax reform you're going to see him drop drop like flies we'll see what happens right i think i've heard that uh newsom is directly spoken on the topic now i guess he's mentioned that he's gonna have the discussion so i don't know i don't know but it's over taxed and what other i mean what other industry do we see municipal and state taxes on such high levels and the end product is in some situations i'm hearing 40 plus percent taxes by the time it gets to the consumer and then you wonder why it's the black market or gray market or elicited market is just thriving yeah right because they're selling depths for good debts for 300 400 a pound and they're not taxed yeah i don't think anything's been as taxed as heavy as cannabis ever no in history just wait till the feds come on i know yeah was it five percent tax right well that yeah and look i'm guilty of it i've always said but this is where like it's i've i wanted i encouraged legal cannabis right i was a proponent of it and i said like give us a rule book let us follow the rules and we'll do it right i believed that we could make a legitimate industry out of it i could make a legitimate living for myself and raise my family and my kids this way but i knew it needed to be out of the shadows and kind of into the light in order for that to happen so i was a proponent i said let's do this let's like give us rules let's do it i just don't think that anyone ever expected the rule book to look like a bible right just a thick thick thick and i don't think that we really knew what we were asking for i stand by the idea that i want i want to be you know in this position i want to be a proponent of legal cannabis and i want to play in this space but like the idea that we just openly accepted everything they threw at us was a big fault a big flaw in our part right on my part and many others part like we're like oh here's our rule book without actually reading it or anything first right yeah so i mean well back then you did the math and it made sense that's the other thing what worked out that's what i'm telling the city of cathedral city right i helped write that ordinance right i agreed to that ordinance when it was put into place and when it was put into place the numbers worked out it penciled out for lack of a better term it penciled out and now it doesn't yep right so and that's also i mean it's compounding the issue with uh you know inflation and cost of goods i mean that's not helping the situation at all i mean that's why is the price of everything going up right now labor fuel like all of our input materials power just everything is going up but the price of our finished good is just soaring downward yeah recreational consumable man yeah yeah it's just it's that one's like you know you can't buy a used car for for what they paid for it brand new you know it's no use car prices are through the roof right now everything it's crazy new car price used car prices it doesn't matter what they are they're through the roof but the price but you can buy the best best best best cannabis you've ever seen for the lowest prices right yeah just like literally like what you look at these bags you're like oh my god these are just fire right so and it's happening all the way through it's on the commercial i mean it's on the the bulk wholesale side um but it but look at what these retailers are getting beaten up too we keep hearing these terms if it's not a bogo it's a no-go right you go and try and sell your product into a store and all these stores are like if it's not a bogo it's a no-go everyone wants free product discount like you know they think they should be paying ten dollars for an eighth of premium making you pay for shelf space yeah paying for shows that's brutal that's yeah spotting fees tough times we're in you guys are in all the cookies right yeah we uh you know they i want to say we are we have historically been in all of the cookies they have different ownership structures kind of in different locations and so things kind of change a little bit here and there but we've always had a great relationship with the cookie store so i think we're mostly mostly stizzy stores and all of those big players that have the the multiple storefront operators um you know the one plants the sizzies the cookies um we're seeing you know a lot of love from all those people it's awesome yeah those are the unfortunately those are the like only guys in that space that seem to be surviving

all of these single owned mom and pop shops are struggling holding on yeah barely holding on yeah uh tyler you you know we talked about chris earlier but you are now on their new dilution solution system yeah i'm happy you brought that up uh so chris came to us end of 2020 um i said hey i got something that's ready for you like i got something uh so we took a trip out from colorado and sat with uh us and our boy carlos who we introduced to us uh from bear ag and uh long story short we were the first people at scale and in california that he installed the dilution solutions controller um with into our facility in an existing facility actually our largest facility uh 1100 light facility so we took that one had batch tanks already kind of ran on dosatrons and things of that nature um pulled everything kind of you know sequentially and installed that that's a game changer for us and moving forward even more so uh because of the accessibility i have with it like remotely um but also the consistency and the uh kind of user interface i have a different uh interaction with the facility now because of that so just to give you like an example we use it for fertigation i don't use it for irrigation at the time it was an existing facility so all of our irrigation lines and wires have already been ran it was a headache to try to change that and what we were doing was no different than what that was gonna do for us at the time right uh but for fertigating now we could have one skid instead of a doser for every single batch of rooms batch of tanks and or dosatron for a recipe um no more direct inject directly to the plant yep uh one skid with the editrons uh hooked to this computer this controller where we input all of our recipes so whichever and we started this excuse me we started this with with our original recipe um and it was actually really good that we did that because you know with the time chris spent with us in the facility uh setting this thing up we learned a lot about chemical compatibility with with the certain like acidic values of different ingredients being mixed together uh with less contact time or you know mixing time with with water and all of these things um to where there was kind of like a diminishing return on the amount of product that you were putting in to reach a certain conductivity value wasn't adding up the same as like a dosatron or like your hand mix application would right so we're like beating our heads up working on this thing for weeks and weeks and and you know dialing it in differently than how you would expect to and then we swapped everything to that two part and it was just like again the the stability and the chemical compatibility that these ingredients have with each other they're just meant to be you know injected or mixed however you want to do it it just it it's it's spot on you say i want 50 mls of this ingredient and it's going to give me 2ec right that that's what that value is going to eat it's going to make sense at the end of your line but so basically we have all of our recipes and put it into the into the controller and at just the touch of a button i can fill groups of batch tanks within hours for the same day or next day however you want to do it for specific harvest so depending on what stage of that plant or that room is in if i want three c two whatever it is um we're scheduling everything in advance again going back to like as much as you can schedule out the better you are so i'm implementing this thing to have kind of like our baseline formula uh in it so okay we're going to plant this room on this day programming the whole flower cycle yep that's game having recipes already set right giving the baseline and kind of the the platform that just based like off of experience like this is what the plant is going to want granted it will give you override access and like things for subject to change like we need to do this on this day whatever whether it be a pot reset or you know increase our ec things of that nature but that's up to the operator or myself to be able to make those adjustments on the fly but it gives you your like your your whole harvest basically the day that you plant i know that it's to need this within these weeks and these days and it's going to just kind of be scheduling right coming in game changer yeah we're doing some some crafty [ ^ \_ ^ ] with it uh long story short we're trying to put things on loops where we can measure you know ec conductivity uh you know ph in your batch tank uh we're automating stock tank systems a little bit differently not just something that you can go and buy off the shelf like a neutral solve or something we're gonna design our own concept you know

volumetrically where like a hopper can dump you know an amount like a certain amount of salt by weight right so you don't have to like worry about how many bags that i set out for this 200 gallon stock tank right you don't need to worry about that stuff anymore so that's going to allow us to do stuff like that right moving forward on your new builds all dilution solution yep yep sick shout out chris man thanks for product right on all editron no more dosatrons yep editron and tuition solutions i would i was i'm a big fan of dosatrons you know but i just haven't really i did editron a long time ago and i was using monosilicic acid and i just you know i never put it in my lines again so i'm still you know haven't gone back to the editron thing but it was another example of one of those things i had to break down that barrier a little bit right dosatrons i love they're mechanical hydropowered right so you're never worried about power failures or anything like that right it's it was i understood like you know the basis of it and so it made it you know nice and easy for me um the editron was you know required the the again kind of breaking down what you know and saying like but chris does a good job of it he explains that you know this isn't a new this isn't like you know just a brand new thing that they created this is you know proven and has a track record and something they've been working on for a long time and then his dilution solution stuff is like the interface when you just look at it looks like you're looking like an ipad or something as opposed to like i don't know if you ever looked on like argus i mean obviously you guys have but like an argus system or some of those like tank logic stuff anything that's controlling logic and stuff like that and it looks like it's like windows 95 oh it's all right here yeah like what it is yeah and so like you talked about noise yeah yeah you see like visual representations of how full tanks are or something like that right like things just look like you're like wow like that's cool yeah yeah going back on the editron i haven't used uh that for any kind of dosing without a controller kind of telling it what to do so when you have something like a dosatron and you're trying to inject ingredients it's based off your flow rate and if your flow rates are off then you you turn a couple dials you check your ec and you can adjust from that right so i can successfully long story short i can successfully operate with a dosatron any flow rate given i have you know the bare minimum with the editron it's it's speaking to flow sensors so it's picking up the flow that's coming in and and making its adjustments clicks per second based off of the flow that's coming in it's not like a volumetric thing where it's like hey you need to be at this many pounds of pressure for it to work where it's x mils per gallon actually equals that it's based off of your flow coming in so say if you got a dual dab for for trying to mix the the tanks a little bit quicker trying to fill tanks quicker and one of them goes out right it's going to make that adjustment and you're not going to be [ ^ \_ ^ ] at the end of it it's just going to take longer so it has kind of that safety buffer on top of that mint you can get so tricky with this thing and every single shutoff valve like like anything right safety precaution across the board on your facility overflow ports things things of that nature where like it'll send you an alarm it'll shut a master valve off right if a solenoid kicks open it will measure its rates and it's like hey you called for a thousand gallons of water and it takes this long with the flow rate that we've we've been filling at it's been running for longer it's going to shut off just based off knowing that it's it's you know your your flow sensor in the in the tank has failed potentially yeah yeah so we're done yeah run redundancies man yeah absolutely for sure yeah it's all roach is switching to they're putting editrons they're putting uh dilution solution everywhere yeah chris is a smart guy yeah he's just he knows what he's doing he knows what he's doing yeah he does for sure cool guys i really appreciate you guys uh making the trip out taking the time out for sure appreciate it appreciate you guys appreciate the support looking forward to like continuing this partnership we got going on yeah and can't thank you guys enough for just being solid cats that yeah you know do what you say you're gonna do in a world full of uh [ ^ \_ ^ ] smoke and mirrors it's nice to it's nice to you know be aligned with people who are vibing yeah so thank you like you guys appreciate you guys thank you thank you i appreciate you always

all right wrap it up that was sick yeah that was dope that was fun thank you guys

all right tasa how are you doing i'm good how are you doing good thanks for being here today yeah of course thanks for for having me i'm this is an honor yeah how long how you just got off a plane i did i just got off a plane um it was a short ten minute drive over here and the weather is gorgeous so i'm really excited about that too yeah um i'm terrible at introductions i figured that out so i'm just gonna let you uh introduce yourself and tell us where you're from okay sure um so my name's tasa i was born and raised in colorado um and i did all of my education there i am a molecular biologist i did my graduate work in cu boulder and that focused on neurodegeneration actually and structured rna i then went on to do my post-doc at the health sciences center in denver where i looked at actually nascent structured rna and how rna can lead to uh different diseases um so basically we were me and a couple of our science friends were in our postdoc and you know we're kind of done with academia and we wanted to take what we knew how to do and apply it to do something useful to solve problems and so we decided to start a biotech company um which was sort of the inception of tumi genomics we kind of dabbled in a lot of different industries we did some work on cancer genomics um viral genomics we ended up creating and directing the covid surveillance lab at the university of colorado for about a year and sort of underneath that we were also working on viral pathogens in cannabis and you know over time we realized that the need in cannabis for accurate diagnostics for scientific education for you know bridging that gap between the research and academia and what's going on in the industry was uh was huge and it seemed like a really great place for us to focus and make a big difference how how long have you guys been doing cannabis viroid testing yeah so we actually started testing for hot platen viroid um i'm going to say sort of informally last spring maybe um so basically we were we were working on covid and i'm doing a lot of pcr on covid and we had a grower friend contact us and say oh i have this viroid and my grow and i know you guys are doing pcr diagnostics and can you help us out and you know we were you know we're just a bunch of scientists and we're like sure this this looks really interesting and and viroids they're horrible but their biology is really cool so we designed some assays and um you know she really liked it and she started telling people about it and it just kind of grew from there so so you know hoplite and viroid it's a viroid not a virus what what's the difference yes so um viroids are one of the simplest forms of life that we know of so as opposed to a virus which has kind of an outside protein coat like sometimes you'll see it as like a diamond and then it has like these little legs viroids don't have any outside protein they're simply a free-floating piece of circular genetic information they're really really really tiny but pretty infectious in plants now are they harder to track or treat compared to a virus so they're different i guess would be the best way to put it there are certain types of tests you cannot do on a viroid so like i'm sure people because of covet have heard of like antigen tests so those types of tests look for protein and that they're really fast with a viroid you can't use tests like that so you have to go with a molecular test because it's it's just the genetic information so it has to be pcr or other versions so you have to do a full dna pcr test to be able to see a viroid yes it has to be a molecular test of some kind yep so that kind of you know as far as some of the questions that we were getting on ig were you know is there a kit or a test that we could use in the field to test for hotplate and viroid yes so there are certain types of technology that you can do in the field um one of the ones that is employed most frequently is called rt lamp so rt lamp is similar to pcr in the sense that it also finds the genome of the viroid but it uses a specialized enzyme so the whole thing can happen at one temperature so you can put it in a machine and it just sits at like 65 celsius and it amplifies the viroid and then you're able to see it there's a lot of different ways to do it a color change or sometimes there's a glow no glow those tests are definitely have their place and they're quick and on-site they tend to be a little bit less sensitive than a pcr so i like to tell people when you use those on-site tests at least the ones i'm aware

of you it's really good at finding positives it's less good at finding true negatives what so just going back what is pcr yes okay so pcr is a method where you use these little tiny things called primers and they go into the tube and they look for a specific sequence of the viroid genome and if they find that sequence they use an enzyme called taq polymerase and so what that enzyme does is find the sequence and then it makes billions of copies of that sequence so even if you only have one or two copies in the tube when you're done with the pcr you have billions of copies and so it's much easier to detect it the nice thing about most pcrs is that there's a laser that reads every minute or so how much viroid is being amplified in that tube and it can actually make a graph of how much there is and so it can be quantitative so it isn't just is your plant infected or not you can say oh this has really high viroid load or really low viroid load so a pcr kind of just amplifies the dna and makes a small piece of dna much larger yeah so it takes a small piece of dna and then it makes of that one tiny piece it'll make billions of copies okay so so it gives you a more broader test yes range so you can see it yep and then you have lt lamp which is a different technology right right so it's um so it's rt lamp okay yes but so rt lamp um it's similar in the sense that it also finds a piece of the genome and it makes billions of copies but it uses a different enzyme and this enzyme is able to function at one set temperature so pcr normal pcr requires the cycling of temperatures which necessitates like a big expensive machine whereas rt lamp can all be run at one temperature so you can just do like a little heat block or something um so it's also an amplification technology but slightly different so going on the on the product to have in the field is it expensive to have something in the field that will be doing be able to see hopline by it or test in the field um so there's several different tests some of them are not terribly expensive um and they're not even that complicated to run so i don't know if people have seen those tests where you have a tube and it's pink and then it'll turn yellow so that's rt lamp and those aren't expensive or difficult to run um there are also like handheld type platforms that you can buy i think idea has one that you can even get some sort of quantitative information that's a little bit more expensive because it's a machine we're actually working on an on-site platform too that that was my next question yes yeah yeah so um there's a lot of potential issues with rt lamp because it can be non-specific it can throw false positives and because of that it's not terribly sensitive um so what we've actually done is changed the chemistry of rt lamp um to improve some of the problems so ours it has an internal control it's more sensitive it's less subject to human error um and it's it's high throughput so it'll be able to do 93 samples at a time wow and when is that going to be ready you're thinking so we're hoping to have the beta version ready in the next few months um and then the full version which comes with the full analysis machine um that will feed directly into a database that's probably a little farther off that's super exciting yeah no we're we're really excited we actually we developed it uh for covid and it was being used for that but um i think it can have a lot of applications in cannabis too yeah that's awesome um so what is dna sequencing yes um so to understand this um i might have to delve really shortly into a lesson in biology i'll try not to be super boring so um so dna is basically the instruction manual inside your cell that tells the cell everything that it needs to know to do whatever it needs to do um and so just like an instruction manual or an encyclopedia it has dna has letters but instead of 26 like the english alphabet it just has four so a t c and g and it's the order of these letters that give the meaning just like in language um it also has punctuation marks and capital letters and it even has sentences so sentences um in in dna sequence are called genes and they're like one complete unit that can be understood um and so when you get a dna sequence you're getting the order of those letters um with the idea that you can then find um meaning in that by identifying where the sentences are and what they're trying to communicate and with in in that and that's pretty much genomics is testing and looking at that sequence yes trying to understand what the order means how the sequences interact with each other how they're expressed in the cell are you familiar with anybody taking those dna

sequences and you know applying intellectual property towards them i mean what do you know about that because i was watching some stuff on dna sequencing and intellectual property with cannabis and like the first question that comes to my mind is like how when it's not federally legal yeah yeah so um so i will preface this with i'm not a lawyer so take it with a grain of salt um so i do believe that you can patent cannabis even though it's not federally legal um in order to get a patent you have to prove that whatever the strain is that you've created is unique it's non-obvious it's not available in the wild and you've created it so one of the advantages to dna sequencing is that you can sequence the genome of some you know new cool strain that you've created and then you can identify genetic markers that track with whatever that trait is that you think is unique and non-obvious and that data can help you with your application because you can claim that that this is the genetic basis for it i mean you created that so just breeding two genetics together and creating another dna sequence right because that's what you'd be doing you could take that and possibly patent that yeah so if you so example if you put two plants together and you create a new plant that has some sort of unique cannabinoid or some really cool growth pattern or whatever um if you can find the genetic basis for that and you can prove that that you know most of the cannabis plants out there don't have that allele or that sequence in their dna um then you can make the case that you've created a new strain that is non-obvious and unique and then you can patent that are they doing that a lot in vegetable crops that you know of or yeah so there's a lot of um patents in in normal agriculture for new strains or um you know a lot of times you'll have two genetics and you cross them together and you create something called an f1 hybrid which is a really robust plant and you can you can sort of patent that process too so can anyone patent genomes just off the street you know hire a ip attorney and just so my understanding is as long as you can um defend that you have invented it and created it and that it's unique and non-obvious um then yeah it seems weird when it's you know it's like a natural plant yep yeah i mean it seems like how can you patent that right exactly yeah so you're patenting like a unique trait exactly um can with genomics can you map lineage and see where certain cannabis plants have come from yeah so what you can do is um you can take a cannabis plant and you can sequence the dna and you can analyze spots in the dna that tend to change so they call these spots snips or indels and you can find all the places that it looks different in the dna sequence and then you can compare it to a reference genome or another cannabis strain and depending on how many of those differences um they have from each other you can say whether or not these two strains are genetically really close together or genetically farther apart and telling you where that plant came from a certain region yeah in its lineage yes as long as there's enough genomic information or genomes available for the different regions and different types of lineages you can fit it in there with breeding cannabis plants can genomics certain genetic expression so that's a complicated question um right now the genomic space in cannabis is in its infancy um the genome was just sequenced no in the last couple of years and even though it's sequenced there's still parts of it that aren't done yet i think 10 of it or so is missing depending on which reference genome you look at and something like 10 to 25 percent of the reads can't be mapped um so in order to predict genetic expression you not only have to have the sequence you have to be able to find the genes or the sentences in that sequence and then you have to be able to know what they do and how different changes in each sentence is going to impact how the plant looks and that's a really complicated process and the cannabis genetics space is getting there but i don't think it's quite there yet is there one like firm or lab that kind of leads the charge of you know sequencing cannabis or does everybody come together as a whole um so there are academic labs that are doing sequencing there are industry labs like medicinal genomics that are doing sequencing but you know they're they're also publishing papers and making uh some of the genomes publicly available which is is really helpful for advancing um our understanding of the genome so so they could say hey we found this gene and we visually look at the plant and the plant seems to grow shorter or have wider leaves

and hardier yeah so what we're able to do in cannabis um is something called forward genetics so in forward genetics you have a plant that has some sort of interesting you know phenotype like flower whatever and you want to understand the genetic basis of it you can sequence the the parents and then you can make a cross and take you know hundreds of little babies and then sequence all of them and then let them grow up and find the find which babies have that trait and then go back to the dna sequence and find changes that correlate with the development of that trait what's harder is reverse genetics which is where you look at the sequence and you try to use it to tell the future like this is going to mean that this is going to happen that's much more difficult this plant will grow taller or shorter or possibly be disease resistant yes yeah so a lot of that is it requires a much more in-depth understanding of not just the dna sequence but how that sequence is interpreted by the cell and how that sequence interacts with the genetic background of each of the cultivars and so it's it's a much more complicated question do they have are you familiar with any genes that they've found that are more resistant to powder mildew or botrytis yes so um they have been looking at this um i think that they found something like 80 or more genes that can correlate with powdery mildew resistance medicinal genomics did do one study that was pretty nice where they found one specific gene that they thought could be the cause they took that gene out and they expressed it in a bacteria and they showed that the protein that it was making inhibited the growth of fusarium and so that's that's the closest i've seen to actual causation so far would you be able to breed that gene into other genetics using like crispr or something so theoretically you could do that um whether or not that specific gene is sufficient in the plant in vivo to cause um powdery mildew or fusarium resistance isn't known and you have to remember that if there's you know something like 80 different genes that are controlling the resistance how that gene is going to interact with the whole pathway to result in resistance in the plant is a much more complicated question but theoretically if scientists could find enough genes that confer resistance they may be able to create resistant plants using crispr is crispr gmos or is that different so the definition yes it's hard it's a hot that dmos is a difficult thing um i believe that if you induce a gene that normally exists in the plant it's not considered a gmo because it's you're sort of speeding up a natural process if i were to throw in like a gene from a you know fish or something to make it cold tolerant or whatever then that sort of crosses the gmo line but um it's fuzzy so crispr can be gm i mean qualified as gmo it could it can or can't depending on on what you're doing with it yeah so we uh so i i heard that we met because i used your i used to me to find hoplite and virus viroid in my uh spot in nevada okay and i'd sent in some samples worked with patrick yeah and got got got a bunch of samples back and we had taken five cuts off of one plant and um every single cut came back as positive of hoplite and viroid and i was like wow you know yeah this you know that we were able to weed this out and i've been in a lot of a lot of facilities you know all around the united states and a lot of the times you know i've been i was in one in vegas and walking through the bedroom and i'm telling the guy hey you i think you got hoplite and viroid here yeah um he you know he would no i don't i don't have populated virus i don't know what that is i mean a lot of people don't know what it is yes exactly you know what what is hobolate and thyroid yeah so hablate and viroid is a tiny little uh free-floating piece of genetic information that um it actually was first found in hops um of all i mean that's hence the name hoplite and viroid um the reason they call it latent isn't because it can lie dormant like hidden in your plant but because when they found in hops they couldn't find any effect for it so they decided to call it latent which really just means asymptomatic that actually turned out to not be such a great name because it isn't totally asymptomatic in hops either it can mess up like oil and acid levels in the flour and some cultivars are super sensitive um and then of course in cannabis it's it's not asymptomatic at all so um it was just a poor name choice so so it's not latent it's not so this it's a really confusing term so in science there's something called lytic and latent so this is a cycle that some viruses do especially like retroviruses where

they can interpolate into the dna and then they just like hang out and they're kind of quiescent they don't make they don't replicate or make new viral particles and then when conditions are right they sort of wake up and they enter a lytic cycle where they're doing a lot of replication hop late and thyroid doesn't do that so it doesn't actually technically have a latent phase if it's in the cell it's it's trying to replicate itself now how how what are the growth characteristics that you've witnessed i know you're i i don't are you do you spend a lot of time in the garden or do you mostly just in the lab and running to me so i definitely spend more time in the lab than in the garden but um i've seen i've definitely seen my share of hapleton thyroid infected plants and talked to a lot of growers so um i do know that the symptoms can be really plyotropic so you can which means like super varied so you can have a plant that's either really severe or you know so subtle that you don't even see it um common symptoms are you know your plant will be slow growth you can have malformed leaves leaf chlorosis brittle stems sometimes you'll see like sort of a horizontal grow or the leaves will overlap a little bit but of course the most insidious phenotype is that it it totally destroys the flower um and yeah at that time is too late yeah yeah you're already three four weeks into flower and then you're you're seeing what's coming out of there and it's it's not yeah it's a huge a huge disappointment yeah yeah you know it takes a really trained eye to see hot plane vibrate yeah you know i've i've worked with uh a few growers at my spot and i'd walk through the the veg room and i'd be like hey you got hlv here you got hlv here and they're like what do you mean like yeah i was like you kill this plant you know kill the plant throw away the scissors yeah you know yeah um what i've seen is it's kind of instead of the the branching you know first signs that i look for instead of the branching growing up at more of a direct straight angle you kind of see this flow out sideways and then up yeah yeah you know those that's one sign you know they they come out sideways and then they go up instead of shooting straight off the main stem and then also you kind of get this slight curl of the leaves start to kind of come together a bit and you'll see you'll see that um and then that's in veg and that's those are the first signs that that i really look for but in flower it's like you know you've already filled up half your garden with hlv and then you're flowering out and you're like do i even keep keep this going right exactly yeah um how does hlv spread in the garden yeah so hlv spreads via mechanical damage so um unfortunately the biggest offender for hiv spreading is is us it's very efficient at spreading on unsterilized tools so if you're trimming a plant that has hlv and then you use those same scissors on your next plant you've just inoculated the next plant with hlv it can also spread to a lesser extent on like a trimmer's hands or maybe even their clothes especially if you get sap or something and you're not changing your gloves or cleaning them with bleach before you move to the next plant that's a potential spread there too even not you don't have to just open up the plant say we take a cutting you're opening up the tissue of the plant you can spread it just by touching so you have to you have to have mechanical damage but it doesn't have to be like catastrophic right so um you know if you're trimming and you get a little bit of goo on your gloves or whatever then it's it's on your fingers and it's it's a potential possibility if you're not sterilizing yourself between each plant that that even your hands could spread it can bugs like thrips and mites spread hlv yeah so that's a good question um they have looked at this question in hops um they did an experiment a long time ago where they took like 1700 aphids and they threw it on a really infected hot plant and they looked them munch away and then took those aphids and threw them on healthy hot plants and they didn't develop hot plate and viroid and so the conclusion from that study was that at least in that setting with hops the bugs weren't transmitting it um that doesn't mean that it couldn't happen in an indoor grow setting with cannabis plants um so it's kind of an unknown right now have you seen some genetics not susceptible to hopland virus they have hoplay environ but they're still getting good yields they're still getting terpene production they're still getting all the everything and it still has hotplate and thyroid so i've never seen that but that doesn't mean that it doesn't exist and i have talked to



growers who you know they their plant is definitely positive according to the pcr but it it seems everything seems fine so the fact that there can be plants in hops the cultivars that are are basically asymptomatic it seems possible there could be some in cannabis as well i had a question on instagram the question was does hlv change the dna or the rna of the plant yes so um this is a complicated question um what hov can't do is get into the dna of your plant and kind of live in there and be transferred from plant to plant so it can't be like part of the genome of a particular strain once it's in the plant part of the mechanism for making the plant sick does involve changing gene expression so it can change something called the epigenetic control of genes in the plant and it can also impact the way that the rna is processed and expressed um that type of change is unlikely to be transferred to like you know plant like if siblings or in the seeds or whatever unless hoplite and thyroid is also transferred into the seed there is a possibility if you do breed two plants together that one of them has high blood thyroid or both of them that it doesn't make it to the seed yes so the seed uh transmission so that's that question is kind of up in the air in cannabis um there are studies in hops claiming that it's actually pretty rare i think they put it about eight percent and they said that the level in the seed was pretty low we've done some experiments testing seeds and they they're definitely come out positive and they come out very positive um we're actually running an experiment right now with a grower who ended up in that situation and he's like i have all these seeds what do i do and i'm like well if you're not going to use them send them to us and we'll pcr each one and tell you what the percent transmission and seed is for cannabis so we're working on that question right now so you don't have the data back from that i don't don't yeah not yet so you actually test each seed you you put it in and you you grind it up and then you're testing that yeah it so hlv you're able to see it by the genetic marker yes so we we detect it by pcr so we each each one of those becomes a pcr reaction and then and then we can we can come up with a percent regarding tissue culture have you seen tissue culture cure be able to cure hlv so um there is actually some published evidence in hops that tissue culture can um cure hlv um it's not a hundred percent so it a lot of it depends on when the plant was infected and what cultivar you're doing it on so it can go from zero percent effective to fifty percent of the time it works um i do know that there are some companies that we test for and we also test for the people sending their tissue culture clones there and so um i can tell you that at least for the companies i that i've had experience with they are successful at eventually ridding a really important cultivar of a population but it could take multiple tissue cultures to get there yes yeah so it when you when you take the tissue culture not every single one is going to be hot plate and thyroid free so you have to test each one and find the ones that come out negative yeah when you're when you when you're pulling when you had uh when we took our our tissue test to do the hoplite environ you had us pull five samples why did you why did you do that yeah so it turns out that the the viroid load throughout the plant can vary a lot so um we actually ran a little experiment with a different grower to see how much it varied and we found that if you sample you know from top middle and bottom it can vary by up to fold depending on where you take that sample so if you only grab one spot on the plant and you're unlucky enough to grab that spot where the load is really really low you might miss an infection so it's better to take multiple samples should they take it off multiple branches around the plant yes i would um i would try to distribute out um to as many different places as you can and then you know do multiple branches and you can put it at least for our test you can put a little tiny clipping all in the same tube and then it all gets processed together so that would it be easier to take cuttings from maybe a newly new brand new baby or a new veg plant instead of a big mom yeah so probably you'd have a better chance of catching it if it if the plant is much smaller um most people are in the situation where they have a big mother and they want a clone like you take like a you know 100 clones or whatever and they need to know if it's if it's infected um but yeah probably catching in a smaller plant might be a little easier yeah yeah i think so i mean yeah a lot easier because instead you have one

main top you take that one top and you know right away yeah that's most the tissue of the plant yeah you know so it's probably actually better if if they did want to get the big mom tested just take a few cuts root them out transplant them vegem for a week or two take the first initial cut and send that in for testing wouldn't you think yeah so i mean i guess it just depends on you know what where you're at in your rotation and what you need to get started um i guess there's always a possibility of missing it that's the that's the hard part um i would if you are going to take that route i would probably test over several weeks that same plant just to make sure before um you grow that one up so test it a few times yep yep more than once yeah not just one time and you're good yes keep going yeah what can growers do to prevent hlv in their gardens and from spreading yeah so i would say the most important things are to enact a really strict standard operating procedure around tool sterilization and probably personal protective equipment for your workers you obviously need to also come up with a pretty rigorous testing protocol um you know i know it's kind of a drag but if i had to grow for example i would test all of my mothers you know every three to six weeks because it's just not worth the economic loss that you could suffer if you had a you know a rampant infection in your mom room for example um you know because information is always better than just hoping like i've had growers tell me well you know we're just we're just hoping it's okay or we have our rosaries and i'm like so it's always better to just go ahead and test yeah now i was when we were cleaning our utensils and cleaning our tools and just naturally we used isopropyl alcohol and we thought hey alcohol kills everything right yeah a lot of people say that but what's yeah unfortunately um not only is alcohol not effective nucleic acids are really stable in alcohol so they're really happy to be dipped in alcohol there's actually a lot of studies about what works and what doesn't and so because i get asked this question so much the things that do not work alcohol doesn't work alcohol followed by flame doesn't work torching your scissors does not work a lot of the cleansers that are based on hydrogen peroxide or acetic acid those don't work ammonium cleaners don't work like lysol uv light does not work i know right what i know i'm tripping right now so um the things that work in every experiment are um vericon s two percent um i do warn people the two percent is really critical because if you do half a percent or one percent it doesn't work um or the thing that i like to recommend is good old household bleach that works every time in every experiment they've done since like 1969 how long do they need to leave it in bleach i'm still tripping hold on flame doesn't work nope no unfortunately it's i know it it's crazy but it's not 100 effective so is that just because it's a viroid and not a virus yes so because um because it's just that free piece of genetic material it's a lot more resistant to most of the things that you think of that would like sterilize something so um yeah viroids are tricky they're a lot trickier than other stuff yeah so the whole time that i've had my cup of uh alcohol and the you know we're putting our scissors in our alcohol it's actually helping hp hlv spread because it benefits it does better in alcohol yeah it's it's mostly like a little hov culture that you've got going on in the beaker that you're spreading around to the other plants yeah oh my gosh i know i know it's it's scary how many people tell me oh it's alcohol and i'm like no that's that doesn't work at all how long does it need to stay in the bleach yeah so um you want to use somewhere between 10 to 20 percent bleach um and 30 to 60 seconds is sufficient in order to deactivate the viroid um some people say like four hours or overnight um that'll work but your tool is going to be like a puddle the next day yeah so so 30 seconds you're cool just have a jar there throw the scissors in you know and each i mean kind of each branch that you're taking yeah maybe clean in between yeah if you have you know a couple scissors and you you know you have them in the bleach and you grab one and clip and then throw it back in there and then grab the next one and as you're moving from plant to plant if you have like some bleach spray you can spray your gloves real quick before you go to the next plant to kind of make sure that you don't have anything on your gloves too spray surfaces that you're going to be cutting clones on yeah so it doesn't spread yeah and do make it up fresh every day because the

concentration can fluctuate if you if you let a dilute solution sit around for a while this is game changing information yeah no i get i get to ask this question multiple times a day so i'm excited to just get that out there and help people out what are what are some of the what are some other other questions that that you're asked that come off the top of your head um let's see i get asked a lot um how the viroid moves around the plant um and that generally involves it hijacking its normal biological systems that transport rnas and proteins around the plant i get asked what part of the plant has the highest level of thyroid and that seems to be really variable there were some experiments done in potatoes or tomatoes it was actually tomatoes where they inoculated a plant with a different thyroid that that is common in tomatoes and potatoes and they actually found that um the viroid was easily detected above where they where they inoculated the plant but not so much below and then it's it's really common in the roots so um i would love to do that experiment in cannabis and see if it's the same for for a cannabis plant um probably one of the scariest routes of transmission that we have inklings occurs is through the water so um we can definitely find hotplate and viroid in the roots we can find it in the growing medium and we actually had one grower submit the little water emitter with some tubing attached so we just cut off a piece of the tube and we used it as the template for the pcr and we were able to detect viroid inside the water tube so um when people have hapleton viroid and they have a common water source they need to be thinking about that too so dwc and recirculating systems yeah yeah or you know those clonal trays or like a flood and drain all of those could be potential ways to spread it and you tested the roots and it had positive hoplite virus inside roots yes yeah and it's actually um if you look at uh in hops where what tissues have the most thyroid roots are actually pretty high for concentration that's super scary for anyone that's using dwc it is pretty scary yeah and the scariest part is that viroids are really stable in water so um the potato spindle tuber viroid which is really similar to hotplate and thyroid is stable for seven weeks in water so um it's you know you really have to think about your water source and where that water was before it's it's watering your healthy plants since you've been in the cannabis business have you kind of seen it progressive to it getting worse and worse it's hard to say if it's getting worse or people are just becoming more aware of it um i when we first started doing this there were a lot of people that were like what is the hapleton thyroid i've never heard of that i don't know what that is but um i think that awareness of it is becoming uh more common and so we're getting a lot more people submitting samples but we're seeing it you know kind of all over the united states so it's everywhere do you have any other advice on seeing it or not spreading hopline thyroid across your garden other than you know bleach and and strict sops of cleanliness yeah um so i guess my advice would be to um sort of for lack of a better way to say this raise the level of analogy for cleanliness like a little bit higher um i would recommend to not let any new genetic into your facility until you've thoroughly tested it even if you get it from a really reputable source they might not even know that it's infected and it's just not worth the risk of bringing something infected in um i would treat your mom room like a temple um don't let anyone in there unless they know how to sterilize themselves they understand how it's transmitted and they you know they have the appropriate amount of respect for how bad hot blatant viroid can be um you know and i would routinely test even if everything is great and everything comes back negative um it's better to always be monitoring that situation so you can catch it early versus waiting until your plants flower and you're like what and then you know and then you've got a lot of backtracking to do to fix the problem yeah then you're chasing your toe exactly yeah yeah and you know for a lot of growers losing like a whole harvest is kind of it's economically devastating so it's it's worth the investment the risk payoff ratio is pretty good for testing yeah you uh you guys are saving people's businesses yeah yeah and you know i i you know i know we have a testing lab and whatever but you don't you don't have to test with us but people should test um pick a lab you like make sure they're doing good science and and get your stuff

tested yeah no when i was um that story i was telling you where i was at in vegas and seeing that kind of growth you know the first question i asked him is how long have these plants been here because none of your other plants have hopline viral just this small you know eight by four section of plants that you have here definitely all have it yeah and he's like oh i just got those from my boy like three weeks ago i just brought him in i'm like man i'm like hey get these out of here right now like just just just it to come into somebody's garden and to just tell them cut all your these plants down you gotta have some balls right yeah and and i'm just like look cut these things down and he's looking at me like this guy's tripping you know but you know it's cool i got a call about four weeks later and he was like look i i sent him in and i got it tested and dude you're right they all have hotline thyroid yeah no i mean you saved that guy for sure you know and because his entire rest of his garden was perfect yeah nothing and the thing is it could all start right there with that choice of bringing some plants in from your boy or whatever and it just ravages your business and devastates you yeah exactly it's like i said it's just not worth bringing something in unless you just test it just test everything before you put it next to all of your really important genetics yeah that's probably like number one advice don't bring anything in without being tested yep yeah yeah and i hear a lot of people say oh you know you know a lot of people recommended this or that or whatever and i'm just like you know test it anyway that that's exactly why we do these podcasts yeah you know because everyone has you know their own opinion or their own views or what their boy taught them or this since they've been doing it and with here it's just a clean slate you know we ask people like you you know the ceo of tumi genomics you know and get the right the right answers to the to the questions instead of what your boy you know told you right yeah yeah there's there's a lot of crazy stories and and misunderstandings out there so it's it's nice to set the record straight so that people you know can start fixing the problem or or avoid it all together hopefully yeah are you are you guys um testing any other pathogens or working on any other testing for other pathogens yes so we um so besides hapleton viroid we're also actively doing fusarium oxysporum um and we're hoping in the next month or two to have um released a full viroid and full kind of like fungal mold panel so that you know if either your plant turned out negative or hopefully in thyroid or you don't know what's wrong with it you can kind of order something or something a little bit more broad to identify it we're also sort of in the long term trying to move into next generation sequencing type analysis looking for viral pathogen so that we can do it in a more agnostic way because the number of pathogens that i predict that we're going to find in cannabis is probably just going to explode there's a ton of pathogens and hops and there's no reason because those two plants are so genetically similar that they wouldn't cross over into cannabis and so i think along with looking for stuff that you already know about it's important for the industry as a whole to start thinking about what's coming um and try to characterize that stuff too i mean there's stuff that's out there it's probably there that we don't even know yet exactly i'm sure that that there are plants out there infected with stuff that that nobody's looking for and i guess one of the scarier things is that you know once you have a crop that's so geographically spread out that has a viroid or a virus or whatever it's just a you know a short distance to its spreading to other agricultural uh crops like you know staples like carrots or lettuce or whatever and so it's it's even more important on a big agricultural view to be monitoring cannabis and and treating it like a real agricultural crop that needs to be characterized with its pathogens and biology and stuff what what is fusarium and yes so fusarium is um it's a fungal pathogen it's um probably one of the worst fusarium oxysporum there is no cure for it um it infects through the roots and it usually cause causes like dampening off you know and eventually plant death it's really infectious so it can spread around through the water through you know on on hands just like a hot plate and thyroid um through the air if they're spores and so um it's another big scary one especially with hydroponic systems that people should be considering so any kind of dwc or or

recirculating will you'll you'll spread it throughout your whole garden yes yeah so you know if you if you have a plant hooked up into that common system that has lucerium chances are you're gonna you're gonna gift that to the rest of the plants too are you familiar with any treatments water treatments that that kill for cereal um so i don't know of any water treatments i do know that there are some harsher treatments that you can put on plants to help with pularium but they're not really recommended for cannabis because it's you know people are going to eat it later and the they're pretty toxic and so in cannabis there really isn't a treatment that you can put in there that's safe that'll take care of the problem so you're saying serum is not curable so what does a cultivator do to get rid of it so it's very similar to hot latent in the sense that you gotta find it and um you need to destroy the plants that have it um we've worked with some people that claim that they can take a plant and like continue to clone from the top and kind of clone away from it and they've had success with that um but you're probably your best bet is to just destroy the plant and sterilize everything bleach works for that too and and try to get away from it like that when you're getting a test for cerium you're doing water samples so we can do water samples root samples soil samples um kind of whatever whatever you think the problem is we usually do root and then if people find it they're like okay where's this coming from um and they'll try you know sending in a little bit of rock wool or a little bit of water to see if they can figure out how it's getting into their grow and you're able to get away from it some of your clients have said that oh we've cutting from the top and gotten away from it but is fusarium in the tissue as well yes yeah so it starts in the roots but then it can spread to the rest of the tissue um and so if it's if it's really bad it's going to be you know impossible to clone away from it but um like i said um i haven't read any literature on it but i have heard from people that test with us that they were they had success doing it like that are you are you what are you seeing on inbound percentages of hoplite and vira to fusarium so we test a lot more for hotplate and thyroid than fusarium so i we don't have really good percentages we've definitely done tests and grows that had both um which was really bad um but uh well i'm sure there's a lot to be honest with you yeah yeah because it's just it's you you can't see a lot of growers just can't see either of them yes yeah and they're hard to spot and and and you know it can initially also be kind of asymptomatic so and then they're hard to get rid of so is fisarium a a lot harder to detect visually in the plant compared to hoplite thyroid um it kind of depends on if you know what you're looking for i think eventually it gets really severe and it's really obvious but i think at that point it's too late um and so the trick is to catch it before it's really bad and then it spreads all over the grow and so at the moment that you want to be detecting it is when you can't really see it anyway that's scary yeah it's like i'm gonna get some casarian testing going yeah yeah i mean it's a lot more common in like hydroponic grows and stuff like rock wall yeah yeah we see it we see it more frequently you know in colorado because everything is like super indoors because it's really cold um but but yeah it it can be just as scary as hop late and thyroid actually and it can spread just as fast yep it can spread pretty fast so that's super cool um well i appreciate you making the trip out yeah no of course this was this was a super honor and it's really exciting to talk about the stuff and help people yeah figure it out save you a lot of time on the phone yes exactly so you can kind of tell your clients hey just listen to this podcast you got all the information right exactly yeah especially with the tool sterilization one i'm hoping that everybody hears this and and everybody changes that because i think just that one change alone is going to make a huge impact and the consciousness of fusarium you know as far as i i'm really concerned about this now you know yeah yeah i mean and you know like that there's there's other pathogens too so it's it's it's just something to be cognizant of and know that you know you have to be aware of it you have to be careful with your tool sterilization um you just have to be thinking about it and and then you have a chance of avoiding it before we end what are some of the most exciting the things that you're excited about that toomey's working on that you'll be releasing soon yeah so i would say

the the most exciting thing um for us would be our on-site testing platform um mostly because we've worked really hard on the molecular basis of the test to sort of change the chemistry so that a lot of the problems that people are currently having um with on-site testing it can solve that you don't have to open the tube after you've amplified material it's a visual readout so you can see it has an internal control so you know if a plant is negative or you just totally messed up the test altogether and it's high throughput which i think for a lot of growth a lot of the current solutions just aren't feasible if you have a thousand plants to test um so we're really excited to bring that out and and hopefully people can get some on-site information about their plants where would they be able to be able to buy it through their local hydro store through your website like how would they get their hands on it yeah so initially it's going to be through our website um and then hopefully we'll be able to distribute it out and get a farther reach um but that remains to be seen yeah i think it would be awesome if um you guys could distribute to hydro stores yeah you know just because a lot of the foundational cultivation for the licensed facilities is the bedrooms and garages and basements yes and if we can help make cultivators conscious in the basement we can then help you know focus on the licensed producers and spreading it kind of where the source is yes it's coming from so that that i think getting it out to hydro stores and giving hydro stores an opportunity to to sell it to their you know small and at home growers is going to be game-changing yeah no we would we would love to make it accessible to everybody you know and and the only way to make a dent in this is to address it on every level like you said from you know the basement growers all the way up to like the huge vertically integrated growers um because if we leave somebody out then you're just leaving a reservoir for hotplate and viroid or any other pathogen to just rear its ugly head again yeah exactly um i just want to thank you for changing my garden you know because seriously because you're in there and and you have to kind of get your it's a guessing game the entire time and having a company like yours that you can go to and get a definite answer like this is what's going on you know it gives you that ability to clean it out and and get rid of it and pretty much changing the industry you know so it's awesome what you guys are doing super excited about the at home test i'm super excited for everybody to be able to get their hands on it and do it at home you know in home grows and licensed facilities i think you guys are going to change the industry for sure appreciate you making the flight out to california yeah i know and and thank you so much for inviting me this is really exciting and um i like i like science so it's fun to talk about it and it's fun how many people are interested in it so um this was a really great opportunity yeah yeah you're in the right industry now or in in the industry now where you know you got a bunch of little scientists at home you know with their grows and doing their thing and everyone's uh that's what i loved about it most you know i love to grow plants you know since i was like nine years old yeah so it's just it's cool that um we get to talk about it yeah no and i'm surprised how many growers are excited about doing experiments with us so it's you're like oh let's do an experiment they're like yeah let's do it yeah so i'm like this is great scientists yeah appreciate it and um let's wrap it up all right sounds good thank you thanks tasha autumn carsey yes how you doing i'm good how are you good so we uh we met through ivan we did yeah and um i was always intrigued because i haven't always talked very highly of you and you're a woman in the industry which is few and far between um and can you go over how how did you meet ivan so i was working on a facility in hawaii and i was flying back and forth about every other week and i was in the virgin lounge at about 8 a.m at lax when virgin airlines was still around and i looked across the bar sitting there and it was um you know a guy with the jungle boys hat and jungle boys shirt and then i was i was working out of state for about eight years so i didn't really keep a beat on what was going on in california um but it was roach and so i was like you know who is this guy and i kind of signaled to him like hey you know he comes over and i was like are you with you know jungle boys and he's like yeah i was like oh what do you do he's like well i build and design facilities and i'm a grower and you know what

do you do i had like a little cannabis leaf sticker on my laptop and i was like i build and design facilities and i used to be a grower and so he's like great we should come check out our place sometime and i was like i would love to so exchange numbers um and i called him he called me back like three days later and was like yeah come down to tlc and check it out and i was like okay cool and i was just wrapping up that hawaii job and figuring out you know did i want to work in california again and and i always lived there but i worked out of state so i went down to tlc for a tour and i'm in like you know grow tour clothes like backpack and what year was this this was 2018 i want to say it was right when governor brown just passed all the ab243 247 um and and had enacted those into law so i knew that there was legislation coming down whether or not prop 64 was gonna pass like you know we were getting framework around legal cannabis um in relation to grows so um i went in for a tour and uh walked into the conference room and there was about you know eight or nine people there and they were like okay you're pitching like pitching like i came here was ivan was in the room everyone was in the room so kind of caught me off guard that's heavy luckily i had my laptop there and everything and you know i kind of spelled out what i did which is this kind of architectural design firm that does construction management we do licensing acquisitions and so um went in for a tour and and walked out with a job that's awesome yeah that is yeah you uh you hit it perfectly that was a good good trip to the airport it was a good trip to the airport yeah sure thanks roach [Laughter] yeah you couldn't have ran into a cooler guy yeah roach is a savage absolutely uh how did you get started in the cannabis industry um so i think i was like 2003 i was a young single mom trying to figure out you know how i was gonna raise my kid i was newly divorced had no money um and a group of my friends that all went to uc berkeley kind of had these um you know the old school octagon hydroponics things in their garages with the old school tube lighting and each of them had one of these octagons and it was actually putting them through college and they didn't have families with money and so i was like you know what is what is this about i want to get into this started asking questions and they were like no no no you don't want to do this girls do not grow doesn't happen don't know one female grower i know a lot of female growers and they are always better growers than men i'm sorry yeah in 2003 there was not many probably in northern california mendocino but in oakland bay area it was very dangerous so um i think in a sense they were trying to protect me and i you know have a habit of if somebody tells me no i kind of go full force in that direction so i uh my brother started growing at the same time um i begged him for about six months to put me on and you know i think i bugged him enough and one day he drove up to my house with a tray of you know like a 52 plug train wreck clones and six analog ballasts and dropped them on my doorstep and said good luck that's awesome you started just like us yes i think you thought i'd be out of business in six months we just crushed it that didn't happen um how do you feel about the cannabis industry back then and then encounter cannabis industry wearing today you know um i i read this book a while back it's called snakes and suits and it's written by two psychiatrists and what they did was they took individuals that were kind of in this criminal insane asylum and then they took individuals that ran fortune 500 companies and were ceos of wall street um and what they noticed between the two classes when they did these um psychoanalysis on them is that the wall street guys actually scored much higher in sociopathic and psychopathic tendencies than the guys in the criminal insane asylum and the only difference between the two classes were what side of the tracks they grew up on and so as i go down this road and i've been doing this for 18 years i think you know the suits have gotten nicer and the tongues have gotten sharper but you're still dealing with the same individuals and that's not to say that everyone that has money is bad but it's a very important character study of driven people and we have a lot of driven people in our industry from the legacy market we have a lot of driven people coming into this from the outside so yeah they're in it for the they're in it for the wrong reasons yeah just money focus and i think that um when you see these businesses that are driving just towards one financial goal that you know you miss out on the team and the quality

of the finished product um and and what and where we kind of all came from and what we believe in so yeah absolutely and i think that you know there's a few that that do do really well in this industry but i always say there's much easier ways to make money than dealing with the licensing and the banking issues and you know there there's there's so many easier ways to make money so always tell somebody that's getting into this business like don't do it for the money do it because you absolutely love it and you have no other choice yeah yeah 100 percent um you're currently working on tax reform i am i saw the post you did yesterday on instagram um was it less taxes more retail less taxes more retail that's that's the drum that i'm beating right now um can you tell me what you're doing with california tax reform um yeah that's the save the california cannabis coalition which is kind of a group of business owners that are working hard for tax reform i'm working on multiple different levels of tax reform so one thing that everybody can do that's very easy is go to save the california cannabis and uh fill out the petition and sign it it's one click um if we get enough signatures um you know i think that'll create movement at the state level um and we're also working on another resolution called resolution 21 with a group of attorneys that i work with and some other lobbyists and organizations and what that resolution is is a simple two-page resolution that spells out that right now we're having a mass exodus of legacy growers that don't have corporate money leaving the market and it's noticed first on a local level so if you take this resolution to your board of supervisors um or to city council then it basically they can vote on it it doesn't affect their taxes at all and it pushes on gavin newsom and the state legislators to lower our taxes and so we've gotten that passed in um sonoma mendocino lake county monterey santa cruz humboldt del rio calaveras there's a few more so you're passing all this on a local level right now on a local level so yeah and then if we work on san francisco um and los angeles and you get all of these jurisdictions that have heavy grow communities and their board of supervisors is going hey we have a problem here our tax revenue is down people can't afford to pay local taxes the market has dropped then i think you will enact change and i think it's more impactful than you know a bunch of business owners going hey we'd like to pay lower taxes because that doesn't always you know there's only two ways that they could change the tax would be with legislature and which is a two-thirds vote on legislature and then also either a vote by the people is that that's correct right yeah and they at the state level they can vote to suspend it until it goes back to a vote okay so they can suspend it um your team the team that you're working with on on the tax reform who who's that comprised of um so that is sarah bodner with golden state affairs she's fantastic um she's a government relations professional and um you know community-minded and then joe rugaway's law firm and um i'm working with the lcca which is the lake county cannabis alliance so kind of all three of those groups have come together to create this resolution to pass around to the different jurisdictions that's awesome that you guys are putting work into it you know we're seeing it across the board you know i talk to ivan all the time and he's having a hard time so if he's having a hard time other people are dying yeah and that's important and and what they're what they're seeing is you know it is a cry from small farmers because they're going out of business first but some of the hugest companies right now in our state are failing it is across the board right now cannabis is not profitable in california and until things change um the black market is going to continue to thrive do you feel that prop 64 has helped increase the black market absolutely exponentially how has it done that um you know by by giving local municipalities the reign over whether or not to allow retail has really hurt the market um and by creating so much red tape around this legislative process that somebody that's been growing for 20 years may not have the know-how to get through to get to the other side when i first came back to california like i passed 64 licenses for friends of mine that were you know just trying to get to the other side but didn't have the wherewithal to create the documentation needed to do so and it varies by jurisdiction and varies at the state level but it's it's a lot of compliance it's a lot of paperwork and um and it's unnecessary i mean i i've worked



with like nasa scientists that tell me it's easier to get plutonium out of russia than to get a cannabis license i believe in california i believe it for sure yeah you know environmental impact i mean i mean it's non-stop yeah yeah that's why i'm in nevada yeah is so the last the last time i talked to ivan he was telling me for every eight thousand lights there's one storefront in california i mean he would know that statistic i know that only 68 percent of the state has retail and that's a huge problem because most of the jurisdictions voted against it and so that's one major thing we have to change in order for this market to thrive and for patients to have access you know that's it's so important there's you know some people that have to drive three cities away to get clean tested cannabis that are you know suffering from cancer epilepsy or any you know numerous types of illness that cannabis heals so um yeah patient access is important retail is important so given that storefronts the local council has the ability to not open up storefronts you're saying i think before this was like 63 percent uh of california doesn't have storefronts um 68. 68 okay 68 how do you think california can promote local council to approve storefronts i mean there's such a disconnect there what do they like what does california do so that's part of the um save the california cannabis coalition and part of that petition is to change that in law and so that it takes it either makes the jurisdictions create their own process or fall back on a state process if they don't do it by a certain date so taking the control out of the local council to be able to make it a california and open up storefronts well you offer them the control but if they don't enact it then it defaults to the state rules and regulations what's the current cannabis tax by the time it hits the consumer right now in california uh it's hard to say because prices have fallen so far and if you're talking and that's that's one thing about the the biggest tax hurdle that we face right now and they're all hurdles you get charged from the nursery to the grow the grow to the distro the distro to the retail and then all of the local taxes in between um i've heard 50 but by the time it hits the consumer yeah i i think 70 now too and if if you're talking about you know 167 dollars a pound or something like that with the new increase you know it for an outdoor crop that just hit 500 and i'm hearing even three there's a lot of people that were tilling their whole crops into the ground this year because it wasn't profitable to cultivate so to tax somebody the same amount whether it's outdoor greenhouse or indoor when your cogs are wildly different like if you take outdoor for example and i'm just going to throw some back of the napkin numbers i know that you know there's so much variation but if you take you know outdoor at 25 to 200 a pound if you're in smart pots you're bringing in soil you're on the side of the hill you have logistical factors of getting materials in and out versus if you're on ag land with heavy equipment and you know row crop style your cogs are going to be wildly different if you're in a greenhouse your variations based on efficiency could be between 250 450 a pound depending on where that greenhouse is what the efficiencies built in um you know an indoor i've seen commonly you know anywhere from 500 if you're super efficient to you know nine or even eleven hundred so it and then you know your cost when it hits the shelf is is telling so i mean you could say a hundred percent for some farmers right now yeah on on some of the greenhouse you know there's some really large greenhouses in um los alamos central california how are they isn't there a cap on 22 000 i mean how are they going there's like acreage of greenhouse that that's cultivating cannabis i mean you're in licensing like how are they pulling that off so the state was supposed to limit with prop 64 and this is why a lot of small farmers voted for it they were supposed to limit canopy at an acre then they came back for outdoor right for everything for everything yeah um and then they came back and they said uh last minute okay you can stack as many 10 000 square foot licenses as you want so the licensing is actually unlimited here um you just stack as many tens as you want and on the on the provisional side now they just changed that recently but that's the way it was and then the state measures your your bed size and then local municipalities have different you know canopy caps based on population um the agricultural area that they have and then some counties are unlimited and some counties are very restrictive so the the local

municipalities can always be more restrictive than the state but they can't be less so they just recently changed it would they change it to so my understanding of the recent legislation is that any new license applying for a provisional annuals are different has to cannot have more than an acre on any contiguous parcels owned by the same owner but anything that was previously in existence is okay and then has to go into an annual process but for new license holders you can apply for more than an acre on any contiguous parcel with more than one owner on a provisional license they're supposed to release a acre license once they merged everything merged into the dcc i think that's what they're working on right now is is this you know large cultivation license that hasn't been released yet to kind of because it's it's a pain to get all these 10 000 square foots and then apply for them it's it's absolutely ridiculous and a lot of paperwork so they need to merge those into you know one larger license for people that have you know multiple acres and it would make the process and the pipeline a lot easier at the dcc if they're going to continue with the no cap yeah where do you stand on that cap or no cap so you know i'm i'm indifferent i want i want to find a way for small farmers to stay in business it's it's one of our big fights i also feel like you know for someone like jungle boys for example they can't outsource to another grower to grow that product so they should be allowed to grow what they need to to meet their market share that they've already created based on the quality assurance the genetics and everything else that they've built throughout the years um so you know to tell them hey you can only grow 10 000 square feet like wouldn't work yeah no there's that fine line of you know taking a greenhouse that's been growing poinsettias or some other flower for home depot filling acres and acres yeah with cannabis yeah flooding the market yeah and then another cultivator like jungle boys that started in you know small and slowly grew up to where they have a large demand and they need to fill that demand yeah and they're they're they're feeling a demand when the other cultivator is just cultivating cannabis right and so you shouldn't be like okay you have to cut back your canopy and you got to buy from this guy over here i don't i don't believe that that's right but i believe that some kind of understanding and control on the market um is is necessary because otherwise we're just gonna flood the market and cannabis will continue to be worth less than you know and this has happened in other states like we have colorado's legislation for the most part and we saw what happened there and it took three years to kind of peak dive and then level out again oregon and washington same thing anywhere where you have these kind of free anyone can get through to the other side markets and it's not a monopoly market like the east coast has you um you run into this problem and in colorado washington oregon it kind of settles out and has like at least a baseline pricing in about three years but the difference is those states have like you know four or five million people we're 40 million people so it's a much bigger problem to say that it's going to be resolved by any date um so yeah yeah i know we're definitely seeing seeing it on on the pricing um what did you think about newsome's budget address about a month ago where he brought up cannabis tax reform do you think there's hope there i do i i think that he um i think that he sees what's happening and i think he has to respond to it um because it's coming from all sides and then they're seeing it at the state tax level too they're the ones seeing people not pull licenses the following year and not be able to pay their taxes and going into bankruptcy so that um it has to be addressed my thought is if it comes from the legislators it's it's easier to address in a real way um than you know a bunch of growers getting up and crying and yelling at him which is also happening but um you know i think there's some very organized groups and and this is a part of like the industry has to work together on this one you have a lot of these different activist groups that are fighting in different companies that want this or that if we don't all come together it's going to get messy and we're going to get bad policy so um you know i think sticking with one group and then reading what that group is backing because there's some some bills that are coming out that don't make a lot of sense and push the taxes down the line to the retail or to the excise and they're still getting the same amount they're just going to lower cultivation

we need tax reform across the board and um starting with cultivation tax so i i think he will make a change um i just think the approach is up to us and we have to get really organized and work together on it yeah just real quick a recap um what are the three main things with tax you're looking for um the three bullet points and where do you want to see those on tax for california tax less taxes more retail and strong working groups to come together and write policy that makes sense that sensible sustainable policy um to address the state with experience instead of letting them write our policy for us we have to draft it for them yeah because they don't understand this industry with pricing in california where do you see it getting this year and how bad is it i mean it's bad it's bad i know a lot of farmers just sitting on their product hoping you know it's it's going to be worth more in a few months i think this is the new normal i don't think this is a recession that's just happening right now i think that it will level out it'll probably come back up a little bit because unfortunately a lot of people are going to go out of business which is going to create more of a shortage and then prices will rise again um but yeah i it's going to be interesting what pricing are you seeing in your network of people for it for indoor for indoor high quality indoor what are you seeing oh there's such a variation i mean 1100 uh to 2200 probably depending on who you are what it is obviously if you have a brand and a name it's going to be worth a lot more branding is really important and and it's the differentiator that i think keeps businesses alive while everything levels out because in the flood people don't realize what's good product and what's bad product they're just like oh i can get that over there for this that's what it's worth not realizing that you know this outdoors better than that outdoor substantially or this greenhouse is better than that greenhouse so it's really the branding that becomes your differentiator um of quality and you have to have quality to back the brand but those two have to work together yeah it's communicating to the market that this is the quality absolutely um you know i've personally seen a national price decline even in michigan i mean mass yeah i mean i've seen a national price decline why do you think that is i mean i think like anything it's gonna come down to an agricultural product we saw it in hemp and um you know like i've worked in hawaii substantially and they actually ship in 80 percent or 70 percent of the um fruits and vegetables from south america and from other places so because it's cheaper to produce there when an employee's 200 a month you're never going to compete with that so then they're shipping them on freighters you know creating more of a carbon footprint just to bring it to hawaii that has four growing seasons and probably one of the most optimal growing climates on the planet to grow fruits and vegetables so it's you know um it's definitely going in the direction direction of agriculture and i think with federal legalization pending when that comes online then you're going to see that kind of boom and bust situation with federal legalization coming on online do you think that canada's cannabis is going to be able to be sold state to state or do you think it's going to be remain in the borders of the state i think that it will still become a states rights issue and that there's a lot of talk about that right now um and and it's it's kind of how they treat alcohol too like there are certain states that are you know just distribute in new jersey or just distribute in in certain states for for their liquor licenses and they have those very locked down especially on the east coast or dry states you see a lot of that so i think the states can always be more restrictive than the federal legalization so i don't think it will necessarily be like open borders hemp because you have all these different monopoly markets especially on the east coast they're going to want to protect their local markets and so i think it'll be i don't think it's just going to be a wild free-for-all when they when they come up with federal legalization but i would worry about import export from other countries at rock bottom prices for you know subpar product yeah i agree with you i don't think that you you'd assume that there would be interstate commerce i i don't think so i think that's it's so complicated and maybe 10 15 years after federal legalization but i mean you never know yeah i mean canada did this and it took them you know and they're they're

still working on it but it it took them a while just to form the policy if we think state licensing is hard try federal licensing i mean it's a nightmare i remember in the beginning of canada health canada came out with this policy in the very beginning where you know they're really trying to go medically focused and put it through the pharmacies and things like that um but they would have third party it was proposed they did away with it i believe they'd have third party auditors come to your facility and take a sample if it didn't pass you'd have to burn the whole room and an on-site incinerator that you would legally have to put in you'd have to put in dea level vaults i mean it was just the compliance and still is insane um in canada so you see that with a lot of the federal standards um which if they don't look at it as agriculture which is what it is and they look at it as a commercial product that's where it can get tricky yeah i was up at uh i went and visited arroyo when they first started in calgary yeah i was friends with the head cultivator named chris mayerson yeah and uh metamatt coachella he invited me up you know did a tour but they were like everything they had to quarantine before it came in the facility he was showing me all the regulation i was like how do you even grow weed here yeah this is insane like it takes the fun out of growing i mean it takes i mean everything had to grow it's just i was boggled yeah it took like three weeks to get a light inside the facility had to sit in like a garage area it made no sense at all yeah if you want to move a piece of equipment from one end of the room to the other you need like a stack of paperwork this big in three months yeah that's crazy it's insane yeah now you you were talking about um national import importing right yeah i mean if if there's not going to be state to state commerce how is the state going to allow product coming in from a different country like well the states will decide so if federal comes into play i'm assuming they'll leave it up to the states to go okay we're you know texas we don't want huge grows here we're going to buy everything from california but we're going to allow retail or you know we're on the east coast and we can only grow indoors but we need you know some more biomass product to put into extraction methodologies or whatever and we want to get a cheaper cog on that they might buy sun grown from the emerald triangle um so it it'll take a while but i think it'll be up to the states and each state will pop off individually based on what their needs are but i don't think the monopoly markets will open their doors right away it'll be the over-production states trying to push into the states that haven't been established yet yeah exactly do you think at that point with federal legalization and possible import importing of cannabis mexico would be a threat yeah yeah yep um because the climate there is really good um they have in in some parts of it they have you know somewhat of a dry climate i worked in colombia for about a year and a half and um with hemp and that's a very difficult climate um it's very high humidity and the and very high heat and so once you get past a certain humidity and heat point you can't really pull that down without a multi-million dollar greenhouse and then at that point you're kind of at an indoor cog anyway so why do it um so i've i've seen you know properties with just thousands of acres of failure in colombia um mexico i don't i don't think will be the same i think it's it's a little drier it's a little more temperate um and and genetics will grow well there labor is also really low workforce yeah that's the key and the workforce is hungry and hardworking yeah i mean yeah you know so yeah i think that would be a major major threat although i read an article that a lot of people were pulling like indoor product across the border i think right now it's happening yeah right now it's happening just because cannabis yeah in the united states are so cheap or in california especially well and good too yeah there's not i can't imagine there's a ton of indoor grows in mexico because you know but i don't know um but yeah they want like really good like quality product that's indoor so it's moving the opposite way one of the biggest indoor cultivators in mexico um we have a pretty good relationship with holy cream um mike he's he's good people and um he grows some fire nice so but he's always sold out yeah so yeah it moves yeah where do you see the price of cannabis where it's currently february right now you know where do you see the price of cannabis at the end of this year in california um you see it lower or you see it

leveling off i see it lower because as businesses get distressed um and they're not looking to next year to meet their margins they're gonna sell for below their cost of production so you see it getting worse before it gets better yes but it has to get better because if it doesn't get better we can't even it does because the the people that won't be able to afford to cultivate next year one of two things will happen there will be less product because there will be less cultivators or a whole new group of people will come in and take their place and run for a while until the numbers don't make sense so i mean anyone looking at a cannabis business in california i would say run your numbers and then go you know 30 to 50 percent below what you think and you know how that's possible yeah [Laughter] it's not possible it's not possible yeah two we saw this in 2018 i was uh you know i owned a hydro shop at the time and saw about a 40 downturn and customers walking in the door at the hydro store in 18 and 18. oh wow yeah 17 was a big year yeah you know i did really well in 17 yep and um 2018 came along and literally overnight 40 down in sales so it's it's substantial when it hits it it's quick and do you think that's because people just got out because they thought the stakes were going to be higher or i think price per pound back then we were selling pounds for like 13 to 1500 for indoor and that's that's why oh yeah you know um it started to creep up a little bit we start to get to that 22 to 22 number yeah and then covet hit everybody got an influx of cash and then the you know price went crazy for a while so it's uh it's been an interesting ride for sure i think you know one of the reasons could be nationally why we're seeing the price of cannabis you know lower is because i think people just have less money yeah and i think there's a lot of over production um oklahoma southern oregon there's all these places that are growing you know under the guise of hemp and um it's getting into other markets flooding other markets and at the end of the day the country can only consume so much cannabis um i i don't i don't think it's a money thing necessarily too i don't think the recession has really hit us or if it's going to because they printed so much money during covid um like construction is booming right now um you know all these other industries real estate is booming um so i don't necessarily know it's it's that people have less money i think there's just a lot more product so i assumed that because um retail store uh traffic is down you know on the retail store level yeah nation uh you know california wide i don't know about nationwide but i'm friends with yeah a few with cookies and a few other people and and that's that's really the the story yeah and i think the taxes have a lot to do with that and there's a lot of you know especially places like los angeles where you know 80 of the stores are not licensed retails and so you have stores that are not charging the taxes not charging the tax and then the guys trying to play by the rules you know where's the consumer going to go at the end of the day they just want you know that extract or that brand of cannabis and and they'll go anywhere to get it if it's half price and you can't blame them for that you know yeah well it's pretty interesting and um it's a little scary but riding it out and we'll just see how 20 20 the end of 22 ends up and 23. yeah um going into i want to go into coltivo and and you know that company because you have a you have a long list of companies you're you're like me on steroids you know you got a lot going on you're busy um with coltivo um what's the story behind that company and how did you start doing layouts so coltivo's a design build firm we started about roughly eight or nine years ago right about the time canada came online with their federally legalized process i'm not exactly sure what year that was but um you know i was growing and um had some friends go to jail had some pretty crazy scares and um you know i'd been growing for 10 years so i was just looking for something else to do in the industry and um actually quit when it hit 3 000 a pound i was like i'm out of here so um you know closed up shop moved up north and was just kind of like thinking about what my next step was going to be and um i got that was your number 3 000 a pound you're out i know oh my gosh i smell like such a jerk right now yeah spoiled super spoiled we were all spoiled i was selling packs at 55 6. that's in the beginning yeah in the beginning i i was hitting those numbers too um and then you know and and we were on a much smaller scale too we didn't have like thousand light grows didn't exist 500 light grows didn't exist if

you know if you had 100 lights or 200 lights you were the biggest person in town yeah um so i uh you know was just looking for a change and and kind of wanted to get out of the industry and i got a phone call and we used to build grows all over los angeles for um different uh dispensaries and basically i had a little working construction crew that would go spot to spot and just set everything up um and so i got a call from this uh this consulting company and they were working with ed rosenthal and they were like we you know want you to come to canada to look at this facility which was um proposed as the largest in the world at the time and so i went up there thinking like well i really want to meet ed rosenthal you know i've read all of his books and things like that but i have nothing to offer these people when i enter the room and it's you know 14 of the most decorated architects and engineers in the countries that build all the hospitals and airports and everything else and um you know i'm expecting to get laughed out of the room at any moment and i start reviewing their plan sets and they've got crazy chilling towers specked and just an egregious amount of money and they do what engineers do which is when they don't know something over engineer it by 50 well that directly affects your cogs and so i said you know give us just the hvac piece let me work on that and then i went back to my guys that i've worked with with forever um and we rewrote their entire hvac plan in like 48 hours and saved them a couple million bucks and so that i worked on that project for a while um health canada ultimately held it up so it never opened i think it changed hands but um that kind of started the path to the design build firm and i just my phone started ringing from different license holders that were building things and it was at a time where no no design build firms existed around cannabis i think we were definitely one of the first and it was just a very interesting time i started the company with ten thousand dollars and uh no funding and it it worked that's awesome it's good that you had the backbone of the garage grows to really understand have a deeper understanding of ac and lighting and ppfd and and really flow yeah they didn't understand set points they didn't understand even the most basic fundamentals of growing and so you know through that we realized that there was a need in in the industry and more and more growers were going to come online and that you could through the design process really be that difference between 500 and 900 a pound which is a huge difference um and so engineers i love them i work with a lot of them but they love to over engineer stuff especially if it's exciting and they haven't done it before they have a lot of ideas that they want to throw in there and and a point that they want to get to so my job is kind of it doesn't have to be expensive to be effective and so sometimes you just really have to rein people in on their super creative ideas and bring it back to the basics because you know we've grown fire quality in our garages and in with a lot less money and a lot less infrastructure i've seen amazing product come out of trap grows and i've seen some of the worst product come out of the nicest facilities i've ever seen i'm sure you've seen the same thing absolutely are you guys doing are you guys doing just layout services um so we we do a couple different things and it's kind of switched since covet i used to have a lot of everything in-house um now we sub out the architecture and the um the mechanical portions um and we work closely with them we do have an in-house architect and a cad designer but we sub out a lot of the stamps to firms that are licensed in like 30 different states or 20 different states so that they can go in there and put their stamp on it and then uh we usually walk the process through construction management because what i noticed was you could have a perfect plan but once you give it to a general contractor and come back in at the end it's a completely different story so um we kind of like to walk the process all the way through from start to finish all the way down to the commissioning of the hvac and irrigation and all of that having permit process nationwide is not an easy task no no that is big yeah i mean i don't think people realize how big that is yeah yeah you know it's with the meter you know we just offer uh with the meter designs we just offer irrigation layout and we were looking at doing something similar to what you're doing yeah and as soon as we started down looking at it we're like no we're cool [Laughter] it's a lot of work and it's it's fulfilling and it's great it's

it's not a definitely not a get rich quick no it's not scenario it's um architecture and design is is is not that especially for these facilities because they change so many times throughout the process i think what you guys do is really great because it it it suits that need of um gives you a complete supply list and often the people that struggle the most like a general contractor knows how to put up walls hvac i'll know how to hang hvac but this specialized irrigation stuff a lot of them even the most commercial plumbers have never seen it before and then you don't necessarily have to have a plan through the building department depending on what it is if it's all above grade like this you don't have to have a stamp and take it through and get it permit it's above grade um certain things like sump pumps in the ground and and your water recirculation systems anything below grade but it's such a gift to give that to a plumber and be like here's your exact supply list here's all your line links like it's gonna save that project so much time and getting that facility up and commissioned and i don't know anyone else that's doing that right now so yeah i know it's it's definitely game changing i think we created it just by visiting many many grows and seeing many many bad irrigation designs and very inefficient irrigation designs yeah and um very hard to run irrigation designs and what what we really do is just make designs that are easy to easy to operate yeah you know and that's that's the main thing because you can't have your business relying on expert to run your irrigation control like you need the guy that's you know pull a guy out of the trim room give him 30 minutes and teach him how to run the irrigation that's pretty much what demeter does yeah no and i remember you know running down that road with ivan in the very beginning we were looking at every system like argus priva like all these complicated systems i remember going to um toweling's tomato farm in ventura county and that's like you know multi-acre greenhouse venlo underglass beautiful facility and there was one um one guy in there and they're in like four states and he's like the master controls of all the irrigation he's like i'm running four states from my motherboard right now and i'm thinking like that's great but what if you get in a car accident on the way to the grow like what do you do you know what i mean like you need to be able to teach people how to run this system and have redundancy and backup built in and keep it simple or you know like you could have that one bad day where something happens to the main guy that just knows everything yeah you know yeah exactly and when you're trying to do that on multiple facilities across multiple states there's only so much talent yeah you know so we've got to make it easy yeah yeah we were looking at some really complicated systems and i remember like the guys from netfilm came in and i like first of all i didn't believe the price and then i didn't believe how simple it was and i was like okay something's gonna malfunction here but it's really good components i've used them ever since and dosatron in some facilities depending on how they're scaled and how many lights they have but really just keeping that process super simple is key yeah do you guys offer consulting services with cotivo no um we used to in the past we don't anymore as it went through consultants often get a really bad name in this industry so what we did was and the reason for that i think is um often times consultants double dip so they'll align themselves with all the manufacturers and they'll take incentives off the products they sell and they'll charge the client so they're double dipping in both pawns and i find usually like the most highly incentivized products work you know don't always work the best and so you know uh so we we don't take any um money from any third party vendor or service so i don't double dip and i represent the client and i charge the client a certain amount of money and then represent their best interest do a competitive bidding process work through the architectural designs and so that's different based on the level of work that we do but the client knows that i'm not double dipping in in everybody else's pocket so it's very common in construction it's called an owner's rep so we're more of an owner's rep service than a consultant that i'm i'm a witness to that you know i've tried many times to give you money for deals on lux lighting that you've turned me to taking it you're like hey now we don't do that you can buy me a steak dinner yeah what so what's the difference between an owner's rep and a consultant uh owner's rep doesn't

incentivize any third party product or service and consultants often do but also not all the time but protects against the cannabis tax what's that i mean owner's rep owner's reps it seems like what you are doing is you protect the client your client against the cannabis taxing that often happens i'm the one that goes in and tries to negotiate all the products and services or find what's already existing in the regular business world without the cannabis tax um so from everything from you know insulated metal panels or floor covering or whatever um you have to really do a particular bidding process because once that contractor enters your facility and sees it's a cannabis facility yep price goes up 3x so you really have to run those numbers and get you know five sometimes seven bids in any given situation to make sure that you're not paying the cultivation tax and even firms that like we've used for a long time like they'll kind of see the money in it and then their prices will skyrocket like um i love actually dps panels because i i went and priced their bids out from bids i had three years ago and they're still in alignment with that like five or ten percent increase over the years with with inflation that naturally happens in the trades but um for the most part they're very reasonable yeah why they're one of the biggest in the industry probably yeah you know yeah um what are some of the different markets that you've worked with in with cotivo have you done national and internet international yeah so colombia was under coltivo canada um we've probably worked in over 20 u.s states um so yeah we we worked like i said i worked out of state for eight years um until california created a legitimate process where we could walk plans through a building department so yeah we've worked in all different types of environments what are some of the biggest challenges you see with cultivations scaling um you know usually [Music] this isn't always the case but this is often the case um there will be an investor and there will be a cultivator and you're trying to walk that fine line of what the cultivator needs to function efficiently and get his job done and what the investor needs for the budget and the returns and to not make it too complicated so that if something happens to that cultivator that somebody else can come and stand in those shoes like living soil is great but you know an indoor scaled thousand light aquaponics facility maybe there's three people in the country that can run that so you know you suddenly get 10 million dollars as a cultivator and they're like what do you need to be successful and you get these crazy wacky ideas and you have to like kind of just bring it back to basics and go like we need a facility that anyone can function in ideas are cool and we can do r d stuff in one or two rooms but there's certain things that just don't work when scaling and i always say it's like trying to turn a liquor store into a costco like you wouldn't scale that the same way it would be completely different equipment it would be completely different rules um so trying to walk that fine line between investment capital and return on investment and what the cultivator needs to be successful and really rock out a room and do a great job yeah it's kind of like running organics and complex irrigation systems at scale right doors or bringing soil into like an iso 7 or 8 facility like you're going to automatically void your standards so for me and we've done it all like at the end of the day i always say like i'll give my advice but we'll build what people ultimately want to build and we built crazy things that i would never want to operate in but the um i think the baseline standard for you know if you're 500 lights or above like get in rockwool i know a lot of organics guys will hate me for saying that but i think it has its place and i have outdoor farms also so there i feel like organics really has a place because you're trying to create an immunity within your plants to defend against the outside environment and pests and pathogens that are natural naturally going to be coming in all the time and it's much easier to you know feed through irrigation systems and we have large scale equipments and larger tubing and things like that an indoor facility um you know we've seen indoor facilities that have functioned for years without a single introduction of pests or pathogens so you don't necessarily need all the organic amendments and if anything you're bringing in stuff from the outside cocoa's and inert media but how many times have you seen it spike to four or 500 especially with supply shortages and they're pulling stuff that's not necessarily



supposed to be coco medium into facilities there's a lot of inconsistencies there and more particulate matter breeds pests and pathogens yeah it's just the baseline clean room 101 standards so when you have you know a clean room facility an indoor facility i just feel like you should be able to eat off the floors and it should be super clean that means a truly inert media like rockwool um and soil cocoa particulate bugs thrips you know you're gonna get that introduction and you won't be able to get rid of it not legally anyway and and that's the goal right yeah you have less room for error yeah less room for error with with with organics and organic media a repeat repeatability challenge um and a pathogen challenge and it gets very difficult expect i mean you're saying 500 likes i'm i i'd be scared to run it you know over two yeah i was going to say 200 likes yeah you know 200 likes is like it's it's just scary you know yeah you just got so much room for error so yeah um it's hard enough you know i mean growing and growing successfully is hard enough and there's so many different factors so i feel like everything has its place again i love living soil and organics outdoor takes three years to build it you know takes a long time and it takes agronomists and people with innate understanding um or somebody that's been doing it a very long time because you could have issues with e coli and other things that that could be very dangerous potentially with organics so yeah whatever you do you just have to be know what you're doing and scaling up for the first time is not the place to try new things or stick with the old things that don't work you know yeah absolutely you also own a or start have a company called gene finders originals right yes so we have um we have farms up north and they're all under the umbrella of alchemy 29. uh gene finder originals is the brand that we're launching in the next 18 months um it's based uh mainly off of my my business partner short brooks uh who has been cultivating and breeding genetics for probably the better part of 30 years and he's worked in um he's got some crazy stories he's worked in like africa for the governments cultivating for them mexico for governments back in like you know the 90s and things like that so he's dutch so he was kind of the person they sent around to do all these like test plots for for different companies at a very large scale very early in the game so he's an incredible wealth of knowledge when it comes to breeding and genetics and the idea behind gene finders is to come up with a pathway for other breeders to license their genetics with us and they would then get a royalty on whatever is grown and sold of those genetics similar to how like the music industry works and things like that so we would partner with different brands that are already in existence on collabs we would also partner with smaller breeders that maybe nobody knows their name but they're they've got incredible genetics that they've been working on for 20 years so i'm just trying to kind of create a pathway uh to work with breeders and give them credit for their work so coltivo is kind of partners with gene finders coltivo is you know laying it out separate separate so how how are you getting those clients for gene finders and is coltivo recommending genetics to cultivators no so coltiva is just the design build portion we do a little bit of genetic recommendation for our clients that short helps with and you know once we build this amazing clean room type facility you know how do you get clean genetics through the door and tissue culture and seeds and things like that so that we don't want to build these incredible facilities and then they go down the street to their body that has thrips and spider mites and everything else and then bring those into the new facility so um really just getting things fired up in a way that is not going to be problematic uh for the facility but yeah everything else is a completely separate company under alchemy 29 which is our new our new baby nice nice um are you taking on new clients with coltiva right now not at the moment we are a little busy um we're we're finishing up with the clients that we do have and finishing up some facilities what happens is projects with coltivo are typically anywhere from you know nine months to two years depending on the regulatory environment the jurisdiction that we're working in if it's a ground up versus a ti um so i used to take around eight projects at a time and max out somewhere between 250 000 and 500 000 square feet between those eight projects i'd run everything in parallel and then i would end those projects

at relatively about the same time so be these like long two-year processes so right now we're not taking on or starting anything new we're just finishing our last round i don't know if that will change in the future it really depends on california licensing and what happens with these other businesses but for the time being no before we move on i have one more question to ask you about coltivo do you do you have a percentage based on flower veg and dry room that you use as a formula for any facility is there like a percentage basis of flour versus veg um yeah i bet 30 percent on our veg technically whatever's and and there's some scalability in that and sometimes people are doing double stacks so there's some variables but like my flat back of the napkin number is about 30 and i think it's one of the huge mistakes that you probably see a lot as well where people just under spec their veg and their dry rooms and then you go into these facilities that are gigantic and they've got one dry room or they've got you know a tiny veg and um and it doesn't work so i like to allow a lot of edge space i like room to move in my facilities because and this is something i i constantly have to work with investors on because as they're adding numbers through their pro forma they're like oh if we shrink our hallway and we shrink this up we can add you know 100 more lights yeah i'm a better designer and it's like okay but your employees are not going to want to work in there and if people don't want to work in your facility your product's going to suffer and so i think there's something to be said for you know large hallways being able to move equipment up and down um you know aisle ways that work depending on if someone my size is in there or you got a six foot four 280 pound dude um so yeah making a facility that's comfortable for your employees to work in is absolutely key even if it costs you space what about cycles for example in some of my facilities i'll build one veg three flowers and i'll come down every three weeks yep and if i'm adding or if i'm gonna do an addition i can't just build another flower because that'll mess up my veg yeah um so i'll add three flowers and another veg or a larger veg and that way i'm coming down every week and a half yeah so do you have like a cycle when you're building out these facilities like cativo that you try to stick with on number of flower rooms to the veg so they can run the business more as a process and a workflow yeah i think you know kind of you max out at around five rooms or something like that per one bedroom and then you know sometimes if you're planning a very large facility you just want to allocate that space and veg and a lot of ways that people build what is you know they'll be in flower while they're still under construction and they'll put up pony walls and things like that yeah happens all the time i don't love it but i understand it from a financial standpoint sometimes it's just what you have to do and so i think that you know building out your veg to the full capacity of the facility day one just like you would your offices is key and then add your flower and then roll them in as you as you go through that process of scaling your facility but i always say design the entire facility first even if you're scaling yeah i think a lot of it has to do with asking the right questions to the client because if they have a two-week veg versus a three-week veg the layout could be different absolutely you know yeah because the the flow is different as well yeah yeah so we always put together like these charts of how things are going to cycle through the facilities and we really try to build facilities from the inside out with the plant counts and what i notice is that yeah but once i get in there and start operating i always tell them those charts are going to change you're going to get used to this facility and it takes a year to a year and a half to really make that thing function like a well-oiled machine so it's really just a guideline you know and you can do your best with the planning process but different genetics come in with different like at the end of the day it's farming yeah it needs what it needs right yeah well yeah if you grow a mac one versus you know an og that mach one is going to take twice as long to veg through the og so there's another question right i mean they're genetic yeah you've got so many variables that you got to pay attention to and that only comes with experience yeah yeah you know so i think allocating those rooms for those different varieties makes sense too you know you have your your 8 9 or ten week rooms depending on on what you're running yeah every time i go over to jungle boys

always you know their facilities it's always nine to ten rooms with one large veg and they're doing a two week veg and i think they have three stages of veg in each bedroom one bedroom but three stages yeah so um they're coming down usually every week um depending on that so they're everything is in a week process they're cutting clones every week they're transplanting every week they're taking down every week and they're moving plants and cleaning rooms every week so it kind of breaks up the workload which is why in a 50 000 square foot building with you know 800 lights you'll see 11 employees at jungle boys yeah and which the thing that's great about that too is that they can take down one of their rooms in like a day maybe two like take it down clean it flip it you're back in again where if you have a 500 or thousand lights some of these massive facilities that have these giant rooms i just don't know how they get it done you've got 20 guys in there harvesting and then trying to clean that place it's it's so much easier i don't like to go above 120 likes per room and i think my sweet spot personally is like 75. yeah yeah that's exactly where ivan's at 64 likes a room right 64. i think they might up to like 72 or 78 in florida because the rooms were already built and um i think tlc was you know it had like the typical 40 by 40 or something um but yeah 64 lights is a great one 74 75 is is is good but you know when clients really want to push it i'll be like okay 120 like no more don't do it because then be able to take it down and and maintenance it and replace it in a day or two it's like how important cotivo is and understanding because it'll make or break your business with the wrong layout yeah you've already built it game over construction's done and now you got to run this business based on this terrible layout yeah and the great thing about working with ivan and those guys was that um a lot of times when i've worked with big money investors like you'll have to write three white papers to get a light into that facility and you just go this makes sense right yeah that makes sense and and the layouts like i mean they did all their own layouts we put it on paper um because when you've been doing it so long you just know these things right so you're like no i don't want to go above 100 lights right i don't want to go above this because this this and this happens where you know when you're dealing with um the big money guys it takes a lot longer to get anything done you have to ask 12 people if you can change the thermostat and so yeah that's how they're able to build so fast like every time you turn around they've completed a project and that's why it's that experience behind it that um is key for getting facilities up and running yeah and i've just i've watched them they're just getting better yeah the facility layout's getting better the the irrigation design is getting better yeah i mean they're just improving non-stop yeah it's yeah you can go to the bathroom and come back and they have three buildings built it's amazing all right so you also have a farm that you're working on in lake county right i do yep um tell us about the cultivation operation you have planned for lake county so it's kind of um in a bit of a shift right now just with the way that the market is we have three multi-acre farms in lake county on three different properties which is a really good growing climate difficult permitting process but really good growing climate and then we have a 67 000 square foot processing facility that's going to specialize in drying and solventless manufacturing we're also hoping to work with other small farmers that maybe can't get through the legislative process and red tape and give them a place to grow and a place to process without having to have 10 million dollars in capital um so yeah we are determining right now how much we want to grow next year and we're probably going to start very conservative um and then we also do white labeling for other brands within our solvent list processing facility now you you plan on doing mix like greenhouse outdoor or indoor right now we're all outdoor i think that um depending on how california stabilizes will determine whether or not we build greenhouses here what what challenges do you currently face with these with these projects um so we want to go organic probably by year three so just amending the soil getting it optimal for cultivation getting the right genetics in in a new climate i think that the difference we always say between indoor and outdoor is that um indoor you are god and outdoors you have to deal with god yeah we got fires we have you know climate change we have all these

other aspects that we can only at the end of the day as farmers pick the best genetics the best nutrients fertilizers and amend the soil properly so it's it's exciting and it's nerve-racking and it's all of those those things that make this industry worth doing um but yeah so we're we're gearing these farms online it's been a tough uh regulatory process i don't think the planning department of lake was ready for the influx of the amount of applications they were going to have and so they're they're under staff we applied i think in 2020 in december of 2020 and we're still going through that process so outdoors especially when you have to deal with sequins a lot of environmental reports and um you know biology reports all kinds of things that you need just to you know farm geographically what's the what's the climate like in lake county um so it gets very hot in the summertime you know it can get over a hundred uh but your humidity is like really low like 20 30 percent probably we have three different farms and they're all very different climates so i'm excited to see which genetics we can put at all of these different farms and how they acclimate to the environment around them so that's going to be fun to kind of that's going to be a challenge in itself yeah but i think ultimately we don't face the challenges that you have on the central coast with overspray of pesticide because there's no other agriculture around any of our farms you don't face that coastal fog and moisture like santa cruz faces and the central coast faces and even mendocino that's right on that coastline so i think it's a really optimal uh place to grow cannabis you're you're growing and you're growing in the ground or and you're grown in pots um it depends on the permitting process so your grading season kind of overlaps with your cultivation season so it depends on which farms do we want to miss a season to go in the ground we have these kind of long linear troughs from israel that we may use for year one on a smaller scale until we can get our grading done to go into the ground you're so can any brand without a license just uh somebody wants to create a brand can they come to your lake county farms and alchemy 29 since you pretty much have a seed to sell company can anybody just come to you and create a brand i think there's some legality around that question that i'm not sure of i think you have to have an existing licensed brand but you can like if you were going to cultivate under our licenses we could onboard um you know employees and they could work under our umbrella potentially um but i'm not uh i think it's more of a legal question i'm not sure the answer to it if just anybody can walk in off the street and create a brand i don't know the answer to that i mean you'd assume they they would be able to given that you own the farm yeah so you're cultivating the cannabis yeah then they go to alchemy 29 yeah where they're drying it you're packaging it and you own a distribution there yeah i think where it comes into play is the money going back to that individual through the track and trace process and then you have profits basically going back to the brand i i'm not sure no it's hard there's an issue it's writing that check like everything else up into that point but i don't know oh that's my attorney there it is that's the it's the money yeah it's the money problem that's that's the hang up i could see that for sure yeah what what in-house brands are you guys working with right now on launching um right now we're just getting our equipment up and commissioned and going through the licensing process so we're definitely in talks with numerous different brands but i'm not ready to announce any partnerships just yet with with alchemy 29 you guys are offering dry services for california cultivators so if a cultivator has a garden in a certain region they can transport it to your facility alchemy 29 and dry it there yep and manufacture it extract it package it and you can distribute it from from there at the same point that's correct yeah so what i noticed um especially in northern california is everyone built out large-scale cultivations with no drying space or the drying space that they had was in hoop houses or in barns that weren't climate controlled and i noticed where that's a lot of where the degradation of outdoor product came from so i thought what if i use my background of building indoor facilities and created the same climate control that we have in our indoor facilities but for an outdoor crop and so we're building out about 50 000 square feet of dry facility right now so we can actually go to the farms either pick it up in a blast freezer and bring it back

and freeze it or we can dry it for flower product is anybody doing this i i haven't seen it uh there's a couple companies um on the central coast nobody in our region and nobody in northern california that i've i've seen things like it but not the amount of climate control that we're putting into it and then there's a couple companies on the on the central coast there's a company that we work closely with called stacks that's doing it and yeah so i think it's really important and we'll set a standard between really good quality outdoor product and you know something that was dried in a hoop house is all obviously going to be different what kind of manufacturing and processing are you going to do you're going to do you know bho rosin you know what where solventless um so we're type six and we're using the whistler equipment from canada and my thought is like if you can scale solventless um you've really done um some something that hasn't been done before like feel like bho co2 these things have been scaled and there's a lot of labs all over the place so i really wanted to specialize in one thing that we could do really really well so we have the whistler machine coming from canada the wt2000 which is the largest solvent-less processing machine that i've seen that somebody hasn't built themselves out of brewery equipment which does happen but i think whistler's just put together this amazing piece of equipment there's only two of them in california and i think cresco has one and then we're going to be getting the other and what we're going to do with that is not you know go full force and try to increase our margins but offer the other farmers that we work with a sustainable way to process right now processing facilities you know have a large part in killing small farmers because they're at 70 percent like you know on a toll which is crazy so um we're using we've spent about 3.5 million in just processing equipment and we're using that to really bring down the margins and hopefully help people stay in business do you have your pricing structure between the lake county farm and alchemy already set out on cost to produce or you know what you're charging the client for those services we're getting that worked out right now um we've got to do some test runs and commissioning on the equipment and obviously there's there's variables when it comes to manufacturing farming is a pretty much a set standard we know our our price per pound on on farming typically there's always variables and there's always bad years but i think we can speculate pretty good on that the manufacturing where we're just getting those margins worked out now now with alchemy 29 how far out are you taking clients geographically in california is there a certain immunity taking clients from southern california or we would and i've heard of you know clients in santa cruz area taking their stuff all the way to desert hot springs to dry it so if it's worth it for you to bring it to us we have our capacity obviously fifty thousand square feet um but uh yeah we would we would take clients as far out as as they needed to come as long as it was sustainable for them to transfer that's awesome that's cool you're definitely a hustler you know i mean cultivo alchemy 29 smugglers which is a cannabis brand that you have coming down the pipeline yep gene finders original um you're savage so thank you good job how are you we all we like to work hard yeah and do you just try to try to promote good business practices for the industry and help people be successful absolutely you know i think that's what it's all about um where can people go support you on the california tax because i really want to get behind that i think athena is going to get behind that i know ivan's going to get behind that but but you know as we finish where where can where can people go to support to donate and what can they do so if you are an operator in any jurisdiction and you can contact me through either my website um [www.cultivoinc.com](http://www.cultivoinc.com) c-u-l-t-i-v-o-i-n-c um and you can contact me directly there and i'll get you the resolution it's boilerplate you fill it out with you know your board of supervisors names and then you just give it to the board of supervisors write a cover letter stating the urgency that the industry needs this and get it put on the agenda at a local board of supervisors city council meeting so you can contact me directly about that and then [www.savecaliforniacannabis.com](http://www.savecaliforniacannabis.com) you can go there and sign the petition with one click you can also donate through that site we've done everything as a grassroots effort at this point in time so we don't have a particular place to take donations this was all kind of a bootstrapped initiative

that we did out of out of need of being operators i believe the save the california cannabis coalition will formalize their uh their structure and then that will be a good um a good one to back so it's kind of in its nascent stage right now um but definitely you know stay tuned to the website and all of that is coming so you know really appreciate what you're doing with the california tax reform you have a lot on your plate and this is just adding to it putting together the team you're not making money from this this you're doing this for free you know so so we really appreciate i know i can talk on behalf of the cannabis industry when i say we really appreciate you and what you're doing for the state of california on cannabis so thank you very much and i appreciate your time coming on the show thank you for having me it's great being here good job awesome thanks thanks for making the trip out oh thanks for having me to Cali what you're uh you're from uh originally from Colorado no I'm from Virginia Beach okay y yeah when did you move out to Colorado my parents moved out there my last year high school so I finished high school went to college in Gunnison uh 90 to 95 and uh then I moved back to Virginia Beach in '95 nice why don't uh why don't you go ahead and uh introduce yourself real quick uh go by gy Farmer on Instagram um um just longtime grower um traditional Market traditional Market definitely um they have a moratorium where I live so I haven't been able since I got there to to get license unless I left like four hours out into the sticks and I just don't want to do that um yeah you you've been growing since 91 yeah so a sophomore year in college first time living off Camp or you know away from home off campus had a little house bag seed dirt drop- down bulbs fluoresence not drop down but like literally bulbs um and back then it was you it was hard to find weed back then you had to go on a hunt a real hunt and so you know using bag seed um so you were using fluoresence not even HPS or metal highlights no not yet not yet I did about 93 94 got the old uh parking lot it was like a black HPS and had it hardwired but I didn't get my first light 400 until 96 so you're you're a sophomore in college or sophomore in college how old were you about 20 20 and uh the house didn't have heat and they put a Saran wrap on the windows it's at 7700 ft Gunners in Colorado second coldest place in the nation we had space heaters had a comforter on the front door and had a leaky faucet and it created this it created VPD in the house because it was the leaking and the heat mixed together and the plants just went crazy but I don't think we ever had anything go longer than maybe six seven weeks because we were just picking it off you know we couldn't find nugs and we're putting them in the toaster oven you know smoking them back then so 9 1 to 95 was all just hobby you know I didn't know what I was doing really um didn't have any metal highlights or hpss we just well figuring out with the information that you were given because there was no information as far as indoor cultivation in 91 that I know of was there anything no it was hard to find High Times anytime the hydro editions would come out I would get them but it was like you had to go on a hunt to find a high time it was in novelty bookstore hidden up next to Hustler or something you know and it was hard to find them back then so but I would get those and you know just read them and read them and so when I finally was able to when I moved back to Virginia Beach that was when I got you know there's only the one company really Hydrofarm you know and Hydrofarm used to sell this flood and drain table with everything in it rock wool pH tester um you know the timer everything everything included it was perfect you know when I got that I would buy two of those systems and a 1,000 and I just started that's how I started kind of and growing bigger and bigger using those now that was what 93 that was 90 that was 96 when I got those when I moved back to Virginia Beach and all the from 91 to 95 just a hobby but like I don't just grow back then I was you know I moved a lot of Swag yeah to say the least so it was all coming from Mech I had a good connect starting in like '92 and if you were in Gunnison from '92 to '95 it more than likely sold by me I used the Pizza Hut guys to deliver and uh I just ran with it like that I used to get these these peas for like 3,000 and they were like these I mean it was horrible weed but it was lime green with purple hairs and people just would go crazy over it do you do you know the genetics that you started off with I mean you obviously had to go with bags of you know seeds that that you

found in bags of weed not before 96 not after I got to Virginia Beach I do because I knew it was there there's a strand there called uh they call it VB gany now we just called it gany and it's uh it came so you had your own your own your own strain yeah not mine though but in Virginia Beach or norick or in that area that was the Strand that we had and it was a it came out of Eastern Kentucky in the late 80s by the cornbread Mafia supposedly and it has a distinct smell it's not like any other gany it has a real weird nose on it any but it's couch lock it's really good it would sell you know top dollar was gany a popular strain name back then and for there yeah you just say gany you don't say VB Gan you don't say VA gany it's just gany you just want gany yeah it was just gany back then in before 96 or this was yeah 96 to you know even now I still have it but you still have that genetic yep I still have it and it doesn't like LEDs but yeah you still cultivated to this day mhm wow that's a how is the flower it's not what you know in my mind if I didn't have it I would be like oh it was the [Ã \_\_Ã ] but it's not you've kept it all these years and kept it going well my boy has you know I have three or four friends who still have it and I just would go back and get it because I've moved and over the years or whatever so it's almost 30 years M that you've had that genetic we need to get you a tissue culture kit yeah save you some time yeah I definitely need it for sure to clean it up it's been around but back then also we had uh NL and Hindu Kush I had a partner in about 96 97 when and he had a good connect this guy was an ex-professor out of UNCC he lived in kns island and he could really grow and he had all the genetics and when I partnered up with my guy he would he got it for us and that was the you know that was key I wish I still had all those all those but I no longer have that n Island it's just over the board so Virginia Beach is like 30 minutes from North Carolina and not Island's in North Carolina it's on the very East you can't even get to by North Carolina Mainland without Ferry but you can drive through Pungo Virginia and come into KN Island it's a real small community it sits almost below sea level real marshy what and he was a professor he was an ex-professor we used to call him the professor and he looked like Jerry Garcia I don't think he's alive anymore this was you know 96 97 98 and and uh yeah he grew you know and we us and he used to get weed my guy met him his wife because he was hitchhiking and so he made that connect and so when me and him partnered up um he you that was one of the keys is he had extra money uh the connect on the genetics and he actually had another place and so he say I don't like to partner up with too many people and he was you know to be honest he was a coke dealer so which is sketchy because you know I you want to mix those two things when you're obviously when you're doing this especially back then and it got to the point where I was like um we I would I I ran the gro and he never went to it like I can remember I was I had to come home to Colorado for a week at Christmas and he had been on a bender for a while and he shot the gun off in the grow he's like bro he didn't tell me until I get back he's like man I'm going to tell you I messed up up and he's like he looks up he's like I shot the gun off I was like what are you playing with the gun for bro he's like you know it's like but nothing came up it so it was cool but I remember that that that apartment specifically went through a hurricane um which was gnarly cuz it power was going off and on um the landlord would come in once a month which was crazy because I would sit on the top of the stairs and be like you know he would say my wife and kid are sleeping and I was at top of the stairs so if they try to come up there you know I was going to I was going to go on and that in that time we only had two 1000s and we're using BX proom miix I was buying most of my stuff at a feed and seed store what fertilizer at the time were you General hydroponic Street Park that was the only thing that was there the only thing no there was no cloom or their PK booster you know calmag wasn't even a thing or they just had three-part alone three-part alone that's it and they had no additives no additives yeah uh I think their kblo or whatever their PK booster came or liquid Kaboom came a little bit after like towards the late '90s the um I mean the leg legality back in in early 90s I mean that was even before any kind of legalization how in yeah in Virginia too is like it's the Bible Belt we have I mean they outlawed churches at one point because there were so many it's

where Pat Robinson is the 700 Club I mean so they really are a stickler I mean I fig figured I was going to do 3 to 8 if I ever got caught you know they just legalized uh July of 2021 and my boys that are still kind of messing around they don't they won't go to the popups or seses or they still you know they won't talk on the phone still did you have any closed calls I have had a bunch of closed calls yeah I had in 95 before I left Gunnison my roommate for my freshman year was doing an internship for the sheriff's department and at that time I was slinging in a lot of a lot of Bud like I said and I had set up I was living with my girlfriend and she had a basement in this house that she owned and I had actually poed it off and was about to set up the grow and he came to me and goes hey man you uh you need to leave you know you're going to have some issues and I was like what he's like I was like all right bro I appreciate it packed up my car and hauled ask went next morning got on the plane went back to Virginia Beach that was July '95 yeah that's gnarly yeah and so and then so 9 5 to end of 2002 I'm growing and I have two two different places and I never stay more than 11 months in one spot because and I don't have you know there's maybe three or four of us that kind of have something similar but theirs are all a lot smaller than mine and we kind of share cuts and we share trimming so between that but it was you know I to this day when my doorbell rings I'm you know I'm cell shocked and before they didn't even have can carbon filters until 20 05 2006 I didn't so when I would go rent a place these Town Homes I would get up in the attic and make sure it had the a cement firewall or a block firewall to help but sometimes they have a like a 16in sfet that they put and the smell would get in there you know what I mean and it ReRe so you know you're burning bacon and incense but it's tring of hard to mass the smell back then what was about cultivation that that drove you I mean I like to smoke but you know as I started to grow I I mean I just liked everything about it you know you start out with this little plant and it grows big and it produces this huge bud and then also just people's reaction to it you know like oh bro this shit's so good or you know so and it's it's you know just really social for me as far as that went and and just sharing the whole experience with people yeah I think it seems like people are driven by different things you either have you know you could get somebody that's really into cannabis or there's other people that are really into cultivation and they really like cultivating plants but it seems like you're on both aspects of the spectrum I like you know it's just like growing your own food type thing um I I I really did enjoy it um and I can remember even before I was just reading as much as I could out of the High Times you know any of those those Hydro like I said I would just go through and read them and then when that grow bible came out I think in ' 05 that was huge who was it by I forgot George santes is that who it was yeah I mean it had a reference for everything in there you could just be like oh you know bugs or you know root Rod or whatever you had some answer for it so there was a something to go to when did you move uh to Colorado now yeah or when you mov from Virginia and then you so okay so I'm in Virginia Beach from 95 to the end of 2002 I was like all right bro I'm gonna let me take some time off took all my grow [Â \_\_Â ] put it in storage unit and moved to San Diego before I get to San Diego I go to Australia for a month I surf so surfing is a huge part of where I live so I vacuum seal it take sleeping pills get on the flight at LAX go to Sydney I get off the flight at Sydney walking off the jetway a beagle comes running and jumps on my leg I look up like eight officers in blue suits are coming to me I'm like oh oh [Â \_\_Â ] damn this is early 2000s this is uh November 20th 2002 yeah that was especially in Australia yeah at the last minute I had switched I had been in OB at my boy's house and I was going to put it on the rail my surfboard and he was like bro you got to put that on you and I was like so glad I did because but the the guy was really cool he was like you know he pulled me aside from my dad's with me my dad was a high ranking Navy he was an admiral and he's always been against weed I mean it might as well been uh PCP or angel dust because in his eyes you know he's 84 years old now he's cool now but at that time he's you know he grew up in that Reaper Madness he doesn't I might as well be a murderer for him you know but the



guy pulled me aside he's like hey did you smoke before you left I go yeah I smoked mad joints he goes oh mate that's probably what it is I'm like cool took me took me over x-rayed all my surfboards skateboard all my clothes went through every piece of thing shaking it um at the last minute he's like lift up your shirt you know and I had boxers on with biker shorts and it was underneath my biker shorts and he's like oh mate you're good go you know after like 45 minutes and I held steady cuz I wasn't like you know I was like dude close call yeah real close that's lifechanging yeah and then I get to my family's friend about an hour and a half norty goes dude what you what are you doing you can't bring nothing through that airport what do you got you know I mean I gave it to him he's like oh my God that's so good but yeah I was like [Â \_\_Â ] bro and then uh so then I'm I get back whatever I settle into San Diego I get a place in p and surfing every day and Southern California surfing is the [Â \_\_Â ] you know I mean a whole life you grew up reading Surfer magazine all these spots from swamis to blacks to you know Imperial Beach to lowers to all the way up to Zuma Beach you know I mean all these spots and so I'm surfing I'm starting to go through money biggest mistake I made was probably not bringing my genetics and my grow stuff with me because I'm going through money now it's like March 03 I'm like [Â \_\_Â ] I need to Pi some money and uh my boy's whatever he's moving weight sometimes so I I take I get like 25 pounds 10 his or 15 his 10's mine and I drive across country but I had this weird feeling before I leave I'm like [Â \_\_Â ] you know should I I'm just weird gut feeling which I should have went with and I didn't it's taken three days to get the right rental car and I'm like you know what let me just grab this one I grab a black uh Nissan Maxima with Minnesota plates driving and I mean Nevada then was gnarly Nevada was gnarly they would you know you don't be caught with nothing so I'm making it through I'm seeing cars pulled over in Nevada I'm seeing cars pulled over in Colorado I'm on 70 get I get the DIA and I'm like man I should switch rental cars you I should like [Â \_\_Â ] it Rob been driving a day and a half let me just keep going get like halfway through Kansas I look I see a black unmarked State Patrol going uh westbound he's going like 100 something miles hour moving I'm like damn that's scary and I'm doing 71 in a 70 cruise control I'm not smoking everything's vacuum sealed look at my re 20 minutes later and this dude's coming up on me so fast and I can see him you know what I mean I'm looking the Mir he's just coming he gets and he's just like almost you know just locks it up and sits on my corner for 15 20 minutes I go to make a lane change and he pulls me go [Â \_\_Â ] bro you know he's got the dog with him too dog's going haywire hay are comes in he's ask me all these questions like where you going what are you doing all this I'm like just my way out east you know and have I have a one-way rental things look sus this guy's you know and he's like uh he keeps me for a while and then he's like can I look in the trunk and I'm like yeah go ahead look in the trunk I had a skateboard back there and he's like I needed he walked the the dog around the outside too they don't need permission that you know he walked it he goes my dog's hitting on your car I I don't know what to tell you he's probably hungry and the guy was a dick I mean he really was he was just on me and he's like uh I need to search your inside your car like I got to go bro you know and finally he just kept methere so long that I'm like whatever you know he's like I was like all right go ahead bro and he went through sees the weed you pulls a gun has me out in the middle of the highway [Â \_\_Â ] spread eagle I'm like [Â \_\_Â ] bro I like this is crazy you know and really you know I mean I can do jail it's not a big time I mean now it's the time I can make money I can't make time but you know the probably the hardest call in the world is calling my dad you know what I mean I'm just sitting in jail in the middle of Kansas but you know they try to get you like like they they're driving me in to the one station and they're weighing it and then they're and he's trying to talk to me like hey bro three and leave three and leave and I'm I'm not really paying attention CU I'm kind of Shook and then this he's still saying it then we get to the place and they bring in a Federal Officer and they're like all right man you want to go on your way just give us three names and you can leave and I was like I tell you what bro give me my weed an hour and a half Head Start and I'll give you some names John do Jane do whatever

I going just they're not going to give me my weed I know and he's like we can't do that and I was like well hurry up and book me so I can get out of the [Â \_\_Â ] hole and and now I'm mad I don't even care now now I'm so angry and then I'm sitting in there so and they uh you know like there's a they have me in a oneway door before they put me in uh public uh what's it called uh general population and AD door swing there's like a guy with the mirror and he's like trying to mess with me already I'm like oh [Â \_\_Â ] bro I got my orange jumper on and my flip-flops what is he how do you what do you mean [Â \_\_Â ] with you he's sitting in his cell and he's using a mirror to to look around the corner and he's trying to talk to me as this door's open and I'm sitting in this cell I'm not put in yet they're waiting till after dinner to put me in and so I'm just like oh bro this guy's already [Â \_\_Â ] with me and I don't know what's going to happen when I get in there and I mean I'm 66 200 lb I trained martial arts at this time already four years so I'm like you know what I'm ready put my thing around tie it around my waist I'm like whatever is going to happen in here let's go so whatever they put me in I got to duck three times just to get in the thing cuz I'm like sh and then I get in there and it's like everyone's they're all there either for meth or domestic domestic abuse so whatever I'm in there for like six seven days you know and I know none my friends are going to answer the phone you know I mean everyone's tripping oh yeah early 2000s and you got hit in Kansas in Kansas Kansas of all places Kansas is still gnarly not if you look down the line it's like 70 80 4050 it's North Dakota South Dakota Nebraska Kansas Oklahoma and Texas and that whole thing is still pretty gnarly except Oklahoma that's the last state you want to get hit in yeah and they still don't like it anyway that I get I get booked in there and there's a kid in there and his dad's a city manager and he's like hey bro did you get pop for uh were you driving through with weed did uh so and so Trooper get you and he like knew my whole case you know I'm like this [Â \_\_Â ] just happened how's this kid know all this already he's like he gets everybody that doesn't hit [Â \_\_Â ] he's all telling me all this and uh whatever I end up talking to him every day for a couple days and he's like you give me a pack of smokes and I'll get you a I can tell you the lawyer's name and he's a badass he got the biggest meth manufacturer off of Kansas and I was like [Â \_\_Â ] yeah bro how many smokes you want I'll you know I'll buy them all and uh he gave me his name I finally made the call my dad hard call bro I just sat for next to a couple days my parents had gotten back from Mexico and I knew they were going to be calling me you know I hadn't talked to him in weeks so I know you know they're probably worried and [Â \_\_Â ] and I don't want to stress them and uh make the call my dad's like [Â \_\_Â ] I rate anyway comes bails me out um and I tell him like like d i get this lawyer he's going to get me off and he's like no way you're you got caught you know you're not you know there's no way anyway I make the call the next day lawyer's like bring me \$5,000 I'll get you off everything I'm like I'm on my way 10hour drive from Colorado to where I got you know one way then 10 hours back the next St to take him the money get there he tells me you know what he's going to do um I come back for a hearing and we walk in and this is like a month later it's myself my dad the lawyer and then a magistrate in that state patrol and it's like it's not a courtroom yet it's just a room like this and as we're walking in uh the lawyer's like what what is this how's my client going to get a you know you guys buddies sitting here talking I want the case dismissed and my dad's like oh my God this guy's crazy you know he's going and he's an old man at this time for him even be acceptable that this was you know pretty he's since passed away and uh anyway whatever that come back a month later and because I'm living in San Diego I get back on play go back come back I go to court this is like July now and uh I get on the thing and the cop tells his story I get up and tell my story and my cops uh my lawyer's like could you leave and he's like no he goes well look the police is standing in front of the mirror the reer mirror he wouldn't let you leave and like all the audio and all the video disappeared he goes is how come every time we come to court that video and audio disappears like you know my clent you know anyway we do all that and then I go back to San Diego he calls me up next day he goes they got till December to to fully press you but I

guarantee it disappears and sure enough it did wow yeah for that year you know and that much I was like but the weird thing is I know four other guys that got popped within 30 minutes of that spot and none of them went through that what do you mean none of them none of them had to go to court why why the three and leave oh the three and leave yeah they walked you know I wasn't going to they were like you know we want the man I was like you got him dog I mean I'm not the man but you know I'm not going to rrap my guys out they're that're my friends you know yeah what's that you know it's not going to whatever anyway I got when I got out I had like 184 calls on my flipped up Motorola they didn't mess with none on my stuff it was still sitting in the rental car I was able to go get all my stuff and take it you know because I didn't I didn't take deal or nothing so dude that attorney Savage oh he was his son does it now too cuz somebody asked me about it and I was like uh I forgot his name he's in Russell Kansas you could find him but uh yeah he was a [Â\_\_Â] bro he was he was the man yeah we're going to get a lot of comments be like wait what's that attorney's name I can find it I should know it by heart and I I just have to Google but his son does it now it's the same where uh that senator's name Bob Dole used to live Russell Kansas yeah it's in that same area but yeah and then uh whatever I got depressed too after that you know but it didn't stop me doing from what I was still doing did you take a break no no from I was I wasn't growing but I was still moving Swag yeah but it was like I don't know the time was bad um that's the thing is you know before 9/11 I knew guys that would take two 300 lbs with a Southwest voucher check in put the [Â\_\_Â] bag on the flight not even get on the flight bro pick up my bag just sitting at the termin a bag rolling around go up there and grab it but then after 9/11 that's when dudes had to you know start really driving it because they were going through bags I mean now you obviously guys are doing 40 and 50 packs like on the rag yeah New York Jersey Florida whatever I mean you see it I just read the news I don't know you know what I'm saying I'm just reading like whatever you you read and see yeah Tennessee Tennessee is a hardcore State too um so yeah I me and then I'm I'm there and I have to get a job I work at UH Mission Valley for Superior Ready Mix in a driving a rock truck you know this big rock trucks I did it for a year and I was just like bro just working 55 hours a week I'm like this and I'm not even making really M now this is in in San Diego this is in San Diego 2000 I get the job I don't get the job till after I'm off the off the thing out off the off the trouble I get it from 04 to 05 in like exactly 12 months are you just driving a truck or you growing weed on the side not growing weed just driving the truck and I'm miserable are you moving uh not then no so I completely stopped and I'm just so you did take a little break yeah I did take that onee break and uh well but not when I wasn't going to court I was still on the flights going back and forth holy [Â\_\_Â] and then uh but it just wasn't uh the money wasn't great and the Wii was [Â\_\_Â] so anyway I'm like I can't do this anymore and uh right before I quit the job I go to Costa Rica to surf for like three weeks and I'm like God bro this is where I need to be so I'm like all right come back quit the job at Mission Valley uh and I go to Costa Rica I drive my stuff to my parents in Colorado get on a flight and go to Costa Rica for two months and I'm like all right bro I'm going go set the grow back up in BB and get it going and so I can come back here and live and uh I get back to Virginia Beach in June of 05 get all my stuff out of storage unit get a place start growing about nine months and then my dad helps me buy a house I buy a house in the hood I mean the hood but it's a remodel 185,000 for this house it's three houses down from section 8 housing the only white guy in the neighborhood but I'm always gotten along with I don't care color religion I always just get along with people and uh I remember my neighbor coming said man what are you doing here man what the but like I had a guy across the street real he died I mean I just bought him hinin on the rag and then my neighbor always would try to borrow \$20 and I just you know I don't have no problem I can you know I pay a tax here and there yeah and so that house I set it up and it runs from March of '06 until about a week before my son's born in 200 he's born right the last day of 2010 so that house runs for almost four years five five yeah almost five years fully and I was ready for it to be done CU I knew

it's time was done you know it's either going to get busted or robbed I mean if you running a grow for five years you're doing you did really well yeah back then traditional I mean the biggest thing you know back then coming up or starting is finding a place to grow yeah that was really hard because especially when you have to show income you know on paper I'm a ghost yeah or you know the inspections or you know just the the right location probably just the most difficult it was smell neighbors that's I always was good at like putting it like right in front of everybody but them not knowing it you know what I mean like I'm I got neighbors everywhere and I try to be cool with everyone and I had a concrete business so I was a for Carpenter I learned 95 to 96 I learned to do concrete flat work and if I do something I try to be the best at what I can do so I had a bobcat and a trailer and a Truck and you know everything looked apart so I mean that Bobcat ended up getting stolen cuz I I had in a yard I didn't even check on it for like four months running but um yeah so I had that um uh where am I at I forgot now 2010 you you have a son yeah oh so yeah there was before iPhones and my boy send me an email and I'm not checking it and it takes me like 24 hours and he's like oh bro house got robbed hurry up come home I see it I'm like oh [Â \_\_Â ] I call him he's like you need to come home bro I call guys in the house they're F Ram sacking it and I'm like all right bro I'll get a flight it takes me 23 hours to get home get home 11:00 at night they and when they broke in they took the meter and they stole the meter cuz I had like a ADT but it wasn't set up but it was beeping but it was the battery it wasn't connected to the and I think they're young dudes because it was on week eight they stumbled into the room and they didn't know what they stumbled on oh they got lucky at week eight but they didn't they saw a half pound sitting there and they grabbed the half pound and they left cuz my guy pulled in the driveway chased him out he cut everything down wrapped it and hauled ass with it but [Â \_\_Â ] Windows broken out the the side do just flapping in the wind with [Â \_\_Â ] you know a cop would have drove by and saw it it would have been you know been over even though he emptied it was still I mean mad ballast and we were buying new bulbs every run and new ballast every other run so we uh I come in I get the door fixed I call the city get the thing i' go and dump all the ballot and all the Bulls thr everything you know I'm trying to get as much evidence out of there as possible and that back back then it was the heavy magnetic oh yeah so many of them thousand single-ended thousand watt hux right yep y yeah what did you what kind of wings did you have like the echo Eco wings or did you do vented hoods it was the it was just that standard uh with the glass it wasn't those big ones yeah the Vinted hoods yeah but like the standard Sun systems mhm exactly that's like it was hydrarm at the time but then they I don't know who I forgot who after that but the sun the Sun System XL remember the Sun System XL I had those later but not not then they were the smaller ones I forget what the hydrarm was called I don't know but you know I ran sealed rooms then because you know I couldn't take the chance of of like you know put a window unit in or a portable AC we used the HVAC in the house and of course everything ran better in Winter than summer yeah um and I was running you know 80% off a 15 or 20 amp breaker is what you can run so you basically can run 1 1,000 in a fan or a pump so I'm running extension cords all over the house were you running CO2 no so you're just letting the a event through the house exactly I mean I had a close call there too one time I pulled up my house and there's a natural gas and a cop standing in my driveway he's like we got to come in make sure we had a leak on the street we got to come in and at that time the cop got a phone call and he walked away and I was like oh [Â \_\_Â ] bro like and I'm like coming through my head like a my wife and kid are inside sick Bro and I wasn't married or had a kid but I was like you know and he's like oh I just need to test it like cuz if they I didn't have a chance to clean up you know he' have walked in and just seen or smelled or whatever I don't know I couldn't take the chance and he was like all right let me just put the wand in and he it was cool he left and uh but that was pretty close too you know those small little things like that um yeah and that was so yeah I shut that grow down that was right at 2011 but at the meantime I'm in Costa Rica now I'm not coming home at all I mean I had probably been home in six or

eight months my boy's running it 50/50 split and I pay everything out of mine the mortgage the power the equipment and he's good he he ran it you until the wheels fell off but it also allowed me to get established in Costa Rica because anytime you move somewhere and you're new you know back in the early 2000s how are you moving weight was it um small or were you moving elbows small small small because like in between Harvest I'm only running two lights in the day and three at night off setting and I'm selling ounces at 350 like hot cakes you know back then I got 350 is cheap back then yeah you know you could do four no problem you know I'll take 10 quarters you know th you know it's 100 a quarter all day that's the way it was did you have any um issues moving weight as far as getting jacked or um no no I mean the place I got robbed the most was Costa Rica it's a third world country so you have to your head's on a swi were you growing there yeah I grew there I had issues though I'm I'm saying I got robbed you know that's where you got robbed you got robbed in Costa Rica I got robbed at my house in nor Virginia when they ran in when they realized that we weren't living there we were growing because my neighbor's house was literally I could touch him his his door and he had he was harboring like crackheads and so he you know they were watching us come and go you know my guys bringing you know equipment in and they finally came in but when they dumped the house you could tell they didn't know they stole like an old PlayStation and a receiver or something yeah you know I didn't have no money there it was but you were grown in Costa Rica too yeah and then I got to Costa Rica and I grew and Costa Rica I mean it's awesome but it's I mean it's a Sunny place for shady people it's the home of the wanted and unwanted I mean people that are wanted here go there you know what I'm saying I've seen a lot of [Â \_\_Â ] pedophiles and Coke dealers and I met a lot of we Growers too though you know I have a lot of good friends from that live there as well but that place yeah I had what was it like growing weed in Costa Rica well I was in hako which is on the beach okay it's 90% humidity 90% heat so yeah it's I mean in ' 08 I had 1 1,000 and a 9000 BTU and my power bill was a th000 a month my power bill right now on 20 flowering lights five VEGs 10 ton of air conditioning is 1,100 a month yeah you know so it's that was so expensive and I had white flies like you wouldn't believe I mean you would shake it it would get in your mouth they were so bad and root rot but the place that grow is in the city at like 2400 it's perfect you know on the way you go through that's where they grow coffee and it's like the perfect climate 76Â° San Jose yeah 60% atinas is really the the spot where they're at but yeah the humidity and it's cooler up there it's not as hot just a perfect climate so and you can get big houses up there and you can blend in where in hako anytime I that was the problem I even watched the guy grow one time he wasn't much of a grow but he was out of town and he had a duplex and uh they saw that I had come and gone out of there and the second he got home he got robbed he wasn't there they climbed over a wall cuz it was duplex and they used the drop down ceiling it climbed over and they stole it wasn't much to steal but he was like blaming me I remember I was like bro I promise it's still your [Â \_\_Â ] dog now with moving uh cannabis in in Costa Rica just small you know to tourists here and there yeah I'm doing delivery and I like had a rule I would only sell to these people okay up until about the last two years and then uh yeah I I let my guard down I started sewing it every and that's probably what got me but I had um my second kid in 2012 and she died and any time anyone in your family dies it doesn't matter if it's a newborn or it's an 80-year-old they open investigate everyone involved and so I got a lawyer for my wife and I and he calls me goes hey bro the the ooto which is like they're federal agents they they looked up on your thing and saw you had a charge because it wasn't off my record I guess it takes 10 years this was in Costa Rica this is in Costa Rica because they they they they investigated you and they saw that you had a charge weed 10 years ago so now they're going to be on you and this is this is in April 2 no May of 2012 right after my daughter died and he tells me this so I'm like a [Â \_\_Â ] and I don't take much warning to it I just keep going and I'm moving I'm buying a pound a day at 4,000 and I'm selling it a pound a day of delivery half oun quarters eights you know and I'm on my Moto or on car just you know what I mean and uh and I had a

I had an Israeli uh partner real good guy he just got out of jail last year he did uh six years on moneya laundering you get more years for moneya laundering in Costa Rica than you do for murder and murder you're so he got he got busted in Costa Rica yeah he got busted two guys talking about him they didn't get him a money they got him talking and uh him talking to somebody El two other guys talking about him that's it that's it they never got him with money but so they come in the property this is uh April 2014 they come in 30 agents into his house and then we had a triple uh Triplex that we were growing in and uh how do you even get somebody just talking about you that well he was big time dude he I mean weed was nothing for him he was there were some other things there yeah a big time it got the the the investigation got started by people talking about yeah yeah exactly but not the charges he was going back and forth to Europe okay you know and he was famous for being able to let's say move money okay you know for different groups of people anyway they uh they come in and and and so well he he bought this place up in uh just outside of San Jose at this time and we custom built and we built a wine Celler with a hinged tile floor and I put 6600s with flood and drain in there and it was all set up ready to go that morning we're about to move all the Clones up to there and uh they come in gang busters on them both properties and the triplex we had to grow and there was like two pounds of coke pound and a half MDMA more sheets of acid than they ever seen um but they didn't care all that was nothing money laundering carries the biggest charge six years you know and he did every [Â\_\_Â ] one of it he's a hardcore dude he's N I went and saw him in all the jail but so when he gets popped um it takes me a few days to be able to get to go see him and talk to him and he's like bro don't worry they're not after you there's nothing they didn't me your name they don't there's nothing you're good but I get a phone call the next day after he gets him from another guy he's like hey bro you uh you should take a vacation I always get these calls I'm you should I'm like what [Â\_\_Â ] I take a vacation he's like well a random guy just calls you and tell it's a friend okay and so actually goes come see me so I go I go talk to him he's like hey bro they got your phone tapped they got you on video they got you doing everything bro they want you know they because authorities yeah not the police the police are corrupt they could be a robber one day and a cop the next or vice versa you know I you can buy you're not worried about police it's more Federal no but I got stopped 19 times in 21 days going through my car so I knew something was up you know what I mean it's like what's going on why am I always you know why are they going through my because they do that anyway you know but um yeah after they after they got him and then I got that call I was like ah [Â\_\_Â ] you know I packed up my [Â\_\_Â ] and went on just went on the road in Costa Rica for a while just broke all my phones took the SIMS card out went and got all no stuff and I'm like I'm like and they're telling me my passport is seized up that's what they got me they're like you can't leave the country when you go to leave we're going to but I'm like all right so I'm like uh let me get a second opinion so I call my buddy actually he's 15 minutes from here you guys probably know him and he didn't smoke drink do drugs he had a construction company and a property management company and he was well known he had been there 17 years and so I I got him and I knew he knew some oo the agents and I was like hey bro can you can you check on this for me and he goes and calls me up he goes you're good and then five minutes later he goes no you're not good bro come see me so I'm like all right come see him in Costa Rica no come see me like in person not on the phone go gotcha so I I drive over I talk to him he's like yeah but you're still in Costa Rica yeah I'm still in Costa Rica I haven't left and uh so I go talk to him he's like uh they they they got you your things seized up but you can buy your way out and I go how much they want he goes \$4,000 I'm like cool let me get it you know I go get the money he gives it to the agent he's like calls me he's like just wait 48 hours and you can go check so I drive down to the Panamanian border you're supposed to leave every 90 days in Costa Rica to renew your Visa you're supposed to leave for 72 hours but I'd go Stamp Out of Costa Rica stamp into Panama wait 2 hours Stamp Out of Panama and back into Costa Rica how long were you totally in lived in Costa Rica for how long from like

May of 07 until October 2014 oh wow seven years mhm seven years and I would go long time without even coming home so but yeah after I so whatever I pay the guy and then I go down and I uh I check you know I stamp out and it works I'm like SL you know my passports good you know okay but now I'm like [Â \_\_Â ] dude I need to get out of here it's you know it's not working out anytime I do anything they're just going to be right back on me so I decide to move but I don't move until October 2014 yeah October 2014 I moved back to the States my wife and one kid and and still my parents aren't really cool with it you know I don't really have to talk with them did you meet your wife in Costa Rica yeah she's Colombian nice yeah yeah yeah and my kid was born one of my sons was born there as well he's Tio so I come back and uh you know if I my parents par would have been cool with weed I would have been probably a lot further along but I've always kept this like 3,000 mile cushion where they couldn't you know come up on me you know and if they did I'm coming home or you know I'm I'm at this house or I got gased you can't you know yeah so I'm always trying to like play defense not just with neighbors and friends and and different people but I'm you know always on guard you know you have to be cuz I'm you know and that's I wish I would have just taking advantage of prop 215 but I come back in 2014 I buy a bunch of groc [Â \_\_Â ] in Colorado and I go right back to Virginia Beach that's just what I know and I setup grow but Outdoors really affect I mean we started feeling the effect of uh Cali outdoor at the end of 2010 you know now we're down to 250 to 300 ounce and my boy's like bro it's affecting our sales you know all the way in 2010 that's when we started to feel it but by now it's 2014 and it's everywhere every you know and matter of fact some of the guys I know from Costa I'm like I basically like you know what let me D growing for a minute and just do this because it's everywhere if you can't beat him join them although I did run my grow there cuz my boy had a duplex and he would always anytime he had No Vacancy or had vacancy I would just take it and grow in it and I was I remember 2014 to Summer of 15 I'm growing in the duplex but on the corner is a narco cop with a dog right here and I'm right here and it's like I'm using a [Â \_\_Â ] window unit and you can just smell it coming out even with can fans it just because that's [Â \_\_Â ] pulls the air out and you could hear it and smell it and I was just sketch the whole time and it wasn't going good for me growing there I got m a couple times and I was just having issues so I was like man I'm and the legality of it at that time you had a few states that were legal what Colorado legalized in 12 was it 09 I thought it was 09 was it maybe I but full Recreation 12 yeah yeah yeah full and so I'm like you know what I'm out of here I'm going back to San Diego let me get uh it kept going back but I couldn't get a place that were just get sucked up so fast I was going to do the cuz my boys grow there I still have my two of my boys own a um a dispensary in lame Mesa and they just open another one to grow in San diego yeah yeah so then they were growing and so I was like I'm going to go back there but it was hard I had my second kid on the way I didn't have a bunch of money and somewhere along the way my mom's like well you just stay here you know I got my my my medical license she was buying like lotions and you know they don't smoke or nothing obviously and so I was like oh [Â \_\_Â ] so I'm like you know what let me just stay here you know I know the school system's good like my parents are here they're starting to get older let me just prop up here so I uh you know I first got there and I was so pumped on being a legal State I was just like bro it's everywhere you know people are selling clones and all the no this is col Springs because I couldn't I couldn't find a place in San Diego I didn't have the money you know I didn't have 30 or 40K to put down and start up expensive yeah I just couldn't I couldn't pull it off and so I just end up settling back in colorida Springs parents are cool with it um um but then I realized that you know not everybody has same drive or passion they're just kind of making money off of it selling you know infected clones and shitty rental deals and trying to over tax you and all this and nobody cares about quality no and at this time you know you can still move I mean it used to be if it was just Bud it was you know go it don't even need name yeah still you know at that time and so I I get a place in Pueblo I just bite off more than I can shoot it's like an hour drive each way and I'm I'm I'm

sharing a wall in a commercial spot with these Cubans and they're blasting their Wei with three in one every other day all the way up to week eight and the russet mites are just coming through the wall eating me alive I'm just like [Â \_\_Â ] bro and it took me probably four months to realize I had russet mites I didn't I couldn't see him yeah you can't see them my eyes are [Â \_\_Â ] that too from HPS is just burnt I've never worn any protection over years and years and just you know trimming in the room with the lights and being in the room and cuz I keep getting CT check for glaucoma but it has something to do with like shading in your eyes where I I have to use a flashlight just to see the menu 30 what 30 years of HPS exposure or 25 cuz you're using CFLs the first yeah and then LEDs I mean you're I think you're supposed to use protection too and I still don't you know we got 20 lights in a 400 foot room and it's bright as [Â \_\_Â ] on 100% you know y so um yeah I couldn't see that with the russet mites and I got in that bad deal in uh outdoor this is 2016 to 2017 the price got real low if you remember yeah I remember that it was uh in of 2017 because I was still doing really well in beginning of 17 yeah yep and I shut that grow down I was having issues with the landlord and and this guy he was he ended up being a real bad dude but whatever and I was like you know what let me get I had guys that were in uh Chico Paradise Cave Junction Grant I was like let me get up there see you know get boxes [Â \_\_Â ] it can't beat them join them so start doing that outdoor thing and uh moving boxes yeah yeah and uh and again dude I'm dealing with some cats that are just in it for the money they're not they don't have the passion they're just growing it and they're drying this [Â \_\_Â ] I'm up there I remember being up there at Paradise and they got it on the third floor it's 100 degrees with a box fan they got all the weed hanging power dried in 48 hours just hey [Â \_\_Â ] it [Â \_\_Â ] it all up locking that chlorophyll in there but whatever you know I mean I remember even I was paying 1,800 a pound then at that time and uh so uh I 1,800 pound in 2017 for outdoor yeah I remember buying them fresh at that you know I at first I was only doing like you know 5 10 15 just on my own budget boom get on the plane boom boom boom back and forth coming out of Portland coming out of sack wherever back to east coast and then I uh I did that until [Â \_\_Â ] so I I get I finally buy a place in 2018 that's when how are you how are you uh were you doing Freight or you doing plane or not playing not playing Freight mhm yeah Freight Freight is the only way yeah cuz you could you you know you could ship a box on a pallet and you know show up to a logistics Center drop off the pallet and off it goes yeah I used to always want to use those pod things I was like I'm going to put a bunch of furniture and then stack the middle of it with the Pod yeah I heard about guys using those did you ever use those or no I always wanted to but I was like it's going to take too long it's going to heat up in there yeah you know I was like man I don't want to do that so you did pallets yeah yeah yeah pallets were way and then I got to the point where uh they were they were they were doing Transportation so I started doing more more weight you know 100 200 lb and they were just bringing it in the car you know driving it driving and I had a close call to two one time so I'm going to meet him in Northern Virginia and uh I got the money I got like 150k on me I'm going to pay for that and pick up another box and I get I'm I'm probably 45 minutes out from the Airbnb and I get a call like hey bro turn around don't go don't go the old people got popped on the way in like Missouri they were like in their 80s driving driving and they 200 elbows it at least yeah yeah it might have been more and they they ratted and uh so they were waiting you know all the feds were at the Airbnb and they got the main dude you know but luckily I got that call you know yeah but they knew because I had the money if I not had their money they would have been like you know probably put me in the arms arms way but when I have that much money they're like [Â \_\_Â ] bro that's they need that yeah that's one thing I never like I've never done anyone wrong to this day and I've been doing this since 1986 when I brought my first ounce and broke it down respect yeah the I have some cats that you know are still my homies today that always just stayed true through the game even though I'm not in the game anymore as far as that side um you know we're still homies we'll still go out to dinner hang out Brokers that that I'm still friends with just out of respect



cuz the the loyalty and honesty and integ grey definitely doesn't go unnoticed right you know cuz it's it's easy to be cool when things are good but when things go south you know [Â \_\_Â ] falls apart and you know either people Anar on you or you get jacked or whatever goes down it's everything's easy when when everything's good so yeah you know you really learn who people are when things get tough yeah you do I mean almost all my boys owe me money but it's all good I don't you know it is what it is yeah I paid my debts but it's it's okay I don't I can make more money yeah you know I still have always looked at it I just it is what it is yeah with um with what you have going on now you have a 20 lighter in Colorado that you run MH so yeah so 2018 I get a house and I buy the house like for this basement room it's unfinished and I my man yeah that's I the house cuz the basement it's it's [Â \_\_Â ] up but anyway and I put my six light first I I I buy the this is 200 September 11 2018 I Clos on the house I order fluence the two eyes I believe or two of those and uh flood and dra no not flood and drain I'm doing top feed then and uh so you know I started out with two and then like January that year I think aita came out with their LED I bought two of those um I mean I end up with six lights in there but okay I'm only running four oh and then I get the fluence rails or whatever those were those bars had a couple of those and then Lux came out at what January 2020 because I order it at MJM biscon the the LED did yeah at 2019 I ordered it MJ biscon I prepaid there and it came out I think yeah like January or February that year and I got one and then I got another one so now I got six lights in that house and it's doing you know it's doing numbers it's doing like two and a half off those fluences and then even three off the Lux at the time and you're using 600 watts to pull three pounds and that that the the numbers start changing at that point Big Time MH um you don't have oh no and so I uh another person after the grow Bible like I wasn't on the I wasn't on those um like THC farmer icy mag I I mean I went back in like 2013 or even now I if you go back and look and look at Jack Ivan's Jack May offers you could still use his stuff he's using you know cocoa beds heavy 16 with Aus I mean he put so much information out there when you go back and look I mean and there there's guys still running that way to this day and he put out so much information besides the High Times the grow Bible you follow did you follow Ivan on THC farmer but now you go back and you know five or six years ago I went back and looked but my boy would tell me about it in San Diego but I wasn't willing to worse you know put my IP address out of North Virginia on there I just yeah I'm not that smart I don't know if they could track it or it just wasn't worth it you know so yeah he was I mean and and back I got on Instagram in 2016 and he used to share a lot that two nodes and flip and you know even like back before that when I was using OCTA bers he was like oh take the washer out you get a better flow rate and you know he put so much little detail in his in his things I was like damn dudee this guy's [Â \_\_Â ] he's the [Â \_\_Â ] bro you know so much information it's still reel today you know you can use it but uh I forgot where I'm at now but yeah so I have that six lighter and uh and everything's running good you know and we were at I was at 2,400 a pound up until April of 2021 wow you know I'm still that's solid yeah and so I take on the 20 lighter but I take on a partner you know I'm giving him 10% and 2500 a month on a on a \$300,000 3,000 ft house and uh so you know we're going along but when they made the deal was it 2,400 you know now it's different now we're at you know 14 or whatever you know I give most of it away anyway but now you're you're cultivating in Cocoa what size pots are you using I'm not in Coco anymore oh really no I'm in grodan we're everything's in grodan right now except our moms what do you what do you like what do you like better about groan the clean up yeah you know but it's more expensive it's twice as much for me to run in Coco I mean in groan and it's not as forgiving not as forgiving at all you know Coco is much more forgiving it's like doing weeds with a tri you know with [Â \_\_Â ] extra things on the back to help you stand up tricle yeah exactly you know yeah so I'm a yeah I like cook I like my tri I like my training rules I have no problem with it I mean before I was just vegging in 4 in uh Rock wals and just buried in cocoa and I transplant on day one of flour and just that first 20 days is in a vegetative state the roots are developing and they take off and go yeah Coco

yeah I used a lot of different Medias they used spag and P Moss they've used um Rocka done hydron with flood and drain Ean flow um you know BX proom mix uh Sunshine number for you know ocean Forest Happy Frog all all of it but Coco I just like it cuz it's so at least my the Coco where I buy it so consistent it's a nerd it's inexpensive and you know it it's more forgiving and so I found a sweet spot cuz I I spent like a few years trying to lock down like the perfect media and the perfect size pot for for me right to each his own but it was like this 1.7g Square pot with straight cocoa um and we just transplant the Clone right into that you know so you're transplanting once similar to rock wall in a 6x6 and you make sure to hit it with cleanse because cleanse is going to increase orp increase oxygen in the root Zone kind of prevent that water log out on the roots you know sometimes in Coco you used to water that initial watering on a clone and it kind of stays stagnant the root the the Clone doesn't take off have you ever yeah and it dries from the bottom up sometimes where it doesn't just take yeah for sure so we just kind of found that sweet spot and I'm just I'm stuck on it it's just it's like it's like GH3 part back in the day nobody gets off of it that's like me on you know straight Coco Coco yeah it seems like during co coco I don't know what happened but there's more fungus Nets in there than ever I don't know I use playground no perlite just straight playground when we do use it and we're still using it for our moms and when we pop seeds or whatever but everything right now we were this last run we're on 4 in on top of slabs and that was hard because we don't you know those luxs are hard to un veg under you got Lux LEDs yeah yeah you know you have to have them pretty high and the ppfd pretty low and sometimes they just they don't want to take I don't know we've had issues but we do all right I mean I don't it's not a perect it's not a home run every time you know so now you're doing 4 in on slabs yeah but now this run right now he's transplanting right now I'm just going 6 in 6 in by 6 inch C groans and we're going to flower in that we'll veg for a week and flip them veg maybe two weeks flip how many uh plants are you doing per square foot or how's your layout uh we were do 12 plants a light now we're at like 15 with groan I mean with Rockwell it seems like you can you can put more plants a light but um I'm doing 80 80 a row I have five lights on a 20 foot bench and now we're going to 80 you have a 40t wide tray mhm and you're doing 20 foot long four across uh were doing three three at 12 or no whatever it was 60 but with grodan you can seem it seems like you can fit more I had a lot of gaps in the canopy this last time so you know I don't I don't top I've always just single stock crowd the room yes so three o00 three three plants across on a 4 foot bench yeah and then like stag we put like offsetting ones in there to fit them you know any gaps yeah but it's not necessarily four wide so about it be like 32 32 32 what I'm saying like that and that's I think that's what we're going to run now but my room like you're supposed to have 17 and 1 12 Ines on Center for those benches that roll I have like eight like if someone else were to set this room up they would probably have 12 lights in just you know in 15t or 15 3 15 foots but I you know I I crowded it I just barely get you're not top when you're not topping either yeah yeah we don't top um so we run like that so about like one one plant per 1.3 1.2 square feet about a CR we average yeah and we average about 4 ounces of Bud per plant that's that's pretty good what's uh what's interesting when uh I started planting you I've never seen anybody any grower Get the Led so close to the plants that that you have like you have the LEDs literally touching the tops of your plants they're growing in between yeah well that's over vegged and you know short ceilings one one of ceilings is like 711 the other one's 92 so I mean you're kind of stuck there yeah I'm stuck but also like a lot of that was Mac one and Mac one is forgiving you can give it everything my ppfd high EC and it goes you know so just genetic dependent yeah because if I try that with like the white truffle that thing just [Â \_\_Â ] those po those poly hybrids just start to fox tail and just produce all these small buds so now if you look my lights are right where they need to be yeah they're up high how how like how high do you keep it off the canopy I'd say around 21 in okay at 100 on LEDs mhm right on if I can but once you know I'm I'm using zip ties sometimes at the very top of the Unistrut and I'm still you know like uh we

have that Sher Banger 22 right now it wants to go 73 80 days it did a 4-we stretch it I put it in at 12 Ines the thing's like five and four week stretch four week 28 days of stretching I mean I have my rainbow belts two two uh 20 my my Woody and my zittles they're done it 7 weeks I mean if I leave them on the grill any longer they're going to going to just I'm just going to Bud rot yeah you know and we do get some we were getting some bud rot maybe in in 40 50 lbs we get like a half ounce of Bud Rod were you flushing at all yeah but you know I flush with cown mag and cleanse obviously yeah but how long and I would taper I would use PK uh the last two weeks and then the last 48 hours would hit it hard with just cleanse okay you know so two weeks of just cow mag no no no no I'm using PK actually I was I was run like a 18 oh 180c yeah and start to taper down and then the last two weeks but now we're using fade and uh PK booster cleansing cow mag now you using Blended line fade MH um we're testing that at jungle boys right now and how are you using it how has our team told you to um to run it JJ said uh 6 mil fade 6 mil PK and then they can run a 4 mil cow mag 2 mil cleanse but you're you're you're throwing the Cal Mag in on your own though yeah yeah yeah I probably use too much Cal Mag sometimes obviously yeah well you you you love calag I mean you're your your feed shot that you did was like 10 MLS of Cal Mag do you still using that no no no cuz that's a lot I was like w four Max six yeah it just depends on what four to six now yeah and sometimes just two and I have uh a dilu and solution in both of my I have editron same thing you and Chris are boys yep and Wally as well nice yeah we uh those guys hook me up and uh so the editron are awesome you like them yeah yeah my I mean if you saw my 20 lighter it's crazy it's you know my shit's in the kitchen I mean it sounds like a sick 20 lighter to have a dilution solution than an etatron dosing system I mean the breakfast bar is here the refrigerator the dishwasher and three 100-gon tanks with the edron system like it's and you're doing batch tank frication no you're doing direct mhm wow direct has it been difficult with direct inject instead of badge tank to kind of dial in your irrigation strategy with your emitters or you your flow is perfect uh my flow is perfect but we do we definitely have issues you know finding out the the P1 to P2 to P3 and how we water I have a really good guy that works with me um he's been with me for like a year and a half and he runs that he he's he's head grower head security head trimmer you I mean head head he's everything you know and I got him through IG it's like you know I was always reluctant like [Â \_\_Â ] I don't know if I don't really know this guy you know but sh bro you're back in the 91s so I mean you've become accustomed to living under the radar and all these situations so and I'm in methland by the way I'm like the county I live in is supposed to be the biggest manufacturer of meth in the county the sheriff said every like once every 3 weeks I mean I'm on dirt roads but you look and they'll be they'll be up there zooting up like suiting up with the [Â \_\_Â ] all their [Â \_\_Â ] all the feds and I'm like bro oh hope it's not you know what I mean but they're out there getting that fitting on that math which [Â \_\_Â ] good yeah go for it get them out of there um but coming from doing it for so long and yeah I have trust issues for sure trust issues but this guy came to me he's a lot younger and he kept hitting me up hitting me up and you know first he wanted to smoke the weed and you know I gave him weed and then he's like uh you need help you know I want to work and I CH I he trimmed for me a couple times and then this opportunity came because I needed someone you know I got kids and stuff so I can't just you know even though I do spend more time with my plants than I do with my kids probably but yeah and uh but also it's come full circle I I spent my whole life hiding from my parents and now I hide it from my kids which you know my 12-year-old six-year-old are like BR you smell like plants you know what I mean yeah that's class um how are you like how how many weeks have you been running Fade with Blended line this is our first run we're at two and a half weeks okay that edron how's it looking oh sh it's fake perfect is it are you seeing a significant difference as in as in no fade with I mean it's those buds are getting dark in even before we started to freeze the room out yeah but like uh you know I at week seven s and a half I'll put that light to 11 and 13 and that would finish it too it's just like fall got 11 lights on 13 off oh you change your light cycles yeah

and a matter of fact last run at my six lighter so you give it less light yeah I I ran the whole run 11 and 13 and everything finished in 7 weeks cuz I had a bunch of seeds new clones I just wanted to test and see how it was the canopy was all off so I just wanted to run it and finish it everything finished in seven weeks full like finish finish but like the buds were just smaller well 11 hours on 13 hours off that's going to affect your total DLI yeah um 100% And then that'll affect your yield mhm cuz the plants aren't getting the same DLI but like uh I ran a bunch of moon glows from archive and they came out fire and had size and so it's like [Â \_\_Â ] if we run these right they're going to really be awesome you know yeah genetic dependent so I remember back in the day when I was doing a lot of greenhouse we were we would in Winter we would save up all the cookies the cookie the the original cookies cut um it was we got it from SF originally and we would just run that in our green houses during winter because the the cookies cut did great under low light good yield I mean for cookies cookies was always a low yielder right so but for the cookies cup we were getting same yields as in summer so we would just run cookies during the winter because it liked the low light for some reason right and some do yeah yeah so so same thing you're giving it low DLI but you're getting great yields on that genetic I mean that gany I have I ran like three lights of it the time before last and I stripped it but the original gany yeah that original the old the 1990 early 90s gany yeah and I only strip on day 20 now because usually when we put in the plants aren't very big to begin with and I just don't want to take that all that out of it so I stripped it and dude it acted like corn it just started to protect itself it was too close to the light it started throwing these random single leaves and it didn't really finish I just turned everything into concentrate but yeah it acted real weird and then I do like look around they're like bro you don't want to give those old those old indicas like that anything above a 600 and it was like a 9 600 P PFD yeah it was like a 950 it was just it was just trying to protect itself wow it was like cousin it it just threw all these random single leaves all over trying to protect itself because the light was just too intense wow that's crazy yeah yeah and we grow like 12 different strands and a 20 lighter which it affects the yield too well it's difficult to do that yeah it is but you know it's it's okay because with the way the market is now anyway you got you know quality over quantity anyway I take 35 lbs of fire than 50 lb a subpar yeah you know you you started using Athena right when we dropped right 2019 before the MJ biscon I was using it I saw that you guys had that mixed Blended and I was trying to get off GHP anyway what were you on General hydrop oh three part yeah well I'm using 16 Parts though cuz I'm using other carbs and sugars and c and if I ran that now my drippers would be so clogged oh it' be it be a mess you know now I barely I go through I change my last two mixing Chambers I clean them I clean my filters on the line and we're good to go yeah I'm using 05s when I should be using 3s with rock wool with rockwool yeah FS are good for Coco yeah and but I'm just not 100% we're staying with coco or with Rockwall you know like when this run comes down if if it doesn't taste the way it should taste and smoke then I'll go back to Coco so she could be going back to Coco yeah I mean nothing's you know because it cost me like I think 1300 in rock wool and it only cost me five or six in Cocoa yeah come back come back to this side come back to the Coco yeah it's just the only thing is like you know cocoa dries out and then it's in my filters and it's in my fans and it's you know you don't really see it but when I go to change I do see it whereas I don't have that with rock wall yeah my dehumidifiers you know I'm a little undergone to my Deus but what I do is though I cut my seven we stuff down and that takes away five lights you know so now they can keep up cuz uh like roach was saying you need like 550 pints per light when coming from like the GH3 part and all the additives and all the stuff and going to Athena Blended did you see a significant in Impact in quality or yield oh yeah and and it's so much cleaner but did you see a negative effects cuz you using multiple bottles and then now you're only using what five yeah um yeah I for sure I I mean my Max got better they got bigger the yield got better the quality of the product I thought was better um and of course you know cleanup I didn't wasn't cleaning my res like I

had been prior what [Music] um what was what was the significant just clean consistent yeah all of that and plus five parts I mean mixing 12 Parts it's like sh have you ever ran Prine no I haven't no you know back you know whatever jungle boy like when they were on veg Bloom I tried that but I had issues with granular like mixing and staying consistent but if I was running anything to scale I would use a prong yeah scale cultivation no problem for sure we're doing um like I said we're doing Blended right now and the guys are like blend's crushing like they love it and it's it's crazy to see you know two lines that that are really incredible I mean the the pro Line's a really great pot line but then the liquid line crushes as well it's they do it's interesting to see what you can do when you put some R&D into into something yeah that was this Chris Durant yeah yeah stuff the bomb I mean yeah he's a Savage yeah it's it's really good you know cuz I've always just felt comfortable liquid salts you know using GHP the whole time yeah it was just and when I saw it when you guys came out I was like oh I'm definitely going to this you know right away soon as yeah I don't know when it came out like August of 2019 September as soon as it came out we dropped the liquid line before we dropped the powder line still working on it you're like one of our first customers or you know right in the beginning right yeah when know I saw Ivan you know if he was doing I was like [Â \_\_Â ] must be fire so let me let me try this stuff yeah no for sure when so you got an Instagram back when did you get your Instagram 2016 I think yeah so that was how was that first few posts Post in your room felt like I'm dry snitching on my myself you know I'm building a case like here look at this you know here all these dates and we count the pounds and the years but I mean I feel better now you know I got used to it or whatever plus it's Shadow Bann my account's like is it Shadow baned it has to be I mean I you know I I'd get 5,000 on a on the storyline sometimes and now I get maybe like 1100 12 let me see but you have to punch in my whole my whole igig to get it to come up but you no you're not Shadow band no no you're good no you're good I was with a guy the other day and he had to punch in the whole thing my backup one comes up before my other one no you popped up yeah you popped right up at least for me you know it's weird it depends where I am too if I'm in Miami it comes up different as opposed you know my it'll get more views as opposed to if I'm in the same spot in Colorado no nice yeah so you have a dilution Solution on a 20 lighter dude that's sick I have it on a six lighter in my house that's right I wake up at 650 how so even I sent you a the the new um reset foer oh dude that thing's the [Â \_\_Â ] you like it oh my God that's what I'm a Master Cleaner you know what I mean bleach boy [Â \_\_Â ] all we do is try and clean keep everything sterile but that thing is just simple I blast everything the roof the walls the floor the tables yeah I love it yeah it's not worth it we we started using it in our spot and it helped our fail rate on our on our product significantly cuz we're failing for aspergillis and um in the state of Nevada mhm and um I it was coming I think it was coming from the drains and you don't really realize how much shit's around those drains exactly so what we did is they have a drain connection and you put this you slide this pole into your drain and it completely fills up your drain with this foam and it just kills everything but those drains were probably not cleaning those drains like that was probably costing the business tens of thousands of dollars per month it's just literally just got to clean the drains you have to fail that batch if it fails I mean do you have to throw it uh you can you can sell it you can extract it um in Colorado they just turn around and send another sample back in they're not going to throw that batch away I mean oh really oh it's crazy I mean then those guys are falling by the wayside too you know you can't keep with that [Â \_\_Â ] that sop of you know they're not changing the way they've been growing they got mold they got M cuz I have my installers my HVAC guys they do the license facilities as well and they're like bro these guys are so and so I wouldn't smoke nothing out of their facility you know because how dirty it is narly yeah I mean they put top five companies I'm not going to say him but dude I know their weeds crap I mean my guy came into town before he got to me he went and bought two G he brought it to my house it is the worst smelling stuff smells like asbest yeah the the scale cultivation is not always

where it's at bigger is not necessarily better you know you kind of seen that happen in Colorado I had my boy come down and uh he was one of the founders of aoya um do you remember aoya it was a publicly traded huge cannabis company they competing with uh canopy growth back in the day yeah and he came from that side but now the same guy that's like one of the founders of aoya has a 120 like craft grow that he's running in Canada licensed all above board and um is now just selling small batch craft cannabis in Canada and having great success because the quality I when you're growing you know tens of hundreds of thousands of square feet of cannabis it's just it's extremely hard to maintain quality extremely right yeah I figured like I could up to like 20,000 square foot I could I could manage it to a top shelf standard after that it would probably lose control and especially with the Skeleton Crew other than trimmers and defoliators you know yeah I mean I think that's what jungle boys do uh yeah that's about they run a skeleton crew except there they have several locations that are about that size right you know yeah some 50,000 but they run a lean crew for sure extremely lean but efficient yeah everything's automated and yeah the way it should be yeah but yeah automation's been lifesaver time saer I my guy hand watering all day yeah what uh what brought you out to Cali uh see some friends my sister actually lives here nice haven't seen her in a minute nice right on he lives just south of Tula so yeah that's where I'm at right yeah sick well cool brother I appreciate uh appreciate you making the trip out I really enjoyed your story thanks for having me man I appreciate it and everything you do for me and you know all your guys you know JJ to to Brian to to you know all the guys you know all been super cool and you know always helpful and nice and that's one thing you hired like amazing crew you know yeah well it's cool we hired All Growers yeah I think a lot of uh maybe nutrient companies or companies in general hire like sales or maybe you know we just hire Growers like all our guys are Growers it's going to be a lot harder to teach a Sal guy how to grow weed yeah then it's going to be to teach a grower how to kind of work with customers and and sell a product right they're just about the bottom line is selling more than growing so yeah for sure definitely you know the other day on that podcast you did and uh I forgot which one but they you were like I don't want people to fail you were like you know I don't want people to go through what I did but it's like you kind of have to fail to to to make to build character to build you as a grower so you can learn if it's just all roses the whole way and you don't have any fails you don't have PM or mites or Russ you know what I mean if you don't have that then you kind of don't know you just growing's easy bro you know it's a nothing thing so it's like you kind of have to have those ups and downs just as a learning curve as a grower you know yeah I remember back on some spots that I would you know have or build I'd be I'd be either up or down or losing money but if I was if I was losing money I was just like you know what I'm learning a lot right now right you know on this spot I'm I'm losing money on the spot right now but but I'm learning a ton you were going big too though huh yeah I was going a little too big you never went small you right out the gate big no yeah yeah I was a greenhouse guy so I had like seven green houses in Southern California on all kinds of properties from Anza to aanga um you up in felling San Diego down in Fall Brook I had some spots and just like had this like crew of trimmers that people would all my Growers would grow and then they'd bring it to this one central location and they'd get a trimmed and package and then out to like my old Brokers and stuff like that right and you using all kinds of different nutrient lines and different processes but once I got Athena PR line or that that when we were when we're formulating it and using that using a two two bags and I'm K we're crushing and I'm just like oh my God this is it right like now we're really going um it was fun learned a lot and but uh yeah it was it was an interesting time yeah you got to go through all that [ ^ \_ ^ ] to realize yeah just so you can learn yeah it's definitely a learning process yeah it's not always easy no definitely well I appreciate you brother thank you thank you man thanks a lot yeah definitely all right all right buddy

Ted why don't uh why don't you go ahead and introduce yourself and give us your

background uh Ted Tanner I'm one of the co-founders of uh grow link uh me my two other business partners David Holmes and stepen Neely have known each other for about 23 years met in Southern California uh late 90s uh started a.com in the.com boom it was called local.com um so that's what brought us all together and then from there about I don't know 5 years later we started a logistics company we actually drove by our warehouse in Ontario on the way over here so I was stowing Marcus I'm like that used to be our building um and Pitney Bose which is right up the street yeah is who acquired Atlas fulfillment um there's a reason I'm telling you all this and then uh we sold that company in 2012 right and we're living in Denver and so that was right when cannabis commercial cannabis started popping up at 2015 is somewhere right around there and I started touring I wanted I wanted in the industry somehow even though that's not my background my background sales marketing business development um but the industry was fascinating and so I had some friends that were opening up some cultivation in Colorado and I was visiting these facilities and at the time it was literally a thermostat on the wall for HB uh Toro timer from Home Depot running valves if they weren't hand watering hand mixing nutrients and that was kind of the aha moment um I'm like wow and iot was just coming out the cloud all of these like new technologies were coming out and so um we started a company originally was hydro pods and uh and it was retail controllers so Wi-Fi controllers with Wi-Fi plugs kind of smart home stuff uh that was the start of of of grow link um and so we brought a modern platform to to add really uh even across outside of cannabis and so native IOS and Android apps a web app pushing data to the cloud um just making it super easy like really intuitive easy to use product I think it was even before or right around when n thermostat came out because I know we pulled a lot of ideas design cues off of The Nest Thermostat so that's what it was in the beginning it was just monitoring and control uh as we got into this uh we had a hard time creating a company we don't have any outside funding no debt it's all organic growth and it was hard to make money and Retail at that time with this product I think we were early to Market uh and so we saw that a couple large commercial scale grows were using our little Wireless plugs and stuff and and uh we realized that that was probably the market where we could be successful at and so we took another stab at it we brought everything back to um UL panels built a industrial iot controller so really industrialized uh the original product uh that we created and started selling and started selling it in the panel and having everything hardwired and that's really when things took off that was the I guess the product Market fit moment is uh having these control panels with everything connected to it and we saw some I always say we kind of grew up in the industry with everybody and I think the Cannabis industry has been really good to us uh at least the openness to try something right uh we're controlling you know millions of dollars with a crop so these people took a leap of faith in working with us yeah I think um your strength seems in in a and you guys seems like your team's really strong in software yeah right you're really strong with software but then you have the know with all to bring in people like Marcus like that are you know in traditional cultivators you know to get feed back on on your software is that no you're right I mean I always say we're a software company that sells a lot of Hardware um and a couple years back we made the decision to to not manufacture as much Hardware so we found contract manufactures that make our core controller you know we didn't design that um we find sensor manufacturers to to work with us in designing and Manufacturing the sensors uh cuz all the original stuff was I mean we literally we're assembling all the circuit boards and everything and even the the new connect controller which we'll talk about a little bit brings us back to doing all the design and assembly ourselves um just because it wasn't anything out in the market that we could find or uh for that and so yeah definitely software strong bring people in like Marcus as well as we sell direct to the end user so we don't work through retailers or Partners currently and we'll talk a little bit about that that that might be changing U which has allowed us to have these direct relationships with our customers and so that constant feedback loop and and just the industry as a whole

the I feel like we have these incredible relationships and people are extremely helpful right they like oh we'd love to see it do this this and this and that's really what drives our product road map uh we call it our insiders program and this is just a group group of core customers that that participate in product testing uh they sit at the table when we're discussing what's next what's what are we going to tackle this quarter um so really our customers Drive what we're working on yeah no I know you you work with M Mitten Master right Dylan how's that how's that relationship it's good I was going to get into that a little later he he actually drove uh a lot of changes that we made between our our first program and our our second crop steering program nice so it wasn't like exactly what he's talking about here if it wasn't for that guy you know we would have been missing a couple I think key feat so we're super grateful for that that's awesome that's really cool Marcus you want to go ahead and introduce yourself and and what what your role is at gring yeah yeah um Marcus um I am on the I've done a lot of things at gring you know I was hired on as a tech originally but I've kind of moved through a bunch of different roles you know because we are a small company you know we all work together and kind of do everything so I kind of go where it's needed but now I'm uh on the product product team product Dev team so like he was saying like with the Insiders group you know I'm the one interfacing with a lot of our customers collecting their feedback you know talking over some things and bringing that back to the uh engineering team background uh I'm from the south you know from Florida and you know weed's always been a pretty large part of my life since I was young but being from down there I ended up getting in a little trouble and so I I got out of there as soon as I could and I was fortunate that I had uh some good friends who had Farms out in Colorado in the traditional market so you know I got up there as soon as I could and kind of went with it you know just ran those farms for a bit and uh at least until like 2012 when we got priced out you know it became uh came to a point where the risk wasn't worth the reward anymore so I then got into you know electrical in construction for a little bit but I you know I still I kind of miss you know the the culture of weed and so I uh I decided to try to like look back and get into it and I saw a listing um from hyra it was grink at the time yeah from girlink where they were looking for a tech who had electrical experience and growing knowledge I it came full circle yeah exactly I was like huh wow that's cool and so so yeah I've just kind of been with him ever since what part of Florida are you from uh Southwest so so like the Fort Myers Naples area and when what year did you start growing out there uh like freshman in high school so it had have been like 2006 2005 Florida in 2006 was Heavy yeah it was scary yeah real scary yeah yeah and when did you move to Denver or would you move to Colorado um I think graduated 2012 or something like that yeah no no I'm sorry fora back then even in 2012 12 was scary yeah I was actually out there a little bit before that but yeah yeah there was a reason I left so I was like this is not going to end well um were you doing mostly outdoor or indoor cultivation in Colorado no in Florida Florida's uh closet and outdoor clet how did how did it grow outdoor with the humidity I always hear like mixed stuff on that uh if it got through to the end of harvest before someone found it really like that yeah they were pretty quick on it um uh you just chop a little early you know I mean we weren't I was young I didn't know what I was doing I was just practicing then so I didn't have big buds you know I didn't have to worry too much about like rot or anything like that so it was just bag seed yeah nice Sean what up how we doing you've been busy huh yeah been on the road lot of commissionings this summer where did you just come from I knew you flew from an appointment uh I was in Ohio for the last couple days actually on a growlink job um out there in Cleveland nice it's pretty good size facility I think it's like 800 lights something like that uh all core controllers from grow link grow link F fertigation skid with Anderson injectors U beautiful spot nice how's your interaction Dem meter designs with groink like how do you guys work together and what are the benefits of of the two combinations it's actually a really cool relationship it's more like a a friendship partnership style thing uh I work with Colton quite a bit on your guys team uh and the two of us when we see opportunities



for each other whether I have a client who doesn't know where they need to go needs help with what type of fertigation system they want to use or if they need climate controls or substrate monitoring I kind of find the best fit for them in the industry whether it's grow link or someone else um we're kind of agnostic to who we use it just what makes most sense for the customer and if they're looking for that all-in-one solution uh they want fertigation substrate and climate it's kind of an easy sell to go to grow link um so I'll make the introduction to Colton uh and then clients take it over they do a demo goes through pricing if it all works out well then we go ahead and do the design with the grink platform um and it's kind of a seamless relationship because knowing everybody on the groink team we can share p&id drawings way early on in the design process which helps with their quoting so they're accur accurately building their panels for the customer um yeah and then if on the other side of things if Colton has somebody that is trying to buy a system that has no direction or they're just trying to use a general plumber that doesn't know anything about canabas irrigation he refers them over to me uh and I fill that gap on my my side how about how about for the growing side what what do you see the benefit fits in using like a partner like demer designs does it does it make your guys' job easier oh yeah it's also really comes down to the to the in customer and the experience they have working with you know both companies I mean we're a little obsessed with customer experience and so when you find a good partner and these aren't paid Partnerships I me these are this is just hey you guys do incredibly good work and we want to refer people to you because they're going to have an A great experience and then uh like you mentioned Sean having having the drawings and the layout and and everything helps us engineer a solution so much easier than working directly with a plumber that may not have a plan yeah it makes your guys' jobs a lot easier absolutely yeah I think at the end of the day for deer grink and Athena I mean the end of the day having a successful customer is what drives our success 100% happy customer yeah successful customer is a happy customer that's right um no I think it's important why we talk about why we do these podcasts like this you guys did not pay us to be here um and we just do this because we believe in what you guys are doing you know with knowledge based um knowledge to the to the customer base I think it's really important what you guys are doing with systems um and when Sean heard that we were going to be talking uh he called me and was like look like they are doing some industry changing stuff um you should I want to be on the podcast cuz I understand what they're doing um and once he broke it all down I I was naive to it because all a lot of the stuff that you're doing right now is new right I mean crop steering 2.0 is new your guys' controller new doing stuff for the hobby grower at at at home is new um make it more accessible to guys that are growing in the basement bedrooms basements and garages I think is that that really intrigues me because that's I think that's all of our background right um so when I heard about all that and Sean really broke it down I was like dude come on like let's talk together because I think it'll be a way more you know um it'll be a better podcast so no I'm stoked to have you guys here and and stoked to get into like what you guys are doing and it'd be a lot of fun yeah thank you thanks for having us yeah I I thought it'd be important to kind of give a foundation of irrigation strategy before we like jump into you know some of the stuff that you guys are working on um and I wanted to direct a lot of the questions towards Marcus um what like just on a baseline what is crop steering yeah so crop steering is a term that everyone's used now for essentially you know just a different style of growing you know where it's a bit of an overplay term in my opinion but um but basically crop steering is manipulating environmental stresses and irrigation stresses um in order to get an output that you want from the plan um there's several ways to go about it you know at the end of the day though it's just managing those stresses um for the desired outcome um do we want to go into like specifics here or I mean yeah I mean go go this we're not in a rush okay so how much time you got Yeah so basically the the way I see crop steering in my mind is you know you have vegetative steering and you have generative steering these are like the terms that industry seems to be using as a whole um both kind of do

different things you know um in my opinion though I think the [ ^ \_ ^ ] sorry can we no you can you can you can just keep going okay yeah so let let's go the difference between let's go let's give the foundation like what's the difference between vegetative and generative I think that's really good like what what are the characteristics that the plant the plant you're going to see in the plant verse vegetative vers generative okay S I got a little messed up because I was thinking like uh basically in my opinion like with crop steering um we're trying to steer we're trying to grow a healthy plant always right where steering comes in is that we are introducing stresses at certain times to get a desired effect that is different than optimal growth for that period so like you don't want to ever just steer you know generatively the whole time or you're going to have a very stress stressed out plan it can Herm you're not going to have good results but then again you could steer vegetatively the whole time and it would be a very healthy plant you know might be a little leafy but it's going to be a healthy plant just like we used to always go for you know back in the day but you're not going to get that expression out of it like you would if you stress it get that color the trichomes all those things that we're looking for in cannabis exactly so you can you can kind of say like how we used to water our plants say most of us you know in the garage we were handw watering right when we first started that's more a vegetative correct you know irrigation strategy correct so if you think about it like this like vegetative steering is like the equivalent of in nature if it was just in a an oasis environment you know it's just super healthy super happy it's got no drought stress it's not getting you know the ground's not salty you know it's it's got everything it needs is a balanced nutrition perfect environment perfect VPD that's vegetative steering that's what we're going for generative steering on the other hand is we're allowing certain stresses to happen because we found in nature just from through observance and testing that it's like you know when there's a drought the plant has to respond to that it releases hormones releases oins like it's going to make a change happen within the plant to adapt to that um same thing with like a high salinity environment as well it's another stress that happens with plants in nature so what we're doing is bringing nature into the grow room you know we're because we have control now you know we're able to control the the valves you know when they're turning on and off we're able to dial in an environment perfectly like I can set exactly what my VPD is you know I put exactly what my light level is my CO2 all of that everything is stable um so in an environment like that where we can make one half of growing the plant you know stable now we can introduce stresses when we want to um to get those those hormones you know those metabolic changes and the way I see it is like like I was looking through your guide here you know this is exactly what we do as well you know you have a strategy where you're steering vegetative through honestly if you look at it you're steering vegetative through most of the flower through most of the plant plants growth cycle in general not just in flowering you know um but there's like two periods there's only two short periods when we do go generative and again it's only because we're looking for those desired results you know um we're giving up growth during that time in my opinion uh where like if the beginning of stretch you know the beginning of flower if we steered vegetatively the plant's going to be healthy it's going to rip you know it's going to do great but rather than having certain growth characteristics occur during that time by steering vegetatively which would be like stem and stock growth extra leaves putting on you know stuff like that we would rather we're going for something specific during that time we're going for like a bud set you know we want that's what's going to Prime for the rest of the grow and we want that to be at you know at maximum capacity and so how do we do that you know we looked at okay these specific hormones and these oxin are what is responsible for that happening so how do we get that to occur and that's why we're steering generative out of that time cuz like putting that stress on the plant you know raising the VPD up you know causing it to be like in a drought stress increasing the salinity those are all things that the plant doesn't want and so it thinks it's like oh [ ^ \_ ^ ] I'm I could die here you know um this is not good and so it releases those hormones and

then we get the desired effect at the sacrifice of the rapid growth that we normally would have gotten if we just steered vegetatively um visually visually what are those effects visually on the plant that they'll see when they do switch to more generative um well it so basically like it's it depends on like what the time frame is of the plant that you're when you're doing it and so in that specific time go the first the first um the first time you'll you'll so yeah the first time is going to be you know week one of flow during stretch the same things are going to happen regardless if I'm steering vegetative or generative you know the plant is doing thing regardless it's going to be switching its hormone cycle up thanks to the light it's going to be you know starting to produce pre-fl flowers at that point um and getting ready to to flower um as part of its you know rep reproducing strategy um and staying alive as a plant um and so during that time basically it's going to us giving these stresses are going to just make that happen more intensely faster cuz it's releasing those hormones anyway but what we're doing is we're scaring the plant into thinking I might not get a full cycle I might not have the full time to do this so therefore I'm going to speed up those hormone Productions now to get more buds that's happening to get you know more pre flowers so I increase my chances of pollination so that I don't you know so I can pollinate make seeds and continue on um that's great no that's per I've never heard it like that but that makes a lot of sense in a nutshell do you want to break down for us like during weeks one through whatever weeks week one through or this week through this week when you're going vegetative and generative and yeah so on and so forth it's in a general nutshell so people understand what weeks you're typically steering those different strategies yeah so vegetative um is pretty like I said it's going to be your the main thing that's going to happen throughout most of the cycle um so all of edge all of edge sometimes people will start switching a little bit early when they're getting ready like a week before they go to flip um it's not necessary though you know so you're steering veg most of the time cuz the whole thing is we know again we can't forget just because we're crop steering we can't forget like what we what we knew before crop steering was you know a a healthy veg and leads to a healthy flower you know we want the plants to be ripping when we transition because that's going to cause everything else to happen that much better so you're steering when you steer vegetatively your plants are healthy they're happy um so that's what we're trying to do through veg and then the moment we switch into flour we the hormone change that's happening naturally occurring in the plant is to switch its switch from you know ripping with Leaf growth and and elongating stems and building that stem structure to support all this weight now it's focusing on okay let's let's populate the pre- flowers at this point you know and um so sorry what was week by week yeah week by week generative and V Yeah so basically when you steer you start steering generatively at that point yeah um and that's it's going to allow the natural process that's already happening to just happen faster and you know and better you know like instead of it producing just one here one there it's going to start producing a lot more they'll be typically bigger a lot of times they'll be tighter stacked on there but again that's that's really strain dependent um there are ways that you can manipulate you know your environment as well in this cuz crop steering is 50% irrigation 50% environment um you know you can change up your day night temp differential to to control stretch during that point as well um but really you know we're using generative steering for those first three weeks you know until stretch is over uh to get that done and then from week four through six typically is bulking you know we're going back to veg you know now that the the plants have their their Bud sites created um now we need to nourish them there's no sense stressing them anymore at that point we want to say all right you've done the job that we wanted you to do now let's get you let's get you nourished let's bulk let's pack on the weight now um and then this one's kind of up in the air a lot of people experiment with this and bulking after week three to yeah to week essentially one stretch is done so usually it's like day 21 but you know can always so after after week three of flow you're going to go vegetatively the rest of the flower cycle or is there another time that you go

generatively I'm going to do vegetatively up until about week seven week eight somewhere around there depending on how long the strain's going um where you kind of go half generative again in my opinion so like you you want to start introducing drought stress again but you don't really need to necessarily stack the EC at that point um you can um but really all you're doing there is you're once again using that stress to amplify the the hormones and oxin that are being released Naturally by the plant at that time period so even without steering generatively the plant is still um going to be releasing those hormones so it can ripen and finish up um so what we're doing now is we're just amplifying that stress so that it can do it faster so faster better stronger you know all that yeah now week week one of flour to week three of flour you see shorter plants more Bud sites induced flowering right those are the main benefits now if we're going starting week seven and eight and we we did vegetatively for you know four five six and then seven eight or based on the the cultivar and how many weeks it's going to flower you go back to generatively what what are you looking for on the ripening on the flow is it Aroma taste like what what's the goal everything you know it's again it it's just exua like exactly what you would be going for for anyway all what a lot of people report is that it just happens a little bit faster so they might finish a strain in 7 weeks versus eight you know so you're going for the same things you're looking for tpine production you're looking for you know the triome heads will will turn quicker they found as well because it's again when you introduce stress plant thinks it's dying that's essentially what it is is the plant thinks it's dying and it's responding to it to finish up if while you know before that happens so usually seeing a higher increase in THC and turpins when you're doing generatively on your finish yeah a lot of people see that because you're not basically it's trying to finish faster but you're actually still you still have the same amount of time that you can push it so you're just you know you have more time to stack in there you have more time to increase tpine production more time to to um increase THD production as you're seeing a a greater increase in quality when you're when you're steering generatively the last few weeks correct no that's that's really cool you know we did this um crop steering kind of guide irrigation um Precision Irrigation guide and main things between vegetative and generative P1 I mean we should probably go over P1 P2 P3 before we go into this can you break down what what that means P1 P2 P3 yeah so P1 P2 P3 we're looking specifically at the irrigation side of crop steering um and then basically what that is is you take a 24-hour period and you're splitting it up into certain phases you know of how you're going to irrigate so you have p1's phase one that basically is going to be the we call it the ramp up phase um and that's where your substrate has is dried out from the previous day and you're res saturating it again up to fuel capacity at this point so it's like your first water of the day correct okay correct yeah and we usually like to structure that in multiple shots um because if you just did like one big shot on a dry substrate you're going to have a lot of channeling that can occur we don't want that so we try to give it smaller shots wait a little bit give it another small shot wait a little bit give it another small shot and that allows for even saturation to occur now P2 phase two oh yeah P2 is our maintenance phase um and that's again sometimes we use it sometimes we don't but when we need to that is going to maintain the substrate at its Field capacity um until we until we're done watering for the day so sometimes P2 can be short depending on what kind of dryback we're trying to get or it can go all the way up until lights off you know and during that time we can adjust the the shot sizes and the dryback amounts typically we like to equal those two together so if you have like a 3% shot you're going to have a 3% dryback because again it's the maintenance phase we're trying to maintain that fuel capacity what what is fuel capacity so fuel capacity is the maximum saturation point of your substrate um so like you've you've saturated it and it's not going to get any wetter you know every space inside of it that every por spot inside of it that could hold water is filled and everything now is just going to be run off that's occurring okay so so P1 based on multiple shot size uh multiple shots gets you to Field capacity correct and then P2 is Field capacity with dryback

then back to Field capacity correct so then that's maintaining your you pretty much where you want to be in your subray that's allow yeah correct that and it's allowing you to also push runoff in a controlled way so when you're at Field capacity that's the only way you're really pushing runoff is you're already maximally saturated everything you're putting in now is pushing something out and then you're typically breaking Field capacity at the end of your P1 shots if you're looking for a reset on the medium for the day right if your ECS are starting to climb pretty heavy from your initial dryback I know personally I like to at the end of my P1 shots kind of break field saturation to bring that EC back in check and then maintain it throughout the day yeah yeah that that's a lot of people like to call that just a flush and with our new program we can go into but that's essentially another phase we've add it in as well so directly after fuel capacity we've have another separate irrigation event that you can program where it could be 5 minutes it could be 20 minutes whatever it is but it's exactly like you said you're breaking that fuel capacity barrier so while the probes won't read anything higher you're still pushing that water through and it's resetting your your substrate you know we have some customers though that do that through the P2 right every shot they overshoot a little bit throughout the P2 to bring down they're just trying to maintain a very consistent EC they they break every single time right versus you know one long shot right after P1 you can that's how we used to do it like with our original program um you can maintain your substrate EC via your your maintenance shots that would me more of a vegetative it strategy it could be both oh it could yes based on how high your ECS or how low your drive backs are correct so essentially like whatever that period is of your P2 doesn't matter but we kind of also introduce a little bit of like a generative vegetative in there um where if you are trying to keep your EC low you know say it say it's uh or say your EC is high or higher than you would like and you want to bring it down a little bit and maintain it being low we're going to steer more vegetatively there which means we're going to have a smaller dryback in between our shots and what that's going to do is it's again we're at Field capacity say instead of having let's say a 4 % drive back between our next shot we're going to do a 1% dve back and so it's not giving it very much time to dry back and then you're giving it another shot so it's closer to Field capacity and it's going to keep pushing more runoff so it's essentially a drawn out flush at that point and then same thing whereas if I want to Stack EC um and I don't have the ability to flush then I can make that dry back 6% you know and that's now a long time that it's taking it away from it's 6% difference from fuel capacity and so that's one less event that it's it's running off for so for starters you have less irrigation events and then the irrigation events that you do have have to go further to bring it back to Field capacity then you know and then push runoff so it's it's you're getting much less runoff during that point and your EC will slowly start to climb Yeah by doing that so we R over P1 phase one that's the first watering another the day that brings you to Field capacity we know over Phase 2 which is maintaining um your irrigation throughout the day what is what is P3 what is phase three the phase three is where we stop irrigating that's going to be our dryback um that is essentially what a lot of crop crop steering is based around um so that's the number that we manipulate based on what kind of stresses we're trying to you know induce um what's what's the time frame for P3 P3 can start it's it starts immediately after your last irrigation of np2 so a lot of times that's still during lights on um you know especially when we're steering generatively it's going to be you're going to have your P2 shots that are going to uh going to occur up until a certain point and then from right then at that point the last irrigation event of the day that's when P3 begins and it's going to last all throughout the night until the next morning is there any irrigation events in P3 no so P3 is no irrigation events just a pure dryback from your last P2 irrigation event till your P1 so it's just drying back the whole night okay and your the dur or the amount of intervals on uh your P2 are going to help uh determine your P3 dryback right like if you're pushing too many P2 events you're not going to get that achieve dryback potentially especially earlier on when the

root Zone development isn't as high uh like like after a fresh transplant you're not going to push as many p2s if any p2s on a newly transplanted room maybe your p1s will get you up to Field capacity and then to achieve that that dryback we're looking for you might not have any p2s at all until you start developing a root Zone and the plants actually start drinking okay right and then as they as the root Zone starts developing the plants get bigger and bigger and they're up taking more water we're going to need to increase that number of P2 shots in order to not over dry back during our P3 or to achieve that dryback the P3 right y so we can say like back in the garage days of when we were hand watering our plants we were doing a P1 and then immediately went into a P3 exactly skipped the P2 yeah there was no P2 events right well maybe sometimes that midday watering right if you did a midday watering then you'd have a P2 event yeah we call it that I guess kind I me to simplify it for yeah for guys that are hand watering which is I know a lot of guys that are hand watering that do really really great I mean M High Dave is one of them he just does one you know big P1 um and then automatically goes into P3 and then red does it so what do you usually like to run on EC with Athena a three 3 EC all the way yeah um have you heard of guys using a 2 EC but stacking harder in the media yeah you can do that for sure um typically I'll start with three I mean from clone even like I mean real young they can take it um start with three run three all the way up until about week four um and then when I'm cuz at week four you're basically trying to flush out your substrate cuz you just stacked it up pretty high and you're trying to get it back down again um and so it doesn't take much I mean first off you're never going to get it back to where it was it's damn near impossible to get you know if you were at you know 7 8 something like that to bring a substrate back down to your input it's a it's it's tough even if it's just flushing and flushing the closest I've ever really gotten is like 35 you know or 38 or something around there um and I don't ever see any problems with that you know usually it can be in the fours too but at that time if you are trying to get it down lower that's a way you can do it so like people can easily feed to EC at that point um if they're stacking you see in the media yeah yeah their whole goal is you know to bring it back down to three for example and they're not able to do that feeding through EC then dropping the EC at that point is is totally fine our typical setup for a demer customer using Athena would be a 3 EC tank a 2 EC tank and then a flush tank whether that's like a 0.5 to one whatever the the user wants to use so you have that option to feed that lower EC if you want to get things back in check or towards end of life when we're kind of ramping things back down gotta those are the two feeds that we use the most as two and three that would work perfect then what what media do you guys recommend when um somebody's using a a sensor a substrate sensor what what were the Medias you goto goto Medias we just for crop steering in general either cocoa or Rock wal you know definitely definitely no soil there takes too long to dry back um and plus you might kill the biology um my personal opinion is if I using if I have access to substrate sensors and valve control and all that um I prefer brck wol um mainly for a couple reasons um big thing for me is is overwatering um when I'm using cocoa if something happens um say a valve you know something goes on like a valve breaks or or or leaks or something like that or in case of when we were developing these programs if because we used to have a program based off sensor live sensor data um there's issues that can occur with Coco that's not Coco's fault and it's well I'm sorry let me take that back it's not the sensor's fault it's Coco's fault where basically you have a sensor like in the bottom of Coco right and just by the nature of how Coco disperses water it does so in a you know in a very uniform fashion and it's a slow se but you have a delay so from the time that the irrigation event occurs and the drippers are are dripping there's usually like a minute to two minute delay before that water comes down and reaches that sensor at the bottom and because of that when we were using like live sensor triggers at that point I would end up overwatering by a minute or two and so when that was happening consistently I'd end up with a water lock substrate which then caused me a whole floor of issues after that so so Rockwell on the other hand gives very quick readings um so from the time

that the the irrigation event occurs I usually can get a reading within 30 seconds so the amount of you know overwatering is very very minimal at that point um if I wasn't using you know substrate sensors and sensor triggers specifically to control my valves I would say Coco 100% I think it's way more forgiving um as long as you don't overwater it and you know in general it offers you know I I I don't think there's any like difference in results so I think it just use your preference there do you find Coco to channel when it dries out a little too much yeah if you I mean if you get it well that happens with Rockwall too you know when you go down past a certain point they're both going to channel it might be even worse than Rockwall potentially yeah yep so that's where having low flow drippers really helps so now talking about media size what if you're in uh rock wall what what is you know your idea setup that you're seeing out in the field uh typical configurations are you're either planting a clone directly into like a 6x6 uh 6x6x6 or you're going into like a some form of like Delta you know where you're in like a 4x4x4 4X 4X two um and then you're doing your veg in that and then you're stacking it you know after a week on to either a slab a Hugo you know a 6X 6x6 or like a jumbo which is a 6X 6x4 so it's either you're going directly in to a larger substrate or you are starting it in a smaller one and then stacking it on a slab correct yeah nice the what about size of uh media and a cocoa pot straight Co straight cocoa right we're talking straight Coco what's up with straight Co what's up with Coco and perlite what's your opinion on that I think it's a marketing gimmick yes no I agree with you on that I think the way Coco is designed um you get plenty of variation in there as long as you don't just sit there and flood it you know constantly 100% I agree I I don't not a big fan of perlite in my Coco and especially when you're using cleanse it's absolutely makes no sense it it also is really really bad for substrates too um so substrates can only read or sensors can only read the uh the substrate you know moisture content so the perlite is actually bad for the any contacting a sensor probe would give you an inaccurate it doesn't read so like there's water being held in like pomus or perlite or something like that but that's not able to be picked up by the sensor um so if you stab a sensor in and like you just said if you got perite touching it all it reads is a big open air gap now where it's not being having direct contact with the Coco so now what it's going to do is it's going to decrease the fuel capacity reading that you're getting so it's not it's not uncommon for people to who are using like you know 30% or a 50% mix of perlite in their Coco to be like why is my fuel capacity only 35% or 40% it's like well that's why if you use like a real pithy cocoa and you packed it in there nicely you're going to get up into the 50s you know you're going to be pretty close to Rockwell I don't know if you'll quite hit there but you'll get close what about size of pot what's the idea size of pot that you're seeing in your opinion I would say the smaller the better in my smaller the better yeah really I agree too I mean started in fives went to threes went to two and a half went to two now I'm in a 1 and a half gallon pot running a pretty low density and it allows me to give more irrigations uh events especially with that lower uh volume root mass in the beginning of of Life uh it allows me to control the medium a little bit better and since we have Precision Irrigation and all this automation I can irrigate as many times as I need to in a day if I was hand watering I would obviously want a bigger medium right because you don't want to sit there and continually irrigate the thing all day long but with the technology we have now going smaller is almost better it's the bigger Roots bigger fruits argument I think is kind of gone these days I think that's kind of more of an organic argument they bigger Roots bigger fruits they didn't have access to irrigate necessarily 30 times a day right exactly so now with what we have the smaller medium gives me a lot more control um which helps Drive the plant exactly how I want it from day one yeah no I found the sweet saw to be about about the same size 1.7 gallon um nothing over a two um based on my my my um footprint for for plant per square foot right now moms are a different story though yeah 100% I've I've got some pictures I've grown some massive plants inside of like a one just a one gon Quick Fill I mean stocks like outdoor stocks so IR day yeah I've done that test before too in a half gallon cocoa Cube seeing how big of a

mom I could grow and it was about 6 feet tall and pretty ridiculous but is that sustainable no it's just experiments pumps going constantly but you could yeah it's funny I I see guys usually guys that are using cocoa with perlite they'll be in a bigger pot mhm cuz I think they need to be based on the perlite Mass taken away from the Coco substrate I don't know that's just my theory I don't know if that's even true or not but just seems like it usually like you go into a place and a guy's in five gallons cocoa perlite it's like if you just Shrunk the pot size you don't need the perlite yeah the roots are going to do the job of giving you Irration at that point I think they they feel like maybe they did a five gallon straight cocoa and like oh I get better results with cocoa perlite in a 5 gallon well that's because it's holding on to you get too much m to control with with that and the Perl light's making it giving them that buffer forgiveness um for the um more aeration but if they just Shrunk the pot size one they have to buy less cocoa um two they'd control the media a lot better and and they theyd get better sensor readings if they're using you know a substrate sensor so it's just like to each his own everybody has their own opinion this is just my I I'm I'm with you I I like straight Coco you know um I agree with you about that 1.5 gon size pot nothing over a two um it's also really the 1.5 is also really good for it's that Medium zone so I can put a a freshly rooted clone into that and I'm reducing the amount of Sops that I have I'm one transplant one medium to purchase like we don't have to buy all these different pot sizes stock all this stuff I can go directly rooted clone into that one and a half not I'm not going to have as many irrigation events obviously when I'm rooting it in in veg but it's pretty damn happy in veg and once it takes off you go directly into the flower room and you're Off to the Races you're not building a new root Zone and it's I mean yeah it's money saved it's labor saved yeah labor I mean when you're talking thousands of plants and I see a lot of guys um one transplant is is is Enough For Me Right clone from the Clone tray into my 1.7 gallon cocoa straight cocoa uh 3 EC Proline cleanse make you know maybe five MLS on the cleanse if you're worried about water logging to add some extra oxygen increase the orp but if you're talking about thousands of plants and you were to go from a 4 in straight cocoa into another two gallon pot or whatever size pot you're talking about hundreds of manh hours a year in doing that I mean it's it's uh it's cost savings I i' I've gone into a lot of facilities where I'll see them move three times they'll start in a small col pot go to a bigger one for veg and then when they go into flower they move to a bigger pot and I'm like wow that's extremely inefficient like they're losing thousands tens of thousands of dollars a year on transplanting and when they go into the flower room they're it's harder to get those generative like hard dryback because we don't have the roots in that new pot y right where we build it early on in its life you can pretty much Start steering immediately the second you go into that that's exactly why I a fan of like just one gallon pots you know like you were saying earli it's just like you have total control and why I said the smaller the pot the more control you have like you can push a heavy dry back quickly with a small plant doing that that's also why even Rock will like I'll I always go to a 4x4 you know just so I can start steering because I think a lot of people don't do this but I think it's it's a good thing to steer um vegetatively like actually steer vegetatively in veg you know to go for those 10% dryb backs I think it's pretty big um in my opinion versus so your your go-to for rock wall is a 4 inch in veg and then you throw on a slab yeah after about a week yeah that's jungle boys too that's their go to you're putting them on slabs in the vedro uh so what I'll do is I'll I mean I'm all in the same room um but like in facilities that do this as well like basically they will veg inside of a veg room on a 4x4 and then they'll saturate whatever it's a slab blocks whatever in the flower room and then they'll finish veg out in the flower room got it so they'll finish whether it's another five days another three days another 5 days whatever it is a short acclamation period exactly so what they're doing is they're allowing the roots to get down into the the next substrate before they flip so it's like reducing that stress right okay um crop steering 1.0 what what is what was crop steering 1.0 all right get into it um so crop steering 1.0 a lot of a lot of



people who you know are our customers they're super familiar with it they'll be able to relate to a lot of things I'm going to say here um for people who don't know um crop steering 1.0 is our our first go around at trying to provide a tool for Growers you know to crop steer um you know I I was very fortunate in in you know being a technician at our company getting to go around to a lot of different different grows um seeing kind of what works what doesn't um for a while and then I I visited one grow in spe like specifically actually here in California um grower Kevin Crouch he's amazing and I saw uh something I hadn't seen before I just saw like yields like i' never seen anywhere else nothing I've ever been able to accomplish and so I was like what what is this what are you what are you doing here and he was nice enough to kind of like show me and and that's where kind of crop steering and my life came about you know as he he taught me how that went um and so we were talking and he was like man you know he's got a a bigger facilities like 100 irrigation zones and like this is a lot to manage you know trying to do the crop steering with rockwool but managing your own timers um he's like it' be you know you guys already use sensor you know you already are controlling our sensor data you're already controlling our valve data wonder if there's a way that we could make a program that kind of can help automate that and so that's kind of where the idea came about and you know it was our basically what our first rundown was was a completely sensor-based program so we were pulling in live sensor data um you know from the substrate and auto triggering valves you know we we split up the program into those we we do four phases you know we we do Phase 0o 1 2 3 4 only difference there is is we added in just a little name for a phase zero which is the time between the lights turning on yeah can you dive into phase zero because we didn't go over that in P1 P2 P3 yeah yeah what is phas zero yeah it's not like a huge thing it's just uh it's just a name that we put in to help differentiate for control purposes um between the time the lights turn on in the morning and the time of the first irrigation event of P1 of the day um and so usually that's a certain dryback additional dryback percentage that we're looking to achieve um and really that what that's telling us is like hey the plant has started metabolizing it started photosynthesizing it's rocking now you know now we're good to start irrigating and letting it you know use the nutrients we're giving it why why did you guys decide to do a p well for what so so you want to answer that got a be different nobody else is doing it no uh a lot of things were um over so this has a big use case for like greenh houses specifically but also with with indoor too like if you happen to like if you trim you know or you spray you say you defoliate um you know week two week three or you spray you know every once a week or whatever after you do that the plant does not transpire as rapidly as it was doing previous to that it takes a couple days for it to get back to where it was and so in a situation like that uh if you continued with a just a straight Irrigation Timer schedule afterwards without taking that into account um you're going to end up overwatering it'll be like a Snowball Effect because it didn't dry out the amount that it usually dried out now you're watering more which then causes it to not dry out more you know than it should have and that just continues on and on and on same thing with green houses if you're in a cloudy day you know cloudy week you're not going to transpire as much um and so having the ability to because we already had the data having the ability to see okay the plant is drying back it's it's it's hitting the level that I want wanted it to hit before I start irrigating we thought that that was pretty useful um so that we added it in mainly as just another tool so if you want to use it great so your system like your software mhm calculates based on climate and will adjust the P1 which is your first irrigation event based on the substrate water content yes and no yeah so the the climate part it can it can yeah yeah we we are tracking all the climate data um I how far do we want to get I guess we're not going to talk about the co-pilot just yet I mean you can you mean we're here yeah you could talk a little bit about it and we could touch on and move on we take a quick break yeah for sure right all right crop steering 1.0 vers kind of like 2.0 right yeah so 1.0 like I was saying 1.0 was our first attempt at creating a program that could help Growers crop steer you know we did base it

solely off of live sensor data um and that ended up causing it worked well for a lot of people but it also it caused some problems for others um the big thing to touch on with 1.0 is it was originally geared you know honestly for people who knew exactly what they were doing with crop steering and were were trying to have a tool to help them do that at their facility um so I think I think I mentioned we might have I think we oversold it to be honest with you um selling it more of set it and forget it kind of more automated where it does require knowledge of crop steering and it does require some interaction as your Field capacity changes um so what are the main difference between crop steering 1.0 and crop steering 2.0 so 1.0 I'm going to I I'll list like basically these are the common issues that we we worked with customers for almost 2 years on this um so we got a lot of feedback on it yeah and I want to mention that you guys are doing something that nobody else is doing right you guys are automating irrigation strategy you know for a specific crop which has never been done before so of course you guys are always you're gonna make mistakes and and you're gonna have to you know redo it so uh that's I mean the big reason why I have you guys on is just because of what you guys are doing with with this program and I think it's going to change the industry I mean for sure hope so sorry to interrupt you no no you're good thanks but but that what you just said that's exactly you know why we rely we relied heavily on our customers you know to give us a lot of feedback and that's how we made you know co-pilot you know 2.0 uh was based on that feedback you know based on issues that I experienced based on issues that our customers experience and and relayed back to us you know with with that original program the interface was a big thing you know it was real boring you know it was just a white chart input you know where it's like here enter in exactly what you you know what you want your shot sizes to be what you want your drib back percentages to be so if you knew what you were talking about you knew everything about it already great you could enter that in but it was it also functioned like a black box so like you didn't really know what was happening if like you're like okay I I know I think I want this percentage because I think it's going to do this but you had no way of knowing until you programmed it in and then waited to see what it did to your plants the next day so you were like putting a lot of trust into a program that didn't explain to you at all what it was doing or how it worked CU it was it's actually super it's actually super intricate on the back end on how it was programmed um to to work um so that was the big thing was the the user interface the visualization of how it was going on we wanted to address that with with co-pilot um there was other issues with because it's a sensor trigger base we had fuel capacity you know as you guys know fuel capacity is not stationary it changes uh sometimes every day you know as your roots grow into the substrate um as you you know mainly from Roots taking up space volume inside the substrate and from you know when you when you dry back real real hard and then you go to reconstitute it again eventually you start losing you know overall volume holding capacity in the substrate uh that you kind of never really get back and so you know as we notice this big big time uh when you're going in small pots you know one gallon pot and you're you're starting to get week five week six most of that pot now is roots at this point um and Roots while they hold water you know in the cellulous of them the the probes can't read it just like perlite so what's happening is it's like you're adding perite into the substrate essentially and so what would is end up happening is your fuel capacity would drop you know from 55 down to 54 the next day then 53 then 52 and that would continuously happen um and we had the way we set up that old program was you couldn't move on to the next phase until you satisfied whatever you programmed in so if I said you know I want to for phase one you know if my fuel capacity Target was 55% it's not going to move me into maintenance phase until I hit 55% like sensor reading and if the sensor couldn't actually read 55% it's going to continue to try to ramp up until light you know until the batch tank is empty essentially so it's just draining batch tanks left and right yeah unless you went outside of the crop steering program and you set up some sort of uh overrides but they weren't built into the crop steering program so that was a that was a mistake which is why you you know kind of 1.0 you had to be an experienced

yes yeah yeah you you you had to know what you were doing to use that program properly otherwise it could cause a lot of issues um we mentioned earlier you know that delay with cocoa um this is an inherent delay and that that delay actually gets bigger the larger pot you use so if you're using like a 5 gallon pot we were seeing delays of 10 minutes you know sometimes between when the drippers would go um and the reading would pick up we did find fixes for that where it's like use higher flow drippers and it you know worked better but that's not what we want you know we want the low flow drippers we want the even saturation not channeling um so that was that was a big problem because we were a sensor-based program at that point so you were always overshooting it just seemed to happen very consistently when growing in Coco so that was a big thing we had to overcome because I would say the majority of the industry uses Coco um so it was in my opinion not the greatest for Coco I think one of the big lessons though is just you really can't use real time sensor data for the entire program right um so when we dive into 2.0 we'll talk about how we use sensor data MH in a different way instead of real time so yeah and real quick I'll just wrap this up I don't want to go on for forever all the problems but they do become relevant in what we address for 2.0 um we didn't have the ability to flush and we didn't have the ability to disable maintenance phase um so you were getting basically you had your ramp up and you had maintenance no matter what you could shorten the maintenance phase but it's not the same um if you if you just get rid of a maintenance phase when you're trying to stack EC and you don't have a flush your EC is going to go through the roof you can't you there's no way around that you have to be able to flush something out if you're going to get rid of that whole maintenance phase and just go to a straight dryback to be able to have like a 30% dryback um that was a huge huge are you saying maintenance phase is like your P2 yeah yeah I think it's I think it's important to to to quote the P2 just cuz they'll understand yeah for sure so maintenance phase is P2 yes okay so you were going in basically with our with our 1.0 you could go from P1 to P2 and and to P3 that was it whereas this is something that Dylan you know brought up this was like one of the main things was you know you're trying to steer generatively in the first three weeks um you can't and you're trying to stack EC while also providing the largest dryback you could possibly hit the only way to actually do that is to just have a P1 and then just dry back from there you know no P2 at that point so you're giving the plant the most most time with the lights on to actually dry back and again if you try doing that um over course of 3 to 4 days your EC is going to climb to a bad level you know way too high and so the only workaround around that was to just get off the program and go to a timer based solution which was what we were doing for a lot of people is reworking their timers specifically for those first three weeks and then they could go back to the program again um 1% do size was a thing that we put in there that was a tough one to overcome because uh you know you have to calibrate everything you know everyone's dripper sizes are different everyone's got a different substrate um different environments you know all that and so what's 1% for some people might not be 1% for other people and of course you could go off calculations you know from manufacturers and stuff but when we did like real world testing it was never like the volume that they say is for you know in a block or in a a pot it's it's it might be close but I've measured so many countless side by side you know tore apart all these they never I've never once had even from the same batch any of them weigh the same you know so there are different volumes in every one um and so to to kind of account for like okay what's what what what derper flow what what is what does 5% mean you know shot sizewise what does 5% mean we had to Cal we had to Define what 1% was so we had this like complex way of of running your irrigations and time it and measuring what the rise was and then inputting that in it was kind of a pain um and then the last thing was no EC targeting so big part of crop steering is substrate EC um you had to do that manually which it was doable you know like I said through P2 you could adjust those maintenance shots and and or or adjust your uh input EC but but they would have to know how to do that cuz the system's not directing you one to it's for an

experienced exactly guy that understands Precision Irrigation strategy yeah I mean the goal was to to get rid of the the charts and the graphs and the spreadsheets in the math yeah we just didn't quite hit it with 1.0 and then that's you know that's kind of what we went back to and we looked at building it again with 2.0 yeah and that was the thing we couldn't just make an editation because a people were using it and B the the changes were so vast that it's a whole different program at this point so we started building 2.0 you know we call Co co-pilot um why do you what what what why do you call it co-pilot um yeah basically because it's it's guiding you or giving you it's it's like it's like having a wingman right it's giving you the when we dive into it we're collecting all this enormous amount of data and then we're using that data to give you suggestions and so it's your co-pilot we're just suggesting that you change your P1 timers or you uh stop irrigating an hour earlier you know so that's kind of like that's kind of you're the grower you know this is not this is not meant to take the job of the grower we you can't trust technology like that just until um this is meant to be your your assistant you know this is meant to help people who are you know a trying to learn crop steering and get better at it either on a small scale or people who are familiar with it and are running big facilities but they've got 300 graphs to look at a day you know and they don't have the time a day this is meant to have that assistant there to be like hey I got you like you're programming me you're you're telling the co-pilot what you want it to do and then it's going to do it for you and help you out I think what I like about co-pilot is it's not just making the changes for you it's telling you why you should make those changes so it's a tutorial as you're growing real time right like as you're working through your cycle it's like hey your targets are this you should alter this to achieve that effect and so it's teaching people to actually learn how to do this rather than just doing it for them and they don't know why the timers are changing what's happening it's exactly it's a tutor for you which is really cool that's what we were going for cuz we dropped the ball on that the first time you know we were like we didn't give any instructions on how to do this stuff and we didn't people weren't learning they were calling in and we're having to do private sessions you know teaching them how to how to use it the computer isn't growing my weed properly what's wrong yeah and so we always say it was a black box like you just put some variables in and then it just does its thing and you don't know why magic yeah it's like magic and so we really wanted to get rid of that and bring visibility into everything that's happening make sure you know when every single irrigation event is going to happen and why it's happening right and why you need to change it eventually after reading the suggestions enough and applying them it's going to click in your head and you're be like oh okay it's just like a live tutor if you will um so that that's a big part of of 2.0 the change we did was we made interface way way easier to use honestly way more appealing um and and again you know it's meant to teach as well it's not just meant to you to input things in and it works like magic it's meant to show you exactly what's happening um and with with that new UI uh comes is this the interface right here yeah I'm going to sec I'll get this going so this is our our our new portal here um this would be oops yeah this would be like a dashboard here so basically you would go up to the you have your own irrigation tab now and you would go straight to the irrigation Tab and here is again this is all formed from user inputs uh you know Sean you helped us with this one right here um having a a dashboard where you can see all of your programs all of your timers you know so um because you don't just have to create a co-pilot program you can also just do simple timers as well and then this gives you a screen that shows or like a a timeline view to see these are all my irrigation events that are currently happening what what's the difference between the blue dashes and the green ones they're just different programs so so they're broken up in different colors for every different program so you can visually see at a glance like that's one program this is another program this is another Zone one zone two okay yeah so if you can see here I have like one program is a demo here and this is a custom timer demo okay if I add another one um it'll be a different color or uh yeah it'll come up

come out in a different row a different color all right yeah basically I I'll I'll add one here a sec but you'll see it'll it'll just keep stacking and then you the big thing of this is you can see you know when valves are overlapping and you can time them properly because you don't you might not want valves overlapping due to a pump or whatever like that you're overriding your flow rates like a lot of when we design facilities we talk with the Growers how many rooms would need to irrigate at the exact same time off of the same tank and so we build the tank the pump the piping everything to accommodate that so if they override that and they see oh I have three overlaps and I was only Built for Two flow R will be the PSI will be off and then we won't get emitters properly irrigating yeah so just to give you like a quick you know example this is like a new interface here so like this is where you're going to go to set up your timers um if I could fit it all on the screen I would but I can't so I got to scroll a little bit um but as you can see now instead of having all those fields put in we've got everything broken down into phase one phase two and we have a flush Edition here with the ability to enable and disable any of these when would you use the flush so the flush is going to be used and specifically when the first 3 weeks of flower during stretch when we are trying to stack our EC um to a controlled Manner and maximize our dyb backs so like we were just talking about a little earlier if we just go to this graph here here's our ramp up mhm P1 yep P1 if I want to have the max maximum dry back I have to start it when the lights as as soon as that's done like I have to get it up to a certain level it has to have water the plant needs to survive Fu capacity yeah so we have to hit fuel capacity but then after that if we just immediately start drying back the more time that your plant is not getting water while the lights are on it's going to drink way faster than when the lights are off so typically what will happen is you'll have a much steeper decline here and then it'll flatten out overnight um so in order to get the maximum dryb backs that we potentially push we need to stop it right after P P1 here um and like we were talking about if you did that and you just ramped up to P1 didn't push a ton of runoff because you just hit your fuel capacity and then you immediately went to dry back you're now not pushing runoff for several days um over and over and over your EC is going to start to just Skyrocket at that point so we need a way to bring it down without sacrificing this time you're using the flush after week after you're done with your with your generative no it's after your P1 shot your P1 you're breaking Field capacity with your P1 like we talked about earlier so I could I could show you here so if I turn a flush on the graph will update and that was one of the features here we were talking about so it's now added the flush in it's a short flush I could change this to you know you can see it make it 30 minutes and so now this flush here just increased so it's always going to come right after your PE one um why is because you're already at your fuel capacity so if you really want to get it flushed down just to lower EC just to lower EC you're just flushing out excess buildup salts inside the the substrate um having this flush here is necessary because what you're doing now is you're allowing the substrate to get flushed out pushing all those buildup salts but look how it doesn't take that much time you know it's it's a lot faster you're basically accomplishing the same thing here as you would running this this whole cycle um so so you're basically think of a flush as like a super condensed controlled P2 now when you're talking about a flush what's your EC value with that what do you mean like what are you where you getting your if you're doing like a flush usually flush means a low EC value 1 EC or 500 no no so in this case you're actually just going to keep the same input EC by FL by flush we're saying we're going to push a lot of runoff in Med rather than because it'll keep stacking and stacking and stacking we keep putting three on top of three on top of three so you're just going to get excess runoff when you hit fill capacity you're going to give excess runoff M and that's going to lower the EC value in your substrate and then you'll continue with your P2 correct okay or you don't have a P2 at all okay so really the way I like the way we've designed this and this is just kind of how it typically goes is you're either going to use flush or you're going to use P2 to manage your EC rarely do you use both other than L very very late flower when

you're finishing and you're just trying to steer a little bit more generative but maybe your EC got too high you know but your plants are huge for your substrate size and they're drinking a ton so you need to keep a P2 in so that you don't end up with like a 30 plus per dryback um if that's not what you wanted so that's a very like Nuance case that you're going to use both but essentially these are going to be interchangeable so like if a P2 is uh if a P2 is active typically you will not have a flush active and if a flush is active typically you will not have a P2 active yeah turn off P2 right now and we'll see what it does to the graph we're using the lights and the natural transpiration during lights on to get that hard dryback dude this is amazing so you won't you don't this you're setting your timer right now yeah yeah yeah so I'm I'm editing what I want my timer to be and I can play around with it all I want I haven't saved anything so that's a cool feature of this is I can cycle between all of these pages and update my targets and do all sorts of stuff to build it exactly like I think I want it and it'll show me exactly what I'm going to do and then at the end I can apply it or I could erase all the changes and go back to the way it was you know and co-pilot will make recommendations based on the data that it's getting from your substrate yeah so I'll explain that real quick here I'll just do a quick quick explanation put it back to the way it was so what co-pilot is this is our fourth tab here suggestions the AI will essentially take this is your real data oh this is the real data so you can click and see your real data over on any of these Pages you know so you can overlay your data so what this is here this is a the target data so this is what it should be based on what you have here this is what's actually happening here so you can kind of overlay that stuff so what co-pilot does is it takes your real data here and then it Compares it with what you want to happen through your targets page so if you go up here here you have like four little tabs mainly are using these two here yeah maybe run through that yeah let's go to information and schedule and targets okay um you got you got yeah I'm a dummy so help me out here so when you first go to create a program you're going to have a form that pops up as step one here right uh this is collecting basic information and what this information does is it helps us generate default values for you um and populate set timer programs so for the customers who don't necessarily know all about crop steering or they don't know what their target should be or anything like that we've programmed in what we found to be you know pretty generic very usable uh timer sequences that they can use still get pretty good success and you have one gallon pot I see there you can change that three five correct so you can you can select rock all the different rock wool types uh and and different cocoa types here and each one of those cocoa types and substrate types have kind of some different recommendations kind of what you have in here right we're just we're collecting that same data but you're inputting into software so incredible so basically we've like taken the default volumes and again they're not perfect but we've taken the they don't have to be it's the cool part so we've taken the default volumes like for all of these substrates and we have that then we are also selecting I'll go through it here you're going to select your your your probe your valve that you're trying to control or valves you know whatever however many it needs to be um we have a steering method so again this is just for populating default so at the current time that you're activating this program are you doing vegetative or generative and what that's doing is it's going to tell us like okay these are the target values I want or these are the target values I want um then we're selecting you know your dripper flows um number of emitters so that's 0. five is that 0 five what if you have two drippers per plant then it's 1.0 right again we are actually making an update right now cuz talk got you guys yeah so we're making an update on this where we're changing it to the dripper type how many drippers per plant and the total number yeah cuz that's important I use so me I use 2.5S for a 1.7 gallon cocoa pot straight Coco yeah so in this scenario you would just you would do the math yourself and say one cuz it's 2.5S but we are changing that make it a little bit more intuitive sorry we were changing that to make it more intuitive that's a lot better 2.1 and that's that's the thing you know that's what what I like about this

company is like our guys are able to just make changes like super quick you know when we get the feedback in um we're like hey yeah that makes sense the benefits of being strong in software yeah I had a couple basic recommendations after I got a tutorial on this a couple weeks ago and the changes were implemented within a couple days I was all right awesome they're pretty good changes so they like yeah that that needs to happen um so so yeah I mean and if you're using you know like our fertigation skid that we have um you can select a dosing recipe for direct injection as well through here and it'll specify like what recipe is going to get dosed um lights on lights off time and then you have the ability to to schedule alerts so you can dose your recipe but is that more with your skid yeah yeah if you're doing direct inject straight to the plant yeah yep okay otherwise you would select the batch tank well yeah the batch tank is going to be selected through the valve whatever valve you select yeah okay um but as you can see here like whatever you click on um you get tool tips as well that's something we didn't have on the other one where it explains you know exactly what it is that we're trying to collect why you why we need it and what we're going to do with it um so moving on you know to the next if you press next after you enter that information and you will have all of these values populated you will have a graph populated for you based on the information you put in it'll give you your schedule correct a good starting point a good starting point you can if you know what you're doing and you're like oh I don't agree with that feel free you're you have full customizability you can change anything you want in here and you have 4 foot 4x4 rock wool with slab XYZ size yeah we're we're adding a custom option in as well too so that if you've got like some weird wonky setup you can kind of put in whatever you want but you do have the 4x4 with slabs in there I believe so yeah and the information portal and that that changes your schedule that's amazing yeah and so again you have this interactive graph is going to be through all of your pages same thing um it will be different for each one so like on the targets page you will see the graph update based on the targets that you're setting run through those real quick yeah so we already kind of went over the schedule so on the targets here we collect the same information we did from the other one just in a more simplified form so for phase zero we're looking for your additional dryback Target percentage uh phase one we're looking for your ramp up shot size percentage your ramp up shot dryback percentage and your Field capacity and one cool thing here is like if you didn't know what that was you could click it tells you what it is over here and then it also highlights what it is on the graph so if I go here my ramp up shot you can see it's highlighting just specifically the shot it's kind of hard to tell because of how you know uh minimal this 1% dryback is but you could see it's highlighted those there do you so for that P Z for the greenhouse Growers out there mhm and if they say it's a colder night or a cloudier day it won't activate P1 until it gets down to that dryback percentage it depends we've gave you the option for that so I'll get i'll get to that in just one okay yeah yeah one sec when we get to the suggestions I'll that's a big part of it actually um so what this does though is this everything you click it highlights it shows you what it is um um and if I go to edit anything here um you know like my maintenance drive back percentages as an example I can make that you know five and this will update and it's now changed it shows you exactly what you're trying to do now um what was that at three or two before and so now we'll move to suggestions and and again you can always always overlap real data at any point through these so here's where the magic happens so what co-pilot is doing is it's taking the the details that you had on your schedule page like what's actually happening and your your you know those values and then it's comparing it to what your target is what you want your target to be um and then it's figures out a way like changes that you can make to both targets and schedule to bring those two together um so in a way this target page is you programming AI to do exactly what you want and it's going to manipulate everything else to make that happen so when you have suggestions which they'll come every 24 hours that's the way this works that was a big thing we should have probably touch on is sensor base was a big issue with the last one for a multitude

of reasons so what we're now doing is timer based so as you can see you know those were those are timers here so these events are going to happen no matter what you know you're not going to have a drain batch tank issue anymore you're not you know you're not going to have any You Know Field capacity issues you're not going to have any weird delays that you don't want to it's not just going to irrigate until it hits the the water content that you say you want exactly what it's going to do is it's going to look at what you wanted it knows what you want to do and it's going to look at what you did and it's going to say okay you didn't hit your fuel capacity it's going to give you recommendations it's going to tell you it's has that's where the advanced like calculations come in it's like okay we've analyzed the trends you need to change this you know this percentage to that or you need to change you know this time to this to hit you know the goal so 1% shot size out the window you don't need it analyze in 24-hour blocks yes so 24hour blocks in what three or four hours at the end of The Block is when you get the suggestions and you can apply them or deny them at that point see with realtime sensor data right remember the delay we were talking about um Coco and you had that 10minute delay let's say well now when you're analyzing the data overnight we know the delay CU you know we saw how much we fed based on a timer and we saw how long it took it doesn't matter whether registered immediately or 10 minutes later you're still seeing those same Trends on the graph and you can analyze that if you want to grow in a 10 gon cocoa pot I don't recommend this with 3 emitters by all means go for it you know if you have a 45 minute delay from the time that you we actually read it it doesn't matter it'll learn it'll learn it and it'll say okay I know you've got this delay maybe it'll tell you to maybe we can make it say hey maybe change your setup a little bit but you know um but really here's the what what you were just talking about Sean um is these are the suggestions it breaks them up into the phases so like P1 P2 and it'll tell you first off we make it very polite you know consider doing this so we don't want you know so basically this is telling us right now our Targets this is what we have and this is what we want and you can see they're close but they're not it's not that so how do we get it to this how do we how do we make this here um turn into this and so what it's telling us to do in order to do that is to change our fuel capacity Target from 45 to 60% because copilot has detected that 60% is closer to your actual fuel capacity so it's letting you know like hey you know your act this is at 45 and you're actually hitting up here at 58.6 or actually no it does go up to 60 right there so um and then for P2 it says consider changing your P2 timer quantity from 4 to 6 to get closer to your overnight dryback Target and increase the amount of P2 irrigation events to get more runoff to get closer to your target EC so that was actually one thing I kind of forgot about here Target EC pretty [ ^ \_ ^ ] sorry pretty huge adults here pry pretty huge uh having a Target EC here um because that that was I mean that's really really intense for for any software a pretty big deal that I think that was the most impressive part about this whole software change to me is is you're not just taking water content to effect to crop steer you're actually taking e substrate EC into account so we have the ability to stack or run off and drive the plant how we want to versus what everybody else has tried to do and what what 1.0 was before is just water content we couldn't actually drive based off of EC and that's what I didn't think would be possible for a very long time and here it is like yeah it's awesome it it worked out it it's it's pretty awesome it's incredible super proud of that one um but yeah basically it's telling you what you need to do so the way we do this is we can we I can kind of explain a bit on the back end like what it manipulates in order to adjust your EC without sacrificing your water content so it's has to work together with both of those because there's easy ways to manipulate your EC and sacrifice your water content so we had to find a way to make them mesh together um which I go over here in a sec but says consider uh changing your P2 timer interval from 1 hour 50 minutes to 45 minutes to get closer to your overnight dback Target and get more R again these are both EC recommendations here and dryback Target and the recommendations you don't have to implement them if you don't want to no no so if you're if you read these and you're



like eh I don't agree with that you just press ignore um but if you're like hm that might be that might be something you actually have the ability to preview So based on the changes that it's uh implying it wants to make you can press preview oops oh I think I messed something out by tweaking everything but basically what it'll these are what it's it'll it'll preview what you're going to see tomorrow exactly so well this is that's actually what it just did I just kind of messed it up cuz we were messing with things there but basically you saw the graph before where it stretched all the way out to here when I pressed preview it applied those changes and it shows this is what your new graph will look like at this point um so when I overlay my substrate it gets a hell of a lot closer as you can see here so um basically it is these are the tweaks that it needs to make to bring those two together um and and and same same with EC as well you know you'd be able to do the same thing um but yeah so if I want to apply them so we could take a look real quick just to show you how it works um I think it was adjusting our uh to schedule I think it was adjusting our yeah an hour and 50 minute interval hour 50 minute here and the number frequency of those P2 shots is what we have here and then in our targets our fuel capacity is at 45 it it'll give you recommendations of changing any of those yeah so so irrigation events um times everything targets it tries not to adjust your targets because that's what you want unless it's something like fuel capacity or something like that something that changes if it if it sees that you're there's a 0% chance you're ever going to hit your target cuz you can't you know then it will recommend you change it to something you can hit at that point but usually it's going to manipulate your actual timers so if I press apply it's it's now applied them this just happened because I don't have a controller hooked up to it oops just missed um so now if I go to my targets my Field capacity is now 60 um and then in schedule we're down to 45 minutes with six frequency there and this is what our new graph looks like so when I overlay my moisture content this is what we're getting a lot closer and the way this works is it analyzes it every 24 hours and tweaks it and fine-tunes it so over it might not be perfect day one but over a period of like 3 to 5 days you're going to be spot on especially when it comes to EC and talk about when those suggestions are populated what time of day compared to when your lights are on so that was actually something we just came up with or came across actually that we're we just put a fix in for is basically it would happen right at the the last the last bit of that 24-hour cycle is when it would give you those recommendations and before we had it set where it was like you had about what like the three-hour window or something to apply those and if you didn't apply them it would say uh suggestion expired and you're there's no more suggestions you can't you can't apply them anymore and the reason for that is you got to think about it it's like every 24-hour period it starts analyzing again and so like it expected you to make those changes that it told you to make and if you didn't do that now it's having to reanalyze again because you know you're you're you didn't make those changes and now you're 24 hours yeah you don't want to do them halfway through a day and exactly mess up your your the anal the analyzing of that 24-hour period for the next day exactly but so what we've done now is we made it to where because people were having problems like oh with my lights you know uh it was at midnight you know so I got suggestions at 3:00 in the morning or something and I wasn't awake to apply those um so what we did was for right now cuz we we will have a feature called autopilot here what hopefully in the next couple weeks or so that will Auto apply these features so if you've deemed that you trust it you could just turn on autopilot right here with this little uh little toggle M and it will just go ahead and auto apply them daily so all you need to do is just go in and say yeah things are looking good I think building trust in the system first before we go into full giving the customer the option we're testing it right now but just I mean coming from 1.0 and the feedback we got we need to deliver something that people believe in and trust and so the no more back black box now you know when every irrigation event's going to happen spelled out for you here's every single event that's going to happen to achieve your goals uh and then the suggestions coming over and once somebody gets comfortable with the

suggestions they're oh yeah that makes sense that makes sense we'll build that trust over months and then we'll enable the autopilot so they can just Auto apply those suggestions right yeah but for now uh we have extended it so it's like you can apply them at any point when you wake up in the morning but it will give you a warning that says hey just letting you know you know this is going to skew the data a bit because you didn't apply it in that window that couple hour window when we need ideally you want to apply it right before lights on you want to yeah you want to apply it right when it within the three-hour window that they're available um so because it's and when is that 24 hours calculated so if it's like if your lights are from say 8:00 a.m. to 8:00 p.m. when is it does it start 24 hours at 8:00 a.m. is that what it is question I yeah that's a good question for our devs um I believe it's from the time of program creation so don't matter what time you know cuz you could create a program in the middle of your night cycle um and it's going to recognize that you're in the middle of your night cycle um so I would assume it would be from from that but I'll get clarification on that um one last thing I want to kind of touch on real quick is what we were talking about what you bring back what you had said about I was going to ask you about that with you know being a greenhouse grower you we're dealing with a lot of different um variables in climate and that will obviously change your P1 event so what what does the system do to to counteract that so we have the ability to prioritize what you as a grower want so some people you know they're they're more concerned with circadian rhythm and they want to make sure that every day at the same time we are starting our P1 irrigations whereas other Growers they have more of a nuanced use case for it where they're like oh I would rather I care more about that specific dryback percentage that's happening um and and so I don't care exactly when it starts I want to make sure it's going to start after I've dried back that specified amount no matter what though uh I will say the program is going to try to get all of it lined up anyway so if you're additional dryback you're just not hitting it in that time window it's going to tell you hey maybe you need to adjust that that amount um and would that come off of your would you just would you stop your P2 event sooner in the day so you could have a larger drive back of P3 correct okay um and so it'll there's a the tool tip here so like you can click down and you can either prioritize um you could prioritize start time or you could prioritize starting uh water content what is a vwc stand for volumetric water content okay what what does that mean that's the water content readings that you're getting based on volume the volume of water okay yeah so like 55% or 60% of this substrate is water got you um and so you can choose between these and they'll be different suggestions for each um and based on applying it the way you want they both will do the same thing minus or you know within that reason you know the the start time there and so it tells you here too it's like uh basically when you prioritize your start time you're basically telling co-pilot that you want to make sure that your irrigation events start at a particular time every day regardless of whether or not the water content percentage has dropped to your additional dryback Target um same thing you go here and it'll tell you like it's it's this isn't based on time anymore it's now based on your water content of your media yeah you just want to make sure your irrigation events or they want to you want to tell co-pilot that you want to make sure your irrigation events start only once you've achieved that additional dryback and it will modify your irrigation start time every day yeah yeah that is really cool that is really big for Greenhouse Growers I mean indoor Growers you're getting similar climate and same usually ppfd energy to the canopy CO2 levels everything's real similar every day um with Greenhouse I mean it's it's fluctuating every day y so having that ability to to change the dryback based on not just time but based on um water content changes the game I mean literally saves hours of time for the grower you know hours that's that's what we were we were trying to do here is is be a real useful tool yeah so the end goal is autopilot obviously that's yeah that's what I want to I want to talk about autop in a large facility you know you can imagine when there's you know let's just say 10 rooms eight zones per room you got 80 timers or more than that you got your P1 and P2 timers set up so it's just

eliminating that looking at grass and adjusting timers it's a full-time job for at least one person in a commercial facility to and a stressful one analyze graphs all day long make the correct decisions hope they're making the right decisions to alter the next day's events and then they're constantly learning every single day okay well I kind of messed up here I wish I would have done this this has a lot more data behind it um and can shave off that time and labor again saving labor in the facility and accuracy you know consistency yeah instead of a week of trying to dial in your your dryback you can get it done in a day or two kind of like Athena Pro Line you know if you look at it it's like you're taking a beginner grower and you're kind of making him a pro right off the get you know it's like it's it's you you just follow the follow the program yeah and that's that's the thing you know programs like this um or whatever you know programs you want to follow like for your Target set points we're not telling you how to grow here this is this is still we're not trying to tell you how to grow we will help you know give you our recommendations but yeah if you're using another program that says like you want a 3% additional dryback and a 6% ramp up shot and a 20% dryback this is this is all up to the grower here you know you program and what you want to do and it will help you do that that's really cool you could take your Precision Irrigation guy learn and then go enter what you learn here right into the program that's awesome exactly that's awesome you guys are changing the industry man now let's move on to blueprint what what is blueprint I'll grab this one all right so blueprints are you've heard crop or recipes we we're calling them blueprints once again we have to add p0o call something different but so blueprint is a crop recipe it's it's everything that uh you can pre-program everything so it's all your climate data your temp humidity CO2 your lights your light level maybe even Spectrum um your irrigation events your your recipes even and then now that we were're adding even all the manual things that happen uh throughout the crop cycle like Tas and pruning and trimming and all that stuff so uh you pre-program all of this and over the entire crop cycle so I'm like weeks week one this is how I went all my all my set points uh then week two or you can even go more granular or you can even scale I program week one and it'll gradually over the day scale a week two so you're pre-programming everything uh the difference between recipes like in a in a in another cultivation management platform and blueprints in grow link are we use these to control everything so you're pre-programming it and it's controlling your environment to those parameters um so we can probably pull this up too but yeah is it could you is it like co-pilot for climate um no it's really just not yet not yet um no but that's the direction right that's the direction for sure so it's the beginning of co- pilot for climate yeah before blueprints a customer would have to go in each week and change their temperature you weren't able to pre-program your entire crop cycle ahead of time and so now you can pre-program everything and then every week it'll automatically change temperature humidity your CO2 everything is automatically ramping up changing doing what it needs to do without having a user input on a schedule oh I got to get back to the computer today I got to change all my parameters just I mean if we look right here you you kind of have the weeks I think laid out or or you have right here veg I want my temperature to be between 702 and 82 yeah flower so this is say this could be four stages that could be pre-programmed and automatically change without any that's amazing interaction so you can do that now yeah absolutely yeah we could pre-program what page is that um like two one you prebuild your climate recipe for an entire growth cycle and just hit go and it automatically changes week by week or how whatever day period you have that changed on yep and where it gets really cool is um we just acquired a company called flow Envy which is your metric integration uh all of your sop building tasks uh they even have some light manufacturing and sales in there but now we're able to bring in all of your Harvest data your your yields uh and lab data and all this and attach it to that blueprint run so now here's the blueprint here's the recipe here's the result I got and now I can do constant Improvement so I can tweak it improve it then the goal is to have Co co-pilot saying hey you would have got we're just not there yet on the climate side of things but the the ideations for is now

we know the yield on this particular blueprint we can look for anomalies and look through the data and figure out why and give you suggestions on how to improve it the next time you run that blueprint can you record a grow session like say a grow cycle can you record that and save that as a blueprint if you're manually changing them week by week and altering as you're building yeah the way it works is you would still pre-program your basic blueprint but every change you make throughout that crop cycle we're recording and at the end you can choose to save it with all of the changes or choose what changes you want to save it with got it I absolutely crushed during this one I had a lot of manual input during it but it worked out really well you don't have to remember every little change you made you can just hit save just make those all part of my blueprint for the next time I run it um now blueprint covers all climate aspects anything else other than climate like you're talking CO2 temp humidity ppfd yep anything else um well you'll be able to you'll be able to start interacting with your so I'm actually creating one right here for us so you can kind of see so basically I just did like a little test I'm adding a stage of growth in so we're doing the veg state for example like veg week one um should probably change it so it's like seven days you choose what growth stage it's in you set your environmental set points um got temp day temp night temp humidity day humidity night VPD VPD VPD night CO2 lighting set points with the ability to do ramp UPS so like if you were trying to simulate a sunrise or sunset you can do that here you can change your light intensity of however much it's going to be you you changing light intensity uh you you're connecting to the light controller yeah cuz we we control everything you know so so you'd be able to put that in so now you have are you measuring ppfd mhm yeah yeah you are yeah that one wasn't set up that way but yeah we we'll have a par sensor in the okay perfect yeah and then you multiple you would go through and you know create you know veg week one um and you could make veg week to you could just keep and so forth yeah just continue on with instead of a like a a zero through 100 if you have a a par sensor in the room can you set it at a ppfd level so you can say I want to be a 1,200 sure and it'll drive yeah which is more important in greenhouses cuz we we do light throttling in Greenhouse so if you have cloud cover coming over MH we you can make the decision to supplement it with lighting and keep a constant ppfd in the green ramp them up and down that's gamechanging yeah you basically it saves all your set points and it auto applies them and to your to answer your question it's it's climate right now but now with uh with the irrigation Precision Irrigation you'll be able to go in and put your set points that are in your co-pilot program right into your uh blueprint it'll be on so they'll work together yeah that's what I was so that way it'll automatically change your set points your irrigation set points over time because they'll need to change based on the climate and then that's it's going to have to be backwards that's what we're working on is the backwards compatibility because suggestions you know the AI is going to change up your set points your co-pilot based on the information from your blueprint we just have to merge the two so we're working on what is a really intuitive UI so it's easy to use that's what we have it all works we just got to figure out the best way really good blueprint a grower can set in all their parameters of their climate you know from temp CO2 everything ppfd and go all the way till last two weeks of flower where they want to drop the room to 68 degrees lower the lights lower the CO2 and just kind of finish it off yep that is amazing and then kind of gets even better so now now you're you're you're putting your Harvest data on it so now I know what my results were from the particular blueprint run and so the neat thing is if you have let's just say you have two facilities and your your coworker over here in the LA facility ran this particular cultivar and got this result and now you want to run that cultivar in your facility you both have grow link you can just grab his blueprint put it in your room and hit play oh that's if they let you yeah this is the same company oh yeah it's a sharable file you can download and send to some else right so if like the way our stuff is set up is each facility has a an instance I guess or a a login I and then there's domain login so the domain would be all my facilities within my so if you're thinking of a large MSO you know each

facility has its own account and then the domain user connects them all together so you can see what goes across all facilities can you export a blueprint to a thumb drive for what if you wanted to share it with somebody if you're a consultant perhaps anything like that right now we don't share them outside of the same organization copy um you know in my head and I don't know if this would be well received or not I I see someday where you could like if you have a friend or you know somebody else you could share your blueprint Mayer for instance who's breeding genetics and this is the best way to run my genetic let me give you my blueprint of how you run your room this is how this genetic runs best on this irrigation strategy on this climate and you could take that on thumb drive with that that cut we and load it up we'd probably just have a share button right in the app share put in who you want to share it with and send it off to them I mean you really what you could do is say if there's a large say it's jungle boys right and jungle boys um has great Growers all over the place but there's some Growers that are extra knowledgeable like roach for example he could set up grow Link at cah you know his Spot Run grow link figure out all those parameters for a year or two build all that in download it into blueprint all his co-pilot irrigation strategies and then take all that and send it to his grow link PL platform in Florida right and now they can download that building into all those parameters that he's been working on for a year or two in Los Angeles and have the same exact thing going on and you're saying that's available already right now that is within a company within the same organization awesome yeah so if you're in MSO you can share all your recipes and all your blueprints across the entire country Changes Everything Changes Everything yeah so you can think over time you're constantly improving them they're constantly getting better I want to run the I got some new blueprint [ ^ \_ ^ ] for you right here I'm gonna yeah exactly that's so that's yeah that's exactly how it works um I'd like to I think it'd be really cool I know a goal that we have is to like that the AI that we have for you know co-pilot turn that make that also do environment and then make it do both I was going to say my thought was like What if you just bring your plants over from veg to flower and you do a slow ramp up right and so you're slowly increasing your CO2 you're slowly increasing your ppfd that's obviously going to change your transpiration rates on the plant and so it's going to be hard right now or maybe it isn't I don't know uh for the AI to figure out what to do the next day if you're constantly in changing your climate over say like a week- long acclimation period right if you're if you're increasing your light in your CO2 obviously the plants are going to transpire differently so it's not really going to be in apples apples day by day but if you brought in it it will so that the way you're you're absolutely right like if if we had that co-pilot in there they would definitely it' be better if they work synergetically together it make way more predictive analysis but the way it's designed now outside factors don't matter so I mean whether it was someone in the room just with a hose just you know going crazy on random plans all it looks at is data it's just looking at data data Trends and and real-time data you know so and making those suggestions and since they change constantly you know it's like constantly updating every 24 hours um it it wouldn't matter to the program but there is a way to streamline it better by combining the two yeah blueprints happen from customers just wanting to have their set points on a schedule I just don't want to go in and change my temp every week yeah you know I just want to do it for that that was the the simple idea of where it stemmed from and then that's and this is where we took it the beautiful thing I think about is not having to remember man that one time I crushed that run I want to do that again what did I do differently got just save it that's that's huge it's got the co-pilot it's got your irrigation strategy with your climate that's it's got all the parameters done okay big question right this the big question can we keep our own data do we have to share our data with you oh with us yeah do we do we have control of our data like does if jungle boys wants to keep their data and they don't want to share it with a company that they might not trust like whoever right sure do you guys give the ability for Jungle boys to keep their data um so first we don't act Agate data right we don't share data you own your data it isn't our

systems we do use data to improve our systems internally um the the only way is there is there is a way that you can run your own server so you can run your own server your own you everything's um ran through our uh like when you set up set it up you can actually put your server URL and you could run a server you own and we have set that up in certain instances so it doesn't bounce to your Cloud right it's your private it's your private uh database and apis and everything that's just for you we have set that up on occasion so not very common but we absolutely have have done it and can do it yeah because I know for some Growers you know prolific Growers or you know like it's a big deal they want to keep their data yeah you know I think it's it's important we we definitely don't share anyone's data though like no we have we have super strict data um privacy policies some people imagine if you're like XYZ grow you're very popular grower and you spend 20 years figuring out how you're going to cultivate this plant and you have this new system in your building that that you're running it and a company is going around showing people your data like it could be a sales guy you can't control it right you can't control every employee in your business and he's going to yo bro like look at this is YZ grower and this is how he's running his facility and I'm not saying you would do that but I'm just saying Could Happen hey hey bro you want the jungle boy program let me send it to you here you know what I'm saying first we can't do that and nobody in our company can do that just saying I get it that it it could happen right I mean and and it and it could be something you don't necessarily I understand that you don't believe in that and that that that should never happen but one of your employees goes off on a whim has control over that database and starts sending it out to XYZ you can't control every single employee right right but there's no way I mean there's no way for that to happen they can't physically export a profile or data and apply it to a different so that's but that's that's what but that's what you just said blueprint was within the organization yeah you can't take it and apply it to like if it was Jungle boys's sorry if it jungle boys's blueprint I there's no way for any employee I could Pro well I'm not smart enough but an engineer probably could but there's no way for an employee to grab either those blueprints or profiles or or there's also the rules algorithms and all that we haven't even covered and apply it to a different installer instance of our of our system yeah um but there is a way you know we can just do a private server like a private server they keep their own data yeah and you don't have access to it yeah that's awesome that you guys have that option right it's not for us it's it's you know there's a higher cost of of Maintenance now when we do updates we have to update multiple instances of our environment versus just a single Cloud instance but you have if you had an update you'd have to go update the server we have to update every instant of you know each one of those servers yeah for each of those yeah we've only done twice in the history of gring okay where people have a private yeah I understand I understand understand it too yeah you know what about what about our hobby Growers our home Growers our garage basements and bedrooms like where are we at we like that's one thing that I think is a big deal and I know they felt left out uh when it comes to systems like these only being accessible to licensed facilities um is unfortunate and what are you guys doing about our hobby guys um so all of our software is available to anybody this is available on the pick controller absolutely yeah so you can do all your your co-pilot stuff with uh with our single little pick controller everything right here and anybody can buy that online yep readily available licensed or not yep so anybody can buy this yep awesome dude that is great and we're kind of going full circle I mentioned that we were hydroids when we first started the company and we had these Wireless modules and that was absolutely for the hom grower hobby grower and then I I think s you know for us to sustain the business we had to we couldn't figure out how to successfully um Market to that base and I think we were just early to Market I think if we hung out for a couple more years like kind of when trollmaster came in we we could have done well in that space so we went way commercial on our Hardware you know so uh and those were big UL control panels I mean just us building those pounds is really expensive and so it's kind of cost you know kind of cost or it

priced out some of the you know a home grow or the the hobby grows and now we're coming full circle so now we launched the pick controller which is a product you can buy on our website that's um what works for commercial grows and home uh the new connect controller is another step there uh so the old controller was the core that was the that we install in the big panels the connect controller is the same power and brain the core but it has all the built-in input inputs and outputs uh so all of your your analog drivers for your lights your re your relays for your valves and your hbac and all this kind of stuff it's still hardwired in so it's not quite as easy I guess to install is like those little Wireless modules or Outlets MH I'm really excited to talk more about the connect control I think that's aame pie equipment in the industry yeah absolutely so it it's really we came out with it to lower our Hardware cost um I I have a problem I always say we make panel shops we don't build our own panels we contract them out that's the biggest cost of our solution today is the actual assembly of these panels it's not the individual components in the panel it's the labor to wire those panels up and so um The Connect controller just brings it all into a single single board so all your inputs and outputs and everything on a single board so there's not a ton of wiring in assembly um we're able to to build those put them in like a poly case preassemble them put them on the shelf and ship out orders so if you think about the core controller are big commercial those are all custom built every single one of those what's the average lead time on a cord controller probably like 3 months three months versus something now that you can just get off the shelf go to yeah go to our website and buy it and we'll ship it and so it's really going to allow us to scale the other controller there's tons of engineering we're working with electrical engineers and and consultants and we're working them throughout the entire install process and we're doing design drawings and and and we're supporting the trades like the electricians and everybody uh installing the product and then we land our guys on site to do the commissioning and training of those systems so it's a it's really heavy it's like a heavy lift every single one of those deals and so the core controller comes with a thick manual teaches you how to wire it all yourself um is available on our website um and at a at a much lower cost or Price let's talk about price on that real quick and how it Compares in the market yeah the controller itself and we now we sell just the controller too so if you want to hang it right on the wall you could if you want to put it in your own cabinet you can uh it starts at \$1999 for just the controller um and it's and we just had a bundle where for \$39.99 you could get the controller plus two climate sensors and two substrate sensors so that kind of gives you an idea on in enure Transformer power everything and so in that case that that's a sale we're having and that that goes up to about \$49.99 when it's not on sale so five grand that gets you substrate climate and the controller in enclosure with all the power you need to and it has you know it has 16 outputs so that's uh either 16 valves HVAC CO2 you can connect any any onoff mhm kind of device anything that's 24 volt or how does it um right so the line voltage stuff you'll have to run through a relay okay and then there's eight analog outputs and these are light drivers so you can have eight zones of lights or anything else you want to uh run with a 0 to 10 volt analog signal speed any of that yep so so for for about five grand a hom grow could be Off to the Races running co-pilot that's everything for less than that I mean that's if you that that would be like two zones of climate or you're averaging them I guess right home I don't think you need the average One sensor is probably fine you could bring that cost down pretty significantly and then you have a commercial solution in a hom grow at a very reasonable price yeah I mean this is an industrial iot controller it's it's not I mean it's beefy so they they have access to now use blueprint and co-pilot at a home grow with how how expensive say if they have a one eight light room or 16 lights or something like that so um on expense of like equip software no equipment is like what about 2500 to three grand I think right a little over three grand probably for the single sensor and we were talking about earlier sensor density is going to be the driving cost of what that is so how many substrate sensors like the the controller it sounds like is around like the low \$3,000 Mark

in the enclosure with the power supply and everything and then you get the climate sensor 700 bucks uh soar at 4 grand there and then just how many substrate sensors you want to use y um and okay that's that in my opinion it's really affordable yeah especially since it's coming with co-pilot and blueprint and you have access to the software but how much is the subscription for the software and how does that work yeah so it's it's Point based and so me I'll describe a point so point is any input or output right so a CO2 valve would be a point right I'm turning it on and off it's one point uh a climate sensor if it had temp humidity and CO2 that's three points so that makes sense like any kind every data we're collecting or any output we're collecting um and it's all around it's on the website I don't know what the most recent pricing is um it it's all around it our latest pricing is around a dollar something a point so if you think about that the connect controller has 16 outputs and and there you go eight yeah but that's that's PR device Point points are cheaper so the do it's it's it's very reasonable I've seen I've seen the 20 some for that home grow I mean it's under 20 bucks under 20 bucks mon a month dude that's okay all day now the way it gets expensive is when you have 500 sensors and you have you know 500 climate sensors and T of your subscription models very reasonable I've seen on very large facilities a monthly bill that is not staggering at all it's based on our we have a per Point cost Cloud cost yeah and it's based on a multiple of that for us to support that and run that it's not based on we're going to increase your yields by we're going to increase your y by 10% we want half of that you know or or even or even by the square foot or something like that it's literally based on a markup of our actual cost to support that controller in the cloud right yeah no 100% no that's super reasonable I see uh 816 light grow spending you know 39 bucks a month to have access to co-pilot and blueprint uh all day bro like we are we are we are playing like let's go yeah and we're we're always working on trying to bring our those the cloud cost down too you know I mean that's constant battle yeah it's super cool it's super cool trying to collect more and more data and not what you guys are doing and you're not cannabis taxing like a big deal it's a big deal and we like at Athena we we got the same philosophy we don't just want to be fair and um and and not take advantage of of the industry so respect on that thank you thanks what are your thoughts on putting this in the international market the connect controller um that's another neat thing about it is we scale with it and go International with it um it already supports all the voltages and you can get the different plug types uh we're working on uh certification just in certain countries getting it in uh you need like C certification for Europe and stuff and so yeah and then then we would have to potentially localize the software as well right so for for me we're breaking into the international market with demer and a lot of our designs we have complex valving and we like to use motorized ball valves from Imperium uh with these devices and everything it's really hard in the international market to find a controller that's going to work properly with our systems we designed so we've had to previously kind of dumb down our systems and having a controller like this internationally would be a massive benefit for us and the Growers right yeah yeah we're shipping it I mean you can buy it on our website and we're shipping it worldwide right now awesome same thing with the pick controller the pck controller has all the certifications already it's just we're Tak we just launched the connect controller what a week ago two weeks ago so so they're coming yeah they're already applied for working on do you have any languages that you're working or that you've converted to on your interface not yet no okay I'd recommend Spanish right away Tai Tai big one yeah Tai because Thailand is it's pretty big market and um I think it's like the foundation of Asia yeah we're doing a few jobs even with the large commercial stuff uh going over there yeah yeah oh you're sending core uh controllers to Thailand already yeah wow which is not ideal like that's why I like the connect controller I like the price point I think it's more it's better priced um but it also like I said we just ship it anywhere versus for us to scale the company International with the core controllers and the panels we have to find panel shops in all these different countries find people that can you know do the



assembly and support we're also crazy about support like we want to be careful going outside the US to make sure that we can provide the same level of support that we do here 100% um you know uh this comes from customers you know our plants don't sleep so you guys need to answer the phone 24/7 and so we know support that um is important to us yeah great yeah you'd be surprised what you could get done with chat GPT like we did translations like oh dude it works fantastic like we did translations on our booklet that we're working on and we sent it off to you we did Albanian and uh uh we sent it off to an Albanian guy that that was a grower and he was like there's two changes in the whole book and I'm like whoa great job so I mean not too bad and the we're a everything we're a Microsoft Azure shop so you know our our cloud is Microsoft Azure our controllers are called Edge devices they're running Microsoft iot all the AI stuff's Microsoft AI so that's what's the in the background of it nice and it already supports the portal supports the um multi you know localized uh languages we just have to translate it and put it in there so I don't think the lift is too hard yeah yeah um on to you know you you guys made some changes with your substrate monitoring sensor can you guys talk about the differences in what your new ter link is yeah it's not something we wanted to do like I we're you we're software comp at the end of the day I say we're a software company that happens to sell a lot of hardware and we've had to build certain things at times when we couldn't find something out there that um already existed and like the connect controller there's no all-in-one controller you can just connect everything to that we could have bought and put our firmware on right so we had to build it and so um we've been at this for eight years growing's been around eight years we've been doing substrate monitoring and valve control off substrate data for at least six and and we used to um used to sell you know the the popular Solution that's out there uh ex exclusively with all of our you know pick controllers and for all of our substrate monitoring um that sensor what wasn't available to us anymore at some point um and so that's when we looked for another manufacturer and so we found the the clima TDR sensor and that sensor um worked out really well but since the audience you know our our customer base was used to how a capacitance sensor I mean basic the teros 12 yeah could you meter groups has done a great job on getting that sensor out to Market and that's kind of the the gold standard right I mean that's but what what's the main difference between a TDR and capacitance because those are the two different choices when you have substrate monitoring right and right right so what are the big differences between TDR and capacitance I can't really into the electronic details though it's just two different ways of measuring a wavelength between those rods you know you're uh the main difference that the user would notice right on on water content very similar readings um however on EC the the the capacitance sensor is actually an equation between the reading that they get and the and the water content so it's called Hill hor uh right yeah Hill hor equation Hill equation um and so it it just does math to try and figure out uh the EC and it's influenced by water content where the TDR sensor actually reads EC and the ma and and water content separate um so at we still feel like the TDR sensor provides a a more real EC and let me explain what um here's the example I get let's just say you soak a rock oil cube in 3 EC solution completely and you put a probe in it and you read it should read 3 EC right and it would at 100% or whatever 50% whatever it reads you know fully saturated Cube would read 3C then I always tell people to put a wet dry vacuum on it suck out suck it all the moisture out until it's down to like 30 the EC should still be three right well no because no because your your water content went lower the EC in that water hasn't changed well if uh the this is for specific example no plants involved because the plants the plants are eating the salt no but this is the difference nutrients this is the difference the a climate sensor would probably would read somewhere around 3C still but with that uh with that equation the capacitance sensor using that equation you know it was reading three is probably going to you know whatever goes up to six it's so that's what everyone's used to so that was the big problem about selling the TDR sensor over the capacitance everyone wanted our data to match the capacitance sensor and so that's that's one of the main drivers

of why uh we moved over and and found a contract manufacturer to to make our own uh Capac capacitance sensor so that way it's cuz even in here you're referencing capacitance numbers and so if if you're trying to hit a 6C with a TDR sensor that's that's probably a 13 14 15 EC on a capacitance so we just the industry is used to capacitance so so pretty much the this the industry St standard is a capacitance sensor yeah and so you you kind of forced to yeah 100% it was either take tons of calls and go through what I just said and try and explain to everybody or just join them and and the tdr2 does have trouble at high EC's um it can it kind of shorts out the equation so when if you're running really high EC you can start getting um missing data like where it'll Miss data for a while that was something else we found with that now with your new with your with your brand new capacit and sensor is there like a recommendation on on placement inside Rockwall do you have that on your website or is it like a tool you use it it's the exact same as the TDR it's exactly what you have in here too okay yeah same as the teros okay depending on substrate size you're either going to go you know an inch from the bottom 2 inches from the bottom or 3 in from the bottom or anything in between really what it is with any of these probes I'm sure you guys know it's like if you move that probe down uh the reading is going to go way higher you know you're you're right yeah because you're going to have way higher on water content yeah yeah but EC will be depending on how much concentrated salts you have down in that area yeah will change but same thing you move it up higher uh it's going to get lower water content reading you just got to find that middle ground that works which you have recommendations what do you think about our uh sensor placement recommendations that we put on our new sop that we're about to come out with so we I think we did a little light on the sensor count but what we kind of explained here on some of these um position places is you know based on where the plant is inside on the tray or inside the garden you could have a fan right in front of some plants which you'll have a lower water content based on the plant that's across the aisle right MH and on the center the center aisle of the plants on the same tray you would have a higher water content because they're not drying out as fast um and so you know we kind of did a baseline across sensor placement of across all plants that you know plants that are in front of fans Center plant and plants on the on the opposite side of fans essentially what do you think do you have any recommendations for us because you know you guys are making the equipment and oh oh you me to go yeah you just follow um every facility is different first and so trying to find exactly what those microclimates are or off of a single illustration I think is tough but if you do spot checks right okay you I think you can spot check your row and figure out where you should Place permanent sensors that are driving uh automation right I I always tell people sensor density is a very important factor trying to drive an entire room off of just a couple sensors is not going to work um if you're on different strains that strain needs to have a couple sensors for each one or in a Zone you need to have a couple sensors in that one zone you don't have to go every single plant by any means but being able to grab an average off of a few sensors maybe you had a bad placement when you got put in there was an air pocket around it um and now if you're driving your entire room or that entire Zone off of that one sensor that was improperly installed you're going to have less than desirable results right so sensor density and making sure we're grabbing an average off of at least two or three sensors per Zone I think is is a very important thing to have yeah absolutely we we always I I anyway I always recommend like a minimum of One sensor per 100 square ft of canopy so if you had like a 50ft row that'd be two sensors at the bare minimum um in terms of placement on here you know you're absolutely right with how they dry out faster like on the corners and depending on where the AC's are and the Ducks are and the rooms um I always basically will tell people like you always want to go like say we're just look at a 50t row here um you want to go like a quarter or a third of the way in on one side a third of the way in on the other side um I don't like to go like pure in the middle because then basically what it comes down to is you don't want to cater to in a row you're always going to have like 70% of the plants are going to be roughly around the same

if it's a monocrop you know and then 15% might be too wet and 15% might be too dry we just don't want to get into a situation where we have a probe in either of those 15 percenters you know we do not want to cater to the outlier there um cuz the most of the yield is going to come from the 70% so what I always recommend is they know go Third Way third of the way in here third of the way in there on either end and then like you said Do Spot checks not necessarily with a probe the old the oldfashioned way get in there pick it up real quick and if you basically so I'll go in and I'll see okay there's a sensor in this specific Cube or this specific pot um I know what the readings are that PL looks healthy you know I'll pick it up feel the weight and then I'll pick up a couple around it in that general area that that probe is representing and if they all feel around the same I'm good I won't touch it but if I pick that plan up and I and after checking all the ones around it and it's like oh this one's like way lighter then I'm going to move it to one that is a better representation of that average so regarding um Coco you know I've heard of guys getting kind of real inconsistent readings based on the the denseness or how compact the Coco is um in sensor readings um what is your recommendation on putting sensors into Coco and and is there like a guidance or sop on on how to make sure to get a proper reading that's consistent there's multiple ways um you know the way we talked earlier you know you were saying that you guys actually will like put it in as you're packing you know packing the Coco initially before transplant that's a pretty good way I would say the other way to do it would be you know after the transplant is done which is what I typically would do and after it's been thoroughly wet you know so that way the cocoa has a chance to compact itself down um with the water and also that way when you put it in it's not going to like indent the side too hard of whatever you're stabbing through because it's already been compacted it has like a high volume of water in it already um and then usually when you water after that once the Pro's been inserted it's going to fill in all those gaps as well and push the Coco down down again but if you're getting inconsistent readings it's you maybe check your compactness on the cocoa and maybe compact around where just the sensor is would you say or yeah I mean I guess it it really just depends on what type of Coco you're using and what kind of consistencies you're getting like I know I've had them we were again talking about earlier it's like I've had issues with quick fills where they look Hydra all the way um but at the end of the day like when you if you were to like tear it open there's still little thin layers in there that have not been rehydrated they're still super hydrophobic and they're like Rock Solid if you just so happen to get unlucky and stab a sensor into that that's going to cause some major inconsistencies there you usually can tell because it's a little crunchy when you go to push it in I've also heard that it's it's beneficial I mean if not every Garden's going to be perfect not every plant's going to be Optimum Health but overall you what I've heard is you want to put the sensor in the plants that are the most healthiest is was that true or do you have any opinion on that my personal opinion I'm still going to go with the majority cuz we want to make the majority the healthy ones you know um I've seen a lot of situations where the driest plant looks the best you know it's blasted the hardest um in that scenario though if I've catered to that dry plant I'm gonna overwater the rest of my plants at that point so again it's it's really you know yeah most of the time the dries plant looks the healthiest in your garden I mean that's what I usually see so find kind of one that's in the middle to put your sensor in yeah cuz if if you pick uh if you pick one that's like in the middle and then you say all right let's let's dry them out a little bit more now you can make the rest of them look like that because they'll become drier gotcha just my opinion though hey Brandon it's 15 after 12 you gotta go you gotta flight yeah it's all good be R through the airport today how long do we go I think it was like two three hours what just over two it's not too shabby pretty no um this is awesome I mean Marcus probably stick around and talk with you guys I think we're pretty wrapped up I no we'll yeah we'll let you go all right and we'll maybe we'll we'll keep talking with Mar thanks for having me out dude this is cool appreciate everything you guys are doing and uh we'll keep plugging away at it

we like to I always say we like to build cool things that people enjoy using that's part of it right that have a positive impact on their business yeah that's kind of the rules I'm like does it do they like to use it is it helpful and then does it have you know help them with their outcome so yeah thanks guys appreciate your time all right see you see you thanks okay going into your guys's um fertigation skid why do you use H Anderson Well H Anderson is uh one of the most reliable skids out there they they offer the one of the most reliable Pumpers that that I seen in the industry you know and we we've used quite a bit in the past like we used to use SEO pumps etatron you know all all sorts of stuff and wasn't necessarily anything wrong with any of them um it's just for a lot of our larger commercial customers they they needed something that had that more robustness and and could stand up to that just constant you know dosing all day long and um H Anderson you know fit that bill so how do you find the accuracy on H Anderson compared to do other dosing systems I think they're honestly really really accurate um you know they've got those dials on the top that can be so like you first off you size a specific pump for what nutrient you're trying to use you know so like a I think they have three or four different sizes a pH you know if that's what you're dosing or some sort of micronutrient that you only need a small amount on um you're going to select a smaller pump and then once you have that pump size that's you know suitable for that range you have a dial on there that can go down to between 1 and 10 and you can go into half spaces and and everywhere in between and basically what that's adjusting is the actual uh pump volume you know as it goes out so I was on site yesterday uh in Ohio with one was we were commissioning it and the accuracy and the speed of setup was pretty incredible um I mean we Speck them all day long in our builds uh I don't often get a chance to get Hands-On with them um yesterday I spent a lot of time configuring and rebuilding the the core controllers going through pretty much every grow link offering uh in the last couple days um and on that Anderson skid our initial setup of it was so fast um with insanely high accuracy in a matter of minutes I mean we went through and we tested all the pumps and calibrated them to make sure that uh they were in fact injecting properly and then we built some recipes real quick in the computer and fired them off and they were within 0.05 EC immediately was it like for a small grower is it user friendly like as simple as a do dosatron or more complicated in different ways right a dosatron is going to be more cost effective for sure I mean it's going to be probably a quarter of the price to set up a four recipe system on dosatron uh versus an Anderson skid Anderson's I would say is for the larger facilities um not so much like if you're 25,000 ft or under you got to have a pretty big budget to to go in Anderson and that's where dosatron really makes sense and then pairing it with like a connect controller to manage your climate your irrigation right but uh if you go to those larger scale facilities it just makes more sense to go to a Smart dosing system especially if you have multiple recipes above the traditional 4 Athena recipes right if you're a grower that likes to Tinker with things and you want to have a 3 EC a 3 and a half EC a 2 and a half a two a one uh multiple veg recipes right to do that with dosatron is going to take an amazing amount of wall space right you're going have to build a rack for every single one of those recipes or you're going to have to be tuning them and manually adjusting them as you change the recipe whereas Anderson you can just go in or Anderson Pumpers with the gring panel rather you can just go in and build all those recipes and a 4x8 panel on the wall can build you an endless amount of recipes so in that regard they are simpler there's no hand adjustment on them after they're calibrated it's literally going into a laptop and saying I want this many mills per gallon of this this this many mills per gallon of this go this is my target EC my target pH um so you would say anything under 25,000 I mean that's kind of hard to say right I I've had facilities that are I I we just did one recently it's two flower rooms in a bedroom and they put an Anderson skate in there okay it's just what your budget is right um but in the large scale facilities you need an intelligent dosing system like this yeah you don't need one but it there's a great benefit to it and the reliability I mean we I was with Anderson uh during a trade show uh a couple weeks ago at cultivate and we

were talking about them and they they have customers that have these out in the field uncovered for 15 plus years and they're still operating perfectly no maintenance or no maintenance on these things whoa that that's why we went with them whoa yeah direct sunlight in the field for 15 years no maintenance nothing oh God yeah and you can run them off of water power not just air power so they're in an indoor grow we typically hook up an air compressor to them The Big Field guys they just run water through them and they can be waterp powerered Pumpers as well oh [Â \_\_Â ] yeah it's it's big time yeah yeah um Marcus what what are the benefits of of you of grow link working with demer designs on with customers the customer experience at the end of the day like those designs it's just super easy and Colton's told he says this all the time he's like you know there's nothing like giving the customer what you provide which is that that full virtual walkthrough the full cut sheets just everything they don't get that anywhere else yeah have you ran into some designs that have kind of been business detriment to the business you know irrigation designs that aren't properly done because i' I've seen it quite a few times it's like they go and they want us to fix a lot of their problems but it's like we' got to change the irrigation to even do that you tend do we run into that facilities that haven't used us yeah a lot all the time a lot yeah a lot it's like um facilities are hiring plumbing contractors to install complex irrigation systems that none of them ever grow in weed for or have extensive experience I think that's what sets it really sets it apart it's it's unfortunate when we get that we have that initial conversation with a potential client and we go through the consultation we give pricing and then we don't hear from them for a while and we get that unfortunate call six months year later hey we didn't want to spend the money with you we hired our local plumber it's not working out we're having tons of issues can you please redesign our system for us and now they just spent double the amount of money has that how has that happened often it's happened quite a few times almost every job almost every job maybe it's a little bit of exaggeration but a lot a lot very very frequent yeah where guys come back and like hey sorry I ghosted you could you help us out [Â \_\_Â ] yeah they're spinning a lot more than y I mean PVC is expensive these days Plastics went through the roof during Co and all that uh schedule 80 is not cheap by any means and so gutting an entire facility because it wasn't speced properly from the get-go and then not to mention you're now an actively growing facility so you have to manage a retrofit my God during an active grow versus getting it done right from the jump like let's just get this done right when there's no plants in the building we can tune the system we can calibrate we can work through all the Kinks versus having okay staff hey I know we had an irrigation system before we no longer have that cuz it never really worked that well anyways have fun hand watering for the next two months while we gut everything and rebuild it I think it goes back to exactly what you guys are doing here with crop stering 1.0 and moving into co-pilot in 2.0 we have to remember that all this shit's new MH like we weren't growing in 50,000 square foot commercial warehouses um anything but cannabis and so all you people are contractors or Plumbing contractors or any contractor trying to get into the industry is like yeah you know I can let me see I can build that you know it's just like they haven't done it before and when you have like you guys we learn from our mistakes and I think that's as Growers I think you know we're constantly learning from from mistakes and part you know with you guys at demer you've learned from a lot of mistakes we're still learning it's not over I mean what I was doing two years ago is different than what I'm doing today it's not saying that those designs are bad or they don't work but we found ways working with cultivators and some of the best growers in the country how to make things better and more efficient for the new cultivators that we're putting up right yeah um we're constantly taking what we've done on previous jobs and adapting that to a new scenario for that new client every build is different it's not we just have one cookie cutter recipe that goes for everybody every build is designed for that customer specifically for their grow style for their needs some maybe has some facilities maybe only want to water two zones at a time some buildings want to water four massive rooms at a time some

people want to have two recipes three recipes some people want to have eight right so everything is different the fertigation systems are different the zoning is different it's I wish it was more cookie cut it would be a lot easier for me but uh getting to do this a new job every single time gives us the ability to improve upon it yeah right 100% no I appreciate you guys coming out um you know everybody at this table seems to have the same philosophy um as far as where we come from you know what we believe in um you know with with demer with grow link Athena like we we all have the customers interest in mind you know we want to drive success um want to share what we what we learn you know and learn from our mistakes and become better um it's it's nice to work with and alongside you know Partners like like you guys so I appreciate you guys making the trip out and uh thanks for your time I appreciate appreciate you having us out yeah for sure yeah thanks man in this episode I sit down with M High Dave from Galactic Gardens out of Colorado I like this episode because we speak about the Simplicity of how he irrigates his garden feeding once a day and handw watering most of the time I like it because you don't always need to have a crazy crop steering strategy or a substrate monitor as you can see from Dave's Instagram mile highve 420 he's crushing just fine with what works for him I really appreciate you guys for the support I hope you guys gain something from this episode that helps Drive success in your garden no my high Dave I've been following I've been following my high Dave for a long time and uh I'm a big fan uh just because you just grow some serious fire you know you're consistently putting out fire and um and you're always hunting right I mean like how how many how often are you hunting um all the time I started out when I decided that so my my basic uh reason for doing the Hunts I do is because I want to start my own breeding company and I believe if I'm going to start a breeding company I need to start with the best of the best not the best of what somebody else has found but the best of what I believe it to be um so you know when I first started out I spent like 12 \$15,000 on seeds and I bought all the you know latest drops from all the top breeders you know everyone said this is the best this is the best this is the best and I and I think I started with like 400 seeds and um from that initial hunt that's how I found like you know some of the more popular stuff like the Dante's Inferno and Tokyo sunsets and watermelon uh bxs and stuff like that watermelon SE Skittles pull up uh pull the microphone just a little closer is that better yeah that's probably better like some watermelon Z Skittles and stuff like that um but yeah I'm constantly hunting always popping new seeds I feel like being a cannabis connoisseur for as long as I have I always want something fresh something new so I'm I when when I think in terms of like what I want to bring to the people I just think in terms of what I would want for myself you you know so that's like my motivation and constantly looking for new stuff because I know that I would get tired of it shortly so I always want to have a variety out there so you know people can always be like oh he's got this there's this there's this and I could grow something different as of right now I could grow something different you know every cycle for the next 5 years before I'm back to with the bank of of seeds that you have right with the bank of cuts that I found yeah not even seeds just Keepers that I found I could grow something different you know for the next five years before I'm back to the first one that I started with when when did uh you know what's crazy is you grew up in rubido where I grew up we grew up in the same spot what what year did you graduate from I graduated in 96 96 I graduated in 2003 so you got some you got some age on me right when did you get up did you get into cultivation out here in rubido um no wasn't in rubido it's when I moved up north I moved to Santa Cruz and um I got into cultivation when I lived up there my roommate at the time was like Hey you know growing herb is the way to do it and I was like oh yeah like show me like I've always uh you know when I was a teenager I used to read High Times magazine I'd be like hiding in the bathroom reading High Times and my dad used to think I was in there like reading porn and I was actually just High Times I'd be in there for like an hour he like listen son I know what you're doing I'm like man you have no clue like I'm trying to figure out how to grow the fire flow like yeah I like chicks I like chicks too but it was always about the we that

was like always my first love you know what I mean like so when I I was living up north in Santa Cruz and my roommate was like dude you got to come with me I'm going to show you how how we do this and um that you know that's how I kind of got started we used to mix our own organic soil we go buy like big bags of perite and vermiculite and worm castings and B guano and you know make these big huge you know 20 gallon organic mixtures and um you know grow these big outdoor crops and at the time it was like the most amazing thing to me I I just remember just being like in love with the whole process and just want knowing that this is always what I wanted to do um but the legality of it is always what really stopped me from stepping into it full force you know what year what year was that when you when you got in when you started that up in Santa Cruz um I would say that was like 98 yeah that was early 99 maybe yeah that was around it was around 98 99 I think I was like 19 so maybe even earlier than that maybe 96 yeah 97 yeah around there yeah so back then things were serious I mean if you you got popped you got hard felony for like you know anything over an ounce was a felony so you know those was before prop 215 even um yeah it was risking a lot growing for sure yeah for sure big time yeah and when did you start hunting right away or when did when did that start cuz I I I follow you and and you're just you're in it you know um um so right after the before the pandemic hit I had a nice little sweet online online sales business I used to sell a lot of comic books and like collectible toys and stuff and I made considerable amount of money selling comic books um you know I would had to add on Craigslist where I bought comic books I'm in bulk for like 10 cents a piece and um you know I would buy go buy like a few thousand comic books and look through them and I'd find books worth a th000 2,000 3,000 so you I've always had that like Hustler mentality you know what I mean like I'm gonna make my own way type like I I've never really been good at working for anyone um you know in a regular 9o5 setting so I I kind of like doing what I do I'm able to be my own boss and that's like the highest value to me um because like I said I'm terrible in a regular 9 to-5 setting like I don't really you know do good there so um when when you usually do a hunt and how how big is how large is a hunt like how many when I first started so right after the pandemic ended and you know like when the pandemic hit hard like it kind of Tanked my online sales business and I looked at my wife and I said hey look I'm going to get a state license and I want to grow wheat like and she was like she was always been against it you know I always like hey let me set up you know let me set something up she's like nah I don't want to we have kids I don't want to deal okay so when our finances really took a hit she was like okay if you get a state license like I'll I'm behind it like I'll you know at the time she was a manager of a grocery store and I was like okay and you were running a comic books I was running like a eBay online sales thing you know selling comic books and in the in the secondary market and were you still cultivating a little bit on the side um I just had a little tent okay yeah so I you know always had my little tent going um but you know so when I got my state license she was like okay and once she saw that you know things started to pick up for me she you know just decided to leave her job and stay at home and take care of the kids so I could really dedicate all my time to cultivation and that's when I really decid I kind of had the plan when I stepped into it I said I'm going to you know find the best of the best plants out there and I'm going to start with seeds I'm not going to start with a lot of people have a tendency to look for the best cuts they can find I was looking for the best seeds because I wanted to be the guy that came with the best cuts um that was my motivation so in in hunting you know when I stepped into it I was like okay I mean I know what good plants look like to me you know I know what I want to smoke so that's all I'm looking for I don't think I do anything special in terms of when I'm hunting Beyond looking for what I want for myself um yeah that's that's pretty much it I I don't think I'm doing you know anything spectacular I think I just have an eye where other people don't what do you what do you usually looking for when you're when you're doing a um first and foremost I'm looking for tur profile something unique something that I haven't smelled before um that's my first go-to when I when I I I you know when I'm in a room full of plants I walk around I stick

my nose in every plant um and when I find that one that's different then I look for other factors like does it look better as well there like if I can find some that hit like two or three of those like one that's like crazy unique smell crazy unique look uh yield is nice like you know better than the average that those are the things I'm looking for right off the top um I think tur profile different tur profile is what I'm looking for over anything because if you can bring something unique to the market people will flock to that you know if you have something different that nobody's like I believe like the Dante 6 I have that I brought with me to MJ biscon I don't I personally in all my years of smoking have never smelled a tur profile like that you you know that was just like this Cherry candy crazy like artificial sugar flavor so that right there told me I have something special and when I brought it around you know some of the best of the best in the industry and they're like holy [Â \_\_Â ] [Â \_\_Â ] um that's that's pretty much how I was well that's what craft farmer said and like even Ian like you know these are guys like when guys from the jungle boys are like dude this is fire bro like wall was like you know Ivan they're like yeah like dude you got some fire like I'm like maybe I am on to something here like it just kind of confirms what I already believed in my mind but I'm not one of those people I can't be my own hype man so I need other people to tell me this is like you I'll never say I have the best other people can tell me all day I have the best and I don't even think I'll ever really believe it because I'm always kind of critical of myself looking for something better looking for more um but when a lot some of the best of the best in the industry are like impressed by by what I'm doing that tells me I'm on the right path yeah I think I think that's really interesting cuz uh you don't hear that a lot I mean I heard a lot of guys saying oh we're looking for yield we're looking for THC or even um PM uh you know uh resistance again pm and and you know veg do you do you look at those as secondary characteristics uh to TPS I do um like I said flavor profile is what it's all about um 100% for instance the Dante 6 it has a it has a tendency to Herm under the slightest stress and especially has a tendency to Herm on the lowers um anything that's not getting like you know full amount of of high ppfd tends to Herm a little bit so I tend to trim all the lowers off so I don't really get that too much but I've had Growers grow it and like freak out like oh this thing hered out on me it's terrible it's going to ruin my whole crop ruin my whole garden and it's just like um it's one of those plants that like you just have to understand that there's a risk versus reward here like yeah the risk is any stress and it's going to Herm but the reward is you're going to have a phenomenal tur profile that you've never seen before so for me the risk is worth the reward for other people not so much now I've grown the plant you know I've grown it a dozen runs enough to know that the pollen even though at Herms I'm almost 100% the pollen isn't viable because has never seated anything um I've had it tested it come back came back as 100% female so you know which leads me to believe that I I probably have some sterile pollen that it Herms out sterile pollen when it's stressed so um that to me is worth the reward you know the end result is worth it there worth that little bit of risk um other people might look at it like you know that's some you know Herm is a big like I don't want to [Â \_\_Â ] with that in the industry like any you say this plant has a tendency to H people are like ah don't give me that um I don't shy away from things like that when I saw that it hered in the it it had a tendency to Herm I was just like okay let me trim the lowers off if it Herms up top I'll just kill the whole plant but it never did that so it was worth growing in the end and then when I smelled the tur profile I was like holy [Â \_\_Â ] like I can't get rid of this even though with the little Herm tendency I have to keep this because it's so unique so special you know how how how big is your library right now I say have about 40 fenos um out of the 40 I probably put maybe like 18 or so out out there I have about about 20 that I've never released never even shown but I know that they're winners you know I'm just kind of you've never even shown them never shown them wow I have several that I've never shown just kind of waiting it's kind of like you like a like you're like you know when you Aral like you're an artist like you make all these are paintings you don't necessarily want to just show everything



at once I'm kind of waiting to roll them out slowly and I'm also kind of waiting till um I can fully immerse myself in the white market and just drop this huge Library um to the masses which is what I want to do I really want to bring the best of the best that I can find to the people I believe I have an eye that a lot of people don't I think a lot of people are lazy and and a lot of keepers are lost through lack of skill um I think there's way more the lack of lack of an eye to recognize lack of knowledge I mean how many Keepers do you think have been lost due to the fact this guy's overfeeding yeah you know you would never you're never going to know it's a keeper unless you grow it right so I think that's the difference between me and a lot of people and I'll just be the first one to tell you I'm not doing anything special I'm not some prolific um you know well of knowledge I'm not some you know um crazy extraordinary talented grower I'm just somebody who pays a lot of attention to detail and I spend a lot of time in the garden yeah that's it you know lot of people are like oh dude like you know I I get it makes I never thought that anybody would look up to me in this life for anything um when I get DMS and people are like you got a lot of big you got a lot of fans bro you got a lot of fans I'm one of them bro people were like oh dude I really I wish I could I dream about growing like you and I would I just think to myself like wow I never thought anybody would say anything like that to me because I dreamed about growing like a lot of the guys that I follow I dreamed about growing like craft farmer I dreamed about growing like the jungle boys you know I dreamed about growing you know looking at High Times like I said when I was a teenager I that was always my dream to be the best grower one of the best Growers you know and that's what I'm just striving to be to this day yeah you 40 um 40 Cult of ours it's a lot to manage man tissue culture kit is going to come in handy for me there I sent you one right yes yeah have you have you opened it up yet yes I have it all opened up have it all the only thing I do I need some more um containers yeah some vessels so I can really like house everything but that's my plan as I find more Keepers to keep a majority of them in tissue culture form until I'm ready to bring them out I already know what they are I've seen them so you know I've usually most of the things that I've decided to keep I've ran more than once um I my rule is two three you know two minimal I like to do three though three runs before I'm like this is something I can share with the masses um so I was going to ask you that so it's three three full runs before you'll you'll sell a cut yes okay yes um did you do did you did you give it a go the the six vessels that you had did you T I have not cuz I wanted to do a bunch at one time so I'm just kind of waiting to get some more uh containers so I can do like you know a couple dozen at a time then really fill out I have a whole VP Dome so I kind of want to fill it all up what do you think about the VP down I love it a lot you like it the most life simplifying is the best way I can describe it simplified my life extremely um remind me before leave um I will uh I'll send you home with a bunch of vessels okay cool sweet yeah if you you could probably take them on the plane with you right yeah I should be able to yeah you're all right who's um who are some of the do you do a lot of collabs with any any breeders I have several collabs going right now actually uh one of the major collabs I have going is with beLeaf um he sent me some Chimera 3 pollen I'd say about a year or so ago maybe a little more and I crossed it to my Dante 6 a few months back I got I got the first I got about 100 seeds from the pollination um we're going to test run those once those come back viable we're probably going to do a seed drop so so you're you're not only doing feno hunting but you're you're Crossing yes the fenos that I find that well that was always my end goal like I said is to start my own breeding company um I believe that that's how I'm going to leave uh a real Legacy in this industry is not only through hunting but through breeding yeah um CU you know that's something that can live on long after I'm gone yeah no I respect I love that what um do a lot of guys that you work with like you do you hunt for a lot of breeders um currently no but I have a lot of cultivators that buy my Hunts uh um mainly through you know just seeing what I do on Instagram and they're just like hey you know I I'd like to get that because that's going to save me a ton of work um and that's always been one of my missions as well with

hunting is to supply every major facility that I can across the country um you know if I can save them all the leg work yeah CU it's it's a lot of work it is I mean how long does it usually take you you know from start to finish on a hunt um usually about four or five months you know just the the time of a regular cycle but like I said it it's usually two to three runs before I'm like this is the one yeah so about a year yeah so about a year minimal like the Dante's Inferno I hunted that for two years before I actually like was like this is the one you know yeah what where did that come from who is the breeder that was a clearw um drop that they did a few years ago when I was buying all those seeds like I said I spent like 15K on seeds from all every major breeder in the industry and um their gear along with SE junkie and one and be Leaf really stood out out of all the gear that I bought so I mean I can't even tell you about 10 grand of stuff that just got thrown into garbage you know so that's something a lot of people don't take account for you know I've had people DM me how much for this cut and when I tell them they get all offended at the price but it's like dude I spent you know \$100,000 looking for for this to give it to you for free basically doesn't really make sense to me like I'd like to recoup some of my you know expenses as well all your energy and work right I'm not even talking about that just monetary cost alone is like ridiculous like I don't think people really understand what it takes to run a large grow and to hunt through a large grow like I've had whole rooms get seated out you know missing males Miss males in there ended up pollinating the whole room like you know that's a big that's just a big loss it's like you know there's nothing there that I I can't even even if there was a keeper in there I wouldn't even know because it got pollinated yeah you know so I don't think people realize like the the work and the time and the effort that goes into hunting the end result looks great but there a lot of like you know ups and downs throughout that getting to that end result it's not always just sweet like oh I found this great fenal oh easy one run there it is like dude I'm running this multiple times to make sure I'm giving you something that you can work with yeah no they it's uh it's I did it I've done it a few times and it's it's not easy especially big runs what's the biggest run that you've ever have you ever done in terms of hunting hunting 400 400 that is insane that's a lot of work work mhm and the way that the way that I like to do it is we take cuts of everything before it goes into flower so now you have to maintain all these little cuttings while you find the keeper when you find the the reason why I do that is so when you find the keeper I don't have to worry about revegging and they're ready to go you know for the next run I have some ready to go to test again and then by the time I'm like okay this is one that I'm going to keep there's already a mom you know fully grown ready to cut out do you think ring affects the the health of the the planet all or um I just think it takes too long and it's a pain in the ass and it I would rather just have healthy Cuts ready to go you know versus trying to rev something I just yeah I I just never have done it it's always just makes more sense to take Cuts beforehand for me and just if anything I'll keep those cuts in the tray a little bit longer than they need to be maybe you know they might get a little big but at the end of the day when I do decide this is a keeper it's you know fully rooted ready to go yeah so easy to bring it up to production you know do you have um do you have a favorite breeder um I do but not only because of the work that they do just because of their work ethic and their uh moral standards um so right now I would say be Leaf is one of my favorite breeders um not only because of the work he does is phenomenal but you just stand up like straight down to earth dude honest and I think that to me means more than if your gear might be a little bit better than his honesty like I've had a breeder um tell me hey you can't sell your cuts on my site um you know we only do breeder Cuts you can't sell and and okay fine sure no big deal then buy the cut for me then take my photos off of Instagram then put it on his website and use my name yeah yeah I can't sell my cuts but you're going to use my name and my photos without ever talking to me to make yourself money so you know that to me is just like shady business I I've had breeders tell me hey man if you give me all of your Keepers um I'll breed with them and I'll give you seeds so basically you're going to put me back at square one and

then take all the keepers make yourself a ton of money like hey I got all these great Keepers I'm going to breed with them and you know make money and and and I'm going to give you seeds in return so you can keep it going and bring me some more Keepers like I just don't understand the logic there but um it's sad because there's a lot of guys that get taken advantage of like that like I know for a fact that there's breeders who don't actually breed they just do that initial like F1 cross mhm they put out seeds they wait for guys like me to find Keepers they buy the keepers and then they sell them as breeder Cuts gnarly so there's never actually any work done on the Breeders any real work in my opinion done on the Breeders behalf um you know i' had an interview with Denver Westward recently and and I I said to them that I believe that breeders do 30% of the work and um you know Growers do the other 70% and that might piss some people off but that's how I really feel and my Logic on it is like this if you're a a championship dog breeder right and I buy a dog from you whose responsibility is it now to bring that dog to Championship level is it yours as the breeder or is it mine as the owner of the dog who has to care for you know nurture your train bring this dog to a level where people are going to be like wow where' you get that dog yeah I don't know a dog breeder in the game that tries to take credit for people who raise their dogs Beyond I have great genetics yeah you know so that's where my logic is in breeders do 30% of the work when the grower gets this the seed the work really begins yeah now with this collab with bee Leaf um and the cross that you guys are doing is is it to move forward and and you plan on doing some some M High Dave seeds 100% and are you going to call them M High Dave or you have a brand uh my brand is galactic Gardens okay and um so I I plan on dropping all seeds under Galactic Gardens um it's going to be Galactic Gardens powered by mile high Dave nice so um yeah that's like the cross that I did I crossed his chimera 3 to my Dante 8 which is probably one of the most you know famous of my Keepers um I'm really excited about it I think they're both parents are you know phenomenal so we'll see what the proggy looks like yeah I bought the Dante eight from you right yes yeah what else did I get from you I got watermelon Rush Dante 8 Moon blend 24 pink Z Skittles and I believe I gave you the trop cookie Sher cake yeah yeah no that uh we just started it in the veg so I'm looking forward to seeing seeing what comes out of this yeah you you guys would definitely like all those for sure especially in the uh Vegas Market doesn't really have anything like that I don't yeah it doesn't seem like they do no and that's that's what's you know in Vegas they're all about new new new right constant Vegas is starving for quality in my opinion I would love to set up there yeah what is the you know so you're you're talking about getting into the White Market like what is what does that look like for you um for me that means you know getting a full wreck license um where I can cultivate and put my brand in stores um put my brand on shelves really that's that's really what I've kind of done that in a roundabout way already by providing fenos to a lot of cultivators but um it's not anything that I'm directly profiting on Beyond selling the feno you know yeah so I I I would like to like be able to grow quality that the people see me grow on Instagram and be able to put it in storefronts as in many places in the country as possible without sacrificing quality um I think there's a way to do that in my mind it's to eliminate you know those huge 100,000 square foot grows instead of doing like a you know instead of doing 12,000 squ foot grow uh give me like 20,000 square foot grows you know what I mean and by compartmentalizing um The Grow space if I have an issue it's not going to affect the crop across the board like you know when you have the that think that's one of the major issues with quality right now is people have these huge grows uh any issue and it affects the whole thing and and by then they're just looking at the bottom line you're not really concerned with how good the product is you just want to make your money back yeah yeah it's a lot to manage that any you know anything over you know it's a lot to manage anything that size but you know more craft smaller batch you know kind of even in a large space just you know compartmentalize things that way if you have an issue here you know that's only one room one 150 lighter versus a 500 lighter yeah you know what so you're you're currently in Colorado and you're thinking about

possibly going to another Market absolutely what what's going on like what what's going on with the Colorado Market um a lot of people are getting out of it uh their's license grows up for sale for pennies on the dollar right now you know by the dozens in Colorado that doesn't for me that doesn't really seem like wise business move to try to build something in that market because of that so many people are get now I believe that the quality I produce would hold its own and would probably be profitable for me even in Colorado but there's other markets where I wouldn't have to struggle as much with the same quality you know and I'd get much better bottom line so I think that's you know my line of thinking there is I want to be somewhere where it's going to be easy for me easy for me to operate a business exactly you know to to be at least somewhat profitable what do you what do you thinking about it is what do you think it is about the Colorado Market that the guys are closing up shop um Quality quality yeah quality is is sucks like even the guys that were known for Quality a few years ago are not known for Quality now I think uh corporate money has bought out a lot of the smaller batch guys in the industry in Colorado and that has turned into this just money grind of we're going to put out whatever we produce under any circumstances if it means remediation if it means you know if it means we're washing powdery mildew like we they don't give a [Â \_\_Â ] man they're just trying to make a dollar for me that's just like the anticip of what we stand for as Growers for me me I want to bring the best quality to the people how can I do that if I'm just worried about money if I'm just worried about the bottom line you know I'm never going to be concerned about quality because all I want to do is turn a profit uh and I think that's what happened to the Colorado Market everybody was worried about turning a profit unless worried about quality and that desire to consistently turn a profit has caused the industry to collapse basically that and um I would say other markets have had a factor in that in terms of um like Oklahoma you know Oklahoma is like this big cluster [Â \_\_Â ] of anybody can go there and just pretty much I think they're starting to tighten up on regulations now but like so much you know Black Market cannabis is coming out of Oklahoma that it's like crashing prices everywhere yeah Oklahoma seemed to throw a wrench in everything yeah Oklahoma from and and people don't really realize like you know we can talk about Black Market and white Market but one affects the other um if there's a [Â \_\_Â ] ton of Black Market weed flooding the market that's going to affect the White Market 100% um because less people are going to go by there if you can get better quality over here for you know \$600 a pound than you can in the dispensary for \$100 an ounce where are you going to go yeah you know and I think that's what's really hurt the market in Colorado is not enough people focused on quality everybody's wanting to just make money everybody's just focused on volume yeah I think more more you know on the bottom line and and producing more flood the market do they have uh do you know how many licenses are in Colorado I don't I I like I said I know there's I was just looking the other day um and they're being sold for pennies on the dollar you know there's yeah I was looking at you know there was a 15,000 squ foot facility uh with the cultivation license Med and rack was like 80 grand giving it away yeah giving it away for they're just like dude just get me out of here I'll take anything yeah um yeah I've had some DMs like that too guys like oh man you looking for a partner you know I'm we're we don't know if we're going to get out of the business you looking to buy a facility and I'm just like eh I see too much of that in the Colorado market and it just seems like a risky bet for me to try to invest a bunch of money to build up something that's not going to be successful or profitable yeah I mean it's it's hard I think back in the day everybody wanted to be in the white Market until they got in it so you might want to be careful it's uh you know it's it's highly regulated and and most all the states it's it's highly taxed and it's just it's hard when you're fighting against traditional market and you're and you're taxed I mean it's you're not in a bad place you know it's like what you have going on right now with with being in the traditional Market is is actually a really good place to be in it's not well that's kind of why I've stepped towards breeding as well um I I feel you know with the uh recent regulations on uh on seeds being classified as

basically hemp and being able to ship without any any issues I think um that's kind of pushed me more towards breeding as well uh because it's something that I can do without having to worry about a ton of Regulation 100% I think that's a great idea right and it it can be extremely profitable if you do it right yeah yeah um how often are you selling Cuts I mean um I usually sell Cuts weekly weekly yeah weekly um for well over a year now that's the primary source of my income I would say it comes through clones but you're not selling clones in volume just selling the the genetics I absolutely will sell clones in volume too yeah uh usually like anything over 500 I do like bulk orders um but mainly just the genetic to the average person that inquires with me once in a while you get people that want like you know 500 1,000 2,000 um I've I've had some Partnerships with like with clone Colorado in Colorado which has enabled me to get a lot of my finds out to um the med and wreck markets you know um so cultivators and I've had some breeding projects with them where you know my cultivars end up in metric and um that's been profitable in terms of like the royalties deal I have with them as well so yeah I sell Cuts weekly the um you know you've been you've been cultivating a long time and you've grown organically you've used a lot of different lines um in a lot of different ways what um what do you how are you currently cultivating right now like what what media are you using what size I grow in Cocoa um I grow in five gallons I use 100% cocoa um I'm running the Prine um yeah I I hand Mix Daily I don't have a dosatron or any type of uh uh automated feeding so I hand mix my nutrients daily and hand feed um you know I have dripper set up but you know I mix it in hand feed just drop the pump in there but that's the uh for me I believe that your plants like the nutrients Fresh So I like to mix them daily I don't really believe in the big batch tanks maybe that's where you know something that might I do a little different than a lot of people um I believe in mixing the nutrients every day so when you're you're feed your hand feeding every day yes how do you how do you like that compared to drippers I mean you're well I have drippers but I just you know I mix in my 50 gallon and I drop my AAL mix in there and it feeds the whole you know feeds the whole room um but in terms of like an automated system I like that better because I feel I have a more hand hands on approach with my garden and being more Hands-On you're you're more susceptible to notice things issues sooner um you know if you just have everything's automated you're probably not up and close and personal as much with your plants as you could be MH so by me you know hand I even like to hand water sometimes I ain't going to lie you sometimes I skip the drippers all together I'll go in there and hand water just so I can be underneath each plant and exam examine it as I'm watering you know I'm just and um you know a lot of people will say well you can't do that when you scale up but you can it just depends on how much work you want to do no I've I've I've got guys that are hand watering 1,400 lighters there you go on Athena Pro Line and just just they're making it happen cocoa five gallon pots just like you yep hand watering you know 14400 lights it's a lot with so you're doing mainly one feet a day one drench one one feet a day I do uh kind of do like a dry bag technique by feeding less water in the beginning so let's say I have 100 plants in a room mhm or 75 plants in a room um the first you know couple of weeks they might get 50 to 100 gallons and as we get you know heavier into flour I might top out at about 150 um and then as we get later into flower I'll bring that down you know back to 175 daily just really depends on um the feedback I'm getting from them you know so you're you're just doing regular hand watering veg full saturation yes right and then week one through three are you stacking a little harder or how's that um or you watering less watering less watering less less water in the first three weeks I would say like 5050 to 100 gallons a day and then in like week three through six probably upwards of 150 gallons a day we after week three right okay so kind of do you do you do a lot of runoff tests every day but have you seen the new runoff uh guide we did I have not go take a look at it right there it's uh after Proline I want to get your feedback on on what we're doing so you do do a lot of runoff tests yes I test runoff every single day here let me find it for you so we did this it's a really cool chart um I believe that's like one of the key factors to Growing quality is

monitoring runoff that's what I was going to ask you EC and pH you know yeah I keep I keep things within a certain range and it the plants seem to love it so look at week you can see week three um yo Maddie hand me the the other book over there you know this is about what my runoff looks like that I usually keep uh my runoff the entire time I never let it get over six yeah so that's that's what we got so you got P pH a feed 3 EC week one through whatever in veg and then Week 1 through three in flower um we're feeding a three East EC but our runoff is a six to a top out of s EC would you think that's a little too high or what you think um I I don't think seven is too high I've honestly had my uh media EC get all the way up to 9 10 um without any issues and the reason what for that is by giving an adequate runoff us so you can let that PC kind of this last run I really let the EC get up there kind of testing to see like how far I could push it and um I found that as long as I gave adequate runoff you know like 30 to 40% runoff I wasn't getting any burn at all from that so um the only thing on this chart that I I would honestly change would be especially growing in Coco I would uh adjust the pH I I keep my pH between six 62 six and 62 and we got 58 to 61 right and and the reason why I I like my pH a little bit higher if you look at the the uh um nutrients that cannabis absorbs through that PH range it's actually they absorb a little bit more like Boron and magnesium and like the higher PHS and they absorb the same amount of all the other nutrients at 5'8 so why not feed it a little bit more we're it's getting a little bit more of everything as well as what it was be getting at 5'8 there my logic there um what about do you ever have you ever grown in Rockwell no I've never grown a w Coco um soil I went from soil to Coco and I kind of just fell in love with Coco I was like Coco can be a little bit more forgiving than rock wool from what I understand um which is why I like it so yeah you know if there's some uh uh EC or pH fluctuations Coco can handle that versus rock wool I just don't want to [Â \_\_Â ] everything up yeah you know what do you do what do you think about the runoff numbers as far as inflow on uh the EC of week four through six you know five and six EC runoff numbers I think those are good numbers um personally I never really let my EC get over six okay um unless I'm purposely doing it to kind of test to see things but on average the average I keep it between 4 I feed it 3.5 so I keep it between 4.5 like 66.5 it doesn't really ever touch seven okay okay and then flush out we seven eight you know four four to 5 EC three to 3 to three and a half EC week eight on your runoff um I think starting at like week seven my EC is usually around 6 and I start to bring it down daily by like a poter you know a couple points so if if my runoff is at like four at week seven um each day I'll bring it down like 02 point two until we get down to the end where it's at like one or zero or you know a half a point half an EC or something that's usually what I do bring it down slowly the last couple weeks why do you think runoff is so important um that's how you can tell when you're you know what to do next in my opinion so by testing runoff today I know what I'm doing do tomorrow and so if I don't test runoff today how do I know what I'm doing tomorrow you know that's really all it boils down to for me if I if I test runoff and I notice EC's a little high a little low PH high or low I make my adjustments accordingly and I always try to keep things within the range um that's what I was saying I I kind of just stick to the fun fundamentals I don't really do anything spectacular I'm not feeding them like you know unicorn [Â \_\_Â ] or anything and just just I just keep things simple man I uh you know I have my ranges that I like EC pH ranges that I like to keep everything at during flower and that's just my main focus is just keeping things there so that's why I test runoff every day so I know you know if I need to make even the slightest adjustment I can make it the next day would you adjust pH if you saw absolutely a lower pH come out you would adjust it to a high so like if I if pH is coming out 58 I'm feeding at 64 okay until pH is adjusted accordingly so the next day I might test it again and it might come out at like 60 so I'll go in again at 64 Y and then when it's like at 62 optimal for me is um if I'm going in at like 6'2 and it's coming out at 6'4 that's perfect yeah it's it's that means every all the available nutrients is being Tak taken up by the plant yeah you're you're currently using uh Proline right now right yes are you are you adding anything to

it no how how do you how do you run it how do you how do you just mix a batch I I mix it daily so I don't I know some people will mix like a bag into a smaller batch tank and kind of liquefy everything I still measure the powders uh uh by Gram I kind of have an A evolved into the other method yet I guess I I'm one of those people if it ain't broke why fix it so it's working for me to just continually measure I guess if I had a you know a different setup where I was growing at a larger scale you know I might want to go ahead and mix a 25lb bag but I enjoy the process every single day of weighing out the grams and mixing each one and adding the nutrients one by one I enjoy that process I so you you weigh it out out of out of a 25 lb bag yes yeah every single day that's great yeah how how much um yeah I wonder if you use the 2B pouches cuz we make the 2B pouches that are um I i' I've used the balance of the 2B pouches um but I I just yeah I I use the regular um traditional proline in the 25 lb bags uh I noticed the liquid balance is a little bit different than the powdered balance um yeah I like the liquid balance a little bit more I think than the powder balance yeah no I think it's personal preference P we made powder balance uh for complex irrigation systems like metlex right um I don't have any of that so I don't yeah I don't I don't need that so the the liquid uh potassium silicate is is really great and then also potassium silicate helps fight against um PM right when you when you feed it so that's that's actually a big benefit what do you think about um what do you think about when you hear people trying to add things to to atheno Pro Line um don't do it I people ask me all the time oh do you do this do you add this do you add that and I I constantly tell them no I just use the Prine only and a lot of them seem like they don't believe it like you got to be adding something else man like what are you do like think a lot of people don't realize there's no mystery ingredient that's going to make your make you grow better it really is the time you put in your garden there's no magical teaspoonful of [Â \_\_Â ] that's going to make your [Â \_\_Â ] better there really isn't you just got to put that time in put the work in you know when are you defoliating like are you checking your like I had a buddy he's like man I never get over one pound of light and I'm like well what's your runoff numbers he's like what do you mean so so that so I I look at runoff as as important as climate I mean if you don't know you you got climate you got temp humidity CO2 um you know your climate is just your EC values and your pH and your media is just as important 100% And if you got meters checking your climate you know non-stop then you should be checking your runoffs you know what I I think we what do you what do you think I would say minimal like three times a week that's just my personal opinion you're on it but I actually test like five times a week um you test every day I'm a little anal retentive just because I like I like to make like even the slightest adjustment it just sometime like minimal I'm testing three times a week but I like on average to test at least five times a week so you're testing almost every day almost every day now you're just testing what's coming out of the pot when you feed right um I'm testing what's coming out out of the bench so yeah whatever yeah whatever you know particular bench is is running out at I'm usually testing that and then I'll make my adjust adjustments accordingly okay so you take an average of the bench collect right your runoff as it comes out of the plants as you're doing your normal feeding right and then you test that and then you like to see pretty much what we have on our chart 0.5 in the first three weeks cuz we're at you're at 6 to 65 on your EC runoff we're at seven right so we're at we're like got a0 five and that's not going to make a big difference as long as you're given your plants and I think the the number one issue that salt Growers have even new salt Growers have is not giving their plants adequate runoff and so that buildup you know causes all kinds of other problems once it gets within the danger zone it's just like you know you have all kinds of [Â \_\_Â ] uptake problems after that yeah I uh I I'd be going into spots and you I'd look at some plants and they're not looking too hot and the first question I asked is hey what's your runoff look like they're like uh what's runoff you know it's like yeah that's my favorite answer what's runoff I'll be like well there's your number one problem right there yeah um and like I said even pH you know a lot of people don't you know they don't really pay much attention to pH but

like I said if you look at at the the chart of uh elements that cannabis absorbs they actually absorb more between the 60 and 64 range and they do in the 5'8 range um so that's why I tend to you know keep things there yeah what um what lines were you using before before Athena um I I use flex for a while which I found to be really dirty um I used Cana which I never really got any great results with that um I used Fox Farm ocean Forest that was fun um I like you know I was a big Canada guy for a while like can is not for like four or five years I was dedicated because I think I had used so many other lines and I finally found one that I was like okay like this is a solid line like I can trust this giving you good results right yeah it given me good results well that's my main thing why I use atheno over everything else I've literally gotten the best results I mean people can say whatever uh you know they they can rag on the salt you know they can say oh you're Athena you're just buying hype and I'm not a hype guy I don't buy into hype I buy into results so I can say unequivocally that I've had better results with Athena than any other nutrient line I've ever used in my 20 plus years of growing that's why I'm here for no other reason than that um if it didn't give me the results I wouldn't be here yeah appreciate you man yeah how um how how do you like using fade like have you started it I enjoyed fade uh I started it at the recommended 43 days um the first time I like the results I I tried it again at day 50 and I like the results a lot better yeah maybe two weeks before two weeks before even like the last 10 days but yeah two weeks to 10 days before I think is better than the last three weeks that week the week three is a little too much yeah a little too in my opinion what did you see a degradation and yield uh slightly yeah smaller yield just a little bit uh degradation and development it wasn't quite as like you know finished as I like it uh but I did notice turp were significantly stronger and uh trcom development seemed to be a lot more even starting at day 43 when I did it at day 50 results were phenomenal so um day 50 is your sweet spot yeah that's the sweet spot for me and I can't say that for everybody I would say you know listen to your plants and do what works best for them yeah no I think the the two the the two weeks at the end with fade are you still using it now absolutely 100% I'm I'm getting much better turp profiles from it for sure yeah what do you are you seeing any visual differences yeah I'm definitely seeing more triome development with fade um and and I'm seeing more colors as well um definitely bringing out the rainbows in it early yeah yeah how often are you are you doing a lot of coas or you have Partners doing coas um a lot of people that I sell cuts to tend to do coas um so you know I get a a wide variety of coas from all across the country which is pretty cool on the same cuts um so like I had a friend who grew the dant's Inferno in New York uh tested at her for 177% I had a friend who grew it in Oklahoma tested at 32% so and you know it really is the grower makes the difference in the COA in my opinion coas can really just vary like the like a Grower's quality varies you know it really just depends on who's growing it yeah un that's like multiple multiple coas from the same lab and you can get like continuous data right and that's the other thing labs are so uh you know the data varies from one lab to the next it's really hard to be like get one COA from a lab and be like this is the standard you know because you get another COA from another lab and the results be widely different yeah yeah 100% what what lights are you using right now think gr LEDs currently right how's how are they going I've loved them from day one um we run a lot of side by sides like you know we ran them in side by sides against a lot of other lights and they just outperformed um a lot of other lights that you know we ran them against um I like them a lot but I'd still be willing to try something different you know yeah what about are you using any different kind of veg lights I used think grow vegges as well I I believe that uh you should use the same light type of lights and veg and flow so you know that your plants are getting the same Spectrum all the way through I don't like using different light brands or different types of lighting for veg versus flower have you ever done like a higher Red Spectrum on your on your lights uh thinkr do run far red so yeah I do run the far red uh the last 15 minutes um before the lights go out and the first 15 minutes when they come back on so I they get 30 minutes of just straight far red uh every day and are you are you



running CO2 as well yes what what uh I run about 1500 ppms 1500 all the time time yes what about taper it down towards the end but you know through Peak flour it's about, 1500 ppms Peak flour and in in veg um no CO2 in veg whatever you know CO2 is in the building just basic CO2 levels there's no CO2 burner in veg at all do you see a significant increase in quality and yield when you're running CO2 um I run high ppfd and I believe that uh you know the two coincide so you know by running High PF ppfd uh increase the amount of CO2 and that keeps my plants from burning because they're really close to the lights um yeah I definitely see a difference we see what uh PP ppfd values are you running in the beginning of FL around 12 in the beginning of flower like 800 800 and then what do you peek out at uh about 1,200 yeah yeah that's that's the Sweet Spot yeah like 12 about 1,200 and what do you what are you doing in veg on ppfd um in veg is really low I keep my lights at like 5 10% in veg so I'd say ppfd is probably in the low like 200s oh that's really low like well you know um I never run my veg lights over 10% okay um there's a lot of people out there I see running veg at like 30 50% I find that they do a lot better under really low light yeah what what do you you know for for the cultivators out there what importance would you give ppfd to the canopy um High importance but it's like that has to be messed with all the other environmental factors you can't just run high ppfd and be like these should be blowing up like I said if you're going to run High ppfd uh you should increase the amount of CO2 so your plants can take that um you know if you're just running high ppfd and you're not running high CO2 chances are you're going to burn your plants yeah you know yeah 100% what about temp um I like to keep my temps between like say like between like 74 and 80 degrees during the day and like 74 68 at night I don't usually like them just swing more than 10 degrees you know 10 15 degrees um through day or night so I try to keep it within that range do you see a benefit of doing diff you know day night diff um I'm still kind of testing that out I I've heard so it's so funny that you say that because um Bruce bugby did a ton of testing on day night differential and zero diff he said is completely fine so temperature from day to night the same uhuh with no diff um it's the it's the higher night temps that create a lot of problems so anything that's a higher night but there's really no negative impact I guess on Lower night temps but if you that makes sense if you have zero diff it's hasn't seen any positive or negative effects interesting and that that's it's pretty interesting to have yeah because I haven't really you like I said I try to keep the swing within like 10 15 degrees and and I just keep it like that at all times and I don't really see any you know adverse effects At All by doing that which is why I've always kind of done that you know yeah but it's interesting to hear that you didn't really have an opinion on it yet no I because because they're it's from the the the research that they've done it's like pretty much on par it's the same what what about your what do you like to keep your humidities at um so during flower I like to keep my humidity around 60 65% yeah that's perfect um I run LEDs so I get a much better yield like that um a lot of people might might you know like again textbooks would say run your humidity at 45% you know 50% during peak flower or you know but that to me has never worked out as well as running a little bit higher humidity yeah I agree I think that you know that that uh 60% a nice sweet spot but most people would probably disagree with us mhm you know yeah like I said the text book would say 45 50% um and you can do that but in my opinion especially if you're running LEDs you're going to get a much lower yield yeah yeah 100% um when when running LEDs do you used to run HPS obviously you've been in the game a long time um I ran hpss but never at scale uh back in the day when I was growing it was all outdoor okay you know so like light Depot outdoor that was like what I was doing at scale back you know 20 years ago um so when I step back into like okay I'm gonna grow fulltime I just went straight for LEDs I was like yeah this LEDs are like going to save me I don't have to run these [ ^ ^ ] fan cool these Light coolers I don't have to run like AC as hard um it's going to be half the amount of electricity yeah they're going they're more expensive to start with but worth it in my they pay for themselves within the first year yeah back uh back then in in '96 when you when you first started growing and doing outdoor do you have any uh close calls um I had

more than that man I went to prison for cultivation you did yes 20 something years ago luckily my record got expunged but I went to prison for cultivation yeah how long did you go uh I did uh 16 months with halftime but I got busted for 37 plants how did it can you talk about how it how it went down um yeah um so I basically I was growing in a house with a friend of mine and um I'm pretty sure this kid who came over to get some you know buy a pack or something got busted and um he told on us and and we got raided and he was an informant yeah I'm pretty sure he was he either was an informant or he got pulled over on his way wherever he was going or got busted and was like these guys got it over here making him informing right so yeah so he um I'm pretty sure he told on us and we got raid and yeah I just I went to jail what what year was that um that was 90 me see I was 23 so it's 22 years ago so that was what like 2000001 2000s 2001 I believe it was yeah and just 36 plants outdoor yeah pretty large well yeah um so uh at the time they raided us the plants were like almost finished so like yeah it was a big like you know it was like pounds and pounds of outdoor weed to them you know they were counting everything they used to weigh the whole plant so it was a pretty big charge I I had a lawyer and I'm and he beat it down to like a lower cultivation charge and I ended up doing 16 months in state prison with halftime damn dude damn yeah so like I was telling my dad the other day we were talking about it and I told him I said you know the same thing that like took my freedom away all those years ago is the same thing giv given it back to me today giv me more freedom than I've ever had in my life yeah D respect so I I feel like I deserve that one cuz you know it's [Â \_\_Â ] up to go to prison for cannabis um especially when you're around some real hardcore criminals and you know you're not that you know you're not supposed to be in there at all yeah yeah how do you think that affected you moving forward in the industry um it it made it so I was basically like in the dark for decades you know I uh I never uh wanted to get into the White Market until recently like I I I think um Instagram being a you know a vehicle of promotion and networking has really like opened my mind to say okay I can do this like legitimately and not have to worry about going to jail you know um and that was like like my wife's main thing she was like dude you've been in this trouble for this [Â \_\_Â ] before like I don't you know I'll support you if you go do it the right way you know at least get like the minimal amount of paperwork at least and I was like okay yeah I can do that yeah yeah for you you I mean you're super under the radar you know you've just recently started coming out in the last what year if that uh I would say the last like two to three years uh the only difference between why you never heard of mahigh Dave three years ago to why kind of more people know about me now is I decided to dedicate my life to this plant like really three years ago is when I said okay I'm going to do this and I'm going to do it like I know how and I'm not going to [Â \_\_Â ] around I'm going to dedicate all my time and all my energy to doing this right so here I am you know and I and I that's the only thing that separates me from the the next guy I think is just uh my dedication to it you know I don't I don't think I'm special at all I I just think I'm really dedicated to what I do 100% yeah you can tell but you can tell that by the quality of your flower when I was at MJ biscon um you brought and gave me some Dante's Inferno number eight and um I was just like [Â \_\_Â ] blown away yeah that was a lot of people's reaction to MJ biscon which like it kind of really made me feel good about the path that I'm on cuz I feel like you know some of the top guys in the industry are giving me recognition for the flower I've grown guys that I've looked up to you know for decade or more so for for them to be like oh dude your shit's fire like you're growing some killer like you're doing it right I'm like okay maybe I am on the right path here after all you know yeah so I think um going through an experience like that you know pull hold you back a lot and kind of uh adjusts your your path for sure that's it's happened to me and um much respect thank you sir so no um just want to thank you for for making the trip out bro thanks for having me I I like I said I haven't been to California in 20 years so yeah it was a uh it was a does it does it look uh does it look the same it was driving over here I was like deja vu I was like man everything looks different like I didn't recognize anything

honestly it's been 20 years since you've been to back home to 20 years yes how old were you when you left here 23 you're 23 when you left rubido yeah when I left California when you left California yeah I was 25 when I left California yes yeah a lot of things have changed down here yeah I know when I left uh they just had prop 215 was just like you know just becoming in a thing yeah so um that's one of the reasons why I stayed in Colorado I think they were the first state to legalize and I was like oh yeah [Â \_\_Â ] it I'm staying right here yeah like this is where it's at you know being having been through what I've been through like you know first legal State I was like yeah this is where I can smoke my pot and grow it and not have to worry about going to [Â \_\_Â ] prison for it were you part did you know anybody down here in the cultivation industry back in 96 no I knew so I would say like 98 I moved up to Santa Cruz and um that's when I really started getting into the cultivation scene like I knew a lot of guys who were into the prop 215 movement and um they had Med cards which to me was like you know a med card back then was like [Â \_\_Â ] gold yeah um there was like a little Mecca down here in Southern California of Growers that you know I think probably each individual city or county kind of had their little cultivation crew and um there's a cool little Mecca here in rubido Hupa Valley Riverside IE uh of you know underground Growers that all knew each other KN knew each other's names uhhuh sometimes we would meet each other but most of the times we just heard about each other we didn't even know what we look like um we'd all deal with similar Brokers and um transactions so there was a strain back then that was really famous called the Glock I don't know if you've ever heard of that no was it like is it an OG or was it it was like I want to say it was like Hawaiian or something so it smelt like pineapples and it was like the most heady uh outdoor flower like even outdoor like it was just phenomenal and it was called the Glock and I'm pretty sure the guys who were growing it were growing it up in Big Bear area like it was coming from out of there going off up there my boy Dave at Grassroots um who used to live up there during that time and he was rocking it yeah there the the Glock was all coming and it was one guy in particular I know that was like he was like the one who had that particular cut and I know that like all his grows got busted at the same time and that's how that cut yeah up in Big Bear and that's how that cut got lost to the ages but it was like I remember like in the late 90s like if you had the Glock you pretty much had the best herb in the Riverside area for sure that's R yeah back when I was going it was this OG cut and um I got it from this guy named JJ and uh Nikki and Mario were like the kings of the Empire the these guys that I know now um but back then you just heard of them right Nikki and Mario and they were just they're they're really big out here in the IE doing a lot of different stuff and um it's just like this cool Network and it was it was interesting I remember you know I got my first cutting when I was like 15 because this neighbor down the street I knew he was growing and I would pester him literally three four times a week to give me cuts and uh he finally you know caved in but um it was cool to grow up in that to where you're growing up in this you know culture where there's so much trust involved you know and and there's so much Community involved because everybody's networking working together and and just um transactional Trust and it's it's really interesting to to grow up in an industry like that and to to kind of see where it's where it's uh going and has gone yeah it's made some amazing you know Leaps and Bounds in the last 20 years yeah definitely going from like you know clandestine you know Walmart parking lot deals to you can just walk into a dispensary and just buy smoke is just amazing to me yeah yeah I never I I always wished it would be legal in our lifetime so like I said that's why when they legalized in Colorado I was like oh God it's legal here yeah I'm staying right here not to mention I love the state but that was one of my motivations for never coming back to California when they legalized it here I was like ah California but I was already ingrained in Colorado and I liked it a lot there how your relationship with craft farmer you've known craft you known Lance for a while I met Lance at MJ biscon as well oh with us yeah oh nice I met him for I I met Lance I had brought samples to MJ biscon to give to the more prominent Growers um I bought like larger samples like ounces to give to Jungle boys and give

to craft so when I saw craft first thing I said was like hey I got I got something for you like I gave it to him and he said he opened it up he said oh my God look at this [^\_^] [^\_^] Jesus Christ and I was like yeah so you know that that that made me feel great um but yeah we we ended up vibing we hung out um we went to the strip club [^\_^] I hope I don't get him any trouble there but uh yeah we hung out and yeah it was you know we just been vibing since we talk on the phone and you know shoot him textas now and then he's really like genuine down toe guy and those are the kind of people that I like to associate with like I don't do fake well you know what I'm saying so so like the more genuine down to earth someone is the more I gravitate towards him regardless of how long I've known him yeah yeah he's uh good people he's right he's he's he's loyal and he's down to earth he's real like there's uh just all hard qualities to find in this day and age man like not a lot of people are real so I appreciate it when I see it yeah well Dave appreciate you brother thanks for making the trip out I got a lot of love and respect you're definitely I'm definitely a fan I'm a fan so yeah that's great we can be fans of each other thanks brother appreciate it likewise all right

Mike thanks for making the trip out bro yeah yeah I really appreciate it um you know you're you're a legend in in the industry bro so I'm stoked to have you on what uh what genetics are you are you known for so you know if we ask someone you know if they know symbiotic genetics you know sometimes they'll be like oh no and then the first thing I ask is do you know mimosa and most of the time people say yes so that's kind of our most famous um kind of strain so we have Wedding Crasher banana punch um you know there's there's tons but those are probably our three you know top ones um and then you know we've been doing a lot of other stuff and we just did a line with uh Gro key which is the gassy Taffy line and we took his gassy Taffy and cross it to a bunch of our females I you sent me uh the GMO cross with Mimosa Y and we did we did the first run on it and it came out around 15% THC and I was like okay let's do another one y and Jay Jay my head grower out there he's incredible grower big big feno hunt guy like always popping like always hunting for something new and um his philosophy is like look I got to give it three full runs before we we actually you know bring it into the stable and um second run it did uh 19% mhm and I think he just figuring it out on the irrigation strategy and and learning how to grow that cultivar and now that that GMO Mimosa is doing 29% wow consistently yep Cara Cara um yeah that one's a cool one it's uh you know there's another uh I don't know who bred it but there's another feno out there um or cross called garlic cocktail but um I think the blend of citrus from GMO is just um it's amazing especially if you find the right feno that's right in the middle where you get Citrus but you also get that weird chmd Funk it's really nice what um what's the TPS like on your guys's feno um it's more citrus yeah and and it's um shorter or tall or uh it's it's more it's it's stocky got it got it more of the Mimosa which is nice yeah that Mimosa cut I remember um you know the line out of jungle boys trying to get symbiotic seeds what year did you guys start working together you and Ivan so I'm terrible with years but um me too cuz I was I was trying to figure it out I was like what year was that like 11 no it was like 2016 is I think when we did that first initial drop at um TLC and ssc in Sacramento um but basically the relationship with Ivan kind of went was he saw me dropping uh purple punch flowers in La and um he reached out to me on IG and was like Hey would love to get your flowers in the shop and at that point you know I looked up to Ivan I would every show I would go to I would make sure to you know find them if they had a booth give them some hash give him some flour and so U when he reached out to me and said you wanted my flour I was like sick let's make it happen you know so the next batch I took it to them and you know they picked it up and then I kind of you know threw out like hey can we trade some flowers you know like I'll give you some of my flowers and love to bring some flowers back to the dispensary in Sacramento and so uh I think it took a couple times but eventually kind of got him to do it

which was huge at that time because they were only at TC you know and I don't know if they had any other clubs at that point I know they've done like some work with greenwolf back in the day but at that time when we did those drops in Sacramento with um the jungle boys flowers we had lines out the door you know and so um that relationship you know um was really cool and then eventually he obviously asked for the purple punch cut and um I told him hey like it's not my cut to give out I was told not to give it out and he's like oh I respect that you know and I was like just hit up you know Supernova Gardens who made the cut um and gave it to us and uh so he reached out got the okay and then you know um Supernova is like yeah you know all good you know drive it down to them so I drove it down to Ivan and I gave him the purple punch Clementine and I think that's it and um you know after after that it was kind of just like history we kept trading cuts um kind of talking Tech we went through some you know um stuff together trying to you know just battle issues and um we kind of just leaned into each other just you know we both had a huge passion in the industry and both love to grow quality cannabis so it was just like our friendship kind of just took off yo respect for turning down Ivan yeah so it's funny to this day he'll say like dude you have mad you know I give you mad respect for saying no to me you know like and so he gave me cuts that he wouldn't give out to anyone else cuz he knew I would keep it you know close yeah um and it's just like staying true to your word you know and I know a lot of people have a hard time with it but for me it's just like Integrity just being true a lot of respect bro um did you guys ever do any breeding projects together no um but I did do when we did our Mimosa uh reversal I took his Mimosa 26 which is their selection cross it to my selection um and then also took the jungle cake and cross it to my mimosa um I don't think they ever popped it but I've been telling roach and the team like you guys need to pull that out because I gave you guys all the seeds of that and out of respect you know those was their crosses so I was like hey I'll I'm going to cross it but I'm going to give you guys the whole lot and let you guys kind of run with it um but yeah they I don't think they ever popped him but um roach if you're listening definitely pop them I'm going to hit up roach can I I'm going to hit up roach for some of those there's a good amount of them so definitely yeah definitely um I remember my boy alex like we had this like little cultivation community in in L Empire and um I remember him hitting me up he's like I'm waiting in line at at TLC I'm getting these symbiotic uh seeds I I did you guys when you guys did that initial drop was it like you guys ran out of seeds right away right I mean it was it was huge yeah it was bigger than yeah than we expected and you know props to Ivan for like pheno hunting and testing those strains and and then hyping it up you know through social media and chalice and everything like that um but yeah we in Sacramento we had to like tell people like we were counting how many packs we had and like counting how many people in line and like telling people hey after this person there's no more of this certain cross you know so we were selling out before people were even in the door cuz we knew we didn't have a lot cuz you know we started with the two light set up you know it was Tiny and you know the reason we kind of created symbiotic was you know me and Vince we wanted to have strains you know of our own to kind of set us apart it wasn't really to like be a seed company and be like you know super like wellknown it was more or less you know just making new genetics for for ourselves but then when I even got a hold of him and you know did what he did it was it it blew up you know and I have a text from him him you know and something that I think you know it's just amazing to hear from someone like him but he was he text me right when they like harvested and was like bro these are the some of the best seeds I've ever popped you know yeah and like to this day it's like really cool to hear someone like that say that yeah um Alex went and he he got some from that that initial drop in 2016 about that time and um he gave me the Mimosa cut and I was a greenhouse guy had like seven spots all around Inland Empire and I started putting in the green houses and I was getting at that time um I was getting indoor pack prices for my mimosa cut wow and I just went Ham on it because for some reason I mean this thing just in a greenhouse was it hit all the boxes it looked just like indor and you couldn't tell the difference not other

cultivars were doing that but the Mimosa was was doing it and I did it outdoor on a small little outdoor run and nearly looked the same like I was just like dude this this genetic is insane yeah you're yeah a lot of people have said that I mean people have told us many times like I bought my house off Mimosa you know cuz theyve grown so much and like kept growing it and you know did well with it so like it's it's awesome to hear that yeah I flooded the market down here though but I mean we that's all I grew at some point I was just like this is all I'm growing well it's loud like the Citrus chps like as soon as someone smells it it's like oh you know they know exactly you know what what the smell is it's not like you're searching for it it's it's in your face yeah what um what's your background how did you get into cultivation how did you get started in the industry so my pops is uh you know uh part of dispensery Sacramento it was called South Sacramento care center but now it's actually called symbiotic Sacramento and so when that um opened up in 2009 uh I worked there for for a year you know just Bud tending helping him purchase so I was able to kind of see the worst of the worst and then the best of the best um at you know at a young age in the industry and so um eventually my uh my pops got a a warehouse and you know we started doing some cultivation and uh we we brought in some Growers that we didn't know through a friend and uh they wanted someone to live at the warehouse and I was like send it you know I'll do it no problem you know I was I think 19 at the time you know still I was living at home so I was like I'll get out get out of the house live in the warehouse it was a little sketchy you know prop to 15 days you know and so uh I was a grunt worker I would do anything you know clean Leaf pick you know and whatever they told me to and with you know the fact that I was there all the time I was checking on the plants you know 10 times a day you know it's anytime I had the urge to kind of like check on things I to go out there and um eventually I started seeing just some issues and you know started going on a roll it up and all these forms and kind of trying to troubleshoot the stuff that we were going through and start slowly started kind of taking the lead on the cultivation eventually um my uh partner Danny he kind of just backed off and let me kind of Take the Lead and you know started really changing things for the better and it kind of just took off and then eventually you know I uh we kind of branded the the grow The Village as just like a code word like we're at Home Depot or something or whatever would be like oh we're going to the Village you know just so we weren't saying like we're going to the grow and so after seeing like Ivan and all these other people like Matt rise have like a brand on Instagram I was like I want to do it you know but my pops and partner are like you're [Â \_\_Â ] crazy you know like there's no way we're going to you know do that put ourselves out there and I was like yeah but look at all these other people like I'm just going to do it you know I did it and obviously it you know took a while to kind of take off cuz we were you know Vending in the Bay Area everywhere so it was like it made sense too to kind of have a brand attached to this flower um and so and I was doing like extracts at the time working with Matt rise he used to call me the private farmer before I had the brand and so that was another reason I'm like dude I'm losing all this like you know publicity through you know Matt rise which is is like a Pioneer in the hash game and so um named it you know the village started the Instagram and it you know started taking off and you know now they thank me for the yeah for the gesture of doing that so um and yeah so lived there for four years um so I really put my head down did my thing um I met my partner uh Vince for symbiotic uh through a mutual friend that was extracting our stuff um ET extracts and he's the one that kind of brought um the idea of symbiotic to me because um he didn't have the space but I had some space where I could kind of make a breeding project happen and so um we you know he had this idea our first pollination was actually a cookies and cream mail and we crossed it to form cookies and animal cookies who so he Vince was the one that wanted to do the first breeding yeah he was the one that kind of put this you know um put that idea in my head and I was like well I've got some space I got some extra lights let's do it you know and he was living at San Jose at the time and I was in Sacramento so it was you know he wasn't able to like come as much as you

know he'd like to but I just kind of did the day-to-day work you know sent him pictures called him all the time so we did that first pollination um went well besides once we started popping the seeds there was a lot of Hermes just because as you know like cookies in general just throws it out amazing uh stuff but just too instable so we were like let's not release this and so at that time uh Vince you know had that purple punch cut and when he got the purple punch cut from Supernova he also got seeds um from where the purple punch was found and so he had had this idea of like well let's make purple punch in seed form you know let's take these seeds pop them find a male cross it to the punch clone and then from those seeds find a male and then you know that's our F2 male and so we got the blessing from Supernova and you know the rest is kind of History you know we popped um you know I think there's only like four seeds or something maybe six seeds and I think we only had two that popped so we only had two males picked the male that we liked most crossed it to the punch and then we popped like 100 seeds and got 50 males and then selected one male out of that 50 that resembled the punch female as much as possible and we actually pushed it like close to 10 weeks in flower the mail and waited for trichomes to kind of uh push out and our punch mail literally smells exactly like the female what were you looking for uh when you were hunting that male how did you out of those 50 males like I mean structure obviously um like we were taking leaves from the female and trying to like match it up it's because that's what we were trying to achieve is just a male version of the female and so we structure was the main thing and then we stumbled across you know the trichomes we started seeing them like somewhat early and we started smelling smelling them and um we got to one where it's it's identical it's like and I've been wanting to do it for a while and I don't know if it's the same technique for reversing a female but um I want to reverse a male and see what what the male kind of pushes out and I've heard it's got It's a different process but then I've heard opposite um so I think I'm going to try my my recipe and see what happens but yeah we're I mean solely looking for just a replicate of the female and a male and I think we like nailed it yeah how long did you live in the warehouse for 4 years you lived in there for 4 years I lived in a warehouse for four years too yeah so it was like no kitchen you shower you didn't have a kitchen no it was like a makeshift kitchen you know and uh the bathroom had a shower luckily but it was like you know 8 Minute hot showers you know like not it wasn't wasn't nice but um and couldn't bring friends over like only friends that like were trimming for me or anything like that so it was kind of like how's the room set up like so there three offices in the beginning in the front so like with huge windows so I just took one of the offices as my bedroom and like blacked out the windows and that's where I lived and you had a shower no kitchen no kitchen I mean I had like microwave like toaster oven and I eventually got a oven there and stuff but um I was mostly eating out at that point yeah if you haven't lived in a warehouse in this game you're not doing it right yeah it was scary too in the beginning like uh cuz like we didn't even have cameras or alarmed because just like bringing people into um a cultivation at that time was just sketchy you know so it was uh it was a little Eerie at night you know hearing things and stuff like that and luckily in the 10 years we were there um you know I was there for four and we had it another six years no issues with like crime or theft or anything which was really cool yeah now the warehouse living is uh it get gets old after a while yeah I was I was happy once I got my uh my pad for sure mine was next to the freeway okay and well I had lived in one warehouse for two years and then I had moved to a different Warehouse uh for another two years and I started getting sick non-stop like sick sick sick and I I kept going to the doctor and the doctor's like what what's going on you know and she's doing all these tests and she's you're good and then after like my fifth or sixth visit she's just like where where do you live and I was like I live in a warehouse like next to the freeway she like you live next to a freeway like literally on the freeway wow and she was you got to get away from the freeway like you'll you'll be better all the smog and everything I yeah the smog from the cars and it just kept making me sick and I moved away I rented a house and um D I got better in like six weeks I was

didn't get sick again so when I moved to LA like 3 years ago I was sick as a dog the first year like four or five times and same thing I was like went to the doctor and I'm like like after like the fourth time like what is going on and she's like well you moved and you moved to LA you know she's like it's just the allergies are different and because I was having like science infections like yeah everything you know and it was just messing me up and yeah it's got to be the smog yeah it's got to be yeah get that that adjustment but your body adjusted to it yeah yeah it's pretty crazy what was your what was your first breeding project so was that cookies and cream male um that Vince selected on his own and then I basically took the male and I had the females on ready I don't know if I had the animal cookies but I think I had the form and we um bred those and cuz Vince was super into cookies back then obviously everyone was and so you know did that and as I mentioned earlier was just amazing quality but just you know lots of Hermes yeah on average how long does a breeding project usually take you um I mean reversal or regs regs take longer um most of the time but um you know there's four months you know three to four months of the act of pollination and then you got another four to six months of testing because we don't like to release anything unless we kind of get eyes on it so it's kind of like a St twostep process you know first do the pollination and then we pop the seeds whether it's us or we send out testers and we just get a lot of feedback whether you know they're having uh mutations in the seedlings or they're having Hermes we just kind of make sure there's nothing weird going on and then so I mean a year year and a half you know depending on how you're releasing seeds yeah year and a half probably it's you know most our projects take that long and you know we're not you know symbiotic is a side gig for both me and Vince and so sometimes things take a little longer just because we're handling our day-to-day stuff um um but we're roughly a year and a half and you're you're only doing fls as it right now yeah we've um done some other like um yeah I mean all fls actually yeah we're looking into doing some sls um but for me I like the diversity of of fls I know like the European market would love to see a mimosa S1 and that's something that we're um thinking about doing but other than that we're kind of staying with just the fls cuz that's the market really likes the diversity they get in fls is that that's the main reason why doing only fls Y and I I personally like fl's um just for that diversity of just every seed's going to be a little different so you're going to be able to like select selectively you know um breed something so like for example the modify grapes which is GMO and purple punch um you know we we bred that in the sense of trying to find a shorter GMO um faster GMO um but still TPS of the GMO so basically we're taking the traits of the punch which is Vigor fast and you know color and obviously bag appeal but kind of putting that with GMO but selectively finding traits that we like CU um we all know like purple punch has got a bad rep and but at the end of the day it's good breed and stock and for certain things sometimes it throws out something you don't want like the kind of bland uh chirps or like the long trichomes there's stuff that we don't like from it but there's also lots of things that we've utilized in our um selections for for the better yeah the structure and the plant and the yield everything's solid but everybody's staying away from that turp yeah for sure and it's I mean when it first started people loved it but you know it doesn't translate well it kind of has this Dusty kind of like note to it um living like on the plant it's like blue Power raid it's really really nice really sharp um but once it dries it gets a little Dusty is how I kind of describe it yeah um obviously the potency is not really there and I think it has to do with long trichomes like it looks like really Frosty and probably would test high but it's mostly the tri I mean the stocks that you're seeing like especially if you see it in macro or you know you take sift and you take a macro shot of it it's stocks it's like all stocks yeah um what Julian I know you got something going on in in Europe right um going back to that and is that with Julian yeah so shout out Julian and Doug and mark from th seeds um doing a little project with them we just did um a took their um pure Afghani and or Afghan I'm sorry and crossed it to some of our females and then we're doing some other um stuff as well we just did um we're doing a active right now which is a amarell u reversal and



hitting a bunch of his females and stuff and hitting some other females and so um it's been cool to work with someone out in a different country cuz we've only done stuff here so just his knowledge and just his uh resources out there is really crucial for us um just because when we're out there we're kind of like lost you know yeah he seems like a really good guy yeah really he's been in the game for a while I mean he's you know yeah he's a really good guy he's originally from France right yep and then he moved to Barcelona yep what's what's his background I mean he's been at it for a minute yeah I don't I I don't know exactly his full story of the background but yeah he's been growing for a long long time um his passion for the plants is like incredible like um you can as soon as you talk to him you're like you know right away right comes right it's funny I actually have some seeds here that I give Ivan that um I got from from Julian that I uh got from the spannabis trip so make sure to leave those with you and uh yeah you want me to give them to him yeah for sure for sure um yeah I saw Ivan posting do you know what they have going on I know I think they're going to do a breeding project together or something yeah so basically um Ivan was like send me some seeds you know so Julian like that next day you know put together a crazy pack and so um you know they're just going to go through some of this stuff I think Ivan was kind of leaning into some cheese crosses um so I got a bunch of those um but yeah Julian's uh libraries insanes got some of like the old like A5 hazes and stuff and I'm like oh like maybe we should breed with that just to like play around he's like I'm never breeding that it's like 15 we you know Haze and it's like you'd have to like flower it four weeks before everything else and it's a pain in the ass but um he's got some really cool genetics that are like that people really don't have you know anymore or don't have in America I to work with him like that and post them up like that I mean he's got to have something solid yeah that was cool to see yeah I told Julian I'm like you did something there you know he did so roach and Ivan you know gave him a shout out but you know it it makes sense Julian's like I said just a standup guy yeah no it's really cool to to have him on the team or with with the crew yep what do you what do you think about femin seeds they're cool so like me and um or Vince you know was kind of opposed to them in the beginning just because you know a lot of people would say you know they're in stable or a lot of breeders would say oh like I can't like the the amount of seeds I make in a pollination isn't worth it and so um you know we were kind of against it for a while but then we decided like hey we found this banana punch n it's amazing we want to reverse that so we can push that trait to you know other things and that banana punch n you know really it washed well you know one second place spannabis um with Cuban grower so it had you know it was it was amazing cut so that was our first um reversal and I remember doing a test and reversing it um and Shout Out in-house seeds uh inhouse genetics he gave us a little recipe of the sodium tho sufate yeah the STS Yeah well yeah yeah sodium thyo sufate and then silver nitrate blend okay um I don't I think that's different from the STS but I know there's a couple different ways and there's a couple different people that have like a one product um spray but anyways um so we did a test I saw it reversed I'm like cool let's try it and basically when I tried it um the females were ready and so like cool Cho the mail and then started trying to dust it and it was like no pollen and I was like uhoh like this isn't good you know so I was like well I'm here you know like not much I can do so I just hung the the mail in the room was super stressed out cuz I'm like damn like put all this effort into it and um nothing you know know yeah I'll have female flowers if it doesn't pollinate but there's all these male flowers like everywhere now it's kind of like you know um not sterile so I waited a couple days and would go in there and kind of shake it and eventually it started shaking pollen and I was like huh interesting you know and my theory is like when you reverse a female it's really really tight and dense compared to a regular male that's really loose and I feel like the the flowers can't open because they're so stacked on each other and so when it dries it like gives room because everything's like shrinking and um then maybe the pollen you know comes out then I I don't know like the science behind it but that's kind of been our little you know Tech to you know and I've done it with mimosa and same

thing happened I've told a couple other homies like just because you don't have pollen right away like just dry it you know and things seem to you know get better but I've also had reversals where they're dumping pollen you know living so it's kind of I think depends on the cultivar um but um yeah but feminized are cool um the the process to do feminized do you you just take the female plant and spray it with colonial silver or like the STS um and then that right there yeah triggers the plant to kind of switch over to you know um a male some people like said do like a one spray depending on the um the solution I was doing I've done uh everyday spraying just to like be 100% you know um confident because sometimes you'll see like male flowers but then you'll start seeing pistols and so it's like oh [Â\_\_Â] you know maybe it's not enough and I've noticed too bigger plants need a stronger solution than a smaller plant and maybe it's has to do with the hormones being more abundance in a bigger plant I'm not sure um but yeah so it's it's it's a weird process cuz it's like and a lot of people told me oh the the females or the plants don't like the spray but I've never had that issue um the plants take it and they reverse and it's it's a interesting thing the first time what what was the hold off of doing feminized I've heard that more susceptible to to to stress tanes or or maybe herming yeah I mean we always were on you know we've heard that more Hermes kind of come from F and so that was the main reason just because like having a genetic company it's like the worst thing is having people come up to you or message you and be like yo I got a bunch of Hermes like that's not what we want and so that's why we haven't released everything but um when we did the banana punch like it it didn't throw out any more Hermes than a reg line and so it was kind of a wakeup call to us I think it has to do with just breeding in general what what what are the parents like you know what do they have are they inable like if you breed with cookies whether it's feminize or EGS you're going to get you know instable you know uh phenos so it's I think it's just dependent on genetic more or less than reversal or regs what's the the the push uh in Europe to do femin seeds why why is that so I mean this is what I've gathered you know um but in Europe I feel like a lot of Growers don't want to Mom you know out their Cuts they don't want to have a veg they just want to pop seeds and just rip them you know rip through them and so I think you know they want feminize just for that um kind of purpose and then there's the whole other you know um side of things with um the different you know like large scale Growers like in Morocco morco and Italy I heard there's a lot like southern Italy or something L straights yeah they just don't want to deal with males you know I mean morocc they they deal with intersect Straits and everything so they always have seeds in their you know um flowers but I think like 99% if not more uh just goes a half so it doesn't really matter um but yeah they just want to not have to kill out males they just want 100% females out there with in regards to to to male like I know we went over a little bit how you selected your Mimosa male I mean you were looking for the Mimosa traits punch punch mail yeah the punch mail um you were looking for certain traits that were like whatever um what do you is there any any other things that you look for in males when it comes to to pick to selecting a male I mean how do you how do you select a male so in in my opinion it's your you're kind of blind you know you can look out structure and and everything and depending what the lineage of the male you know you can find the structure that leans on a certain parent if that's something that you're um going after and you know to back it up a little bit it's it's all about having uh a plan you know you can't just like breed and just like oh I just want to breed fire you know it's like no you got to have a kind of a plan of action of what you're trying to do you know you trying to bring gas to your mail you trying to you know what are you trying to do and so for us you know we depending on what it is you know we'll we'll select some males or select a single male but the real test is The Offspring because you can have the the most vigorous male you know stem rubs like crazy uh Vigor insane everything is like perfect but you don't know until you actually see The Offspring of that mail and that's what you've you've learned yeah through through the years I won't Bank on a mail until I see The Offspring and then cuz then I can see okay I'm going to cross this mail to say like banana punch or

whatever but I know the banana punch so I know what the banana punch throws out so anything that's different from the banana punch is going to be the influence of the male so you start learning what the male influences and then you can kind of say okay cool the male throws out this tur profile most of the time it throws out this growth structure and then you learn your male more um and so that's that's the best way in my honest opinion to kind of select a male is select it or select multiple ones but select it after you see The Offspring yeah yeah that's cool what what are some major stresses that that will cause a plant to harm that you've learned through over the over the years uh genetics I mean I mean obviously there is stress you know that will induce it but you know it's light leaks uh uh huge fluctuations of Temp and humidity and sometimes Hermes are weird like I've had Cuts Like I remember wedding cake one time herid on me like four or five plants you know and I think it was sterile pollen but not sure what happened but it happened you know um it could be dryb backs it could be you know High EC it could be so many different things um but main things you got to focus on the red genetics yeah and if I see a hermy it's it's out you know even if I know some people like oh only Hermes is the first run or whatever I'm not taking a chance on something cuz it's like yeah it might not hurt me every time but what what if it Hermes in your homie's garden and you just gave him a cut and he you know comes back to you and he's like dude what happened I'm like well it didn't her me on me but it's like if you see it once it's out you know it's it's killed yeah 100% when when you're storing mail pollen what's like do you have certain temps or you know long the length of storage on on that so I've never stored pollen I've always used fresh pollen right away um yep just because I don't don't know how well it stores I've heard it stores well for a year if it's V sealed in a freezer but again it would suck to go into a pollination and have all this pollen try to pollinate and then it's invi it's not viable and so I've always just had you know fresh pollen and taking the plant and shaking in the room um just to be safe there's been times I've like played around with saving some pollen and pollinated like tiny stuff but just like kind of like small projects that never came to you know fruit have you have you ever gotten any seeds that that came with hlv or anything like that nope uh haven't done tons of the hlvd uh testing with like seeds um done a lot of plant testing and I remember dealing with it like around 2016 or so um my cherry K just started we called it dutting back in the day and I know a lot of people did yeah we didn't know what it was yeah and so my Cherokee K got attacked hard and that was my most popular uh you know strain to grow for flower and it sucked because I would come into the room and you know like a fifth of the room would be have it and so I just start yanking them out and started seeing it and then I got to a point where I can see it in veg and so I just started just killing killing killing and at that point we didn't know about being sterile and whatnot but I was actually able to successfully push it out of that strain obviously you pushed it out yeah but I don't I mean I'm sure it was still in if T it but it was not thrown out like it was and I think what it was is you know you have to be able to stively or be able to see it and if you're not seeing it because I've been in the gardens they're like oh we're having hlvd problems all this stuff and I'm like okay well let me see your moms you know and looking at their moms and I'll find like 10 moms fully infected and they have no idea and I'm like look you know like taking a branch it snaps train eye yeah it really does it it takes getting beat up for a few months then you're just you can once you get beat up for a few months you you you train yourself on what to look for and even then like there's been times on like cool I see these ones in veg pull them out and then they get into flow and then they push it out in flow it's like really weird and obviously too there's like when you flip when you flip it right when it flips that's when sometimes uh yeah cuz I'll be cuz I'm pretty confident like I'll see a whole lot I'm like cool like only these four had it let's flower the rest and then all of a sudden there's another 10 you know two two weeks later and I think it gets pushed out later because yeah I think it starts in the root zone or it gets stored in the root zone or something you know as we're learning more about it but and then it just pushes out and sometimes it's just a single branch which is super weird you

know and I just heard it's a slow moving vroid so it just doesn't you know attack the whole plant sometimes how did you get the plant back I mean what what process did you just making sure my moms were badass you know like I know a lot of people take you know flower their best uh clones well it's like you got to take your best like whatever you know if you need 10 moms take your best you know 10 clones from that batch and then Mom those up um and yeah just being able to make sure my moms were not visually affected because we didn't have the test back then was able to you know just push it out yeah I heard um I don't know if this is true so you know um but I heard you know taking cutting off the newest growth and focusing on the newest growth will um but I I'm not sure I've heard that too like literally like lollipopping or like tooting it and then getting all that like old stuff off and then giving all the energy to the new um tips and then yeah cloning off that did did you get that from a cut from someone else or was it was it just in in the stable and it and it I I took on Cuts so much back in the day and still do it came from somewhere you know um it cuz it it came yeah yeah cuz it was on the Cherry K but it could have came from anything yeah something that didn't show it as much yeah it could be in a plant just doesn't that genetic does better with it totally yeah for sure so current breeding projects you have what are you working on so um we had a amarell reversal number nine that we did that didn't yield a lot of seeds which was unfortunate cuz we had some crazy females in there but the we got you know some seeds so we're actually hunting through those right now but we're redoing the reversal of the amarell 9 with some different females and some some ones we did already but that one I'm really excited about because that one's just a hash monster there's so many hash companies on the rec Market that grow you know omell because it's just like tropical lemon like dumps yeah dumps it's just it's really nice it's and it's different you know it's not GMO it's it's it's different so that one I'm really excited about and then we're doing a bunch of hunts so whatever we find from these hunts will be probably one of our next projects as well which is probably one of the gassy Taffy lines maybe the sour Taffy or ego death yeah what do you think about this whole candy movement I mean I haven't jumped on it uh cuz I I try to you know uh go against the grain sometimes um try to find you know my own lane um it's I mean some of the genetics are amazing I know why they're sticking around it's because the translation to flavor is there and that's what everyone's focused on they want to taste it they don't want to just smell it now they don't want to just look at it they're learning you know the consumers are learning which is awesome you know I think it's going to be really good for the future of cannabis but um yeah I mean it's good it's a little boring you know u a lot of the same yeah I mean I I see I've been uh helping out at symbiotic Sacramento taking some product shots and whatnot and yeah I mean every other bag or every like bag is like a or runs kind of remix Lemon Cherry gelato or whatever I mean it's good though it's just boring I want something new exciting you know yeah no it's cool you thought about Crossing anything with yeah we we've done a couple you know um but nothing too crazy yeah you said you taking shots what did what what do you do on shots so I have a background photography I did a lot of um band photography and portrait photography in my um like 18 to 20 um ended up actually going on tour when I was right when I turned 18 doing photos and stuff um and then once I got back I got in the Cannabis industry and kind of uh didn't have time for it so so you first a photographer that's cool and so um eventually I saw stumbled across Eric nug shots and I'm like dude please come take photos of my stuff you know so I had him come in and I saw him like do his setup and I'm like huh I think I can do this you know like just like some equipment some learning so actually paid him for some Consulting to kind of teach me tell me what uh stuff equipment I need to buy and everything like that and jump down that rabbit hole of macro photography which is another like Beast you know uh photography is like one thing but macro photography is like insane because you're taking at least for the style that Eric does and a lot of the industry does or industry photographers it's called um uh stacking or um I guess yeah stacking I can't think of the other word but basically what you're doing is you're putting your camera on a rail and then you have a front point you

tell it the front point and you tell it the end point and then you tell it how many uh microns between each shot you want to take and so for something that's super super um macro like say a 20x objective you're doing like one micron you know between each photo and sometimes like I've done photos where 600 shots on the same subject is that when they're when you're seeing the nug like that's a 360 so that's another that's next level yeah so that's like that's cool too because it's it's a video but it's pictures and so what they do is they take a picture at every single degree so it's 360 photos but then they render it into a video so it's like 4K it's like higher quality quality than video typically because of that but the focus there there it is focus stacking is what it's called but um for the focus stacking it's just on one One Direction so you're just going up and back because with macro photography the depth of field is so shallow that you can take a single shot but you see nothing you see a little sliver and that's it and so the objective is to get everything in Focus but you have to take a photo at every single point and then use the software to blend it all together to make it a video those are to make it a single shot the for the 360s yeah I make it a video okay but like all the shots that I've like on my page they're like some some like I said are 600 shots put into one and 600 pictures put into one one photo just to make everything in Focus it's it's trippy um and the thing that's hard about it is if you have any vibration you know if you touch your table or your camera is a little um skewed that it doesn't come out it comes out all blurry comes out just weird so it's it's really crucial to have a stable setup for your like you know like you can't do it on a raise Foundation at all you know unless what do you mean raise Foundation like a house or something you know like you have to do it on like cement which to where it's stable that's stable yes and no so there's this uh guy uh Zoom Gardens he does amazing like objective macro which is like the super like it's literally a microscope like I bought this 20x microscope and then you retrofit it to fit a camera and those ones are imposs not impossible it's so hard like you take a little step even on like saman or touch the table like this your C you can see the camera just you know going crazy and so this guy Zoom Gardens I um one day accidentally pocket dialed him on Instagram which is weird and uh accidentally yeah just because we were chatting and whatnot but and then all of a sudden I hear my like phone talking I'm like what's up you know and we started chatting and he's like on on a fourth floor of like a building doing these shots and I'm like how like I've always thought you had to be on cement like there's no way and he's like yeah I have to be careful for like semis that dry past but other than that I'm good but you know he just has his setup so dialed in so just you know clamped down to whatever it is that he doesn't have that movement but it's like a issue on my end that I have to like like the something I've been trying to dial in is just my like stableness of my setup how long does it take to get one shot uh depends like if you're doing like a flower or some hash I can get it done in couple minutes you know couple minutes do 600 shots well no so like those ones are if it's not super zoomed you were talking like 50 to 100 and then if you're talking like a single triome like you've seen yeah that's like the 5 to 600 and you're doing like you'll have like one to two seconds between each shot because you want it to like move and then have a pause so if there is any vibration it kind of settles and then takes the shot because every movement you know you're going to have some you know settling so those ones take a lot longer and what sucks about that too is if you have a plant that's living it's you know it's going to move and if you don't have it in water it's going to like shrink and stuff and so you actually see some of these guys doing these shots that are so they're doing these uh stacked spins so they're actually taking a stack shot of a area and then spinning it one degree and then doing another stack shot and what that does is everything's in Focus rather than cuz most of the 360s are single shots so it's not everything's in focus and so those ones can take like six hours to do one shot or one video yeah one video yeah and it's insane because you can spend all that time and then not turn out yeah it's not like perfect so it's interesting it's crazy crazy so it's just a side hobby yeah do you do it for anybody or you just do it for yourself homies for the homies yeah I like doing it

it's it's fun you know seeing um it's like a little challenge just because like especially with house you try to like scoop it out see if you can make it look cool but most of the time like I just do a single scoop and shoot it and it looks great okay so that's cool getting into cultivation because I think a lot of guys are listen to this podcast for cultivation and you know you're a legend in the industry so it's always good to hear like what your techniques are and and what you're doing some of the questions I wrote down is how did you irrigate before pressure compensated drippers so we did a um well at least what I learned on was a recirculating system and it was open Flow we used a like a court or I think it was like a Little Giant pump which is I think a little less than a horsepower and uh so it's open Flow and we would water for literally 15 minutes at a time and we were in one gallon cocoa so it' recirculate you know it would just it was like Hydro basically just dump water on them and we would water start with like once a day and then get up to like three or four times a day so it would fill from the bottom or or D from the top from the top from the top okay and then and then it would just go back into the reservoir and then you'd recycle that water Y how often would you have to change once a week once a week okay so just like back in the day when we first started growing EB and flow right on the botanic air benches same concept but just doing top drip okay and um like for a while it was funny like I was so scared of burning my plants like I would do a day of flush cuz I was like I don't want to put nutrients on nutrients you know kind of thing yeah we so like one day of flush or at least one water of flush and then put it you know put it back in but yeah that recirculating system actually use to this day in some Gardens um that are because it's like it's bulletproof it's not I mean it's efficient yeah it's efficient I mean you can walk away from it for like 3 4 days like and not as long as your pump's working yeah your water goes down a little bit but if you have enough buffer it's like it's good um if the nutrients are stable pH is stable that too um but yeah it's it's it's a cool system it's not perfect but it definitely works did you ever do that that arm M EB and flow bucket system back in the day that was my go-to for a while I have a couple buddies that did it and yeah they crushed it dude it's a great system it was it was great 55 gallon drum but we'd always switch them out for something bigger like a like that two and a half gallon pot with the hydren yep it and they would get huge the only problem was like the the vegene um trying to like that initial like getting if you drop the rock wall down too low it would root M yeah but that was like you had what you kind of had to do was set the rock wool just above the waterline so the plants would grow into the hydren and then as soon as they did that you were Off to the Races like you were crushing y did you have any issues with the plants not wanting to finish not that I can remember okay no why is that what you've heard well yeah I had a friend that uh ran it for a while and he ran it next to his rock wool and that was like the issue and I think it was just the EC would never Spike you know no it wouldn't you know you You' control it it's no dry down you know yeah no dryback uh just just straight so it was he had the issue if we felt like they just wouldn't finish because they were just always you know no really stress when it came to like water you're right you got a good point but back then we didn't even know what finishing was exactly you know so you know back that was a long time but now like I seen I've seen a couple people talk about like oh they want to try some trials with that but [Â \_\_Â ] in the EC you know just by manually doing it not through a dryback but just like throwing six cc into um funny story we had a recent run and it was a friend kind of running it and I was just controlling it remotely or just you know coming in a couple times a week and uh I went in check and he's running Athena Proline and I'm like oh okay cool like oh dang your Reservoir is kind of low cuz we're doing the recirculating but we're doing pressure compensating it's a new new thing I'm trying you know like that system but with PC drippers okay with like half gallon or 3s yep 3s and I'm actually in 4x4 by fours like tin yeah tiny cuz basically I just wanted to flip some um seeds and just rip through them and I didn't want to up poot them because it was just didn't have a lot of space but anyways walk into the grow and I'm like cool like everything's looking good and I'm

like okay your Reservoir is low like pretty low because I used to top off kind of often and so I checked and his EC was 6 EC at the dripper and the plants were taking it oh for sure I mean yeah they had some tip burn whatever you don't dry them back too hard dude they were drying back though they were yeah cuz 4 by 4 spiking like 12 14 e easy cuz I mean I was running 6X fours back in the day and I remember having Grint and seeing you know 20 EC like every you know on the dryback so this was yeah stupid high but 6 cc at the dripper and they were taking it no problem yeah that's the thing with Prine you got so much forgiveness um that you know you don't have to be an amazing grower to to grow good quality cannabis because you have that forgiveness you know you do that with a lot of other nutrient lines oh yeah you're going to it's it's over it's over at 6C yeah and granted I would never do that purposely you know it just it happen why was why was is it just cuz it was old lack of knowledge he just he just knew you know I'm I'm kind of teaching him and stuff like that and I was you know I was in Spain for a couple weeks so it wasn't Hands-On as much as I probably should have and you know it was but that that's exactly what you know you learn from your mistakes sometimes you're like okay well I guess but I mean it kind of didn't make a mistake I mean plants look great crushing yeah they some of them like you could tell they wanted to finish a little early but it was like a small lot was doing that most of them like were just like chugging like amazing I'm like okay interesting it's uh it's crazy what how high you can stack that you see on certain cultivars with with that with the Prine it's just I mean I'm pretty sure tomato Farmers they go pretty high they go yeah I've heard like 20c and [ ^ \_ ^ ] you know but I mean I wouldn't do that but I'm just saying that you I've heard about it so we did this poll and I just put this on here because I thought about it but veg in place or veg room so I like to veg in the room for you like to veg in place veg in the flower room or have a dedicated V room but well both so okay um I like to obviously veg in a veg but the beginning um basically how in a perfect scenario five to five to seven days in veg compacted this is for a setup for um 4x4 uh 2 and A2 you know uh little uh blocks going on to either a one gon Coco uh multi slab whatever so you know grown into a small block you veg them 5 to seven days just root them in and then you stack them and I like to when I stack anything I don't want to flip it right away because I don't know what's what's going to happen and then on top of that on top of it you're stacking you're also putting into a new environment typically flower rooms don't have the humidity that the veg does because there's less plants in there unless you got crazy humidifiers and so um I like to veg another five to seven days in the room confirming the plants are going to take off confirming everything's rooted in because the worst thing you can do is flip a room and then they start going to [ ^ \_ ^ ] and it happens you know there's times whether you can't get your humidity up or something was off on a controller so I always like to see positive like before you flip yeah Positive Growth or just something positive coming from the plant before I flip yeah I know that's how you guys were doing it at jungle boys it was is you like four 4 in by 2 in right and then you go onto a slab y yeah and veg for seven days yep it was like we're averaging 10 to I think 10 to 14 day veg you know total and seven days being in a dedicated vegro and then you would take that put it in the flower room and then get it established s you know 5 to seven days whatever it is and then flip yeah yeah I I see that that's kind of like it's kind of like a preone y you know what I'm saying it's like you you're getting established in a bigger media and then going in there but you're not taking a bunch of space up for your vroom y you know and and you're not moving these big uh pot media I mean you're moving you know tiny tiny little plett much moving clones yeah we used um clone racks to move all over the plants cuz they weren't tall and it was easy and um yeah it was it worked out I mean as a business and like numbers kind of thing it it kind of doesn't make any sense cuz you're eating up your um Harvest per year because you're spending a week in a flower room vegging MH um but for me like I'd rather have quality consistent rooms rather than just trying to rip you know through as many rooms in a year as I can because at the end of the day I have to stare at the room and deal with the issues and there's a quote that Jordan from

blueprint said that I'll always remember but it's like having a bad room is like having a gloomy day you know in the room you walk in and it's just like you yeah you don't even want to be in there you have to be not only that you're going to be in a bad mood the rest of the week yeah you know or longer whatever until everything turns around yeah I remember like my girlfriend you know she like why are you stressing so much blah blah blah and I'm like I have to deal with this for another like six weeks you know like it's it's the most annoying and most like it's just bad you know I'm a very OCD and perfectionist and so having stuff like that just bothers me yeah so we did that poll and it was veg veg room one by a long shot right veg room one but you know I'm I'm in a greenhouse so I was running it and I'm working with my my head guy Jay and we're we're working on efficiencies and so right now we're transplanting a clone into about a 2 gallon square okay cocoa pot mhm and we we having to move 3,000 plants to the flower room and moving 3,000 one G two gallon pots is a lot different than moving a 4x4 by two yeah right you're moving a clone pretty much and we're moving plants because uh our veg I talked to him the other day our veg time is like 16 days I think light ppfd levels are probably a little lower when when we're in a greenhouse y so we don't have um that kind of veg time but we we just recently vegged in the flower room and laid out 3,000 pots transplanted right into two gallons you know only do it with cleanse because it it's a big deal you know the oxygen and you know consistent canopy consistent oxygen to the root zone but we say dude he told me we saved like six days in work oh I bet you know because we were able to take down the room clean the room and fill it back up with 3,000 plants in 2 and a half days Y and boom We're Off to the Races 16-day veg he said he lost like 10 um 10 plants didn't take which that's normal it's normal you know and but he had backups in the veg room the old vegro so we're testing it right we don't we go we I went again we went against the the Pole right but I I think that has to do with each individual Grower's situation totally the the facility has a lot to do with it if you don't have the veg space and maybe you're forced to do that or if you know or maybe you have to get those five harvests in a year you know that's what your boss is saying or whatever um another thing too that I don't know this is more probably some a question for like someone that knows the plant a little bit more but I wonder if when they're rooting into a new media does that take away from you know like their their growth in general so it's like I always wanted when I flipped if I was stacking or transplanting whatever that I wanted them rooted in like not not just like where I could lift it off you know kind of thing you know they're day one a flower and they're not rooted in I'm like just felt weird you know we did we did do that test a few years ago and um what it was is we we used to transplant in about a 6 in pot and then we would take the 6 in and we put it in a two gallon um we did multiple side by sides where we transplanted a clone right into a two gallon and then we were doing that old process of six gallon pot then transplanting the plants that we planted straight into the 2 gallon blew up way faster um you know in flour and in veg uh than the six than the ones that we had to transplant y it was a big deal and I think maybe when I these this is all assumptions right we we just know by doing we don't know yeah we we observe and we just see what we you we learn as as we go along but I think the assumption is that I think that when you're going into that initial six 6inch pot or whatever you're you're vegging in and you go to that transplant I think that that root ball gets Bound in there a little bit and it takes some time to get out of that shock of transplanting and then also the roots got to kind of figure out what's going on and get to where they need to go but when you take that clone and you go straight into a two gallon or straight into whatever you need to be in and you let that thing rip I think it just it just they just did better I mean they say that with seeds too you know if you can get a seed in its final container I mean especially with the tap root it just does better um we did some tests and um at jungle Boys 2 where we did we uh transplant clones AOK into a 4x4 by 2 and 2 and typically we wouldn't irrigate for we just let them dry down that first week usually was like anywhere from 5 to 10 days we would you know not touch them and so I wanted to do um a test where we transplanted into the 4in and then



stacked them on the slabs that day so we're talking the same day yeah we're talking like transplant into 4 in and then put on a slab and so I did one where I had no drippers so kind of the same Tech as I would without the slab watering it yeah or just letting it for five to 10 days not doing anything yeah and so um the other one was I put one dripper in each plant and then the third trial was two drippers traditional you know what we typically did the one with two drippers did the best so day one from a clone AOK got plugged into a and then plugged into a um a slab took off and we were watering you know 16 times a day and it took it he was ready to go yeah and actually did you know tremendously better than the other two this is kind of like the same kind of same stuff we saw you know it's really similar it's pretty interesting I think irrigation is huge it's something I've taught a lot of my friends that were kind of stuck in ways of like hand watering or whatever and I'd come over and be like bro if you get them on drip your plants are going to be night and day yeah they go they just get cons they love that routine just like us humans like routine is huge and so plants get used to it and plants thrive on it you know cuz they're getting fresh nutrients fresh pH you know it's not this old like you know stagnant water you know and sometimes it goes Anor robic if it's you know sitting too long and so I feel like pushing fresh stuff through it uh nutrients and everything is is key and then you know being in a hydro um ponie media you know whether it's cocoa Rock will pee it has so much air you don't have to worry about overwatering as much as long as you kind of irrigate you know irrigate correctly because it's like you can't really overwater a plant from one feeding it's more or less how many feedings in how often is more or less and so we just you know sip them for that whole day and it's like we're doing like 120 Ms per shot so it's not much water you know but it's enough for them to be like thank you you know yeah it's interesting it's it's I think we're going to veg in the flower rooms from now on but that's just because of my set our setup totally you know and we saved tons on labor did you see better structure cuz when you guys veg we're actually we're actually at uh we're actually at day 10 okay right now in that so we literally just started keep me updated i' love to hear the the results I will cuz in that's one thing we did we they go straight on drippers right into that flower room cuz set up for it which is weird because You' be like no you got to have that first dry down blah blah blah and it's like I don't know I've tried it and they don't need it you know yeah it's pretty interesting so still playing with everybody's still learning you know um do you use VP domes yep so I started using so my buddy Ramsay he I was having issues um around 2 17 um I was having issues with domes I was hating domes um I was having rotting on top top um not so much a stem but anything that was touching the Dome and staying wet would just like rot out and then your new growth or you know you leaves you'd have to pick it off and it's just like you know it's shitty and so he told me that commercial green houses do a greenhouse inside of a greenhouse for cloning so I was like okay so me and my coworker um Shadow Aaron um he's he's like a roach is how I explain it just really like mean mechanical really smart guy he's like all right well we'll just do a PVC frame in a 4x8 and we'll make a little hoop house and we'll just put painters plastic over it yeah I'm like cool you know and I can like pull photos of it so we did it did a little trial it worked out great and but then I was like okay I'm not going to do a 4x8 for cloning and it was just like that was like our mom that uh space that we kind of inefficient yeah it was and so we went and got more of the um paint plastic we got some magnets and basically made a VPD Dome um out of painters plastic and just magnets and my buddy Aaron's just really meticulous and like cut it all and it had doors you know with the magnets that were keeping it tight that's fun we use magnets too exactly and um so it worked and it was like actually in the beginning and to this day um I'll use a humidifier in my um my rack the covered rack uh VPD Dome um just so I can keep that humidity really really high in the beginning and so I'll lose you know two spaces for trays but I feel like that that was what helped me and so um did that for a while and then eventually got the Amazon you know cheap one um but as soon as I saw you guys doing I was like oh Game Changer been pushing it you know like if you have issues with cloning like got to

do it and so when I was at jungle boys we got a shipment in and started playing around with it and it was like night and day difference the only issue we had was the humidity in the beginning was a little you know you'd get a little bit of Wilt um especially if your you know room wasn't humid enough and so uh I brought in my reptile humidifier which you can just have it on top of your Dome because it's something I didn't know back no back then but basically you put it on top and then has a little tube that goes into your Dome and basically now the SOP over there is like the first 3 to four days they just pump heavy humidity in it and then the plants just like Thrive and then you slowly pull it back and you where do you where do you put it in where the cord comes out yep oh that's perfect so it's like the cord's there then your your little humidity thing is in there if you follow I don't know if you follow Vic but he's been posting a lot or pop um shout out to those guys but um yeah they're they're killing it with it they said they do it every single time now cuz it was like when I was there I was we were still just trying to figure out what was the step but yeah I brought it in I'm like let's try this and then yeah pop instantly was like oh I see a big difference and so now they have one for each one it has a lot the using the VP dome in inside has a lot to do with the environment of the room yeah you I think when we were uh developing that you know little system uh at jungle boys the humidity of the Clone room is probably like you know 60 70 70 plus percent and well it changes too if the AC kicks on and stuff like that cuz we didn't run we had a humid of fire in there but it was just wasn't I don't think it was as stable as what the plants wanted you know we tested the Amazon ones and that's where it all started right but we we realized the bottom doesn't have a solid cover I would always have to put trash bags you know just to seal it off but yeah you guys killed it with your guys's design the cover on the bottom that that cover on the bottom changes everything yeah well like the little holes for the um yeah the for the M it's amazing the little stuff like that goes along way cuz a lot of thought goes into it yeah the magnets too they're they're clutch dude everything about it it's a good it's a good little if you're not using it like at least buy one try it cuz I'm telling you it it changed my game years ago I I hate domes with a passion and yeah and that's like the key what what kind of humidifier it's a do you know the name of it I don't but if you look up a reptile one um you just want one that has just a a tube you know or hose humidifier with a tube reptile humidifier with a hose or something and just poke it right in there that's I didn't know that so that's cool to to know um how are you using IPM and and stack together you use IPM and stack yeah so you know I was using just IPM by itself and cuz you guys I don't know if you guys in the beginning were promoting mixing them not in the very beginning yeah so when in the beginning I was just using it IPM by itself and then you guys came out hey it's actually compatible and I was like oh please like let's do it because like I'm always on the you know tip of like yes I want to spray my plants and be preventative you know and stuff like that even if I don't have bugs but I'm a huge believer fure feeding um there's an awesome thread on roll it up that I I was on all the time called the loss art of fure feeding and it talks about just all the different stuff that you can spray and the benefits of it like you know there's a lot of elements that do better through um you know like calcium calcium and I think like potassium or phosphorus or just I mean my favorite thing is kelp so like any you know if I can use kelp in my grow like that's that's huge and obviously I'd rather spray it than root trench it and so as soon as you guys said mix it that's like yeah that's my go-to now and I feel good because I'm doing two things at once yeah have you seen um with using stack have you what have you seen with without using it so in kelp in general and stack especially there's there's an instant you know like within 12 to 24 hours you see you know you know I use it a lot too for like if I'm my plants are you know need to root in a little bit more if they're little struggling cuz they're coming out of the Clone room or something I feel like stack is like their kind of medicine or they're like you know their little jump start and so um I love spraying um the IPM stack like on transplant days just so I'm getting preventative because ipin is really light and not you know harsh on the plants but you're giving that little

boost for your clones to then root into your new media so I like using it in those kind of um situations you know day one of flower I try to Do It um and you know usually stop between day 7 and 10 yeah um is when I like to not spray anymore um but yeah stack I I use it every single time with IPM yeah we um remember when we were doing the uh trying to figure out how to kill thrips oh yeah like thrips are like the [Â \_\_Â ] oh yeah they're hard to kill yeah they're and it's probably just us Growers you know not you know just kind of like giving them vaccines you know throughout that you know like not not killing them but you know just enough to like them to get used to it but yeah so we the reason why I bring that up is because we were having mixed reviews right we're like do we feed it 150 MLS do we feed it 100 MLS 120 we were testing all this stuff you were getting like some Effectiveness but not completely so we paid UC Davis to do these trials Y and they did an sop for us on thrips so we have that now that's amazing yeah and literally been working on it for months and um and I think it was like what was the effectiveness on the thrips Maddie THS is 99 thrips is 99% what's the ml per gallon and and what's the SOP so we can 150 MLS 150 MLS per gallon which is a little stronger than it was strong we remember we were doing we were doing 120 and we weren't getting what we wanted yep um and mind you it's it's hard you know like you I give a lot of credit for you know UC daveis stuff cuz I was literally trying to find a thrip and then having my solution yeah spraying it making sure it doesn't like run off the you know um leaf and then get in under microscope and then watching it for 24 hours yeah and then if I came back 24 hours and it was gone well obviously it took off and it's alive you know but there would be times where it would be still there dead but it's a lot of work and a lot of like meticulous you know kind of work yeah we we were stok to do the study with I'm sure and and it's backed by University we're pumped what so what's the SOP So based on their life cycle you want to have five sprays throughout a 12 to 20day period five sprays at 150 MLS per gallon yeah over over how many days 15 uh over 14 day period over a 14-day period one spray every 3 days it looks like one spray every three days okay y so that we [Â \_\_Â ] finally did it yeah that's amazing cuz we dude we were like banging our head on that one dude well it's like it's a common um it's like gats you know it's just like they're so hard to like fully get rid of cuz once you have them they just and I think with thrips too is the issue with them is they like to drop to the media they're almost like I I've been saying it for a couple years now they're like trout they're really like smart if they see kind of movement they hide and so I think that's like what is the hard thing is just coverage because they'll drop in your media hide so it's like coverage is key and then obviously having a product that does kill them you know fully so and that was 99% yeah that's what my notes are but let me let me actually go across go go look at the study I just want to make sure that we're given the right information gotta and then you guys have been doing some tests with IPM and sulfur right we yeah we did um and you it's compatible just follow the sulfur and IPM sop um and that's a big one because for for like um broad mites and rusted mites sulfur is the only thing that works it's wettable sulfur is the only thing that works um I think there's some states on cannabis regulatory that you can't use sulfur but I think California you can I think so yeah yeah so but yeah the the shitty thing about sulfur is you just can't use it in flour no cuz you do and it's like it ruins your in product but at least you have an out to fix the the broad mites or The Rusted mites you know a lot of people just you know they don't cuz you got to have a microscope to be able to see these both broads and russets and so like most people like don't notice until it's like too late and then you're screwed cuz you're weather you're two weeks into flower infestation is really bad but yeah um I went through and it was pretty 99% it says approximately 99% wow 99% UC Davis oh yeah I think white flies was like what 82% we did whitefly we did um uh two spotted spidermite you ever dealt with white flies no yeah me neither I've never dealt with them but IPM is 82% effective which I don't know that's not very good even your green houses never no no never dealt with them I dealt with these like black aphids a few times and hemp Leaf aphid I've had those but I've also had the bang AIDS which are gnarly bang Aid yeah which is came from Oregon like the

Cannabis Aid MH um they're like green they're yeah those are like the common ones but I had the black ones too before which is I think a different species it's like this black thing that grows on the side of your branch or something it's weird yeah um I believe that one's like 85 85% against white flies we we we're going to post all this stuff up um we just got it we just literally been working on it for months and months and finally got it all back did Bruce get you guys in there uh no actually Chris did yeah so he called the oncology department and um and got us in there and they did all these trials on IPM for us amazing it was amazing so 150 ml white flies 90 150 MLS white flies are 90 yeah so we'll post all this stuff up um how do you how do you combat CH uh channeling uh when when Rockall you're doing a lot of rock yeah um so you know when I made the switch to rock wall um that's something I noticed right away because I was all about dry Downs um shout out to John slab laab he's kind of been my mentor with the switch him and Ramsay but so I'd always you know just you know not be able to rewet my cubes especially with the PC drippers it's like it just it's almost impossible so I used to go around my grow was a lot smaller back then and I would hand water just and I used to call it just reset them and now I kind of been following the Michigan boys you know mobile J Mitten Master Dan Miss Hunter and it seems like they're kind of on that same tip of resetting the blocks because with these plants just drinking as much as they do you can't can't catch them sometimes when they dry down too much and if they dry down too much you're screwed you just can't get it up again it's kind of like a dry sponge it just repels you know and so lately what I've been doing and having kind of sop for these smaller um spots that I have that I'm running kind of remotely is yeah if they get light and you know like you know if they're light after their irrigations then we need to reset them because once you reset them they're good for a while as long as you don't let them dry back and so that's what I've been doing um it sucks because you got to literally hand water when you have drippers in place you know yeah but it's way worth it um another thing I've wanted to try wanted to talk to you about possibly was um wedding agents cuz you know I don't know Coco wet something some kind of surfactant and me and Chris talked about it for just foler SP uh spraying but I wonder if something we can use in the um drippers or you know in the solution that will help combat that or not even combat it but be able to rewet them easier with drippers um cuz OB yeah I wonder if that would cause any problems exactly I'm I'm I'm leaning towards it can't work cuz it would have been done already but it's just something I've been thinking about for the last year or so what's your what's your soaking process now just how often put the hose on and you know um at least once a week okay once a week but it depends if the room's crushing and it's staying wet I don't touch it you know but if they're like if I'm coming in and they're like at the end of their day they should be soaking wet and they're dry you know I'm not talking like dry dry but just kind of dry you can kind of you know once you start feeling your pots or you're fing your cubes you know what your wet is and you know when it's like 75% wet yeah you just kind of feel it in the cube like you feel the pockets in it and so um yeah I'd say once a week at least once a week just full soak depending on you know probably pull back on irrigation a bit no just let it grow yep so keep your irrigation cycle the exact same I do because it's just a one kind of time thing and it helps them because it just creates that um that EC is going to drop and you know it's just yeah I just basically so just give them a good drench once a week hand water yep okay yeah you have to hand water you can't just run the system for 15 minutes because those drippers just can't get it even though the science says there's no channeling that can happen in the 3s um maybe when they're fully saturated and you don't let them dry down but once you get below that like 45% 35% channeling is going to happen and those drippers will not get it up yeah okay that's good to know yeah yeah um Coco vers Rockwall it's tough one man um that's I've been battling myself with that one I'm about to do some more cocoa runs um did some cocoa runs uh jungle boys did some Coco slabs mostly for tpine um kind of seeing where the tpin fall on both of them because I've been hearing through some some homies that I really trust like one thing that they say um is rock wool doesn't hold like after it's dried it doesn't

hold on to its Tarpin as long there's a point where it just falls off and it just becomes you know doesn't have that fresh kind of like um smell and so and he says cocoa is the opposite it just holds it a little longer so I want to try that um and then just want to see you know um flavor you know seeing if I can get different flavor better flavor which doesn't make a lot of sense to me because it's like how can a media you know they're both airt media so it doesn't make sense but you know like as we said earlier we're just observing and if something works even if it doesn't make sense to us we got to run with it you know um but yeah I hate Coco for the fact of it's messy it's annoying you know just um but it also is more forgiving um so there's there's pros and cons to both um I just love having the ease in no mess of rock wall you know no trans planting no mess it's just simple and it's consistent for Cocoa you're going to have some inconsistencies especially if you don't buy quality Coco yeah the I like Coco because it's it's less expensive than Rockwall okay substantially anything a \$1.71 for a 6x6 Hugo they're expensive now they're expensive yeah so do you do quick fills or do you do pots no so I get I buy these uh I I used to buy bags 50 L bags uh 1,800 in a full container container and I get it from Sri Lanka um but now I get the compressed bricks okay so we got this compressed brick and then we just get it bricks it's not wrapped in plastic or anything they're just on a pallet and then we put those in a bell Buster and it gets wet and then it Bell it it breaks up the cocoa and then we just use do you charge it with anything special or just whatever you're feeding I go yeah nothing I just uh we fill the pots and we we feed Proline 3 EC from day one day one nice let's go and with cleanse and use Balan is for the ph and that's it man I mean it's trust the program I love that like the the cocoa it's it's you know I spent about 31 cents to fill up a that's a two gallon compared to 171 yeah it's huge it's huge when you're doing thousands of plants so so you you you're you're kind of you're kind of in the middle I'm on the fence yeah I am like have two grows actively right now um that are in rock wall um but I think in the near future I'm going to be definitely um doing some cocoa runs LED or HPS HPS all day whoa but really but um I'm forced to do some LEDs B some situations and stuff like that but yeah I don't like LEDs HPS all day and you've ran a lot of LEDs well I mean yes and no um at the jungle boy spot we only had one room um of LEDs so I didn't get didn't get to like you know um learn well you ran it at scale which is really cool no for sure um but yeah I just I don't know there's something about it that the HPS the plants just um consistent I don't know the growth is more consistent to me and the dry backs I don't know it's just something about it what about the finished product uh HPS HPS yeah I mean don't get me wrong there's amazing LED product out there but um for me since you know I'm a grower I like I like running rooms HPS LEDs are just um you know you have to do a lot more um like ppfd readings and all that because you can [Â \_\_Â ] yourself you know not knowing cuz like a lot of people if they have like LEDs I'm like you have a ppfd meter and they're like no like how do you know where you're at you know like you kind of need to check Leaf surface temperature as well yeah I mean that too there's so much I mean a lot of people run them too cold too a lot of people just run the LEDs way too high because like oh I'm going to run them at 100% cuz my you know HPS at 100 but it's like they're way more you know they throw way more ppfd and the plants just they hate it you know so like DLI was what really helped me with LEDs um and figuring that out cuz like the whole flip you know from 18 hours to 12 hours if you didn't calculate your DLI you could mess up really bad and I was messing up when I used to um veg in my rooms um with HPS I would always be like why are my plants like hating life at the end of like the veg cycle in my room and um I just didn't know about DLI back then so I was cranking the same amount of light with 18 hours or same ppfd at 18 hours and then I was at 12 hours they getting too much too much light and so I instead tried and stumbled across a lantern technique um it's an old um I think a tech but basically you do 12 hours on um five and a half hours off and a half hours off that's right and then one hour on and then five and a half off so basically you're throwing in one hour in the middle of the night and actually keeps him in veg oh Ser so 13 hours of light 13 hours of light yeah that'll keep them in veg yeah and so I was doing that

and that had way better success yeah all I needed to do was lower my ppf y but that was something that I was like oh yeah they're doing way better with 13 hours of light yeah you just giving them too much yeah too much ppfd for too long you you wouldn't really recom if they're using the right amount of ppfd lantern technique is not needed just low at you know in veg or look up DLI it's a calculation of we put it in the handbook perfect yeah we put the calculation in the handbook we showed the grower how to break down ppfd and calculated into DLI and recommended total DLI um that the plant needs through veg and flower and clone and then once we we broke all that down and then um we sent it to Bruce bugby Sweet and just confirmed it yeah well he changed it because we just had um ppfd um and he changed to e he put an e extended so so if you look on our our handbook it's the most latest ltech I guess I don't know um but it's e ppfd DLI extended DLI interesting and um he he was talking about he extended uh the the the levels and and he goes this is the latest stuff so he switched it up for us and then we we put it in the handbook sweet so it was cool and for that we we we put his uh apoy you know leaders in there for him I I always have one usually my backpack you know just cuz I'm going from spot to spot and if I won't run a LED without it have you seen his new the new one they just came out with like a year ago it's a DLI meter really and you put it in your room you set it there it's in the handbook you set it in the room and it calculates the full DLI oh sweet and then at the end of the day you come back and it gives you your DLI for you it's pretty sick pretty sick rather than just doing a random reading you know or having to do the math yeah because you'd have to take the LEDs which the math problem the math equation is in the handbook but um then you have to to do the math but this thing just does it all for you I wasn't expecting you to say HPS yeah really no I I I wasn't my best runs have been HPS for sure yeah cuz everybody's going LED right now yeah I mean there's definitely Pros to it but um what I don't like is the the the issue of humidity is really hard at the end to get you know we had tons of De at the cut spot and it was you know we had to figure things out to kind of combat that because it was just yeah they they transpired a lot and you got to run hundreds of Lights HPS and then you know I think like 60 lights of LED in the same building yeah 70 lights um was the LED room and then the flower rooms room for 63 to 77 yeah so you got a true firsthand experience multiple runs yeah so it's it's cool I use HPS and I was more I mean again I'm a grower at the end of the day so I was just more consistent with HPS so I mean yeah I mean I think LEDs got a lot to um we got a lot to learn about LEDs and I might in a year or two might you know say otherwise but right now it's just I'm way more confident with HPS I'm with you on HPS I mean for Greenhouse I only know Greenhouse really because it's been like 10 years since I've grown indoors so um when it comes to Greenhouse cultivation HPS all the way and and I tested these LEDs 1,000 watt LEDs that I got and I I ordered them and tested them and they throw out way more ppfd and way more DLI y but the yields were the same as my HPS yeah that's kind of so weird I was so confused you know if if you look at it on paper you're like your yields are going to crush those HPS rooms and it was it was the same yeah no difference yeah and I I have homies that crush with LED you know so it's it's it's dependent on you know how they grow and just the environment and stuff but yeah for me it's it's HPS and I don't know like the white light or spectrum is cool like when you're in it cuz you don't have to like you don't have this orange glow but I don't know if that's you know what the plants really want and you know we grew with that HPS for how many years that same Spectrum maybe the plants maybe we bred for it right I don't know I don't know what topping plants don't top them wow really don't top them no I haven't topped a plant and I mean we would top in and for moms and whatnot but um yeah uh Ted from Alien Labs was the first one that kind of got me going on it and he he said it just like if you want bigger nugs like don't top your nug or your plants yeah so I started playing around with with then but then the industry started pushing for it and you just get more uniform you know when you top a plant when I used to top I used to like literally take just the new growth like very you know meticulously top it not like some people they just pinch it because I would always come back and again and observing

observing observing and living at the warehouse you'd have sometimes the top or you would top it and then you only have like one kind of pushing out then you'd have this lopsided plant because one shoot would be a little faster or something and so um I just hated topping for that reason it was not consistent and so when I stopped topping my my canopies were just on point as long as you gave them you know enough space and everything um your lateral bran branching was just as good like um I used to show people all the time cuz a lot of people would just like oh I got to top like three times before like I flip them and um i' like just don't top and just trust me you know as long as you don't cram them in there this Branch like you know it's going to get to the top yeah and so I would point out all the time like I'd be like dude look at this the lowest branch is like 4 in away from the top you know I know roach was playing with that um quite a bit is that the go-to now at jungle boys yeah so no topping I don't think I don't think any of the facilities top anymore I I could be wrong but majority of them don't now you can tell the can cuz when they some of the guys would come to the cuty spot they would see our rows and it would just be three lines of just tops and it kind of looks like oh dang like you're not going to yield as much because you don't have as much tops next to each other but what that does is and to me I feel like the plant gets to be a plant you're not manipulating it and the plant's been you know around longer than us it knows what to do and so um what happens I feel like is you just get more penetra light penetration sidelighting sidelighting everything and the plant gets to just do its thing where when you top it and lay it under a net I mean it's cool for photos and everything but it's just not you get less like A's and more like B's and C's when you top and you know or if you uh Bend under underneath a net I mean I literally just throw the plant in don't touch it now are you changing your plant count when you're not topping um like plant density no about the same but I'm I'm really low on plant uh count you know it's forget the square footage I think it's like 1.6 plants square foot or something think yeah um I could be totally wrong I haven't done that in a while but how many how many are you what are you growing on 4x4 4 by uh so we tables or five uh five foot wide okay and then how many PL AC crossed three wide three wide y so yeah it's like 1.6 right there the math on that I think it's one if my math is right 1.66 yeah exactly so so that was that was kind of my thing and then um it's you know I've seen it where they do way more and it's just you got to think it's more labor on on your team more nutrients um and just yeah when more plant density yeah it's just like when you have the lollipop and stuff like dude it's it's so much better you know to just let the plants fill in the space it looks weird in the beginning don't get me wrong like you're flipping a room and you just have these empty spaces I me it's impressive um with a 14-day veg yeah 14-day veg 1.6 plant per square foot you know not topping it's super efficient y it is it is and I I don't think I'll would ever top a plant again in flower that's good to know that's that's really cool how long do you usually keep your moms alive for um so I'm I'm definitely on the fence of you know or tip of like just ripping through them and not keeping them too long just because old moms just gather diseases whatever they they grab you know stuff that we probably don't even know or test for and so typically cut them two to three times three times being the Max and then reset them so um how like six weeks six weeks that's great quick you know at the cut of hat spot we you know kind of like in a sense wasted Cuts but in for the purpose of having the best of the best um a lot of people would be oh you know look all those cuts yeah those are the bottom cuts are weak you know like we were you know ol Cuts were very uniform because when it comes to cloning and comes to filling rooms you don't want plants you know all these different you know yeah Heights thickness or just Vigor so um yeah we we definitely cut just to be the best of the best jungle boys is known for the big big old moms in the the room that that's changed now huh yeah so now it's Hedges so we just grow or they grow them like um like the rooms y but we do top them you know like seven days in come off take a basically a clone off each one we don't clone it but Bas it's not a top but it's like a nice um you know clone off each one and that creates a um a bushy structure and then a week or two after that take your first round two weeks after

that second round and then if we need Cuts again you know you keep them keep them around but yeah that's big cuz you kind of that three month Mark three that in between the three and fourth month Mark if you have your moms around that's when I've seen hlv oh yeah kind of start to you know start so which your roots are like you know not not the way they were and just you know if you overwatered or anything like that then you're just dealing with that it's a fast growing crop yeah it's not it's not designed to be six-month old you know moms that you're taking cuts off tot the the the plant's just gonna time they're not woody you know like it's just they're fresh so yeah no it's interesting so Hedges now no more big moms six weeks and trash yep yeah yeah six to eight weeks depend like sometimes you two months yeah sometimes you got to keep around because you're like oh dang I need more of cuts of this strain and I just planted mom so like you pivot when you need to but for the most part they're they're amazing looking like we don't need to chop them but we're doing it just because the safe practice of just strong solid solid genetics or solid cultiv Wars throughout the Y facility one last question what's the what's some of the what's the biggest hit you've taken in the industry that since you've been in it in the Cannabis industry to be honest I've been been pretty lucky um gotten through you know some hardships and stuff nothing too dramatic um but I would say the broad M issue was pretty bad um me and Ivan actually dealt with it together um we got some cuts from the same guy and basically we were both like remember that I remember when Ivan was going through it yeah it was bad and we were like texting each other every day like try this try that you know or this isn't working and then eventually he's like dude you have no idea like what I stumbled across and it's the cheapest fre it was that and I was like at Like Home Depot you know super easy to get and within one spray I only had to do one spray I did do a little I think it was like four tablespoons which is way higher than um I do now and it it killed all the bugs but I lost a couple plants because they were so stressed out from having broad Ms for like two weeks you know yeah I was spraying stuff but it was probably killing maybe 10 to 20% at most and so that was shitty um and it was a great learning experience though and then another one was um maybe the hlvd but honestly it wasn't too bad like I said I've been pretty lucky and just kind of been able to Pivot and and find a solution to get me through that run or get me through that kind of issue um yeah so I'm I'm have you ever had any close calls with law enforcement no wow no good for you no I've I've been pretty uh good with that um yeah I've been lucky for sure because I've been in the industry 10 plus years you know and I've I've definitely rode around pretty dirty at times and you know done some crazy stuff plants in the car you know just crazy stuff but been lucky yeah respect dude good job you kept it kept it tight yeah I mean I was the type of guy that would tell all my you know like trimmers like don't talk about cannabis outside you know like remind them every time because there' been times where we'd be hanging out talking outside in the parking lot of the grow and they're like oh yeah I'll come trim tomorrow you know like be yelling and I'm like what are you guys doing you know so I was very you know um scared of those situations and made sure that you know um stupid stuff didn't happen yeah not respected I appreciate you making the trip out I appreciate having me yeah this was a really great great experience I'm glad we did this oh yeah long time coming yeah yeah it's been it's been a long time coming over a year yeah so respect thanks bro no worries appreciate it sweet thanks for making the trip out boys appreciate it thanks for having us yeah always a good time to come out here yeah we've known each other for a while now right end of 20 end of 2020 yeah how did how did we we met each other separately sear we was talking about this the other day we were talking me me and Jay were sitting on talking about like how long it's been and we had to go back into like the phone and you know like we're talking about when you know when Mac started here you and then I was shortly in the we met when I was running when I started running Pro Line I still remember calling is this you and Alex when I was answering the tech answering Tech and then you got me with Alex yeah CU I was just trying to wrap my head around two-part nutrient yeah you know what I mean and we met separately or did I meet nope we met first we met through uh you found me on



Instagram and sponsored me okay so then we started there at the end of 2020 and then we got Max on and then Dylan came on all within like four or five months of each other I'm G to put my headphones on just because I like it better yeah can hear you guys better um it's been about four years four years yeah it's crazy four years too yeah it's been a when I pull up here right the rise it starts to like I'm like it's been four years and this the ride has been crazy 100% yeah there's a lot that's happened in four years um what did you guys think of spannabis is your first time yeah it was amazing eye opening experience for me personally second time mhm your first time J yeah yeah just the people the environment and just seeing the gap of tech and genetics and how wide open it can go over there it's a lot of fun the culture is a lot different than here in the United States I feel like when I go to ESP spannabis I feel like the culture 2008 throwback 100% like when I went there two years ago and then got to go back this year was the same thing it's like it reminds me of Michigan 08 like in like at like 08 to like 2018 yeah you everything's love everybody's just excited there's all these new genetics around you know you're meeting all these new people everybody's getting paid well for all their hard work you know and and uh just such a positive environment like so many smiles so many positive conversations and very grateful people the the breed game in in Spain and Europe seems like much more predominant than it was in 2008 back then in the United States you you think so I mean it just seems like there's so much breeding going on and so many different you know collabs and stuff like that it's a big Market everybody wants to capitalize on it I think get their genetics out there get their brand going new markets that's a big thing for us with Athena is going to these new markets where you guys go yeah you know helps us immensely just see what's going on yeah I think too there's I think that like uh a lot of the US market has obviously got their eyes set on Emerging Markets from a breeding standpoint too right like I know a lot of a lot of guys here that I I see I'm like man they're already popped up over in Europe or they already popped up in Spain they're already doing this over here how they they already got those genetics over there and so you know yeah I I think it's escalating at a much higher rate than it did here yeah for sure the culture is strong yeah I like I love the culture of Spain Barcelona is just such a they love their weed their hash they like to party what were they smoking spliffs so they're smoking tobacco with weed mixed and you give them a little bit of weed they smoke their spliffs yeah a little bit different than here now um what what's your both your guys' backgrounds when did you guys meet and then and then how did you guys get into the the industry so I'll explain how we met he knew me from Instagram so one day he was harvesting his rooms and he just called me out on Instagram tagging me like hey mobile J come out here I was like who the hell is this guy you know I mean I've met him once before at a party or whatever he's like come out here mobile J We're harvesting today just randomly just randomly randomly what made you what made you just call I was just having fun in my I had a I had a kid that was working for me time this young kid I was trying to help out and he he um I actually I I made him say it I was like I was like you know say hey mobile J come up here and help us out or something like that and he was just he was a he's a he's a stud he's a good grower you know and uh his work always stood out and just have one of those days in the garden goofing around man we I try to keep a really was light positive light mind set in the garden like all my people still this day know it's like hey we're here to have fun first man I'm not like I got around this plant for a reason it's to not have a bunch of stress like I got out of other areas of business to enjoy this so it was just a moment of fun that turned into you know a good relationship it's crazy then morally we align there's no weird funky you know what I mean [ ^ ^ ] going behind our morals align so it just made sense and we started from there you start you know partnering on cultivation together a little bit or genetics were a big so like back to what we were just talking about like there wasn't like you know I had always popped my own seeds found my own stuff really didn't work with a lot of people and that's just how it was for the better part of my you know cultivation was you do everything yourself you pop your own seeds you grow your own weed you sell your own weed I

don't know another world without that that's just what's been bred into me right and when I started talking with him it was more open up that door with genetics he was running a bunch of genetics he was kind of the Clone guy he was getting all this different stuff and like you it was it was genetic based and then we we share a lot of OCD similarities in the garden like super super like you know we get a burnt tip the round's over you know what I mean type thing and and we both we both share that and fun right so we just aligned align a lot in the garden just being very particular and about the way we want our plants to look and the flower to smoke and everything to be and and I think that's where it just kind of Blossom from yeah Jay you were more focused on the genetic side more focused on cultivation yeah packs cultivation and so we kind of mesh well you know and he takes the ball and run with it where I'm more of like a thinker where he's a doer so then you mix that up together then you start getting these breedings and we start hunting seeds and then we start catching waves with everybody and then it just snowballed into you know Bean fiends you guys balance each other out pretty much I mean it's crazy you think about like what was that that was yeah like four years ago and and back then and this just goes to show you how fast this industry grows you could hop on a platform like IG and there was maybe like two or three dudes selling clones right and he was one of them you know and like now it's like I open up IG and everybody I know is trying to sell a clone or sell something I mean it's just it's crazy how it's changed in just that short amount of time it's pretty insane how many nurseries and home clone guys there are and you can you know it's it's just not how it was he used to be one of the original ones you know so I went over uh and did a trip in Barcelona um not this last time but about a year ago and you guys as far as like a breeding U brand and and and to a breeder I've never seen anybody blow up so fast it's I mean we owe a lot of that to Athena I mean we have a very big platform that you've tapped us into I think our growing prowess kind of sets us apart to we're able to cycle in these genetics and things that we've used from the start in our breeding so everybody's familiar with and it resonates with people we don't do dirty business we don't rip you off our seeds we don't sell you bad clones we keep everything really close and tight to where people recognize that and it makes our brand a little more valuable yeah I think at the core like like I remember talking to you when I made that first call um with you and I was just like look you're growing some serious fire like you're just crushing it using I think you were using Blended at the time or was it Proline initially when you first found me I was using GH okay and then we converted over to Blended first yep and and and so um I think you know the foundation is you guys are both really talented cultivators yeah that's where it starts Athena might it gave you like a platform to be more visible but I think at the core you guys are just talented cultivators and it's not nutrients it's not it's not anything in particular you guys just you guys pay attention to detail like you said earlier your OCD and you guys just grow fire yeah I mean it's it's you know that that's always I think that's what really um has really has really done us well is we're not I'm not here just we're not here just trying to sell you seeds matter of fact we get more stuff behind the scenes about conversation because I'm the guy that I don't want to let anything go I'm like we're not selling any of this there's too much fire in here and he's like but dude we got to and and like that's where we Evan flow awesome as a team because you he wants to give things to the public and I'm like no no no no no no I want it off for me I want to have the best packs I want to have the best you know what I mean and so like we're not we're not here to just like shove seeds down everyone's throat to make a buck you know what I mean and and honestly a lot of our business practices and the things that we do is I mean you know being surrounded by this crew and all these Savages around here and just I mean we we're surrounded by good people make good decisions based on the people that were around you know what I mean and I think that that's a big part of it too you know and we like to show off our stuff more than anything you know yeah showcasing one he's a dog breeder so he's already been through this he knows the value of good genetics you don't just give things out to the public because then it throws a wrench in your program you got to hold

some of those things tight how do you guys decide on that I mean what's your guys' stable look like and are you going to release more crosses that you've done and and how does that process flow I mean we got a big stable um we got a stable too big of a stable to where we're we're running into issues with not having enough veg space you know so we're working on that and I got a Savage shout out to my boy John he's a Savage I got a guy that works in my that runs my veg and he has to keep track of a lot of genetics and like you know I go to some of these bigger places and I've been to you know over jungle boys when they've got big hunts going on and man you start talking about doing these giant hunts and sacrificing you know 30 40 50 lights to you're probably not going to make near the profit back on that right it's kind of you know when you're looking for that one or two and then you're backing everything up in the meantime right and you got all this veg space that's dedicated to maybe finding one or two out of a whole room and it takes a lot of time and a lot of space you know and uh that's something that I'm diligent on and that's really changed over the years for me it used to just be veg was Tiny predominant flower right and now it's like my Nursery is like my coveted Zone I tell my buddy John every day I'm like this is the [Â \_\_Â ] heartbeat like this is the most important you know thing that we have cuz I I CET things so hard it's like when you find a good genetic out here right it's invaluable right and there's like in this industry let's just be honest I mean there's a lot of drama that can surface around genetics I mean I've seen it going all the way back to stuff with a lot of popular breeders out there where something gets out or somebody uses something and then it just creates and we're trying to like really not we don't want drama we we want to just be good dudes that are you know trying to do our best and bring something to the public that's been tested it's been Ved lots of testing you know when I when I when I go to Spain we release those packs we brought MH you know those sh crosses it's like they were very limited and we I spent a year going through those I could say with confidence hey Brandon here's this pack of seeds I found fire in here and I can stand on that you know what I mean it's not like oh those are those are really good we dusted them you'll probably find some good stuff it's like no we went those mutants we we looked for how how many mutants how many Herms do we have you know stuff like that were they stable and and uh I think that that's something that's just lost out here it really has been over the years it's your brand it's and and it's probably it's why it's why your brand blew up so big and and just because people are finding fire and and what they're getting from true yeah how do you talk this guy into to releasing I know cuz it's a balance I mean he's like the older brother he's been through this he's been growing longer again he's been through the genetic side of things with the dogs so he has the foresight to keep us on the right track I might look at the short play or look at giving back hey let's get these out to the people let's do this let's slow down a little bit let's see what we got here let's get it in let's go to the Next Generation hold our cards tight and then once we're comfortable and we've reached a place to where like a tear gas or something that everybody wants can be released but it takes a lot of time and we can't undercut ourselves we've learned giving out genetics can be you know have a lot a big negative effect on your garden yeah so we got to keep those things tight yeah so so you just a few these are just a few names that that you guys have come up on on crosses tear gas candy bones candy cartel zupa candy Blues um full mouth and sweet pie you have any like number ones out of those I mean that tear gas the number nine cut shout out to my boy Matt I got to give him a shout out M Roots what uh what what what brand is he with Mi Roots it's his brand he's he's he's my partner he's our partner and and he uh he's a very talented cultivator um he's got a knack for selecting incredible genetics and you know that's again we're we're blessed we got a beautiful team back home like it's not just he was our first tester too so he's the first one to take a chance on us here's 100 seeds pop them he almost didn't pop them and then he did and he got rewarded heavily and that's where tear gas came so he was the hunter on that heed that we crossed it we BR it and it's funny too cuz he found squirts another one that's on that list that's a big one squirt was another one that we that's from the same he a big part of our

success really when it comes down to it yeah Matt was a Hu this guy was a huge part of it I mean just and it's funny too because he sent me a message the other day a text message and he goes man I was just thinking cuz he he he when I hand him those seeds he was like I don't really know this guy and I don't like he's not looking to waste his time and his money either and he's like I almost didn't pop those you know what I mean it's a lot of work took the CH now now the same guys what what what do you got coming up next what what are we and now we got a project going on right now with the tear gas with his number nine the next project you know and he's just sitting there going like this waiting for his waiting for stuff that he can hunt so it's just cool to see that transformation right and and uh you got people that are kind of going I don't know about this to now they're like waiting on what do we got next you know what I mean what was the cross with tear grass chear gas was uh sherb cake so we we reversed sherb cake uh our buddy Brett chromatic cultivation um we reversed his sherb cake Sher cake was what gelato to it's ice cream cake to g33 it's a c junky 1 or g33 I think it's 33 okay yeah Y and then then we we we reversed that and we tapped a few things with it um and uh skunk piss was one of them sh made a big wave in Michigan it was loud turpy Sher when it first came out it was you know the cut to have by a lot of people um so he used that and then he had this OG cut of skunk piss which goes back to skunk number one just big yield strong and it just shined through it was like our most premier pack one of them for sure and so that goes to show too like this strain is a strain that will legit do forite legit on production is the loudest gas I brought a bunch of it you know what I mean and you have some with you yeah it's it's it's it's uh it's upstairs and it washes and it washes at like fire and you're talking about it's a unicorn because you're taking two strains that don't wash and you get a 5% washer out of it right and and uh that's the cool thing about genetics especially when you're when you're playing in that F1 field you know you're you're going to see traits anomalies pop up like out of nowhere that could have been hidden for for Generations upon Generations what's your THC percentages average is what you're hearing out uh that so the so the tear gas um tear gas tested for us a couple times I've done some trial we actually just got in my metric facility so I have a real test going in but anywhere from 28 35% you know what I mean 28 she's a heavy one she's a heavy one she's she she produces yield and she tests and she washes she grolls like a beast I mean she's a she's a she's a she's unn we had 200 g out of one Hugo cube out of a section that's four pounds of light when you break it down nine of them would be um 3600 grams man crazy hitting did you send that to me or what what's up hold it out on me you did you so so so that cut is off limit to everybody you're called out right now yeah I'm get hunted itom hunted it you know my boy Matt kind of calls his shots on that one I'm going to have to so it's in the breeding now where you can hunt the seeds and go into and tap in the potential there but those are the conversations you're breeding that heavily right now well right now it's in first rotation yeah are you doing selfing on that one or are you doing fls there's S1 on there there's S1 so you doing s1's where you could go back and then hunt a different variation of the tear gas if we ever lost it go back into those seeds and you could find on similar yep okay per se yeah that's great now now that's that's that's really interesting doing an S1 what what what makes you go the direction of S1 on on that particular cultivar just to see what's in there well first to back it up you S1 it so you self it to itself to where if we lose it let's say you can go back in those seeds and tap into the potential now you're just looking for a different variant of that tear gas so is it a little tighter is it not stretch as much a little bit different of a turp um that's why You' throw the s1's in there you could get lucky but it could go south too we're hunting the SHP cream pie s1's right now they're not very good so you got to find that one out of many so they're not all created the same in a way I mean everybody's have a different opinion and you know there's been guys doing this 10 times as long as us I may disagree but that's the s1's where I'm going to go a little bit more all in on a hunt I'm I'm a pop more than I would on like a say an F1 or something right and because I know that I'm going to be doubling up on good and bad traits heavily

right and uh same thing in dogs no different and I and I'm I'm going to be looking for that one that stands out right yeah um and uh I'm going to go a little bit heavier on that because like we just we popped a bunch of the sure best ones and you're going to get a lot of that leafier sure be you're going to double up on all the traits you don't like about that plant too so there's a bunch of them we just like nope NOP find the one with the good traits potentially yeah how many breeding projects do you guys usually manage how many crosses are you usually managing at one time ah not crazy amounts we're trying to like really test things out and plan things out so it's a couple breedings a year and then you have to vet and test those so we harvest the seeds pop the seeds get them in Clone form flip them so it takes 6 to 8 months just to once we have the seeds to even find what's good in there yeah yeah there's you know that we vary a little bit different than a lot of you know some of the you know other breeders and stuff out here we just we're not just going to make the seeds and sell the seeds you know what I mean we're going to make the seeds we're going to go through the seeds we're going to make sure the seeds are good we're going to make sure we're actually if I can't find a banger out of 8 to 10 seeds on a feminized F1 line I'm not going to sell those to the public like if I didn't find anything why would I sell them to you to have you waste your time yeah you know what I mean that's why we've caught traction as well yeah you know and like our seeds too we don't hand out any prees we give you extra they're all fully developed well harvested seeds you know that pop quick usually not just saying this usually the genetics that people are popping from our hunters and our testers we have the strongest genetics in their Gardens and it's just now it's just tumbling and people are seeing now we're in Thailand and Spain now and they're just popping them they're stoked yeah you know and it's all back to just you know keeping things doing it the right way yeah when when you're doing crosses like with with tear gas what do what do you what are you looking for and then also what are the main crosses that you're doing for 2024 um I think with tear gas obviously she's a Powerhouse in herself so we're we're looking to bring forth all the good traits we like gas the gas the wash I mean just the she's so potent I mean she's she's distinct right Jay Jay's Jay's talked to me a lot about this over the years and and I agree is is we want things that like are recognizable you know like you open up you open up a bag of runs lcg you know you're like that's runs that's lcg you can smell the candy right you open up uh mot breath I know a motor breast smells like I've smelled it enough to where I'm like oh man cream smoothie is another one from firef farmer you know great guy out here doing genetics and it's it's it's just a distin smell you open the bag tear gas is distinct you know it when you open the bag it's the bag you can go into the dispensary and crack a bag in the corner and just wait and watch everybody and they'll just start looking around going where's that smell coming from cuz it just it blows out the whole room and it's distinct and then you take all of our receivers that we have the stuff that we've had in the vault and the new stuff and then cross it to that tear gas you have no idea what you're going to find in those no idea so we're looking to bring and then there's there's negative traits that we don't like it stretches like crazy it's you know you got to flip it you got to flip it on a 10day on topped and it'll end up 5T she's a stretcher she's a stretcher crazy and that's where the yield comes from the production yield comes from too cuz she Stacks tight that whole way up you know if you hit those dve backs right during stretch and so we're looking to bring we're looking to dial that back she's not the densest flower she she's a big she's not I like like cookie hard you know more like cookie hard type buds if I had to choose you know um something to grow that's a little less leafy um so we we threw a lot of complimenting receivers in there that should help tighten some of that stuff up you know so and that's a balancing at that's where my head is always going I don't look at something and go what do I like about this the most when I'm breeding I'm going what are the traits I don't like and what where what am I trying to to clean up you know what I mean on the next on the next the next version so a shorter strain like a lemon berry or something that's more Squat and tight might do well against the tear gas to slow her down make her more compact y

you know yeah that's great how did you guys come up with the name Bean fiends well I mean do we kind of get into this yeah I mean we can give a short version of it we so like obviously beans are beans are the same we um I'm I I my whole life you know I've been I've been into breeding kind of talked about a little bit already so like when I go into something I'm usually I'm a fiend when it comes to it we both have a background of you know when growing up when I was younger I was into a bunch of bad stuff I shouldn't be into you know what I mean um and uh so was Jay so like now you know 15 years 20 years later you know it it it's it's resonating all the way back to when when I go into popping beans dude I'm it I mean look what it's done to my garden in the last two years it's taken over everything because I'm a fiend about stuff that's just in my nature like I just can't not but then we also used to be you know drug addicts right so that's where the fiend comes from just a play on it yeah like we smile we we take that with pride you know what I mean like I'm very open about anybody to ask about that I'm like yeah that's why you know what I mean like we're we're we used to be and we still are only now it's positive and you know what I mean it's it's it's for the it's for the better so and it's a play on the other brands like C junkie Bean fiends feno addicts so we kind of play played within that too do you think cannabis cultivation and what you're doing kind of focused you guys both I mean we're before you got into cannabis were were you you know going down that path and do you think cannabis cultivation was something that you could really hone in on and focus and kind of build something on that gave you that reward to to stop yeah yeah so God dogs and pot for sure you know what I mean for real I mean they that's what having that moment with whatever's up there and then next in my life was dogs and then coming back in in full swing with cannabis really those things I took that negative you know my my negative energy for and put it into something that was very very very positive in my life and and uh and and that's yeah that that for me those are those three things for sure yeah it saved me me I got fired from my welding job for smoking cannabis and came back home and started growing it and it just found me just found a knack with the plant and just went hard at it and it's paid it's paid off for real yeah it's crazy a lot of years of sacrifice it's not easy to learn how to grow especially I learned on my own I had no clones I didn't have anybody showing me like little homie and me this is how you do this this is how you clone it was all red at YouTube a lot of the jungle boy stuff you know what I mean just and just getting on the grind and learning I was telling them you know we were reading over the little the little thing he was putting together and you know I was reading some of that dialogue to myself and I'm like you know for me it was Mom's basement you know Dad's basement dad's basement Bas dad B from Michigan you know being in the basement growing controlled environment it's cooler down there you don't have to build a barn you know I didn't know what I was and it's just like to think where to now it's just you know popping seeds under crappy fluorescence bag seed and like you know and I'm and and I remember then too I was like trying to make the coolest growing room with what I had available to me which was not much cuz I was trying to keep it on the DL from my mom who did not support it at the time you know caught me with tons of pounds and money and so you were grown in in Mom's basement mom's basement Liv she didn't support you she did not support me this was like no this was this is 25 years ago so like times were different you know what I mean um even if she she she really supported it I think at that point it was illegal so it's not like whether you thought pot was okay or not it was illegal and I got was getting into a lot of trouble when I was younger so I think that coupled you know that's why she was so hard on it no you're not doing this but I was s LED since I was 13 you know what I mean and so like it it's it's but for this this plant and this culture full circle now my mom's fully supportive of what we do you know this industry and my life has fully affected her life in positive ways you know she's got to see her son do things that like at one point she probably never thought was going to happen you know what I mean at all um so it's came full circle it's it's pretty cool to see I always love to hear when um parents support their kids in in cultivation because especially back then like it's a hard I know Ivan's mom supported him um my mom

supported me but my dad didn't so it it's it's it's pretty interesting to see kind of how it comes full circle I was I was like the black sheep of the family and I'm sure and now look at you I I'm sure a lot of us the community all of our Growers and where we came from we were all black sheep 100% in the family at at one point in another you know most of us um just because the the stigma on cannabis yeah I think that's I think that's pretty fair to say I think most people that I know that have especially the guys have been around you know there's a whole another generation coming up now that doesn't know the life that a lot of us lived you know pre2 2008 and in Michigan or you know whatever probably same thing out here where it's like helicopters cars you're going to the grow store and you're Paran all day and you had to go to go to my mom's and go out to lunch before I even went back to the house with soil you know it's just like times have have just absolutely absolutely changed it's just notot about it now yep whatever no yeah yeah yeah it's it's a weird transition to be nonchalant about it but you kind of get used to it and then you go to another country and you're just like hey like you're just talking nonchalantly about cannabis and we outside the restaurant Australia I have had some some like local like this I coach youth wrestling with my kids now and like you know I going to stuff this this winter in Michigan going to meets and stuff and I got dads that are coming up that I don't know they're like hey what's up bro and they're just like looking at me and they're like mt Master right and I'm like GE I can't go to my kids you know what I mean but it's but it's but it's cool it's like very it's it's very for me like I at one point in my life I thought it was never I never was going to be free to do to grow weat and and really dive into and love what I was doing because it was so illegal that like like even the people that wanted to support me couldn't because they're like dude you're going to get in a lot of trouble if you keep doing this you know what I mean and so like it's a blessing to be able to do every day I wake up grateful that I'm able to do what the hell I want to do and I actually love to do and I mean and honestly it's the first time I've been appreciated at like something that I'm actually doing I worked I worked at a manager I was a I did a great job after college managing in in the food industry and Manufacturing and but when I left it was just they had somebody else the next day and it was you know and to be value is huge yeah you know I never had that in my whole life at a job respect for the craft pretty cool stuff no you guys are killing it um out in Europe I hear a lot of bean fiends um in Thailand's crazy crazy you guys are blowing the [Â \_\_Â ] up they're doing well with the genetics over there they're doing real well great job what you're you're also working with Ivan on some stuff I know you're working with jungle boys a little bit you and roach so they popped a bunch of our they popped a bunch of our gear some bangers um he was actually just sending me some some C cartel candy cartel and Candy bones I think they they went heavy into um we got some other stuff we're going to be sending out to him soon and uh me and roach have been kind of talking about some things on the side and I know they they're they're hyp they're heavy in Hunt right now they're I mean from they're hunting like crazy right now crazy right now and like that's the right move man like I I I just I see a lot of people still relying on the Clone guy relying on the same genetic that everybody else is running and like even back home home people ask me what what's the what's the best piece of advice you can give somebody that's trying to make in this market I'm like dude you got to stand out SE by running no I think I think it's important for for every cultivation to know um that if they're not hunting if they're not constantly hunting they're they're [Â \_\_Â ] up like it's you always have to be looking for that new thing that's going to make you different in that market because each individual Market's completely different you know it's all state you know State bordered so um there's a lot of things that you can bring into that state or that area that that's not there and that's going to set you apart from from the competition it's going to make you different it's going to move move units everybody wants new new new it's and it's consistently like that I mean the the dispensary game will shoot on the black market or the white Market that's just it's dominated by that I mean I I got to have 20 flavors on deck of all different

profiles to be able to make 40 pounds a move you know what I mean where it's like you used that used to not be the case you grow Gorilla Glue and it'd be all gone in a day you could grow as many lives of it as you want it you know so being mindful of that market and and out and demographics are huge we saw it in Spain I'm bringing out all the gelato and the candies and the sherbs and everything that we think that we're selling back home that's huge for us you get out there and it's just we're not like it was completely different out there they didn't want the candy they were more into the they were more into the sweets the fruits the papayas you know the artificial you know stuff uh like candy sweeteners and stuff um which is a little bit different and it's it it was it was cool that a wake up there too it's like man every every part of this this world is just so different on where they're at with genetics you know what I mean we still have a lot of people that inbox us and you know and usually this is not mature markets they want bag appeal and yield yield and bag appeal yeah it's changed out here are you you guys seem like you're doing a lot of like candy gas candy flavors like what like what predominantly is that is that the you're going to continue down that path are you switching it up I mean that's what sell different breedings yeah the Sher cream pie is heavy in our lineage which is like a sh smooth creamy gas the runs we did a big breeding with runs so those really pop off for like the Exotic crosses and everything but we still do the super booths for the washes and these different ones so it's kind of we got a mixture of everything going in right now and then this tear gas one's the one that's going to kind of cap it off with like gas power everything in one so this is kind of our breakthrough moment as far as the breeding with this tear gas cuz something now that we've created one of our friends have found going back to other things we've created and found as well when when are those you have at ETA on the seeds we're going to be ready from the tear gas probably end of the year yeah Harvest them soon and then get to testing we go to testing so like that's and it's funny too cuz we'll have a lot of people like we don't care just Fork them over and we're like no no no can't do that cuz we don't know what's in them could be gold in one pack every single one it's like do you give that out to everybody first you know it's kind of risky to do that CU it's it's it's it's it's it's tough you don't want to can't give the keys over to the whole Kingdom you know what I mean you gotta there's got to be a lot of strategy I mean I you're G to you may have a stud or something in your in your library that like you just can't give up it's just too good or you find something like a tear gas and it's like no we got to sit on this for a minute it's cuz you're not going to find something like that in every pack of seeds that you pop you may find good but Elite something like a runs something that's just Time and Time and Time and time again just hitting year after year I mean those don't happen every day if it was that easy everybody just be set up and finding new stuff all the time you know what I mean text me when when you got those seeds ready I'll take a bunch of those I will definitely i' love to I'd love to pop pop some of those um most of what everything you guys do are F1 crosses MH reversals feminized right now y So you you're doing reversals and then and then making fls are you back Crossing or um we are we're we're yeah we're reworking on some back crosses uh F2 you know we got some F2 stuff in the projects obviously we we every time we you know every time we reverse something we always S1 it again like he said that's just for genetic preservation we want to hold those tight we want to be able to go back through those at some point um um but yeah F1 a lot of F1 projects because that's really our foundation I was talking to Village yesterday and he was saying um symbiotics he was saying most of everything he does is F1 just because he's looking for something new and unique different different se's different you really need an absolute Banger to go deeper than that in my opinion but again that's just my opinion because of what you just said I'm looking for new stuff once I find something I'm like okay now like why you're doing the S1 on the tear gas y yeah and and we'll probably we'll probably go BX and F2 off that most likely as well you know if things turn out but I mean it's a lot of work I me you look at some of these I mean archive and some of these other guys been doing this stuff for so long



and and and in the little bit we've started to scratch the surface on and how much work it is behind the scenes for us I mean kudos to guys been doing this for a long time in the breeding world when I know they have massive libraries all I look at is how much work that is now jungle boys I mean how many males they got on stock in tissue culture i me it's just insane it's a rabbit hole that you can infinitely go down yeah it's a fun one though it's really fun what is your what are your thoughts on femin seeds um personally and and it's funny cuz we're in Spain there was so much you had a lot of people coming up are they feminized yep I don't want them they're reg only because they're worried about being unstable that's like the big rap with femin seeds if they're unstable or not that's why the process is important on reversing um and not only the process but going through those seeds and testing you have to with with with with feminize in my opinion you have to because they in their nature have a higher chance of being unstable because it's an unnatural process feminized um you know with I heard a lot more susceptible to stress lot easier to stress and more potential for Herms y That's why you also instead of like flipping a seedlink from seed you take clones off it and then flip the Clones to get some of those hormones out so you're not going to have as many Herm issues you kind of weed that out right off the bat but I talked to Village yesterday and he was saying that um in areas like Morocco and south of Italy uh both they're they're looking for feminized seeds because they're doing a lot of outdoor um field cultivation Y and and they have to have feminized or we've worked with some of these people you have y giving um we've sold in Spain we had people coming up buying bulk seed from us they don't want to run mother rooms they don't want to have cloning so they want stable seed they can plant and get a good result out of it so stable femin seeds and the only way you're going to know if they're stable is by going through them mhm yeah you know I mean we changed our pack size of seeds that we were selling based on consumer you know just feedback that we got we were selling 12 packs and now we're selling it for a certain price now we're we're at eight packs the reason we're doing eight is because that started to be the standard that I pop when I'm popping something I'm popping eight and if I find a banger in there and we find something good okay cool and it's stable we we didn't get we got less than 10% Herms out of there good that that that's solid for for an F1 F you know but that's that you got to go through them you have to with f have to well it says a lot that that Ivan's popping your stuff yeah so yeah that's says a lot feedback feedback was great from them I mean yeah they they uh if we we've had a lot of a lot of big players them being one of them that have have given nothing but good feedback and that means a lot to us I mean because you know you gotta you can think you're doing something right but when you get I don't say the blessing but you know people have been around for a while that are popping into your stuff going okay man there's some heat here when I get roach sending me a bag design I'm like okay that's just that's the stuff that makes us feel good like we're on the right path right I mean like validation y yeah no respect how how do you guys uh stress do you guys stress test your Mals or how do you find a mail like I mean well I haven't went I I went big in on a mail hunt like uh a couple years ago and this is before we started doing F stuff and like you know that's a whole different like that's a whole that that now we're going down another that I left I've left the Mals alone we actually got I got a bunch of seeds I've been collecting reg seeds not our more OG leaning stuff that I'm going to be going into soon uh here soon too and you know when we're when I'm going in for males um you know I'm looking for structure I'm looking for you know how that plant Stacks up um and uh I've never really done much stress testing with any of my males I just haven't um you're just looking for characteristics you're looking for characteristics yeah like tpping tpine structure structure um are huge you know all that plant stacking up lots of vigor out of the males strong male to hit against the females yeah yesterday we went over a bit with um some cultivation questions and something came up about channeling and channeling in rock wall and what was brought up is that you guys um kind of switched up your Tech a little bit and started doing a big handw water once a week y to kind of give a the the rock wall a big soak um but you're not changing

your irrigation strategy from what I heard just letting leaving the irrigation strategy alone and doing a hybrid hybridized version of hand feeding and using the drippers so where we're at right now is I kind of like to have the guys do a full reset at the beginning of the week with a hand feed get your adjustments see where you're at and then plan your irrigation for that week um so when you hand feed the rock wool it goes up like 20 30% in saturation so you're just giving that plant much more abundance of water just uh to thrive instead of always dripping and channeling and running more of like a dry cycle Cube which if you have your guys doing that it's very risky you can burn your plants up you can stress them too much so it's just a safety to reset the cube and even like groan they suggest always doing a hand feed at least once a week to reset it you're not fighting saturation issues no matter what you mean you're going to watch if you don't do that you'll just watch your your your vwc just it's at 80 70 60 and you're pushing more water and just it's channeling through and and other thing we we uh I realized too at least in the 6in youo as far as that hole is deep where you plug your clone there ain't no roots that there ain't no roots so that that that hole is I think like what about an inch deep about an inch deep that first top of that inch of that block you won't have you won't have any Roots up there because it just goes dry just goes dry naturally unless you're doing that soak once a week you know um and uh and letting that that whole entire Cube stay wet and give it that reset we talked a lot about that before giving a pot reset right pot reset and that's it's no different carrying that saturation in the bulk so you don't lose it getting down to 45% you know saturation you can't have that you want up 70 when you're bulking when did you guys start doing that about a year ago okay yep started messing with the hugos and just doing different versions yep and then we've kind of figured out the Block tech is what we call and then we started doing quick flips so vegging in place untopped vegging for like a week to 11 days hand watering and letting him explode and it's really proven to be a great system if you can get the cuts you know nine a light 10 a light type thing um but and then we're handw watering this Cube all through veg so it's like two hand Waters three hand Waters and that 11-day veg flipping them monitoring that during stretch making sure you carry your saturation and then kind of sailing off into the hybrid of hand hand feeding once a day or once a week getting your schedule and then using your drippers now you're just hand feeding 3 EC yeah okay so you don't do any like flush or anything like that nope hand feed I'm personally always chasing the pH I want my pH coming out six at all times so we use a 3.0 input and then we manipulate the irrigation to chase that pH so some people will be like why is my pH so low well your EC is really high so lot people just change their input pH to their output pH but you have to manipulate your EC values to get that pH where you need it yeah and I can see how that one a week hand water will stabilize that that media and it gets your guys in there kind of seeing the plants more working with them seeing what strains are eating more and just more Hands-On more monitoring now you you switch from Coco to rock wall what was the reason and what are you liking better it's cleanliness speed of growth um I mean it's just so clean you don't have to charge it you don't have to scoop cocoa out of the you know like the quick fills that overflow and it's just a kind of a nightmare with Coco I mean it's still a good medium but Rockwell is just cleaner and you see like jungle boys the large scale guys they're running Rockwell mhm you don't have to pre-charge it it's very simple um and just quick growth I still run a lot of Coco I'm still on the Coco I like I mean I like what you got going on does I like Rockwall I have a lot of uh new guys that that work with that are working with us in the gardens right that are in charge of a lot of these Gardens now they have no experience with rock wall and if you don't have experience with rock wall it's risky it's risky because guys naturally are so scared like letting things dry backs fry your root Zone real quick and you start overw watering Rockwell too early on don't let that root Zone get establish in that block and you know we too many guys that it's a we'll say it's like black belt right it's like the black belt growing in rock wall the right way to me is like black belt you know what I mean much more forgiveness and and Coco I like one

gallons same everything else applies well he just said I'm still doing the once a week I hit that I hit that I hit that rude Zone insurance it's an insurance and it gets our people in the gardens it gets them looking at every single top of every single plant you know to to be in there feeling and touching and that's huge man I mean it you can't replicate spending time with the know have you seen any difference in quality Coco versus rock or same we're we're doing I mean behind the scenes I'm personally in our legal right now we're doing side by side it's hard we got we got so is so is Mike yep we got Prine it's hard to say Prine and B everything's the same Pro the feed's the same we got two rooms 6in block two rooms one gallon Coco okay looking at the biggest thing we're looking at shelf life shelf life of the flower tpine not dropping off we've just and I don't want to speak too soon but you know there's there's there's just you know um there may or may not be because I feel like it takes a lot of a lot of studying but we're to that point as a team where we're looking at those minute differences you know what bag is staying louder longer smoke taste flavor everything we I haven't really have I haven't noticed with storage I mean how storing it is too it is too but I think that's just where we're at with things I mean we're looking at every detail of the process now know because again we're not making SE we're also making flour we're making hash we're doing everything so you're obviously questioning it because you're doing a side by side well he's got a Rosen brand swole so every little bit matters to where the flower I'm seeing I would still go with Rockwell I don't think there's that big of a difference maybe a little bit of shelf life if you're curing for a month or two maybe it drops off a little bit with salts and rock wal but I still stand behind it it's a great product yeah if you're trying to squeeze that extra and then again how many Cuts can you get in your room can you get n of light as your guys can can they be on top of the rock wal so it's just a little bit of a buffer with the Coco it's a little personal preference it is yeah it is per personal preference with with runoff markers you know Jay I know you're you're big on runoff um what what runoff markers take me through flower and what do you what are you liking to see on your runoffs so like week one through two we're trying to build up our EC a little bit do that generative type steer uh but but again I'm chasing the pH so we're trying to keep that all in Balance together typically as we get into flower it's like 4 EC runoff we might build up to five maybe a little over five and then we kind of taper down from there I don't really like going over six and pushing them too hard we're seeing that you don't really have to do that and the harder you push them um the less smoke ability they have so if you keep the root Zone EC relatively in check then you can manipulate your dybs also to kind of combat that so what's all this balance I would say from week one to two let's say a baseline 5c runoff and then as you get into bulk we're going to maintain roughly the same EC just kind of very simple do you reset after week two or three um in flower on that's where we're kind of implementing this hand feed at the beginning of the week so we can strategize see where our numbers are and then get a plan for the rest of the week um to chase hit those numbers that's all that we're looking for okay so 5 EC for the first few weeks and keep that 5c going or I'm I'm trying to stay in between five to 5.5 EC roughly through the whole um the whole progress or the whole um cycle okay roughly 5 EC it's just a good Baseline for me personally and and a 6.0 pH correct roughly is there a like an acceptable range like maybe 5A or then it comes back to the genetics which genetics can handle the higher can the tear gas it can handle a 6 EC runoff to where a zupa or something will be burnt to a crisp so that's the thing to where we're staging so many genetics in these rooms to where I want to keep the simple Baseline 5c runoff 50% dryback just so we can get you know an average of the whole room it's not like we're monocropping you can really dial in one at a time so we got to dial in 15 at a time and a 30 lighter that's one thing about Prine that I love it's like it's really consist across all cultivars it's a very consistent UMES yeah fertilizer for for across all cultivars it does it does really well yeah it's it you know I'm right where Jay is at Baseline I'm a little I do like you know six to six to 8C during during stretch like first week or two um okay so you're a little different a little higher not much I mean you

know these are 6 to ADC is substantially higher yep 6 to ADC um you know now again what he said is a good point genetics that can take it I got pie can take 20 run off don't care give it to me give me as much food and light as you got won't get weird on us right it's taking notes I mean it's never been more confusing in our Gardens it's like hey guys uh we got 30 lights we're bringing you 30 genetics to run they're like what I'm like yeah we want them all looking pretty good so you know to what you just said prine's a great Baseline and then I still come down and bulk I'm lowering that heavily after strip I'm coming down now I want to be five five during bulk you know well in his rooms though too he's utilizing under canies so you do have to feed at a little bit higher feeding I've heard with under canopy you're feeding more now you're feeding you're you're you're well you're we're strategizing more so like I will feed hotter a little hotter I'm looking those plants need a little bit more you're putting a lot on them you know what I mean early on you know the bulk but if you don't go a little hotter you will see deficiencies are using on your canopy not at the moment so your room's got to be structured and ready for it yes you need more deu you have more plant you know plant Mass you need more infrastructure you need electric uh you need more deu you need a little more AC so my rooms I'm redoing two rooms right now we're going to have the capabilities to start running them in one but we just haven't had the infrastructure to you know put like the AC power basically to to implement them yet we haven't do you think the reason why Dylan's running a quite a bit higher EC on the first few weeks is because you're running under canopy and not I think that's the biggest I think that's that's important to communicate with yes you're adding so much more power and light from the bottom that you're going to need more juice you know just like if you run a ton of ppfd up top you're run 1500 ppfd You Can't Run 2 EC it's just an imbalance yeah it's it's it's an appropriate balance of light with those under canopies um finding a balance of light all the way around uh and definitely feeding feeding hotter if you're using them anybody that's hit me up about hey I'm thinking about you I'm like you just better get ready to feed more learn quick feed more and not necessarily feed more just stack higher EC yes stack higher EC or or for any feed three EC but stack higher feed feed 3C and stack or if you're unfamiliar with how to stack a lot of people it's a very fine line with telling somebody stack the root Zone and watch the runoff and then that guy I'm saying feed 4 EC yeah just High feed a higher EC with under canopy and LEDs with under canopy and LEDs you know a higher EC but but watch the like you said watch the dry backs watch the dry backs yeah especially you take that water that buffer out and all you have is salt sucking on your dry Roots you're spiking that right through the roof so that's another thing you can feed a lower EC lower run off your phes in check and then do heavier dryb backs so you can kind of taper it to your genetic right it's interesting to hear both you guys talk you're not using under canopy you and you're automatically going to that higher AC it's good that we touched on that changing the market the under canopy right now well we we move slowly to well slowly being like you know it's like I'll try something or he'll try something I'm not we're not going to both jump in and try something and then fail it's like I'll try this and you now we're getting some we're getting some notes together on what we need so when he's done and he wants to move in that direction I'm like here this is what we got a baseline we got a baseline you know what I mean you know OG's are another one I IUN run ogs I can't stress them like I can't feed a lot of the ogs that some ogs want higher feed some of them want R your runs you try to stack High EC on runs and you know go crazy it'll just burn up in a second you know what I mean it wants like three or four EC runoff like even with Blended then you can go down to 2.53 EC runoff and you're crushing but you try to do that with a sh pie yeah you're green and yeah it ain't going to color right it ain't going to it's crazy like I never thought we just talking about this the other day it's like it's like sometimes it makes my head hurt in in the morning cuz I'm like trying to Stage all these rooms with different genetics and then we got to try to put the ones in the zones that feed together and there's it's just not hey here's your clones load this room up we you know we're going to crush this round there's so

much more strategy it's insane it's insane with the market advancing what are you doing out in Vegas how many streams you running out there dude dude bro I'm running I'm running uh Mark and doing Marketing sales team working on that now um you know just had a baby like 10 days ago congrats getting my IFR Pilots license so I'm getting my instrument rating just passed my test and I have my flight review on the 18th that's coming up I'm just [Â \_\_Â ] buried like I don't I don't know if I have you know the band with you know Jay Jay and I have grower meetings every week and he tells me what he's doing and and where things are at and and we you know collab on ideas and strategies on how to lean out the facility become more efficient um we're testing under canopy light so we're working on that together um you know he he does a fantastic job with with adjusting to each cultivar and in genetics like I just told Mike the other day um his his GMO Mimosa cross that we popped uh he sent us some seeds and um you know it took j3 runs to dial it in but he took it from 15% THC to 19% THC and now we're it's hitting consistently 28% THC nothing's changed it's the same genetic the only thing that changed was irrigation strategy irrigation strategy was the only thing and and you you know you can't do that with all genetics you know I mean the the Cherry the trop trop Cherry um trop Cherry that you sent that's just a low tester I mean we we did everything under the sun to to get that thing above 20 and we're just consistently H 17 18 y it was about the high it goes average is like you know 12 are you guys seeing that with the trop Cherry as well we don't we haven't ran trap Cherry in quite a while okay yeah it's a lower tester yeah lower test and then just no matter how much irrigation strategy throughout that thing like it's just going to be enough it's crazy how some strains it's crazy how some strains uh can be manipulated like that and do change it it's insane I mean we even even going like more into the hash market now um you know diving down that rabbit hole it's like we got 70-day cultivars for flower that we need to chop at like day 40 for ash because that's when they're ready right and like just D this it's it's like it's it's insane I think a lot about like you know 10 years ago five you know even five years ago and it's like I wake up every I feel like Bill bich I'm like all right every morning I'm like all right I gotta it's it's there's so much more that goes into this strategy on strains and what are we chopping today I don't know the last time that I've just chopped a roomed out at Harvest yeah it takes two weeks cuz this isn't quite ready and this needs a little bit more of that and you know this needs an extra five days with Fade to color up right when this one's done in four and it's just my team's on standby wait now going back to you know first three weeks you're going um 6 to 8 EC with under canopy that's important to mention um are you resetting um and then continuing on what's your runoffs looking like on there so we reset in Coco every week like we still do H water we res set um and then uh going when we get into bulk um now I'm going to be down at about that 5 to 6 EC on runoff we're in bulk 5 to 6C um run off with bulk Y and then how long are you you running that for and then how are you finishing so we're running that all the way to uh I I'll use day 49 as a reference on little closer to the mic yeah I I'll use day 49 as a reference on a 63 day stay just for reference so we're going to push bulk until about day 49 and and and then we're now we're starting tonow I'm going back generative right and so I'm going to push more runoff I'm looking to start lowering that runoff but I want big dyb backs overnight so we're going to start stressing that plant hard the last like 10 to 14 days huge dryb backs ECS are spiking even though you're you're you know you're but you're pushing way more runoff at P1 to lower that way down now I want to see you know six 5 4 three and essentially right at the end I I dang near want to see what's coming out with what I'm putting in when we're about to chop when are you really uh week are you trying to drive stress last two last 10 days last 10 days and it's a slow thing I don't just all of a sudden go from this big beautiful bulk where they're happy and you're giving them everything they want to just massive dryb backs it's all a nice taper yeah start to cut the taper the feed taper the the p2s slowly starts drying that thing out more um I think I think that's it's underestimated on how important stress is 100 is that what you're what was the main factor in and raising that THC percentage of that Mimosa GMO stress stress stress

bigger dryb backs bigger dryb backs harder dryb backs that's why irrigation strategy can change it so much 100% I get a lot of common common thing that people always hit me in the inbox with on cultivation stuff is like oh you know I got this room and and I you know I'm not I'm getting low test scores or it's not smelling or it's not this and 99% of the time they're overwatering all the way to chop yeah it's just staying way too wet it's soggy it's just got and it and it's just so important those last 10 to 14 days to stret that plant out appropriately it's the quality it determines the quality yeah you know I think a lot of these some of these guys look I could be wrong but I think a lot of these guys that possibly using Organics or or something like that they're like look I'm getting a better product out of or running Organics well why right because nutrients are nutrients right the the balance and nutrition you know um but I believe that the reason why they're getting they feel like they're getting a better product with Organics is because with Organics you're not going to get the perfect nutrient balance y you're going to stress the plant a little bit more or a lot more Yep um and you're they they getting a better product because of the stress yep so they give it you know something like a mineral super balanced mineral and they're giving the plant perfect fertilizer perfect nutrients perfect everything no stress and they're not liking the finished results of the quality of the product it's like you got to stress the plant you got to work them out basically you know in Organics is I was talking to my buddy the other day a good guy up in Michigan um and uh his name's cash he's a he's a good he's a good he's a or little small organic guy great guy but he'll he'll tell you straight up and I've had the same experience bro some of the best flower I've had you know some organic flour some of the probably some of the worst flour I've ever had organic because if you're if you give it too much and there's too much food left in that plant now you're going to chop and it hasn't had a time to stress in siness cuz it's packed full of nitrogen to the the very end cuz you dump you dumped too much of something in there right your soil wasn't mixed right or whatever the case may be and I I I feel like with indoor cultivation still what we're capable of doing now and where we're going is we're we're able to take away and give and do whatever we want through environmental strategy through irrigation strategy with the same results and and we're going to be able to do that closely I think here soon with pinpoint accuracy once we dial in in strain specific right it's like you figure out that J that GMO mimosa now you you figured it out now now you have a blueprint where you're like I'm going to grow this the same way every single time because I figured out the blueprint that I need for this and uh that's that's what our playbooks looking like and you could do that with a super balanced consistent mineral nutrient but to do that with Organics you could do it but it's a lot harder to do it's a lot harder to do to get that for what that cultivar needs and to figure that cultivar out it is way harder to do in an Organics yep you know I'm just personally I'm not not not that talented no I mean it I think we've said this on podcast before but the the the few guys I know that killed and small guys I know personally that killed an Organics I mean those guys are those are good Growers bro those guys got are are like a month ahead of their plants you know they're they're charging for what's a month out it's completely different and like it's very hit or miss the guys that Miss Mish hard a lot the guys that hit are usually smaller guys because that's all they can manage because it's that it's that time consuming and it's that it's that much more right very difficult y we did a uh uh a a vote on on the IG page veg veg in place right and I talk to you and you say veg in place veg in the flower room yeah no no veg room what what's up with that so you know for for us I guess you know we're we're running this way both in our legal and and in our in our caregiver spots um you know being able to set up a room for us on a on a what 8 to 12 Day veg if we have the Clones available to do you know production like we want to I'm setting up a room I'm vegging in place to save not very many days when I'm looking at it um if I'm bringing a one gallon in let's say that I've got that initial dryback on so I planted it 5 days ago we clean the room we reset I bring I bring a bag in I set it down I still got a veg for a few days get it acclimated we're Ving for 8 to 11 days

in place that's it you know and because of proper environmental strategy proper irrigation strategy we're also knocking a week to 10 days off of most of our Cycles now so at the end of the at the end of the year we're still looking at a five crop cycle out of every room with way less moving parts and labor on our employees now again I'm we're also I'm not set up in a massive commercial facility where I have that space either right to to set up and but to me it just there's there's too much for for me to go wrong in in that moving plants around I love going into a room resetting clean plants bring stuff in planting healthy clones they just get all the light in the space from day one and that veg is shorter those plants are thick and they're healthy and and it's just you know more efficient you're finding it more efficient for us yeah for us for us for our situation of what we're doing I mean you know caregiver Market especially I mean we're we're you got clones from one facility feeding they're going all over you know what I mean what am I supposed to trailer up and take clones and plant them in your room all you need as moms and clones you don't need a big pre-stage veg and carrying medium over just give them all the light so the market would disagree with us the market disagrees with depends what you're doing though too if you shorten your flower cycle and we're flowering above nine weeks now we get a free veg yeah so I've I've had a veg room my entire cultivation you know life right we've always had bedrooms um and this is the first two weeks that we've vegged in the flower rooming it so far we're loving it yeah so far it's great I plant respond well talked to Jay this morning and um he says it's growing great he lost 10 plants um with the transition but that's pretty standard even in the bedroom so just have some backup yeah uh Overstock yeah a little bit of Overstock when you when you move in but moving 3,000 plant um with two gallon pots is about a day and a half of work for three people you just set your room in your spacing yeah if I if I was vegging you know we veg in place like I I have a caregiver spot where we still run big plants right like five six week veg right yeah those ones I'm I'm not bringing in and vegging for seven weeks we're vegging two to three weeks somewhere else bringing them in setting them down but production setting I just don't see the savings anymore plus did you do anything with that veget space that you had that you were using before uh we're gonna make it all moms there you go it's all so it's being utilized in for well we actually so we we we we built a facility um with dedicated six flower rooms and then we had one big 7200 square foot um vegro we converted that 7200 foot vroom into flower rooms we are going to it looks like we haven't made the complete decision yet we're still up in the air we're testing it right but now we have a 4,000 ft mom room and we we have a 7200 squ foot veg room but if this goes well and we like you know the end result of it we're going to take that 7200 foot bedroom and turn it into flower what made you want to try the the system you know I think I don't know why I just always I love Six Sigma Kaizen the lean farming practices I I listen to you know kiss Organics the podcast great podcast um mostly organic Growers I used to listen to it non-stop um when I was growing and um there's this lean farming uh podcast it was really really good and I got the guy's book and I started get into Kaizen and understanding like lean farming practices and for some reason like I'm really drawn to it I I really like it like I like to take a process and see how you can make it more efficient it's a blast to do I enjoy the same thing yeah you okay it take three employees x amount of time to do this process can we lean it down like muda they talk about muda like waste in the facility like trash you know you go into facilities and there's just muda everywhere there's trash everywhere there's stuff in the corner there's stuff that you're not using on a regular basis and taking that trash and just getting it out of the facility and cleaning up and making sure that everything's clean and also what they talk about is putting the tools in the right places where you use them you know it could be really simple like a pair of scissors um when you need them in a certain section um or other stuff like making a cart that's dedicated for a certain project like for example like make a cloning cart and the cloning cart goes with you to your mom we just started doing that you just started doing that making a cloning cart those little things and makes it fun it makes it fun like you you're looking at every single process of your facility

and you're trying to figure out a way to lean it down um and and gain efficiency so we got our our rooms down to 2 and 1 half days Jay got the rooms down to two and a half day flip so we are harvesting cleaning the room with the the reset foamer spraying all the walls down spraying everything um and then taking all the pots and um feeling cocoa inside the the the room feeling pots spreading out the pots and transplanting we're doing that two he said he's doing that in 2 and a half days nice down in out and then that's it no no more moving veg no more moving the because even every little process like you have to think when you're moving that veg you're taking the dripper out you're moving the plants then you're putting the other dripper back in and all that is is gone because you're now vegging in the flower room and look this we're still testing like we're only 2 weeks in but it's looking like you know for us and the way it works in our facility it looks like veg in the flower room but look could be completely wrong and I think each and every facility is a little different it is you know so I think process of some facilities might need veg rooms and some might not yep I'm definitely Pro vegging in the room especially if you get it down to these quick flips that's why we started it it's really clean get your Cube set up on Center you got a week or 11 days and you flip and Y it's just so much and the V stress alleviated the quality of the veg that you're getting when you spread n of light out and give that plants all that extra space the structure instead of it being how many times have you move plants into a bedroom and they're like limping over they haven't been getting adequate light they kind of got too bunched up it always would happen to me two days or I'm going to bring plants and I'm like I'm a I was I was too I was too early on my veg again and everything gets too congested in veg and they they get a little too close together and they start to get the branching isn't proper anymore you you start those plants off and they just Branch out your maintenance goes down that's the re side lighting y you know yeah I mean all the maintenance goes down too with the quick flips you give them that room to just grow in place quick flip and now your maintenance we're using one layer of trellis on some of these and then going in and defoliating these on top plants is very simple so we can have one guy doing the hand feeding weekly pluck the plants one layer of TR now the whole thing is super efficient yeah so talk asked this question to to Mike yesterday and um I I was in I was I was surprised you know um I asked him if he's still topping and he said no are you guys topping still where you at with that depends depends it's all situational in a perfect situation in my um rotations we're running on top populating n of light running on topped one layer trellis vegging in place one Cube so in one medium the whole way we only have to water that I mean we saturate the cube you don't have to Res saturate until like day six or seven now you're almost in flower so we don't even hook up drippers you know to our veg plants or anything I have my guys for the first couple weeks really on the hand watering and checking and monitoring cuz now when you do that quick flip your stuff's not drying back you're not over over vegged it's all like a system made perfectly just uh you're not changing the course either you're not topping it and it needs time to redirect its energy and then you have one wonky branch and two wonky what he said he said when he was topping he'd get a wonky Branch or they just some strains are I that fallmouth you mentioned on that list earlier great it's a chema to sherb She carries chem sherb structure she grows outward and kind of billowy and if you to that plant bro it grows flat and just keeps going that way I you don't but if you don't top her she's not that bad you think about it's natural yeah that's how the plant's supposed to be and and and I just I've had too many cases where you top and the plant just doesn't respond well and I don't like that so you guys you guys are going no topping as well no top for the most part however situational situational situational if I got to go down it's the whole system the whole sop of having that Cube putting it in your room saturating it letting your plant grow in that one medium and then not having transplant stress not having topping stress you just send it and it you'll just be amazed you'll have a plant This Tall but now you're vegging in your room so it's structured out really well then you flip that and it just fills in Its Spots never bothered but everything I think there's a good point



to be made here everything what he just said for it to go right you better be bringing in equal clones that are not that are all healthy have the same root zones they're all healthy they're all the same size all that has to be A1 from the start you bring in the couple big tops you know you got some clones that are way bigger and all of a sudden that on top you got a couple that are just it's got to be consistent from from the get-go you know some plants you have to top if you get a crazy plants throwing these dinks you don't want that consistency in your bag you want your bag to be all the same size nuggets so you may have to top a couple strains okay yeah but I would say perfect scenario for us we're still not topping the maintenance maintenance goes way down the whole programmer running is low maintenance that's how it all started yeah I mean it has to be right now with pack prices the way they are and the market the way it is like you you got to be really focused on this stuff plus we find I think we both found this one we little strain dependent but when we're not topping you're not putting any stress in that plant you're just sending it dude those packs those pieces the neckbones the nuggets everything is just they're just you look at the bag and it's just go it's just whatever it runs it's all it's all quarter pieces all the way through you start topping and spreading your canopy out and weaving and doing all this yeah you'll get some crazy yields but has smaller pieces it itself out it yeah it Cooks different well if you think about outdoor too do you take outdoor and you smash them all together and create this really thick canopy you can't cook no you keep it spaced out so you can get light in every way so now if you grow this on Top plant it's shooting up you have all these towers you have all the light getting in all this branching so it all be cluster [ ^ \_ ^ ] you know what I mean to where you need more defoliation tons of leaves tons of layers of trellis so you got more defoliation you got a top dude the plant is why I mean this dude is really the one that that started messing with us it's just getting the labor down in these rooms you know I mean even our PL our guys are seeing it though like KH yeah ta con like he's following all of our Gro and Sops all of our feeding on topping it's leaking over into Thailand now we got all the local homies now doing it too and it's kind of like like Max doing the Caps he un topped he's on it too so it's like I know Mike said he was following your guys' sop on the one a week watering that's how I heard about it yeah he Village has always been like a kind of like a big homie to me I've always looked up to his page he's super clean obviously he's part of the Athena Family sent him the super boof a long time ago he crushed it like he's top tier category cultivator but he always being the DMS being like whoa what are you what are you doing cuz he sees you know he's able to recog I love about Mike dude like he's he's like he always like when I was growing up you know and growing in the industry it's like symbiotics like holy [ ^ \_ ^ ] like Village like you know he's Legend but then he's dming you like hey bro what are you doing what's going on like he's like no ego supered that's what's huge out here bro is like and that's real recognize real 100% like you gotta like to be the top of this game Mike's one of them the Ivan jungle boys David prefer Gardens I mean those to me are Legend Dave's a legend bro da like but it's drive and the lack of ego Tyler King Garden let not forget Tyler [ ^ \_ ^ ] ego dude guys a similarity I've Tyler I just talked to him this morning we're going to see him after this you know David I talk with him a couple times a week and he's those these are the guys that I can go to and be like yo I'm I have a question about this or they may come to me and there's no ego there's no this well I'm so and so and you know what I mean there there's none of that they're not too good to learn either we're all learning we try to push that down we have a big team back home and shout out to our whole team they're they're excited we're out here doing this and it's like we push that energy down to we want everyone to we're not better than we're just we love this [ ^ \_ ^ ] fends bro we're fends in the garden like you know what I mean like we're just we're trying to get better we're trying to look at every I I mean we we almost go overboard to the on the you know sometimes I have to sit back and just breathe and be like I'm so grateful for everything because I can get bent out of shape about like a burnt tip yeah Chas call me room's garbage bro we got a burnt tip and I'm looking at footage

I'm like what what are you trying to chase the perfect but that keeps us that keeps us pushing it really does that that level QC keeps keep Sanders High for sure I love that no I love because that's that's how you know it was back in in ' 08 09 and 2010 like everybody's sharing information everyone's cool it's like the whole Community the culture and all those guys that have been in it are still together and we're all just continuing to share No egos not you know blasting it out everywhere um and that's the culture dude that's that's why we put for the culture yeah yeah um this is one I asked Mike yesterday and I was surprised on his answer but um just because not not because my personal preference is you know what he picked but I was surprised um that he would because he's an indoor cultivator and I just see a big movement in the industry um LEDs or HPS both something we want to touch on here kind so this so this this is leading into why we're able to V place and not have it hinder our they're both they're both good each have their good negative stats LED you're going to yield more uh your flower isn't going to be as expressed HPS going L what Mike was saying he didn't feel like the LED flower was on par with the HPS flower it's less consistent it's harder to cook a good batch on your LEDs especially what LEDs are you using you just buying the cheapest LEDs are you buying a set of LEDs that have been tested by Growers to where they know they make you know create good cannabis yeah can't just throw in any LED we've learned that the hard way we see it side by side like holy [Â \_\_Â ] get these things out of here yeah you know yeah like HPS man that Lu de best light in the game best light in the game okay like no not talking [Â \_\_Â ] but hands down the Lux de 1000 hands down the best PS ever created there's a reason I'm like design and everything I'm like Facebook Market my thing every night is I go on Facebook Marketplace and I just try to find them bu them buy them and I just have my shop I got pallet RS I'm just do you really do that I do that that's on Facebook Marketplace because that's the only place I can find them hey if you have any extra brand new double ending let me know let up hit up Mitten Master go buy them we'll take them we'll take them you know we just got them for 50 bucks 50 bucks a pop bulbs cost more the um so why did you say both like what is it like are you using both in the same room or yeah I mean we've we've moved a little bit in that direction um you know just just because of well a big part of the original movement towards it was cost of energy I me if you you know if you're a Trapper and you got 400 amps of power to work with or 200 amps of power well we can all do the math on you know 600 watt LED versus 1,000 watt de and how much canopy space you're going to get how many exactly Cooling and you know you any Trappers going want to push that electrical box to the [Â \_\_Â ] Max you know what I mean if I set up a 400 amp Barn I'm trying to get as much I can out of that 400 amps you know and so that was a big part of it you know um and I think there's The Best of Both Worlds we don't we don't need HPS you know in a typical HPS room how many pints of um humidity are you pumping in there the first couple weeks of flower veg to even keep maybe 60% a lot we don't need to do that anymore checkerboard turn them off run the LEDs so checkerboard it so a little bit of are you doing that now yeah a lot of spots where we're set up like that okay so HPS mixed with LEDs yeah and so you're getting that that that that that finished flower that you that look The Best of Both Worlds yeah you're getting best of it you're getting the ppfd that the LEDs throw off quality HPS yield of LED you're getting a veg under LED I love got no problems yeah I mean so it's great for early flower that that that veg place I don't need to be running 16 humidifiers trying to keep my room up to you know it's fine it'll hold 70% no problem one little under LED it's not a problem then as those plants grow we get into flower we're able to start you know change and we're able to change the spectrums tune this one a little higher tune that one a little lower you know what I mean um use the the best of the Reds that are packed in the you know in the in the HPS and those luxes throw [Â \_\_Â ] part too so between that and and a a good solid LED I mean you really get just a a spectrum that's perf perfect you know there's a lot of little details that that go into that that you know we're still working out but you know you also got to have the ceiling height you can't you know you got eight n foot ceilings you're not you know yeah you're not running uh HPS no yeah 100% you have to do LED so I

get it I get it what you're saying both yep yeah Power and and ceiling height a lot of the LED weed over the time when I started looking it just all and I think this took a while for me to see a lot of bags just looks all the same a lot of the times it's it's it's not not all the time right but it's just got more of a rocky bulgy appearance to it it's not as expressed as that like traditional single-ended or double-ended flower you know what I mean um where you're getting that more natural expression on it edgier you know um triome development you know see a little difference there you know from time to time but really just maximizing Watts right that are available that's really where it started you know what I mean you're playing with uh some high Reds are you yeah yeah we're playing with some of that playing some of this is something we really didn't want to touch on we didn't we didn't want to uh spill this is why I'm kind of quiet and I'm sweating I'm like oh no here we go um come on bro we share all the info we're not holding the community come on yeah no no we we um so we start playing around with Reds there's a lot of Manufacturers that make tunable lights right so um start messing around some different tunable lights uh you can buy you can just buy Reds and put them up in your room too but um definitely start playing around with Emerson effect you know what I mean um and and just do you want me to give you like the full lad down on everything give it yeah so God damn it so it is a mix light recipe it combats it mixes the both of the Best of Both Worlds you're going to get your quality from the HPS and your yield from the LED when you're vegging in place this whole thing is a uh sop together it's all designed around the lighting um when you're going to veg in place with your LEDs you don't have your HPS on to zap out all your humidity so now as you're vegging in place your checkerboard your every other light vegging with LED you don't need a lot of light or vegging 24 hours so you only need like 250 ppfd so now for that week to 11 days you're running a very low ppft you're not fighting humidity and you're using very low amounts of wattage then when you transfer into flower you are going to turn on your HPS which you're able to get a mixed spectrum and then as you progress into flower as your lights shut off during the day or at night when they shut off at the end of their 12 hour cycle you're going to initiate the far Reds the far Reds are going to make your plants transpire differently and uptake nutrients differently they're always going to prey so this is the real next thing is the lighting everybody's like oh is it the new nutrients what's the irrigation what's the runoff everybody's not thinking about the sun you change the Sun and you change those diodes you can't just buy a \$400 LED put it in there expect to have Premier packs going against everybody else in the market with the same damn genetics you have to have a custom lighting recipe that's going to cook your weed way differently than anybody else and people are starting to slowly see it now it's leaking out and now that we've talked about this now it's really out it's something that we were not going to disclose you know everybody at dinner last night was like Brewing up questions everybody's what's the lighting what's the lighting only thing that everybody would have to we're not going to talk about the lighting cuz we want to keep that to our own Brands so we can right now I have two rooms down fully outfitting him in mix light he just dropped a bag on doing all of his as well so we're full in on this next Journey here and we've I feel we've figured it out there's still some tuning to be done but this is like the cheat code like it's not the irrigation it's not so much the nutrients obviously you want to keep all those things in place but you change the Spectrum changes everything game over we learned that at Lux you know spectrum is a really big deal color is a really big deal what what are you on you're you're doing a full flower for 12 hours and then how long are you using just the high Reds for 4 to 8 minutes 4 to 8 minutes that's it and we've done we've done I mean you know me tweak McGee over here so I'm constantly trying different lighting like different intervals right but that's the sweet spot for us right now and this isn't something new this is the Emerson effect when I first met you actually I made my first led purchase you answered the phone for Lux and kind of hit you with all these questions but this is something that's been being done by the original DIY LED guys for a long time but they never had the platform or the room to show the capabilities so now that we've been implementing

he had a trap spot that was all HPS he's like Jay this next spot we're building all HPS [ ^ ^ ] it all right run it high yields excuse me low yields high quality we're like all right in the power's high so we got to get past this we started using a different LED so now we're like all right we got to do The Best of Both Worlds mash them together and it's turned out to be a perfect recipe it's the pack next to pack it's not even close you're getting \$5 \$600 more per pound than you were before just using that high high red just well just you're cooking it's the lighting Spectrum in general the base lighting spectrum of both being mixed and then integrating the Emerson effect with the far Reds at night it might not seem a lot but those eight minutes of Reds at night will put your plants to sleep and knock off a week of flour so now it all comes full circle to where you knock off a week of flour guess what we gain a free veg in the room now so now you have all this space in your veg you just bring in Cuts propagate your room populate it excuse me and now you're you're chopping earlier so it's really a 63-day cycle and you're losing all the veg space and the transportation that all goes into the low maintenance system one layer of trellis untopped one medium hand saturating it's a full system on its own that we've been working on for the past year yep yep and it's still strain dependent uh with some things to with how long early things get chopped you know your runs and your your early flowers are Done Quick you know your sh pies there are still like there's certain strains where we we have you know we have a different finishing cycle for that you know we'll have to dry it out you know harder still get it to to hit but even those 70-day strains are still cut back a week so like that that that week that we were losing losing right we're not really losing at all we're shaving off a week to two weeks of flow now now you're you're if day one of flower to day 63 mhm you're starting that day one of flower High Reds at the end of each 12h hour cycle for eight minutes correct okay um now it sounds like you're seeing a better quality better well the base of having the mix Spectrum so having the Lux and then the LED is already going to create a different spectrum and then you add the Reds on top where you need a two driver two channel LED so it's a combination of everything on lighting it's all full system the led the HPS it's the the Reds at the last 8 minutes have you done it without the Reds the last eight minutes they don't they don't respond the same okay I yeah they just built a new spot all around this this this lighting technique and his guys in there attending to it like bro like we're never going back he sees day one when you implement the Reds it's not the same every pedal is green every stock is green every leaf is just on 10 I really feel like it's all my my uh we're utilizing all this in the um in our legal facility as well however we're using a different brand LED right um that's not tunable so we're not running Reds at night still chopping a little bit earlier not the the one to two weeks still getting that great quality though I mean quality is insane my partner there Michigan and fire is my partner in my legal spot he we have this we have this other recipe over his SP he's night and day difference and it's I believe running those Reds and I to it's it's something with the calcium uptake I've never seen pedals and stocks so green in my life the whole room is lime green you can never go back it's it's it's you're never seeing and so we'll look at that room and then we'll have another mix light room without without still great plants aren't praying as hard you're getting more purple stemming you're getting more you know purple pedals you know this the plants are night and day different and they're just finishing faster your day 30 you start getting deeper into flower day 14 onsets faster day 21 looks like day 30 day 30 is looking like day 40 I mean it's just the other the other room the progression without it is just a little bit slower you know still still a still a great product great end product but those Reds you're really shaving that's where that time starts to get shaved people be like Jay how you getting these you know these crazy colors your Fades your bulk what are you doing with your irrigation it's like well I'm keeping a 5.5 EC with 50% drive back stay easy it's all about the lighting all about lighting now are you seeing uh a degradation and yield since you're finishing earlier no same yields you just have to adjust everything now to a quicker cycle that's it yeah you have to adjust to a quicker cycle a 75 day strain is going 65 a

runs that usually let's say you cook it out to 60 63 in an LED room trying to get it colored out and bulked up we're at like 50 it's ready to go it's cooked out like the leafes are cannibalizing they're so colored and ready to go and yields the same it yields the same we yielded I mean with that tear gas alone we yielded so we do nine cubes of light we yielded 20000 gram per Cube that's four pounds of light if you were to tell me that when you first met me i' would say yeah right I've got canopies packed I'm hitting two it's with the untopped and the whole system it's it's just it's just different it's just kind of what we've been holding in our pocket and working on for the past year yep yeah it's it's uh it's definitely it's it's definitely been a game changer it's uh it's going to change the game once people eventually see and they're able to invest you won't go back you know again you got guys that are set up to vegan place and they're ripping and gripping I mean you're you can do the math and what that means to a facility yeah we talk about all the time about streamlining streamlining facility you know small things like a clone tent or whatever is knocking off time and labor and something like this I mean you're just you're getting more efficient I mean you're talking one layer of trus we're talking like our plucking days I pluck the rooms couple hours a day it's done it's just a low maintenance high output uh system we we've changed a lot of our lot of our you know plant strategy as well like plant work strategy you know the typical go in strip a room down day 21 or whatever your defoliation day you're just murdering plants they don't drink they kind of sit there kind of whatever they they know depending on the genetic again we've really done a lot of work in other areas too that have have affected like I want to say our our plants and then you know at the end the end products always the pack that's what I look at right and still a lot of plant Technique we don't strip in a day we usually take two weeks we slowly defoliate for for day 18 to day 30 day 32 now now with um have you measured the ppfd on the canopy of the of the red and what what kind of ppfs are you seeing or do you know so it we're mixed we're mixed so like traditionally um you would usually from the research I've done and the guys I've talked to if you're running let's say your lights at 50% let's just say you want to run your Reds at night at 50% right but that's if you're the Reds that's if you're at a 1: one right I haven't found any um ppfd is pretty low I want to say it was when the reds are on yeah you don't need a lot like with our checker board and the little light that it puts off it can't be much more than 50 to 100 50 to 100 ppf roughly I mean we can double check but it's not it's just a blanket you know do you know how many watts um I don't don't because I'm I'm I'm assuming that the lights have built-in Reds that oh it's very low wattage it's like 10 diodes light okay so it's not it's not a lot of Watts so for for somebody to implement you know some kind of red high high red far red um you know even like uh clone bars or something like that you can implement it whichever way you like and it's going to knock off time yeah it's going to I mean it it's um it's something that like even when we started messing with it we like it takes me to convince me of something like that I got a see I'm a Believer if I see it I believe it that was something right away where I'm just like dude this room keeps hitting these rooms are just different these rooms are just different and for me to make a big investment and everything that I have we started at one now all eight nine spots are being retrofitted what color the reds are like how far red I think they're like 800 nanometer or darker okay um we have to double check on the the nanometer or whatever it is but it's we use lights all built in yep yeah so yeah I have to check on that you know you can buy supplemental red bars a lot of companies out there red and far red so you got to differentiate those um it can be a little difficult but um yeah The Firs at night just by themselves that eight minutes it's the game changer it's funny too cuz I've went back to a lot of the lighting companies some of the ones that we use I'm like asking them and they're like clueless you guys they're not they're not a lot not Growers I know I know I know and that's that's that's like the thing it's like you know we have a lot of again we have a lot of local homies a lot of friends I know what we're doing and you're starting to see like and they're doing it any way they can me my boy sent me a video of his legal spot the other day and it's like all bar style LEDs

like 50 of them right and he's like instead of taking out checkerboarding he's just like got Dees like two feet above all his LEDs all over just trying you know what I mean because you're also drying out the room right HPS has always been great for that you know you're drying out the room so we get we get later into flower we can crank up we'll crank up the dees more start lowering the lowering the LEDs to actually just really finish that room dry and express out hard and then you know we can turn them off the last couple days blast straight UV and white led to bring out a different expression for certain genetics it's a great strategy because you know using the LED to raise the humidity because that's the biggest problem with LEDs and using the HPS as supplemental lower the humidity and then you're getting all that that HPS quality that we all miss that we all love right and this is something that we hold like close like this is something that we've been working on and spent a lot of money on and just time and effort like this isn't something that we talk about lately no 100% because it works it works and it's it's um I mean you you got to have the SE the cook Zone I call it is very important so like you need three and 1 half to 4 and 1/2 fet from your lights to your plants because if you start if you got a strain that starts stretching now we're just in pure LED light right because you need that mixed Spectrum yeah we've seen it first run I had with one of my buddies we were running the strain of stretch way too much it's in 1,500 ppfd of just LED right the rest of the canopy is way lower but that weed was boof you could be creating some lighting companies uh right now yeah right I know there's been so many people that DM and ask and I feel bad cuz like how are you doing it it's just like I don't want to tell you you know because we want to get it going first before we let the cat out of the bag but now the cat you guys want to do like a lighting lighting fixture for high Reds what are you guys what were you thinking what's that is that is that something you wanted to do like a lighting fixture for I mean we talked about a little bit here and there we we know we went down the lighting thing a little bit didn't work out too well for us on a clone light but um you know um we we just at the end of the day I think both of us we just want to have the best bags bro we're cultivators we're cultivators I love roach or whatever and just being in the gardens and saying it's we're cultivators first so that's why we're blessed to stumbled upon this doing all the rooms being smart making changes like we're not Chris Durand I can't break down you everything right but we're Growers and we see what works and it works and I and we we have to deal with the end users gents right the streets still talk yeah streets still talk to us you know I go back to him all the time I'm like this is and he's like what that I'm like bro this is it right here this and when we start messing around with this light recipe it's like everything just some of my LED packs if my guy doesn't cook them right they're going for 800 900 bucks we're selling 2K packs of the mix light you know and they're flying off the shelf yeah and it's because you're expressing you're you're taking I mean these these the they're I keep saying it's it's like putting something in the oven right it's like taking a a microwave why do you call it cooking because because like that that that plant has to be it has to be yeah we're Chef it has to be cooked right in my opinion like if you take a microwavable burrito you put it in the microwave right they're those little cheap burritos no they're all right you put that thing in the oven like give it the right what what it really they're not that bad you know get we're seeing the same thing it's just we're seeing we're seeing weed sesse and cook properly to where the bags are coming out consistently you know we're not we're seeing we're not seeing inconsistencies and anything throughout the garden through a genetic like a Sher that may be spotty on how it sesses and it purples out it's just it's black it's the way it should be and who's came you with a chico and said well you can chop a week or two in advance get full color lose no yield I mean that's just that's revolutionary yeah that's insane yeah yeah that's big yeah and we have our homies starting with the grodan cubes and they think it's all there I mean that's part of the system but once you get the full effect all together you everybody will change a room immediately if you have the money and the time to put down your rooms and do this I mean if you make like a really affordable low watt light you wouldn't

need that much money I mean no like it wouldn't take much you know since it's it's not like high power you know you're only talking about 100 50 to 100 ppft well also the lights we're using though the LED specifically the high- hanging ones are a big part of the mix you know whatever base Spectrum you're using you can't just go pick one random company it's you know we' found that there's one light specifically that's giving us the best results and it it's paired with the Reds too the reds are big but it's also the base Spectrum the top Bend diodes all the [Å \_\_Å ] these guys have put into that light that's going to be proprietarily different than anybody else's and having and having that that distance is key that canopy distance to your plants you want that in that full mixed Spectrum blanket blanket like you know you want an even canopy you want things still nice and Laser even and you want that distance to be proper cuz it starts getting too high now we're not in true mix lightning anymore you know now it's dominant more from HPS more dominant wh or green from from the LED right so um but you know that back to genetics I mean we're even at a point now where we got some Led rooms and stuff where we're hunting and I'm like can't do that anymore no I got to hunt consistently under one one thing cuz we're finding stuff under LED and then we're bringing a mix light we're like that's the same strain we got lights now that we can't even grow under LED and now we got we got a collection of strains we like this is Led only cuz it still does well right and we got certain things like sh pie you can't grow it under LED it's trash roof packs everybody's got it you bring it to De or mix light completely different strain it'll sell I mean it's it's a game changer mean it's it's insane so again back to how so you guys are getting two grand a pound for your mixed lights yeah I mean in Michigan at bulk that's yeah I'd say 16 to two on average trra depending R candies lcg stuff like that yeah that's solid it's solid yeah it's super solid changes yeah it's changed Gardens but but again I mean I not that there's a lot of other brands out by us that do very well small caregiver Brands metric guys that still do very well but a majority of the market still is just they're just buying clones from the guy down the road there's it's they're not differentiate differentiating themselves all same L same nutrients same medium same irrigation what's going to separate your pack from the rest lighting lighting and genetics that's it lighting and genetics the two biggest keys that you can Implement in your grow obviously beside besides you know just execution and making sure everything's mixed right or whatever but you blanket those genetics with the right color it's one thing we've always talked about here too in Athena is like streamlining a process we we talk about this all the time with when it comes to nutrients the last thing I should be concerned about is what's going through my injection system and getting fed to my plants that should be easy that should chicken rice like we it should be well mine is cuz but Prine for me I don't to worry about what's going on M I set it I check runoff my guys check back stains once a week to make sure our dosers are in place that's now I can get in my garden and worry about genetics all these other things that foliation techniques all this other stuff liting Tech exactly play with the lights play with the climate yeah if I had to worry about scumming like scrubbing scum out of my res every day and all this Fallout I don't think we would have stumbled onto lights I would have had time yeah wor about too many other problems in my garden yeah you know so um everything else is is is uh is is is super important clean easy feed clean zon now now now I get why you said both yeah both yeah got to mix them best of both World L HPS both you need both you need both we jokingly say that the LED light basically ruined the weed Market ruined the Cannabis Market everybody's growing the same green weed blown out bud rot you know and uh they wanted to do it to to Save A Buck on electricity but they're sacrificing the quality of the product so if you mix It's the Best of Both Worlds and again I know I'm kind of harping on this now but in that system where you're vegging in place and shaving off time you're seeing it and you haven't even implemented the light system yet to where it's like working you know we're working with something here yeah it works it really works yeah that's awesome and that's a rarity right well you just it's it's what Lux was all about if you don't do it you don't know it and that's that's the thing like that's what we

stood behind was was doing it and it's exactly what you guys are speaking of right now you guys are doing it on every single day every seven days a week you don't get days off when you're running a garden you're there every day mhm and you got to be doing it and and this is how you guys are learning and and progressing and finding new tech that works for you guys and respect and this wraps all too back into like being fiends it's like everything we're we're what would you say 20% 30% maybe less than 20% we're actually we're breeding we're you know doing all the stuff with seeds right 80% of this is still like we're Growers we're taking all this stuff back into our Gardens and I'm going tell you right now I'm not going to go sell a pack of seeds if I can't sell those packs first when I grow out the seeds right like if this [Â \_\_Â ] ain't tight you know what I mean and like I just don't know I don't know a lot at least out by us there just not a lot of there's not a lot of that going on it's just worry about all that stuff later you know what I mean just just grow more grow more grow more grow more and that's that's not it it's like your [Â \_\_Â ] better be quality coming down like if it ain't quality dog you just got through in that sub part like that if it ain't standing out yeah and that's the difference in this market there's plenty of there's plenty of meat on the bone out there you just can't be the guy waiting for somebody to throw you a bone you got to be putting it we and found our own way you know you guys have uh you guys have been in the industry a long time and you went through you know uh a stage where you know we were the black sheep in the family 100% so what what are some of the biggest hurdles and challenges that that you had to go through growing up into this industry um I think for me I I went through a lot of trials and tribulations prior to 20 8 prior 2018 in Michigan a lot of legal trouble got ra to daa I mean just you know like all those typical hurdles right um and then you know getting into this industry I would say over the last five years um just just learning to just learning number one to be grateful and and I don't worry about what anybody else is doing or saying I don't like I I people hit me up all the time you hear so and so said this online I I don't know what you're talking about I got to Blind ERS on and I've learned that from getting sucked up into some of that stuff too you know what I mean yeah Jay's got Jay you've been doing a better job of that I've been through the ringer with some of that stuff yeah yeah it's just so it's so easy you know you get caught up and and stuff out here and then next thing you know it's six months later time flies I we all know that I mean this industry is what we just talked about it feels like it was just yesterday you know the first time I came out to the old HQ and it's like it's been years it's crazy you know what I mean and like so we we've just some of the biggest I've had to get over just you know persevering and like just worrying about like our family like the people that we have a great team back home shout out to all of them and like we have to take care of those people like we have a family to take care of and we're all out here every day putting at work and we're focusing on us and and like and and and and that's been huge not getting caught up in everything else that's going on out here because it's easy to do it's super easy to do it's easy to get distracted yep I mean we dealt with all the just we were joking the other day about like just you know like it's like even early on with Athena it's like just all the bantering we took all the [Â \_\_Â ] all the your shit's mids and you can't grow and it's like I think now in L what he just said I think you guys were just blasting [Â \_\_Â ] at ppfd of like 12 million and didn't know what you were doing you know what I mean and and and like we went through all we went through all that I mean all the account deletions and just all the it's just crazy Stu and and now I feel like it's I think the Market's matured I think Growers have matured a little bit I think people are starting to see that it's it's it's it's not what you thought it was a few years ago you know you put in the work you're in your Gardens every day you're sourcing right genetics you're hunting genetics you're using clean stable nutrients and you got half a brain you're going to be all right you know what I mean don't don't get caught up in everything else that's going on out here you know that's like the biggest piece of advice I can give a new grower you you feel comfortable about talking about your da DEA situation yeah yeah what happened um so I was um I was dating a chick cuz I was



I was going to Western Michigan I went to I graduate from Western Michigan University so I was living on campus down there I was dating a girl uh long story short she set me up on a buy this was before 2008 um I was growing then we're talking to four lighter which back then like that was a big deal that was like paranoia Central for me yeah and in Michigan it's a real big deal yeah it was it was false walls you you know what I mean building false rooms and you know not not like it is today and so I was you know party one night showed her what stuff I shouldn't show her you know what I mean and next thing you know I'm getting rolled on doors are kicked in and you know what I mean and she she had she had essentially set me up on a buy bought some product for me and they had every right you know to come my house at that point I wasn't home um I still remember coming back down uh um I was coming down uh from Grand Rapids down to uh down 131 back to C maazou um I was actually just got done offloading all my packs from the last round of my buddy and Grand Rapids because I never sold stuff when I went to school you know what I mean like where I was hanging out and doing my doing my stuff always brought it back to Grand Rapids let them take care of it and I went back home and I remember coming down 131 and my brother rest in peace called me and was like hey uh I think like the feds are at your house and I'm like my heart just sunk I had clones with me for the next round at there was no plants in the house it was just an empty room downstairs thank god um still hanging over my head and the only reason I didn't end up in a lot of trouble is because they they held that case open for about 9 months and this was in the this was like in the fall late Summer and the following spring my brother died on campus from from a drug overdose right across the street from the house that I got raided and when he died I found him and the FEDS feds were there because it was drug case and it was the same Feds that R to me across the street nine months later and so they they you know took me aside after all the commotion settled down the news left and they're just like hey you need to go get out of kazoo and never come back and that's why like you won't ever find me in kazoo Michigan that that often still this day and that was that was I mean that's going on 20 years that was a long time ago I 18 years ago 17 years ago do you think um your brother passing from a drug overdose had a lot to do with you know your path yeah my path for sure so like I I was like anybody else had a good time party did all that stuff when you see a dead body especially find someone close to you it dude I it just I didn't care after that you know what I mean like I didn't care especially your brother yeah my brother my best friend I didn't care what happened I didn't care whatever you know and uh you know it was it's definitely you know um miss him every day I I uh I know he's looking down you know but that was definitely like lifechanging it was like I was probably kind of going like this and then that was just like jump off a cliff didn't care anymore got into a lot of trouble I stopped growing after that point for a long time like that that's when just just like I'm partying screw you I don't want nothing to do with this um and then I got I got sober resurfaced and that got back into the dogs heavily you know dogs are what saved me really and that got me back into in the Cannabis and and uh refound a love for you know I love growing I was obsessed with it from the day I got into it but when my brother died bro I don't care about anything else nothing you know other than not feeling the way I did which meant drinking a lot yeah you know what I mean yeah you know and uh you know still this day it's like anytime I think about drinking or anything I just I go back to that and I'm just like no I just can't I can't can't you don't drink at all anymore no no no it's been it's been a long long time you haven't drinken any alcohol since no since since I've met February Fe February 9th 2011 y yeah wow yeah so it took me from my brother died in 07 so there's like four years of just just balls to the wall balls to the wall lucky to be here like grateful every day bro like grateful every day and and I'm not a like I know I know people that have had way worse strings of luck and worse things happen to them but I just just try to be I met because of this industry I've got to meet a lot of people that have struggled with substance abuse in in cannabis I mean it's pretty common you meet people that are doing a little bit of too much other things too and I've been able to share my story and help guys you know what I mean

and and like that's I'm grateful for that that that's what I believe my past is for right it's it's it's to use it as an example of like I've been there I know where you're at but I also pulled out of it you know what I mean forg and fire and he came out the other end and now he's a leader so he's able to shoulder all that get through it and now he helped like lead our group right he's strong enough and he has the ability to do that yeah that's awesome you know because I I uh when you when you've gone through you know a lot of people if you've gone through a lot of stuff in your life you are able to look at things that aren't that big of a deal really in the grand scheme of things you know what I mean like I get and I I'll get caught up in like the dumbest thing in the world right like somebody something said or and then I step sit back and I think about like where I've come from and other real life [Â \_\_Â ] I've been through and how blessed we are and how blessed we are to even be sitting here like it's just like when I saw you and I got here bro I was like so grateful to be in California where it's sunny right now and cuz I shouldn't even be here you know I mean true you know so like this whole thing to me is just still a wild ride being able to see all we just the people we met and along this ride and and and uh we try to pass on the same messages to our team back home and we try to treat people the same way the way you and I and everybody in our paths that's helped us has treated us we try to pass it on that's huge right like we gotta keep passing it on why we do this podcast 100% give it away that's why Jay just had to give up all his lighting recipes really didn't want to let that one out but I much love bro I appreciate you bro thank you for thank you for sharing it I know that was hard for you us I mean I was going to bring it up and I was like d we going to talk about it he's like I ain't [Â \_\_Â ] talking about it well yeah you know Urban Farmer right yeah Matt Matt Matt's uh he's crushing he's crushing on the squad back in Michigan and he's he's in one of these rooms right now and he's just like every day sending me videos he's just like bro bro bro and I got to give a shout out to my boy Tyler we just redid the whole LED room for him so now he has the capabilities to do what we're doing in the other rooms I can't have him watching us succeed and grow this crazy [Â \_\_Â ] stuck oh no my guy Tyler it's um my my little homie but uh yeah we're getting him out to run the same the same system so he can do well as well you know yeah yeah yeah we're we're they're all doing good now we're grateful to be Pioneers I'll say it like that I guess out in Michigan like a lot of I mean we got a lot of great guys out there have been trapping and doing stuff forever I mean all the guys at high-tech I mean there's so many guys chocolate and all them there's a lot of Dee rooted growers in Michigan's got a great culture the culture in Michigan is is incredible and and like people always I I feel like a lot of people are just waiting for the shoe to fall they're like when's it going to crumble and I'm like you don't know Michigan no like you don't know Michigan you know like and and the the is real there's so many people that have the stories I just told you about getting rated a little forl BR that's the common story in Michigan like most the guys that have been around for a while have been in some [Â \_\_Â ] you know what I mean and like and it makes you stronger if you can hang around and get through all of it and we're just we're just grateful to be out there with our buddies you know being able to bring something like a a lighting technique or you know just hard work and and seeing it Shine through and rub off on other people you know what I mean that's offer it's it's it's it's it's really cool it's really cool to just be be part of that scene and know that you're contributing in a positive matter you know and and we we stress that to like the little group that we form back home I mean I've got you know I've got some we got some awesome people working for us and and like it's all the same fundamentals we've learned here love family like first like you know we're all going to do this together I mean take the we pl pluck leaves I'll never forget when when Ivan told me how roach started jungle boys no you're trimming you know what I mean like you're you're you're bottom up guess what we do you're bottom up has to be and guess what I'll still pluck leaves I'll still trim yeah and like and I do that because you have to lead from the front have to same thing here we we all pitch in wherever needed you know what I mean and we lead from the front and so just

grateful to have good leaders in front of us that have taught us how to do [Â \_\_Â ] too because like I grew up without a dad I grew up without anybody in my life showing me how to do really much of anything it was just wing it you know what I mean definitely figured it out yeah so a lot of good people in our lives though too a lot of good people look up after in this industry and you think about how easy it would be to go off and like get in with the wrong group out here you know whatever and it's it's easy yeah it's really easy you know to to just go off and La La Land and be part of all the drama I see out there and I hear and we're just head down trying to just do our thing you know we don't know everything about breeding you know we don't know we're just we're doing we're doing the best that we can our due diligence and we're trying to put in the work period that's just what Always Rings through my head is like we're just trying to put in the work we make mistakes still get bugs still have problems you know clones still die still lose Cuts yep [Â \_\_Â ] yep Cuts you know we just yeah stuff still happens but um just trying to trying to do the best we can every day and push forward man appreciate you guys making it out yeah thanks for having us I got a lot of love for you guys appreciate it you've really elevated you know our game and giving us tools and things to our uh Advantage tons so thank you it's awesome that I met you on Lux tech support right and then Y and then I met I met you on Athena tech support yeah initially ini I was grilling you on the Lux I was only ordering like five of them you're like why the [Â \_\_Â ] is this guy grilling me about all the colors of the dodes that's awesome yeah I mean you got to have your finger on the pulse and if you're running the tech support you're knowing what's going on for sure yeah so much love guys I appreciate you guys making the trip out to C course thank you and uh look forward to to what the future holds yeah appreciate you bro thanks bro thank you thanks guys see you

no hey I just want to thank you for for coming on thanks yeah it's good I mean I know we're neighbors but and we're both in the same business but you know we don't really talk too much about cannabis too much yeah yeah um so what what uh how's your instrument going are you gonna you gonna do it I'm slacking but I'm going to do it yeah just dedicating time and just with the schedule I have trying to find a uh a CFI that can like fly by the wing and give super short notice you know like hey I got the afternoon open usually they're like oh I'm booked out two weeks like have you started on it at all or no I started doing some of the ground The Ground School you did yeah so uh on the shepherd a that the preest with all the answers for like 1,200 I probably got 4 to 500 but when it started getting into all the Airways and the VR stuff when you sent me that link yeah I watched that thing four or five times yeah it's got like sections and you got to like you got to follow the process did you read the process no yeah you you got to stick to that shepherd air process like it's like oh for the shepherd air yeah not but not on uh the Youtube tutorial tutorials yeah I'm going to have to go sit with an instructor and literally that's what I need that's what I had to do I did like 18 days of 10 hour days 8 to 10 hour days 18 you not all in a row I did like seven days consecutively and then I did another you know five days then I did another like five days and then a few days so all Ground School just ground uh not not ground I did um probably like half ground about that um one-on-one and then we went flow and then come back I say if you're not flying I don't know how I'd be able to make it practical to where I can kind of memorize everything that I'm learning yeah I think you know what's crazy about the brain it's weird because I remember I'd go like seven day five to seven days solid of just straight training training training 8 to 10 hours Ground School and flying and then um my brain would be mush yeah about at the end of the seven days like I I'd feel like kind of like in a dream state and I'd be worried to come back and start flying again because I'd forget things right because you're just getting so much when when you're doing your instrument IFR you're getting so much thrown at you and what I realized it's like your brain has to heal itself it it is it's a trip because I think it just T just like a muscle right if you're you know working out your biceps and you're working out every day every day every day and you don't let your biceps heal you're not going to get any gains yep analogy like I what I

realized getting my IFR um was your brain's the same exact way you you got to give it like that a week or two off and then come back and it like sets in like all the you know approaches whatever you're you're working on sets in okay so just hit it yeah even after a 2our session of Ground School online I'm smoked mentally at two hours that's about what I about last about two to three hours of just straight Ground School of just yeah yeah and it's cool that we're you know we're neighbors we we're both in cannabis we're both Pilots right you both have kids same age y you know it's it's pretty rad yeah well I think you got half the neighborhood on to wanting to fly that is that what happened oh yeah and then I was getting [Â \_\_Â ] from all the boys in the neighborhood like what do you mean you're into bikes and dirt bikes and all this [Â \_\_Â ] and you don't you're not flying I'm like should I be is that how it went down yeah and then one of my buddies took me out and just instantly we got on the runway and we started throttling up it's like you know put your hands on the yolk and follow me through and then the second the wheels came off the ground yeah I was hooked y getting my getting the IFR is probably the hardest thing I've ever done like the most challenging thing I've ever done in life yeah you know but I'm sure it was rewarding like when you're done with that just the private Pilots when he finally said like well done you completed it yeah in my mind you know I'm just like where's my Super Bowl ring yeah I did it yeah how long did it take you just over a year yeah that's what it took me about a year how many hours did you I think I took the test in like 75 hours 75 that's 75 or 7 75 to 79 hours that's exactly what I did 75 hours you could do with 40 but obviously you know that but uh but it took me 75 for my private yeah and it took me a year I think someone should have told be telling people that if you're going to do it you really need to fly twice a week and get it done in six months because if I win a little bit over a week flying just the motor skills yeah you're just you're not fully there you know and then you start getting frustrated you know one bad landing and then the second one you're trying to overcorrect everything two bad Landings three bad Landings then just the whole days you know uh no I think being a pilot like it's it's so challenging and it's not always like riding a bike right like you get right back on the bike you're good to go with being a pilot you don't fly for two months and you got to warm up you got to like you know get warm up on your calls warm up on your Landings warm up on your checklist like just get out in the grind and and uh it's extremely challenging that's why I like it it's just really hard so um you still get the sweaty hands right before you're about to take off not right now just because I've been flying so much with my IFR training um but before that yeah absolutely if I don't fly for 2 months for sure dude I get you know sweaty hands I get a little nervous like [Â \_\_Â ] like do I remember everything but as soon as you take off and you make that left down win or wherever you're going you're like oh I got this like I know exactly what I'm doing you know it just takes that getting up in the air and as soon as you're there you're like oh no problem yeah you know just but before that it's it's rough I heard you had a did you you got into IMC uh on the way back from havu you had to land in like Palm Springs or something saying oh yeah our uh Aaron told me about that our buddy that got me into flying yep it started getting pretty shitty condition so we landed in Palm Springs and he told me he's like climb up circle around the airport there's a big opening get to 12,000 ft go over the mountains of the ANZ of pass and then you'll see a break in the clouds right above the airport so I did it but he did you get into IMC uh I started to but then I like descended through the clouds pretty heavy okay right around the Palm Springs area there was an opening but when I was coming through yucka Valley 29 Palms I could see maybe 5 10 miles in front of me and then that depleted yeah pretty quickly so when I'm breaking through the clouds I had Trin Awareness on I was like let's hope we see land sooner than later instead of the side of a mountain yeah is the wife cool now that you got a serious she don't really like the flying thing too much no no I mean planes got a parachute yeah I mean I tried to sell on that point too but a little bit of turbulence she's in the back with a blanket over her head and she won't even sit in the front seat oh it's like that yeah yeah but my my boy that's 10 he's like super into it yeah so it's

all right that I have him in the front because he wants to learn he's his goal is he's wants to get the uh private Pilots license at 16 yeah that's dope and we have the exact same plane both G2 you have avadine or Garmin uh I got the avadine yeah same as me do you have 650s or what do you have 650s yeah oh dude you're set yeah but who doesn't want to upgrade you know yeah yeah for sure for sure yeah um so your your background you were a pro bmxer for a long time how how did you get into that and how far did you take it I think I took that to the highest level that I could uh about seven years old started racing by 12 years old I knew that that's all I wanted to do uh parents didn't make me do any more Little League Sports and uh just being like a oneman marching band out there getting to do it for myself getting to travel a little bit the freedom of kind of like your parents letting you go with other friends and travel it just stuck with me not having to rely on somebody else it was like it was one of the coolest experience I think as a kid just uh some of that freedom that you have going up through like the ranks like how do you when you're starting you're starting at the local BMX track like beginner totally and then what are the ranks that you have to go through to become the level that you were at so they have like novice inner expert and all those are just like a step above like the belts in karate certain amount of winds you get bumped up in classes and it becomes more challenging and then at the time uh at 16 years old you could turn pro some kids between 16 and 18 if they're a top amateur that's when they start to go pro um and then from there they started having like World Cups I think uh 2008 was when they had uh the first Olympics for BMX and that's when everybody in kind of my age bracket uh 16 through 20 you know started trying to leave the amateur classes and go towards Racing Pro so that everybody could follow the Olympic dream and that was a pretty cool experience just uh not making the Olympics but getting to train for it and getting to travel the world and racing some of the World Cups and meeting other young people from all over the world that they're living the dream and it kind of almost refers to Growing you just when there's like a bond where someone's got so much love for one aspect of life the camaraderie is great you know like everyone's super open to being inviting to you whether it's at on their home turf or just kind of telling you like what it is that they're doing or their experiences so how how far did you did you hit did you plan did you race in the World Cups yep I got to race like elite pro uh I think I did that for six seven years and what countries were you traveling to and how old were you um I traveled to quite a few countries and it probably started at 18 it started at 18 yep like in from 15 to 18 everywhere in the United States there's like a circuit that travels every other weekend you're flying to some place assembling your bike and racing and then uh around 18 is when they started you know having all these World Cups and You' go to different continents and get a compete against people globally that's dope that's cool yeah were you were you were you growing on the side when you were racing or oh yeah you were oh yeah how how how old when were you when you started growing 16 16 yeah my parents didn't support the whole BMX thing so much so uh they didn't no they weren't too into it you know just my parents were like driven on me getting an education that being a primary focus but seeing other people in different aspects of life doing pretty well fall their dreams and I'd say more of like a bluecollar work environment I've seen some people just Excel so well at what they're doing without that education just following a trade and I knew like I had my heart set on BMX wanting to start my own bike company which is another kind of fun time frame in my life which I got to learn a lot and carry it all over to cannabis but uh at 16 I kind of I was running away from home a little bit and then I was living with a buddy whose older brother grew and I'd smoke here and there but getting to see the plant I was like I was hooked instantly and and so when you're you're going around the world kind of are you doing it on your own without your parents' help and and then growing cannabis on the side where you growing at home or you growing at like a buddy's house uh I was growing at home okay I just relied on uh a water reservoir being filled up by like a buddy or a neighbor and then those the cheap timers with the 15minute clicks y y and then calling a brother or something or a buddy and or having a roommate at the

house and just it could be on two totally different time zones and I'd still be making sure I call in morning or night and like are they praying is everything getting watered how how did you do did you do EB and flow because a lot of the everybody was doing EB and flow back then of course banic trays eban Flo 100% rock wool 100% y right that was like the go-to yep how many lights uh I started out with four lights in a guest bedroom and then did the 4x4 blocks the same thing the botanic hair trays the flood and drain and then uh I ran that system for like 2 or 3 years and then started the uh that was like the go-to the go-to Y until everybody went to the buckets the Evan flow buckets by r&m I think so yeah with the hyd the hydrogen balls but a year of coming home and that was the big thing is like you need your buddies to come over to help you wash your balls yeah and just being in the backyard with the host spraying him and having a little assembly line I'm like what am I doing you know yeah I kind of missed those times yeah a little bit we were like voyagers you know just trying to figure it all out and it was everything was super discreet at that time yeah yeah typically the Buddies I don't know if the same for you you'd meet were guys at the hydro store you see another dude instead of getting the little one gallons he's got a bunch of five gallons on the dolly you want to step it up yeah yeah or you see him there two or three times you start opening up like hey what's up what's your name what are you growing yeah yeah for sure um you you started a a bike company called decoy yeah how how did that go and when did you start it oh I don't remember the year I started it but uh maybe 10 10 12 years ago so I think I was like in my later 20s MH and uh it was just something I wanted to do like BMX wasn't a super high paying sport so some of your sponsors of the people you ride for the best way is like almost like selling packs and uh making a royalty you know so you're training kids at the track or you're going on tour and you are meeting people they'll give you like a promo code or something and try to sell the bikes and then they go back and look through the data and be like all right Brandon all right Derek you help myself 20 frames over x amount of time and just kind of doing that to pull my weight I realized some of these guys didn't want to listen to the feedback by some of the pros on what would be like a better design or putting in the work for somebody else I was like I could do this on my own and I wanted something that was USA made and that I could design and develop and I've always kind of been business-minded you know selling candy to kids at school at a young age like I could do this myself and do it better what how old were you when you started it maybe 24 25 like I took probably a little over a year of just R&D finding different people to help me weld get the metal Source I'd have to get like raw aluminum get it annealed so it would be softened up and then get it all bent and Swedge because I just didn't want kind of your standard out of the box stuff which is what I felt at the time was my competition yeah I've seen some of your your bikes for sale on the market that are like on historical like BMX websites dude it was pretty sick yeah it was good times I learned a lot that was looking back at it that was like the best chapter of my life I think for real life experience getting to learn yeah getting to learn how to run a business 100% yeah because I think you know coming from the Cannabis world if you're just growing all the time and you're just moving packs yeah you don't understand about taxes um payroll you know compliance all this different stuff that you got to worry about in business so you getting that experience with your bike company and taking into what you're doing now it's probably really helpful oh 100% even employees and quality control and just kind of even learning how to deal with uh somebody told me eating as much [ ^ ^ ] as you can still being able to maintain your composure there's always going to be somebody that's not happy and it could be your fault or it could be something that just doesn't suit their liking and being able to kind of digest that and walk them through into a happier scenario that you can still gain the sale earn their trust and leave with him you know having a positive experience yeah and cannabis I mean it's totally the same way yeah you started at 24 and then what how' that Bike Company go do you still have it what did you I sold off the tooling for uh the frames which is like the main component of a BMX bike and then I kept the name and then the parts line I sold off uh the name and all the property that went

along with it I think that was like coming into 2018 when I knew cannabis was going to be full recreational sales and legalized that's where my heart was at cultivating cultivating yeah so you went in you go go from being a pro uh bmxer making your own bikes and then going to cannabis what happened after you you sold decoy did you blew out the warehouse that you were yeah the the shop that I had you feel comfortable talking about that I mean yeah it's all right I won't really go into like depth with numbers stuff but uh all of it was like proposition 2 15 days uh there were some hiccups with it as far as like legalities and I ended up having to deal with all that as I rolled with the punches and the city that I was in was actually like pretty forgiving they wanted to see people go about things properly and actually apply for a license uh they weren't considering proposition 2115 anymore to be okay for their city and um all of their zoning and stuff so I just took kind of everything I that I gained from all my years of experience and I worked hand in hand with the city and I just went forth on going out illegally back in prop 215 they were they were kind of trying to license that I mean that's that I mean they knew the city knew already probably like in 2017 they had some of the zonings what they would consider like an M1 which is mostly like in the industrial areas but they had like a a plan mapped out and they wanted to gain revenue from tax so leading up to 2018 like they they laid everything out and that's where there's been a couple buddies I've helped out is the city that you're trying to apply for a licensing and it's no longer illegal like there's nothing to be embarrassed about you can walk into the city office and just ask hey what what is your Zoning for cannabis you know some cities allow it some don't and uh they'll lay everything out in front of you you know sometimes at the clerk's office they'll even print it out here's the zoning here's the forms here's how many applications are still left uh they want you coming in there they want your business yeah and how how big did you go in that in that warehouse when you in the decoy Warehouse was like a 5,000 foot Warehouse okay so like 100 lights yeah we ended up making it into a like putting in a mezzanine and expanding up to 100 lights yeah and then um you eventually got into retail yeah right yep uh started that in 2018 the shop didn't open till about 2020 and then we got the micro business we took a uh a r Aid Pharmacy got to the whole interior of it a rid a r Aid I think it was actually called a a kenz at one point a r Aid and then a kin or vice versa it was in the city of Marino Valley and we gutted the whole building and they did all our own TI one of my business partners general contractor dude is extremely rad ended up becoming one of my best friends and he's hungry you know so we built this thing in probably 9 or 10 months and then we faced Co like everybody else and had to deal with all the city inspections delaying but we had trades on top of Trades and that building in under a year's time we were ready to turn it on just had to wait for Edison for the power upgrade but we took that building uh there's I think just shy of 500 flowering lights got like eight rooms in there veg mom's uh we do some Manufacturing in there and then in the front it's a retail store coolest thing about the retail is you can see into two separate girl rooms kind of a really neat experience just coming from the side of cannabis where I wanted people to know about it uh being the extreme sport seeing so many injuries and people like everybody else you know they get on whatever script medicine when I'm a firm believer like cannabis is the way it's a plant no different than treating a burn with aloe vera is whether you smoke it or consume it I think it's the miracle cure so that's something that I like we pride ourself on is people can actually come into the store and there's people that are skeptic about it at first you know maybe a friend or a family told them about like Edibles or something being the entryway into their medicinal need side of it but actually being able to see the plant a lot of people are like so that's it those flowers are it oh yeah well we dry them we trim them what's trimmed you know it's taken typically made into something and you get a lot new new consumers totally and it changes their kind of their their whole perception or their stigma of cannabis you know I'm like it's not we're not trapping it and gassing it like a a potato for a fast food joint or anything like we dry it in a room with an air conditioner and a dehumidifier and then it's

trimmed in packaged like it's it's very simple it's very standard and there shouldn't be a stigma about it being anything more than that you know yeah 100% And I I've been to uh one of your grows a while ago and oh yeah you're very like you're very organized like you you you have a set process and you stick to it right trust the process bro I mean yeah so it's it's this like you're very uh meticulous clean and just set um how did you set this new grow room up you have eight rooms obviously you have eight rooms for a reason what was the reason around picking the number eight that's just kind of how we could fit and utilize the square footprint that we had with some of the like uh supporting poles that were inside of the building but I just try to maximize everything as far as our workload we consistently cut down a room every 10 days and with two drying rooms that's kind of just a very simple formula that I can continuously replicate our Nursery split into it's all one but we have usually two stages of plants in there new development New Growth something up to 16 days we pull it from a room reload it so we want everything revolving yeah I trying to keep that consistency I see a lot of guys you know trying to you know it's so important for cultivations to be on a schedule like a really tight strict schedule agreed you know especially you with labor and consistent workflow and um drying space and flow through the facility or flow through your retail like that consistent 10day Harvest and having multiple rooms guys that are you know back in the day we try to do these big rooms take all down at once but where you really start to kill it is the schedule it's that that take down every 10 days or whatever it is whatever your schedule is stick into it it's and building facilities that way as well time is money yeah I think one of the best helpers uh that I ever got to see is when Instagram first started up you know like I'm a absolute lover of the Jungle boys and getting to see that they would you know show it in live time basically like a photo uploaded today of them chopping up a room and refilling you know in the days where everything's propped 215 and no one's really talking about is I had friends that would dry in the same room that they would grow in whether they're getting their own clones however so or buying it from a friend that reloading a room vegging in place and then turning it over they're like yeah three runs a year we're doing three runs a year and then you know seeing jungle boys go about it it's like nope they have adequate veg space the dry rooms you know it's like these boys are on point and and they're showing it to the world you know like good for them yeah and that just kind of gave me a little bit of reassurance like all right I am doing this right you know like time time is of the essence in this you know you want that plant charging you know like things being docile for a bit just slows down the growth how many runs are you doing in those eight rooms a year uh just under five and a half five and a half so you are on point yeah like we I mean the max you can do is what 5.7 or something like that typically like almost every strain we do nowadays takes us like 60 65 days yeah so what you're you have your own veg room yeah and then you're moving them into the flower room and you're flipping them right away you're letting them veg for a little while right away day one we'll chop the entire room bleach scrub get it all sand out and then put in new slabs irrigate them and then like second shift starts so we'll split up the shift for that day usually two or three guys we start like a later shift and then they'll just bring in the plants 500 lights how many employees do you have uh we've got team of like 14 people that trim um when they get done trimming they deaf they do the tear downs and the setup of the room and then we have uh Five Guys in cultivation whether it's mixing salts canopy managing Nets just checking on the plants the the Five Guys that we have basically it's not so much labor that I'm looking from out of them it's just more like the focus of having an eye on the plant that's a big one that I'm I see a lot of facilities that are struggling or buddies that come in and want some help or like hey I think you're doing great what's some of the things you have eyes on the prize at all time is like the easiest way for us to kind of stay on track you know I've heard a bunch of other dudes talk about it but these rooms have so many components that are just running at you know 100% full charge all day long dehumidifiers air conditionings Foggers your drip system if one of those things goes down it throws everything off



and if our big Focus point is light temp humidity those three things go hand in hand with our irrigation so if dehumidifier is not working the AC is down you know we just see looking at our data whether it's a spike or a decrease in something it's like I think I can catch it a little bit faster having guys kind of working through the rooms and just monitoring things uh more efficient than just sticking straight to my data we can catch it I think a little bit quicker that helps us with keeping down the labor quite a bit is that kind of a your real thumb um one guy one grower per 100 lights or that just what it ended up to be I think that's just what it ended up to be but it's about seem what it is yeah pretty much yeah one guy for 100 lights I mean if you're back in the day you say oh one guy will run a 100 lights you be like you're tripping totally but these days I mean you you don't have a choice yeah and I think if you're really delegating that work properly and you have your scheduling on point um you can bring down that Workforce tremendously I watch guys putting on Nets as plants are already getting so big they're flopping over and their game their game plan for the day is oh we're going to get two sets of Nets up and in my mind I'm watching this and I'm thinking why did you not have you really need for these size of plants three Nets why were two of them not up already already let the plant grow through you know and then just go while the plant's still soft and growing you know like start separating them and opening them up at a young stage and we can take you know what should have been an 8 hour day at this stage and turn it down to two or three hours of Labor with one or two guys at at a younger stage you know it's just timing is everything how uh how long is your veg time uh it's about 16 days 16 days and are you in rock wall or coco rock wall we do like a 4x4 by two and a half okay and you go onto a slab we're going on to a slab after that yeah that's exactly what jungle boys are doing right now okay yeah 4x4 by two and a half onto a slab are you going on the slab in the bedroom or you no we when we chop we'll set out slabs kind of everybody goes on lunch when we put in the drippers and then I typically I think it takes about an hour and a half and we come back and the slabs are already kind of all bleeding out completely overfilled and saturated and then at that point we put on the Block let them sit for a bit and then slice them and let them bleed out so are you vegging in place or you have a bedroom we have a bedroom yeah it stays in the bedroom for 16 days every stage has got its own room there's a mother room uh room for clones veg and then the second that we chop we take stuff from bedge and put it right in the flowering room and then the time schedule stays the same if that room's running uh 9:00 in the morning to 9:00 p.m. then at 9:00 p.m. that room shuts off the following day it kicks on and we call that our day one now um with the 4x4 by two and a halfs you're vegging in those and then putting the slabs in the flower room and then planting those on top and then flipping yep flipping same day same day wow that's efficient these are pretty efficient yeah and that way I'm not getting plants that stretch so much and that's where I kind of resorted back to the two and half inch height instead of the 4 in cuz I notice those 4 in is uh if you got a healthy plant and it's charging those things are monsters before you even get them into the room yeah yeah and so 16 days in a in a 4x4 by two and a half and you're not having any problems you must be watering multiple times a day you going drip with veg we drip with veg yeah okay everything is and that's something we pride ourselves in is when we like set up our rows we have everything kind of squished together in one row and uh for one room it basically takes up five rows uh in veg space so there's 10 rows in there and then five at one stage five rows at another stage but we'll keep them all the blocks together for about four or five days when we put a plug into the block just hand watering hand water them once actually to make it even easier just put a clip with the hose onto the train I soak the [Ã\_\_Ã ] out of the train just like an ebb and flow just like an EB and flow let the blocks get fully saturated and then uh open the drain and then let them dry back for four or 5 days and then after that we separate but our big thing is when we separate we try to put them in stages you know Row one is our smallest 2 3 4 five and to the untrained eye it looks pretty uniform but that way as far as our irrigations go is I can kind of tune things in to where I let them dry back a little bit more maybe on if I had a row of some

smaller clones so that that way they get a little bit extra stretch and that way when it's time to set them inside of a room I'm completely uniform now is that on the same bench or a different bench each bench has its own irrigation so that's why I was asking cuz it have to have a different zone different Zone yep okay so basically one row might get one or two less feedings maybe the first seven days in there based on the height of the plant based on the height of the plant will you be able to get those plants caught up to the to the other ones yeah so all those plants will go in the same but you're just adjusting irrigation strategy based on the size yeah that's great yeah and one other tiny little thing be you mean you got to be on your game to to be paying attention to that yeah we've worked with the guys that uh that are on the team for years on that and it's like every guy takes pride in what they do and that's where I've seen is our support team is just so good with all of the guys loving it that's one of the things so exciting about cannabis is there's so much growth and it's so fast and when things are healthy they're even faster that it's it's hard not to be excited about to coming in to work every day you know even the guys that have a two-day break whether it's their weekend or their their midweek is they're excited to all come back in and like a relay race you know pick up the Baton where you left off at you know so so it's like all right Brandon you did great this weekend now it's mine like I'm driven to help charge these plants yeah to have your back yeah and all the guys do that that's a big thing is uh out of the Five Guys we've got a group thread manager's on there I'm on there but at the end of the day it's just a simple text a group text and all the tables we've got uh a little tray that I made with a runoff cup and then at the beginning of every table I just put one pist string in so I can get the volume the total volume going into the plant and see what's coming out so I'll get a report at the end of the day room one you know 1,800 Ms in 400 500 Ms out and then once or twice a week we check pH and EC just to make sure that we're at our set points now are you checking that on the whole bench on your runoff of your bench or are you doing it for each individual plant no I uh on each bench I've just built like a little wooden stand so that I can Elevate the slab a bit and then I took a cloning tray I cut two cloning trays PVC glued them together and I'll put one entire slab on that thing and then get the total volume and then divide it by three for three plants on a slab that's smart I like that yeah and that's just very simple way I've tried all the sensors and uh it's okay it's just I don't want to say it's good or great I I'm thought it was just better for the keep it simple stupid method uh I walk into a room and we we know everything starts feeding you know within a two-hour window of a room turning on and all of our rooms pretty much turn on the same time you walk into a room at lunchtime and you don't got cups in every tray filled with water you know that we missed an irrigation you know whether somebody closed a valve or what it may be but for us that's it was just more of a reassurance and then even the group thread is trying to tell my guys all the time like sign on to the whatever system we were using you know and and look at it look what our water contents are at and start looking at the graphs so you're using substrate Monitor and you're not not anymore no no I just I threw it all yeah I I threw it all to the wind I just thought it was like a little bit uh I don't know would be unnecessary a little unnecessary totally and then trying to teach other people how it worked kind of uh they'd understand it but then maybe they're focusing a little bit more on that than the overall health of the plant yeah now I could see that yeah I started having gaps in the room in a lot of rooms where I'd see the growth wouldn't be where I'd on it and some of the guys be like well the sensors in this row say that the water content is lower than it actually was and they're overfeeding it and just the bite into the slab wen't what I wanted uh I didn't see the resin production that I wanted so I just went back to the old school method how's that how's it working out good I just feed the plant till I feel like I have ample runoff uh and then work on getting a good dry down and then my personal experiences with rock wall is just don't let it get too dry yeah for channeling yeah I think one time at the beginning is okay and then typically everything res saturates back up the slap saturate really well even if you go a

little bit past where your set points are but same thing with the 4x4 by 2.5 blocks is with the dripper on that uh it's hard to overwater those things the plant's charging it's got healthy Roots you can have your P1 or two P2 phase and even without the sensors the simple as having a guy walk through the room and just kind of feel them and if your whole team's on point working together hand to hand you know what you're looking for how often are you feeding those uh 4x4 x two and a half when they're in veg say you know you went through your five days kind of establish them spread them out organize the smaller plants with the bigger plants put them on a different cycle um on the larger plants how how what's the frequency of the watering and when do you start those basically are like a P1 six to like six maybe eight shots a day for the first three four five days um think they're a little oversaturated at that point but I'm just looking at you know making sure I got good root development and about by day eight after the plants been vegging for a full week it's it's pretty mature you know got a lot of big fan leaves on it at that point we'll almost every row is at about eight feeds and then we might have to do uh two or three P2 feeds so that when we come back the next morning nothing's overly dry and it's important to let everybody know the only reason why you're able to do that is because you're using such such a small media for veg totally I mean if you were using a 4x4 you would completely change that irrigation strategy totally even the 2 and a half or what yeah two inches or inch and a half whatever you're adding on would change that irrigation strategy completely I mean you'd go from six to two or three right yeah so that's really important and you and so obviously you're cutting down the irrigation strategy on the smaller plants letting them catch back up with your runoff and and so you said you're cutting a clone tray in half or you know cutting the end off a clone tray and putting it together kind of gluing it together and then putting the slab in there yeah what are you looking for on the runoff markers like on on runoff you said 400 MLS on runoff or what do you so in uh in veg with it only being like one individual block on that I'm we typically go for like around 25% runoff maybe 30% runoff off of your input off of the input yeah right so if it's getting uh 300 350 MLS a day for that size block I'm hoping to see like a Max maybe 50 60 MLS MH and then what what PH are you monitoring when you're checking your pH and your EC on your weeklys what what are you looking for uh typically like we feed pretty much everything at like a 2.8 to 3 veg is at 2.8 it goes into room it's at 3 uh it's getting blasted with a little bit more light I just feel like it needs a little bit more food um when it's in veg because of it being a little excessive and runoff not too crazy but my PHS always stay we go in at about a 5.7 and everything kind of always is fluctuating 5.6 5.7 5.8 so there's not much monitoring I know we do excessively dry back let's say in one of the rows where I'm I'm aiming to get a little bit more stretch out of the plant um rather than paying so much attention to pH I'll pay attention to the EC because if you start having two three four days of more aggressive Drive backs I'll see the EC start climbing and in veg I don't want a 2.8 plant to start climbing into five six seven EC runoffs cuz just it's only in that room for such a short period of time in veg in veg yeah yeah so you're looking for around uh for runoff on that it's I'm I want between 5.6 5.8 if we're feeding at a 5.7 okay so minus one minus 0.1 plus a 0.1 is okay and then uh for my EC runoff I'm hoping not to climb more than like three EC in it so if we're feeding oh for veg for veg yeah I don't want anything really over a six okay if it is we just add an extra P2 maybe two or three shots one day and then we'll retest that one specific Row the next day and be like okay you know the runoffs now coming out at a four five or a five now when you're going in and you're doing that initial drench on on veg are you hitting him at a straight three EC or on Prine uh 2.8 yep 2.8 EC 2.8 all the way through veg Prine cleanse balance uh yeah balance not really I'd use uh top water no we use R but I use a uh the General Hydroponics the pH up yeah the pH Pro Plus up okay okay um and and so hitting them at at 2.8c right when you drench then you're monitoring your runoff making sure it's about a 3DC on runoff in the in the Clone trays you get go together once you transition after 16 days of full veg into flower are you taking that clone tray that you built and put

it in the flower room as well yeah I have the same thing already built for for the flower room okay and then what do you what's your irrigation strategy looking like day one to Flow To You Know week one to to week three week one to week three uh when we put them on top when we put a a 4x4 on top of a a slab I'll irrigate them for 48 hours with lights on so um we use that open sprinkler yep which is yeah that's what we're using right now until we get our grilling cooked up but open sprinkler is amazing it's amazing no problems and again it goes back to the keep it simple stupid everybody can kind of walk through it without a whole lot of instruction you know uh being able to actually click on things and label them however so and build your irrigation strategies it works out pretty darn well yeah really simple so we'll go into uh 48 Hours of feeding you know every hour so you get 12 shots we do like a two-minute shot shot with A5 gallon per hour dripper um not you goes point you use FS not 3es yeah I use the FES you like would have you tried the threes or I did I just don't I get kind of I'm I get bothered by things pretty easy if the the workflow isn't there and then an open sprinkler setting up the timings to be you know two three minutes apart I don't want to go into it and have a feeding on at 9:00 a.m. 9:23 9:46 this way I can just Point extend your extend yeah shorten your feedings shorten my feedings and then I just if everything's feeding for two or three minutes you know and then instead of being separated 20 minutes apart really they're separated 18 minutes apart mhm and as long as you don't uh dry them back too hard you don't have to worry about channeling totally that's so you got to be on it yep and there's been times uh that's why me I'm like a big believer in the slabs is there's been times where it's kind of it's borderline you know and maybe I wasn't there that day and someone's like hey this room can hold off one more day and we all come in next day nothing's wilon or anything but you could just tell they're praying and you feel the slabs and you're Blown Away you're like whoa there's no weight to them and even with one dripper on him those things will allow you to Res saturate him once or twice in a critical condition I kind of going back to when I started and going from a 4x4 and then doing the EB and flow buckets and then trying longer trays running a uh like a Hugo the 6x6 that was just that seemed like it was the industry standard for a long time well if 6x6 was it 6x6 was it but there would be critical times where you're not there for a day and they dry down there's no resaturation even if you go super slow with the wand and you soak it two or three days later it just goes back it's a channeled out block and then I like less is more so adding one dripper it's just a lot more simple than two drippers on a Hugo making sure that that way I get even saturation yeah slabs your insurance policy 100% yeah and when you're when you're setting your drippers in your slabs how what's the what's it look like in a three-foot slab uh three drippers three drippers and now are you going uh into the 4 foot oh into the 4x4 into the 4x4 okay pretty close up against uh like super simple yeah 25% away from the edge of the block you know close to the root system and then we have everything on the back side of the block so if my tray is facing the drain on the tray is facing towards you drip around the back of the block okay centered yeah super simple super simple and then y so three 3.5s for a you know three foot slab y on a four on the 4x4 on a 4x4 yeah Y and then so going back to the runoffs um when you're when you're collecting your runoffs and your trays what what are you looking for on on EC because you seems like your pH is really stable the pH is always pretty darn stable you know and uh that's other things why I became in love with your product is no I'm So Into the keep it simple stupid so adding [ Â \_\_ Â ] all the time like that was it is you used to go to the hydro store and it's like even the names on some of these things bigger buds Sticky Buds super grease dude it took me we've known each other for a long time and you weren't always using Athena like it took me a while to get you on the team it it did it did not not too long it's just if it ain't broken don't fix it yeah I get it and that's kind of where I got off of the sensor it's like I think I can absolutely Crush just knock it out of the park by just teaching my guys what we're looking for as far as weights and making sure if they're getting fed they're all right uh but running a 12 or 20 part system adding this and adding all your cups and stuff it's just it almost sounded too good

to be true yeah you know like you you come over to my house with a couple bags of salt and you're like yeah here A and B and in my mind I'm I'm just thinking no this this can't be right you know and then uh when you start kind of putting together some of the mpks on the formulas of what you're and you're like I've got six bottles of half of the same [Â \_\_Â ] in them you know uh yeah it's it's we've been we've been getting hammered our whole our whole life you know just getting fully you know [Â \_\_Â ] you know yeah by every nutrient company buying water yeah buying water and separated it into different bottles you know it's like that's why what it's what ath Athena was kind of like that first you know step into to like here this is all you need and get away from all the [Â \_\_Â ] yeah I won't say who but I did try another company and that's where maybe took a little time to to like uh lick my wounds you know and give yours another shot is I want all my reservoirs I want all my drippers to be clean I'm super couple people have seen the Instagram page and I'm really big on filtration I don't want to work harder yeah clog drippers is just something that I seen way too many facilities or even some of my buddies Gardens and one of the other powder formulas I'd come back in a 24-hour period you know and what was left in the reservoir you could wipe your finger on it and it was just coated with sludge you start opening up filters and uh it's terrible it's a mess it's it's setting you up for failure you know and that's one of the big things is even when you gave me the samples you know was whipping them all up in a trash can you know I'm like do I use it today I'm like no let's test it out tomorrow but coming in there and then just seeing that I didn't have all the Fallout you know and then it was still clean I'm like allright and uh yeah it's all that all that all all everything that youve seen in your Reservoir is going in your in your lines and everything that it's in your lines is going in your drippers 100% it's got like when you're doing a 500 lighter like you can't can't be [Â \_\_Â ] around totally you know and and and be out there trying to unclog drippers how did I what did I do I came by and I dropped off some pearline what is that how it went yeah and you're like dude how are you not using it I was like well I'm a worry wart yeah cuz we're neighbors and and I I remember you're you're using another line for the longest time and I kept talking to you about it right I kept mentioning it you know and I was like he like you got to get on it and I think one day I I was over and I just went to the office grabbed you a bunch of product and dropped it off right yeah we were going to go writing or something you brought me a bunch of bags like here start using it I'm like oh man I kind of felt you know felt guilty cuz you're like he's my boy he's my neighbor I ride dirt bikes with him and I got to run it you know I got to try it out yeah but it was instant success yes uh and since then I've you know got a bunch of dudes on it and it's yeah it's pretty cool people come in our facility and they're like well you've got all these tanks how come it's just filled with water like I thought you're supposed to use a bunch of chemicals for growing pot like well you need fertilizers yes I'm like and here's what we use it's super simplistic and they're like well how come if these are the tanks for the room there's no fertilizer in it I'm like it is here's our Ro holding tanks you know and they're extremely light blue I'm like and here's my feed tanks I'm like they've got like the tiniest little shade to it you know because I know you don't use dyes but it's it looks super clean to the untrained eye it just looks like a normal storage tank of water yeah yeah it's really really clean it a lot of uh doing liquid fertilizer is as a walk in the park to powders as far as manufacturing yeah because you can get away with less quality inputs uh less raw quality of inputs on a liquid because you can filter the liquid out once it's you know mixed and done you you do a filtration process and then you you put you bottle that right right but when you're going with powder like powder formulas you get the the quality of inputs have to be another level uh over liquids and a lot of a lot of uh companies don't understand that a lot of you know nutrient companies they don't understand like you cannot change an input like is if you change where you're sourcing your raw material from if you get in a crunch or you you're done I mean you're gonna have you not always right but a lot of the times if you're going to change a raw input or change where you're sourcing products from you're going to

end up with sediment you're going to end up with all these problems and then you're going to get something like you were saying earlier it's got to be consistent always the same always the same raw inputs and that's what we're really focus on yeah so going back to the runoffs what do you like to see um in that in that transition week of the first few weeks of flower are you still seeing a 3 or you you climbing up a bit no I start climbing up a bit uh kind of about two weeks in is when I start seeing them climb I don't really check that first week cuz after we go 48 Hours of being on the slabs I'll take three to four days of letting him dry back wanting the roots to really Chase into that SL harder yep drying them pretty darn hard so uh it's been a a while since I did check an initial runoff after an immediate dry down uh but to me that's completely invaluable you know I I the plant's looking healthy I know that my EC is probably skyrocketed because it's dried for so long I mean even 3 days in a slab your pH is going to be shifting quite a bit so as long as my plants are really looking healthy I'm not really checking my pH or my EC runoff until about 2 weeks into flow that's when I kind of start again okay it really simple keep it simple like uh again we just look for plant Health you know if everything's super green and vibrant and praying and the plant's thriving it's charging you know I'm getting a nice tight stacking on it a lot of branching it's super vigorous you know like not saying look the other way but I don't want to I don't need to break into things pretty good uh what we will do is we'll just grab an exacto blade on a couple slabs I'll bring a tape into the room and we'll cut the side of a slab open and just making sure that the rooting process is really well and the roots are kind of like scaling and trying to develop as much as they can throughout the block and I running the one dripper I've had actually a little bit more success with that I've seen other dudes on Instagram that have you know two drippers in it and it maybe they get an even watering but for us on that smaller block it looks like it's getting saturated pretty darn well to where it's got even distribution one dripper with one dripper the whole entire slab is very well saturated you know the stocks of the plant are are charging to where 14 days in they're on full irrigation where every day they're getting for our facility 15 to let's say 1,500 to 2,000 MLS per plant uh the stock on the initial plug is now starting to break through the the 4x4 you know and the 4x4 is starting to split a little bit they're biting in so well to the slab and then from day 14 on we check once or twice a week the pH and the EC and I just I really don't want to see the EC climbing more than like 1.5 to two over input over the input every every week as we go throughout okay and then typically you know we start our flushing at day 50 uh I tailor back on the nutrients kind of like at day 45 we start dropping the temps and the humidity a bit so then it's like the plants its responses it's not wanting to to eat as as much I can't put the same volume in or my runoff will just be like extremely dramatic I'd be overflowing these cups so we drop the EC back I typically will fill up a tank to 400 gallons instead of the 500 gallons and then just top it off with a 100 of AR water to dilute it okay my pH doesn't change uh my EC would then go from a like a 3.0 to a 2.0 2122 and then we feed the rooms with a little bit less irrigations so then maybe I'm I'm chasing for 12 to 1500 mls in the per plant versus our 15 18 2,000 MLS if the plant's really charging what what are your frequencies that you're that you're running um on irrigations uh when you do when you transition to flour are you still going that 6 to 8 are you are you going up uh we're probably at like 10 to 10 to 12 shots 10 to 12 shots for for how long for uh four minutes four minutes four minutes a half gallon okay half gallon per hour dripper and do you adjust that based on cultivar or totally yep yep just kind of see where it's at drinking yeah and then uh someone will set like an alarm in the phone you know if we're aiming to get 8 10 12 irrigations you know by the time we're supposed to get maybe irrigation if we start at 8: a.m. and we uh are feeding every 20 minutes by like 11:30 maybe we'd set alarm so 2 and 1 half hours into irrigations we'll go into the room and just see like if we're starting to really the slabs are bleeding we already know like hey we can cut back and then just a light hand feeli sporadic here and there throughout the room and just kind of see like hey all these plants are saturated big thing with the trays is you've

got all the crevices through the trays that you can look down if I'm already seeing all of the slabs are are bleeding and I've got run like ample runoff I know like hey I don't need 10 12 year to I can cut it back open sprinkler baby Justus oneus one that's awesome monitor it and you're never changing your irrigation times you're just changing your frequencies correct yeah yeah and then if a plant's really charging then without a sensor we kind of go into that P2 strategy so we've got one room I have no idea why but it just charges harder than the others it's like our big banger so when there's a strain that's a big yielder we always wait for that one specific room I bet you has to do something with climate you know even with all the sensors that we're using and trying to go back through the data no one can put their finger on it and you know the definition of insanity there's mornings that I go in there I'm like all right I'm going to get there before anybody so I'm undisrupted you know and half hour before the lights kick on I'm sneaking into the room feeling stuff got my hands up feeling temps and I just can't put my hand on it it's just it's the miracle room you know that's the one where we've got like our our highest yield and uh if we've got a new a new cultivar that we're going to put in there or whatever strain it is that we're going after that's a big yelder we wait for that room because it's like we're trying to beat our our objective it's like that's the room that's the Banger what are you averaging a light on yield uh just shy of like three pounds of light okay that's great yeah that's awesome um and you're you're using HPS right uh everything's mixed how how does that look great no I mean what do you what's what how does it look checkerboard or you check uh one line of HPS one line of LED HPS LED HPS LED so that everything's getting a throw and kind of uh mixed like a mixed spectrum mixed Spectrum so so you're going one full line on LED and then one full line on HPS do you see uh a a difference in growth of the plant on height of the canopy or um not really on height of the canopy but loving my own personal batch I'll see under the the HPS the plants that are stretching the tops might have a little bit more of their definitive characteristics you know they might CX a little bit harder have a little bit more Spike uh the frost I'm thinking is a little bit greater you know the trike production on the LED actually like a little bit more color but the HPS is something where the plan I just feel like if you're going for look look if you're going for look only like that's the photo opportunity one that the HPS just gives a little bit something special you know yeah um what about smoking I mean what do you what do you prefer smoking on LED or HPS I feel like they're real close cuz uh I don't really like to smoke the tops I like to smoke 6 to 10 inches down I feel like it's a little bit more turpy okay everybody I know wants the tops so like when we're trimming I'll go into a room and I'll pick you know what would be like the secondary tops you know some that had just a little bit less light so that I get a little bit more flavor out of it I feel like the smells a little bit better and then I'll trim those up myself and glass jar it so that you know my personal batch is a little bit R to show the did did you listen to the podcast we did with Bean fiend yeah what did you think about what they were saying about LED and HPS because you're you know you're already on it right and you're already doing it yeah so what did you think about what they said about you know the climate and increasing uh is that is that what you're on now yeah no totally they they're on point with it and I that's what's so cool about growing is like everybody is just so open to kind of telling telling you their experience is uh I don't think things are so far Advanced right now that where people are like trying to keep everything super secretive yeah uh because I could hand my recipe and my sop plan to the next person and for some reason with the same strain it could look completely different uh the TLC you know is a big factor in that but uh I think light Temp and humidity is a big one and even having a mixed Spectrum you know having to adjust what the temp and the humidity is is it's just a different balance point that you got to find out what works best for you so what what made you go the LED and HPS mix light in the same room um like you obviously were on it right yeah I wanted some savings but uh gavita originally when they came out with those like 1930s uh I got a buddy that started working at a Hydra store 15 18 20 years ago and we've kept in touch so him

as a rep at gavita um he's always been like Super Rad about giving me stuff to R&D going back to the Bike Company he knows that I'm really big on just writing things down if we tweak anything even our irrigations we record it so if that room's banging I know at the end you know less irrigations or we adjust light intensity at a different day than what our Sops are or temperature whatever it may be we record it so that I have something to go back to um and because of that he knows how a little bit anal like can be on all that stuff so he likes R&D you're very very meticulous like I said when we started and I got no filter if something sucks you know like even in my biking days you get a sponsorship by somebody they want to give you something that's garbage you know it's like ah that'd be cool to have a couple hundred bucks of a paycheck from this but if it's trash it's not going to help me to win yeah uh so R&D and the stuff you know like I'll be very blatant about how it's working but the the 1930s seemed to be really be rocking the plants are charging but in a uh in one of the rooms that I was going to R&D in it they only gave me half the amount of Lights they're like oh we're allowed to give like 40 lights per person so I like all right well rather than me do put putting the room half and half let's just give this a whack you know we'll do every other row and just if it works I'll buy more and switch them out but it works so well right off the bat that when it's time to update the rest of the rooms I'm just thinking again if it ain't broke where it's at if it ain't broke don't fix it and we did we in our R&D room where we tried different strains or whatever fenos that were we're trying to do in-house or our own strains it's an all LED room uh that room to me still doesn't smack as hard as the the mix Spectrum wow and I think part of it too is those HPS is the amount the heat load that it has it's just it's drying out the media so quickly and then the air flow throughout the room is just changing over so fast that because the heat load because the heat load you know you don't have to do all the it like when I first started I never knew about people adding humidification to a room in the HPS rooms typically you know in the the Black Market Days people struggle for a hom grow to put more than a mini split you know like it was really hard to sneak a five ton on the an extra five ton on the side of your house and have a Handler in a a six or eight light bedroom um so heat was naturally a factor from those HPS which the plants would transpire and it would be humid just from that but in LED without adding any sort of humidification I just don't feel like they transpire as much so so we have to add that doing every other row balances it out it Balan it out yep wow that's a trip dude that's like it's crazy that I didn't know that that's what you were doing you know and the I heard about um the first time I heard about it was doing uh the checker board was with Bean fiends I didn't even know that's what they were doing because they were keeping it super secret for a while and to hear that you're already on it I think I was one of the first dudes on it I it's been on I think so too it's in one of our viewing rooms that's kind of what you know the guys at gavita were like you're going to show it off right that's the big thing is it'll be in one of the viewing rooms and people that were into growing were tripping you know you get the good with the bad people that come in there and they got something to say and there's other people that just have the love for it but uh some of the guys that grow or even our faculty that has their own grows like why are we doing this you don't think that that's weird I'm like what do we got to lose by trying you know like it's working great yeah it's and it worked for us now are you using the gavita double-ended uh thousand watt yeah okay um you can't even buy them anymore I mean so now we got to switch to another double-ended I think there's a few companies making double-ended anymore but yeah nobody really like not not it's not significant no no but luckily since we pulled about 200 and something out of the facility that we have them in storage so just have some extra yeah if something takes a dump on us we can we can swap them out yep and now now you're going to under canopy you're going to you just you're adding that yeah how's that going so far so far so good uh walk into another budd's grow it was just night and day difference like I was blown away with how little they were bottoming or lolliopping or cleaning up the bottom of the plants like he was on a Hugo my one



buddy in particular but they only cleaned up maybe 6 to 8 Ines of the plant so right at the starting height of the under canopies and the buds were absolutely amazing I was joking with him like I'd rather smoke your bottoms you know and yeah the turet production on him was out of control the color on him was out of control but actually seeing a plant that literally had quality buds all the way through like you just don't really see that too often even with stripping of the plants you know like I've seen guys that go so crazy with de leafing and the bottoms just are never quite as big as the you know the upper 25% of the canopy but the proof is in the pudding those things are smacking are you um are is your AC uh adequate enough I mean probably because you're using the LEDs yeah you got some extra AC to back up the under canopy we do I'm fairly new to the under canopy so like uh the longest I've had him in a room now is about 8 to 10 days I just got him okay and I went all out I'm just we're going to do the whole entire facility like I'm sold um but I haven't got it to where the plants are just charging so hard and transpiring so hard that it can't keep up like now it seems like I'm in good shape so uh okay so you just fing cross hey you just threw him in was just like praying like this is not too much of a he load yeah you got to learn as you go but uh we kind of oversize everything to the the small not the smallest amount but what I would need if there was like an influx in the plant count for the room or you know increase in in yield so that that way I'm a little bit over than under but we have a little bit of power left in the building so even though I had another Transformer and step down and uh set up for the underc canopies if need be we'll just add another air conditioning to each room what uh what brand did you go with uh we went with craft Farmers did you yeah the same buddy he bought a couple of uh a competitor's brand and he only had I think six of the other brand and then he had uh like half of the room with the craft armors he's like I'm just waiting for some more of the craft armors like look at the difference and the one room where he had six of the other brand they look good the whole rest of the room didn't have the under canopies and it was night and day difference and I mean he's got room he did it side by side oh yeah room one and room two so it's like I could swing open both doors that are caddy corner and look inside and just really notice I was like this room's got a third more weight in it like 100% there's no fooling you you have the bud the color in the buds was night and day difference the bottom of the plant was so purple and the buds were so big it almost looked like they were two weeks further into development but then you know if I had my blinders on and I only got to see the upper half of the canopy it was it was the same are the the are they the same Watts between both competitors the 120 watts right I think I didn't even I just saw a significant difference so I didn't yeah yeah put too much time into researching the competitors and uh I think Lance is a super rad dude you know craft farmer he's just he throws it all out there you know like two other dude's in this game build a patreon where you know you can follow everything step by step like I don't think a lot of people understand the value of that even if you think you know it all how much you could learn or just how much of a caveat it is for that reassurance like you know what dude this dude's crushing it and he's doing the same thing as me yeah yeah because a lot of dudes fake the funk I hear some wild numbers out of buddies all the time you know oh we're now at 4 pounds of light and I'm like all right sweet sweet so you're getting 400 lb out of your 100 lighter they're like oh yeah 2 days later I get a message does your shop need we've got 195 lbs of this and 25 Smalls I'm doing my numbers I'm like that's not four pounds light but yeah yeah if you want to fake the funk that's all right and Lance doesn't he throws it out there like it's all real time you get to see it you know writing a question and getting support back like not a lot of dudes do that and uh I heard a quote a long time ago you know like greatness doesn't fear greatness and some of the people that I've looked up to in this industry dude they put it all on the table like here's what I'm doing you know like I want to see success in the next guy yeah yeah I I don't want to see anybody feel you know like I'm the type of dude when my buddy gets a new toy I'm like the first dude like call me when you get home so I can check out the new truck or oh you got a new jet ski let's see this thing you know like I I

don't want to be that dude that's like [^\_^] this guy got the new jet ski yeah no way dude like you want to be pumped for your boys and uh those people that are just putting it all out there like and it's like he doesn't know that guy that he's helping out but what does he have to lose by sharing his wealth of knowledge to the next dude it's just the love of it even before he had the under canopy he was always sharing the knowledge like just always sharing it and it's the same thing Ivan from day one he just never held anything back and you know back back in those days when Ivan was doing that everybody had their own little secret recipe which was like a blend of like GH3 part and some other [^\_^] of course you know and and that was their secret recipe that they wouldn't want to let out and it's just um Ivan was just never like that you know Lance too he's just here it is this is what it is this is how I'm doing it like you know Ian put uh the OCTA bubble remember the OCTA bubblers oh yes that was the initial one oh dude and I still I take the guts out I owe that dude for that one that that changed the game dude I was a slave to the wand you know um or trying other whatever Home Depot bought drippers but uh yeah it started with the OCTA bubblers then into the net FM pressure compensated drippers and and and then that's it D I mean I don't think we're ever going to change from that like that's that's the I mean who knows um yeah I talked to Roach about uh doing under canopy and he just puts them in at jungle boys and they went from 2.7 to 4.2 on a tray I'm just like holy [^\_^] dude like that's Insanity you know it is but it brings the love back into this I uh a lot of my buddies I joke about to me this is Extreme gardening this is still a sport you know like everything is so controlled that you have all your set points that you get to manipulate the environment your irrigations the plant to grow to your Desiring it it is I think very extreme uh yeah but year after year of Chasing the Dream of beating your number yeah it's extremely repetitive like I can't beat my lap time I can't yeah now you're about to beat your lap time oh and I'm always excited to come back into work I think the work environment that we have is great all the guys love working so it's we do a lot of joking uh maybe sometimes too much but we have a good time um but now being able to strive for a bigger number it's like I'm jonesed to get up and get going and just think like I'm gonna beat that number yeah well now you're definitely going to beat it you know because I mean yeah because there's no there hasn't been any big you know changes as far as no you know technology or increasing yield in a long time and I think under canopy is one that that's going to be a big change yeah it's going to change the game for a lot of guys oh yeah yeah and maximizing the square footprint right now is key is key because for everybody that's not in California I know some other states are taxing pretty hard but wow California is squeezing us we're seeing you know some brands that aren't thriving as hard as they should be you know starting to throw in the towel so now being able to maximize that footprint and you know squeeze a little bit more juice out of it is it's it's great you know and it's very minimal on cost you know people see these lights oh it's 200 bucks but simple math you know even if I took it at a with a grain of salt you know and people online are saying 30 40 50% increase okay I'm going to get a 20% increase well what's that mean yeah dude a 20% increase on what you're getting if you've got a room that's got 10 packs out of it now you're going to get 12 packs out of it y those lights are going to pay themselves back pretty pretty darn quick yeah in the first run yeah in the first run it'll pay itself back yeah so and you can just Chase the Dream of boosting up those numbers yep how uh so you have one location in Marina Valley yeah um called ccoy correct and are you guys doing another location yeah we have in sanino which is pretty close to a neighboring town uh our second facility going it'll have like 225 lights it's another micro business uh we'll have retail there also it's been fully built and ready for well over a year what's been the whole licensing or uh we've got the State Licensing but the city the conditional use permit uh fire and CO2 is a hold back and in that uh in that City they sub everything out to a third party oh so you're just I'm at their Mercy constantly a new fire captain or new fire chief comes in uh somebody new from the third party that's working with the city for all of our Corrections looks over it and it

everybody knows it's it's not a quick feat we'll get a correction back and I'll look through the email and be like dude it says right here Resort back to page 10 like we made that correction they didn't open up all the pages and go through it but by the time I get that back I could be waiting 30 60 90 days yeah and this is just a vicious cycle that's been going on you know uh the building's beautiful it's just sitting how close is how close are you guys I was told January 1st of 24 by the city that 100% we'd be on oh my gosh yeah so who knows now oh yeah because on December 14th I was already taking thousands of cuts yeah I was like January 1 we're on Flipping Breakers stuffing it with plants uh and that wasn't the case I mean there's a lot of guys in this industry but you know I know it's it's hard it's hard to make a profit right with with taxes and Regulation and it's you know I'm I'm sitting back and I'm watching you and you're you're kill you're doing great I mean you're profitable I can tell you're profitable and I can tell you're running a good business but I don't I don't think um as far as meticulous and and paying attention to the the garden as like you are I just don't think I there's a lot of great cultivators out there but you've got to be on your game on the game like you can't you can't there's no back in the day you had rooms for mistakes but those days are over completely it's you're on it I could tell thanks so it's all for the love of the plant I think that's one of the coolest things how many friendships that I've got to make through this is I think the guys that are killing it when we all get together none of those dudes are talking about the level of success financially like oh my new boat my knew this everyone is more into I've noticed quality go up I've known I've watch yields go up uh it's the overall success of the plant and the love of the plant 100% and it just takes me back to my BMX days is you have the dudes that would be at the top of the game and they never snubbed anybody that was struggling to make it or wasn't at the top of their level the love was there for the common love of the sport you know or now of the growing of the plant is everyone just wanting to share their knowledge of wealth it's like what's better than that you know uh to me I I think with everything else on Instagram all these fat diets and just learning about you know uh we've talked to some of these other things about you know how you can stay in great shape and such but the natural endorphines that you get from levels of success to me like I get a way higher dopamine fix out of talking to a buddy and then seeing their success or someone that comes in and gives me a point or two and seeing some success and coming back and seeing something thriving then I do making money like I want to see a plant thriving yeah my wife thinks crazy you love the plants more than the kids you'll have the AC running for your plants more than at the house no I think I I I truly believe if if you want something in life um if you give first you receive I mean whether it's you want Financial wealth give somebody you know Financial wealth you know give something away and and the success will come I just I've always believed thatt you know it's it's a it's a it's a biggie you know what's uh what's this this is oh made this yep what is it called clone dunker clone dunker was pretty sick though I mean this thing's pretty sick so what how did you start this when did you start it simple simple but it I mean you could see it it's great I I'm just like a weirdo one my free time I like designing things and trying to develop things so there's like bikes yeah totally like bikes my kid's into baseball so I got a few things and Pat I'm working on for that it's just uh I just enjoy it to stay busy and I seen a lot of facilities even our facilities part of the Sops was like Dunkin clones it took forever it was a waste of time um a lot of the times I thought our clones were healthy enough that it wasn't needed but it was just also a reassurance of going through the clones and separating them again just a redundant waste of time okay great roots not so great Roots maybe let these things be in the dome for another couple days but hand dunking an individual clone couldn't be a greater waste of time um so I just thought how do I get these things cuz I tried you know where I would tilt the tray and try to dunk them and then half of them fall out uh just a bunch of like little ghetto maneuvering so a buddy of mine that helped me out with some like cat and solid work stuff from my my bicycle days uh I got in contact with him again was like hey do you have time can you help me put

something together and develop this and he was all game for it and uh we bought a 3D printer and just started making prototypes prototype after prototype just making sure that it clipped onto the tray real snug um and actually what it is it's a tool that will it'll slide through all your clones so for a 50count clone tray it slides through really well it snaps onto the tray and locks all of the one by ones or like aokas into all the plug trays and then you can completely flip the tray upside down and submerge the entire clone and takes a couple of seconds and what do you what are you you doing IPM yeah we do the the Athena IPM uh I'm just a big believer you know that kind of bugs got their own natural defense so it's like so it's just part of your regular sop sop yeah we we'll do it twice uh I typically will start doing it like day six to 8 um and that's where I got into the next step of developing this is there's kind of like a lip or an edging around the whole entire clone dunker tool to where the will sit on it but it allows like some you can see into it it allows some sort of venting so now I get a little bit of air flow into the tray cuz you know you got the two little flaps on top where I've seen people recess and offset the the plastic Dome so that you get some more air flow trying to harden them off a little bit quicker but uh this allows it to now get air it's super simple super simple how much is it uh I think I'm going to be retailing it for about 20 bucks 20 bucks 20 bucks yeah yeah dude totally worth it and and how is have you using this and dunking your clones you it sounds like you're doing it twice we do it twice yeah do it twice and then you transplant into veg transplant V so you do it do you do it right before you transplant into veg I'll do it the day before and then typically so the Clones will be 12 13 sometimes 14 days so it's preventative so you're always doing it completely preventative yeah completely preventative and the Clones like absolutely Thrive now how uh what's what's your bug bug pressure and PM pressure that you're seeing I mean when you're doing this process I mean yeah knock on wood yeah things are pretty good uh I don't have any issues as far as our moms so for this to be the end all tool for somebody that has a absolute infestation no they may struggle a bit yeah uh or they might have some success dipping the block I typically don't want to dip the block I'll just go completely into the stem reaches the block as far as the D um but yeah the pressure there we typically will not even spray ineg or if we do spray ineg now it might be once every other week okay that's not that's because you're starting off so well I mean that's the big thing about IPM IPM works great as a infestation but it works even better as a preventative 100% you know so if you're if you just make this part of your regular sop where you're following this dunking before veg then you know we spray um twice a week in veg um IPM and then we spray up to week two or three in flour just twice a week and then the rest of the flower cycle nothing yeah you got nothing because you did all the work on the front end before you had a problem completely and that's exactly what this is you know it also works really good for shipping or transporting clones yeah you're right it locks them in so this actually locks down and you a regular M tray yeah so this will lock them down ship a whole 50 cell tray yeah you could look like Jim Carrey and Ace Ventura with that the package I don't know if you remember that movie where he's throwing it around yeah yeah and it just no problem no problem it that's where I was like spent so much time as making sure cuz the M tray is a little bit flimsy but uh kind of the prongs on that are are great enough to where it'll really hold on nice and snug to the tray yeah right here it just goes right under yep and then you flip it down and lock it in flip it down lock it in so just you slide it through grab it on the the open-ended side and then press down on it it'll clip in the other side what are you going to who's going to distribute it what are you thinking maybe direct consumer maybe my buddy had Athena I uh I don't know I think maybe is that why you brought it maybe I just kind of wanted to show it off like is this something that's kind of exciting I think it's sick I think it's sick it's simple it's affordable you know and and it and it works have you it's mainly Mii uh or any other trays on all of them yeah there's a Groen sells another brand but it's very similar and it will snap onto it too okay so it works on multiple kinds of trays and I'm kind of developing the 72 count the problem is is that because of the thinner spacing

having the the actual fingers that lock it in it's not as tight of a lock on the 72 the 72s and then I'm kind of just looking at what industry standard is 50 50 sells better dude I mean 72 is too compact yeah it's too compact 50 is like that perfect yeah you know I wouldn't want to go more than 50 on a tray like I always liked 50 and those fingers are big enough where a lot of people don't actually put the stock into the punch out of the plug but they offset it you know they they actually stab into like the side of the wool you know or away from the circle to cut out the punch hole in the middle yep and uh it's still big enough to where you you can slide it through you know you might have to give it the tiniest jiggle but no one's going in there and breaking you have to be careful but uh it with a 50 count no matter how you plug plug your starters it'll it'll fit and hold them how many can you produce in in a day um well there's actually a company out of Corona I I paid for them to have the mold I made I did all the uh the cat filing of it and then from China they got the mold but now everything will be manufactured in the US so I'm I think it was a ballpark if they can produce 5,000 pieces of plastic injection molding in a day okay all right um let's have a meeting after this about it see what's up cool that' be dope cool yeah I think it's I think it's pretty sick and for shipping it's a game changer yeah that the other one is we got the uh the prorated boxes so that hopefully you can stack them up like these yeah CU it got overwhelming when I started picking some of these things up I just where did you make this box at here locally uh somewhere back East I'm not I'm not sure what state but it was a company found online that would do a full cut to size with digital print all 360° okay but trying to stack these things up you'd be surprised like a couple thousand of these things they're heavy oh it'll take up your whole airplane hanger yeah oh do you have a whole air I got a bunch of them already oh no way yeah so it's like I have to get boxes so that I could stack them because uh if you stack them up just on plastic instead of you need distribution yeah yeah and marketing and and we we got that and that's something I'm not the best of you know like I don't pride myself in that I don't try to like the funk that's I Stay in My Own Lane you know like I'm not great at marketing I'm not great at uh well dude you're running a 500 lighter and a retail store and then you're uh opening another 200 and something lights in another location another retail store I mean you don't you only have so much bandwidth yeah yeah it's a lot I just I enjoy my family that's another one it's like I'm a big family man I'm like super blessed I got two boys they're healthy they are extremely rambunctious y they love playing sports so it's like I try to divide my time as equal as I can between work and play y so what uh you know I was I'm always interested um through your struggle because you know you started at 16 and you started in an interesting time like a lot of us right started growing weed when it was uh definitely gray yeah um have you had any challenges with law enforcement or anything growing up through the through the industry yeah feel comfortable talking about it I mean a little I just don't want to uh what would it be like throw myself under the bus but uh don't throw yourself under the bus yeah you know like my facility uh got raided and we got issued a bunch of fins Luckily everything was dismissed other than like being handcuffed and released I didn't have any real criminal charges um that's good I've been pulled over with a bunch of work and had the proper place uh paper trail and all the legalities of the proposition 215 day in place to where police officer kind of just looked at me like I don't even know what to do like well here's my giant folder according to how many you know uh members that we have you know with all of their recks it's like this is how many plants I can have this is how many pounds I can have do the simple math he's like you seem knowledgeable kid like go and looking back at you know I'm already a short guy but when I was 18 I was looking like I was 14 so driving a truck around loaded with like probably wasn't the smartest idea but uh rolled with the punches you know like dude class how how big was the spot that got hit that was the 100 lighter the 5,000 oh that was the 100 lighter the 5,000 square feet yeah how did it how did they find out uh somebody else in the complex is doing the same thing and uh a kid set a dab rig with the uh the enail mhm and I guess it fell over and he went on lunch break and it lit the lit a coffee table on

fire and his whole building went up in flames but he had fire sprinklers so the the volume of water let it out oh these out of the uh the garage bay doors these guys had leaves just um bellowing out the door so it was a dead giveaway and then after that they just they did like a sweep and it was I think three shops in there in total so the one that got popped for having the fire and then two others they came and they raided Were You There When it got raided I was not no but they came and hunt you tracked you down yeah and then I just showed up too because uh one of the neighbors told me like the code enforcement already knows who you are I met code enforcement he was like completely okay with it just said hey do you have your paperwork in order uh they even allowed for us to go and get fire sprinklers so I had a fire sprinkler company come in put in Fire Sprinklers and then I passed a code this was prior to getting raid this is prior to getting rid so they knew about it so in my mind I'm like I'm this is Proposition 2115 you know like I'm allowed to do this it's medical marijuana um so I didn't really have a whole lot of fear but just one morning you know I got ADT calling me and then I sign on to my cameras and there's no cameras going on and then uh of a neighbor at another building a good buddy of mine who builds uh some like fancy cars and stuff and we took a liking to each other and he knew what I was doing he called me and just put me on blast right away this is what's happening you know one of your beloved workers is he's handcuffed in the back of the cop car like you got to come show up and uh by the time I did it was just code enforcement there they released the worker that I had and he he laid it all out he's like all the all the fines that you have are in the building name like the city wants you to go forth with the license they just want you to do it properly and it was kind of a relief you know I'm like I maybe I'm doing things uh in a gray area I didn't know but now knowing that the city is like wishful of this and is like is willing to help me you know it it was a relief you know like rather than always like kind of like looking over your shoulder am I doing right is this the wrong thing you know because uh part of this is I got started my my younger brother got paralyzed from Motocross and when rather than doing the opiates it's like we got him on pot and we got to meet so many other people who were like oh you know like our kid can never smoke weed and you know we grew up in like a religious household my mom's like that's the devil's lettuce no one smoking pot and now you know I've changed her way of thinking she's like wow like your brother was a raging psycho when he would take his medication that's all prescription based you know like uppers and downers and then now now it's like he still he rations his weed like he he smokes a couple times a day maybe not even a gram of weed a day but it's like he's on pretty much no prescription medication at all and there was so many other families you know we had families of like young kids 12 13 14 years old they're like we heard from somebody in room 102 down the way that they smoke pot now a couple times and they're getting better and this is in the rehab facility and uh I'm like well I can't give it to you I'm not giving it to a minor old yeah but totally like I'm seeing the like the healing benefits of it so uh I wanted to be like an advocate for marijuana you know and when it became legal like I was super excited and I was already kind of telling people because of what happened to my brother and you know trying to work on funding and needing help from a proper architect and engineer and people to help me establish this like I couldn't do it all myself I needed somebody in my corner I needed multiple people in my corner but having to kind of relay my story to them and they're like okay I've heard about weed and the medical aspects of it and it helping people and like really really like you could just see the motor turning on a lot of people like they're like this is legal now this is real like this is the wave of the future uh it was cool like yeah it it was just an awesome time period and um not having to worry about it anymore and now being able to like track all my sales and properly pay all the taxes and being able to actually like work on upping my revenue and making it Prof without trying yeah without it it felt great yeah yeah 100% so you're doing a great job man oh thanks congratulations yeah D thanks a lot yeah good job and uh looking forward to seeing that second store open oh thanks yeah very exciting I hope so soon big win appreciate you making it out thank you for

having me dude and uh congrats to you on all your Su success too you know like thanks bro we're just a couple of young dudes with the dream yeah and uh how 37 you're 37 okay I'm 39 yeah and that's one of the rad things like I think we're some of the younger players in this game but when I get to talk to people just letting them know like living the dream is you can't have any entitlement if you want it it's so possible to get it but mapping things out and having a realistic goal you know and really having a vision will help you out cuz when I started this I had goals and I had a vision but how realistic they were really realizing that I needed the proper people to put in place to make my goal and vision work could have been detrimental if I didn't open up to people you know so 100% other people trying to get into this you know like there's still time people say it's oversaturated but like if you really have the love of this plant and this is your dream you know like it's not it's not too late I still see this as like a Prohibition phase you know it's like put in the time don't be afraid to get in there even if you got to work for somebody else and show your worth you you don't know at all there's still development all the time 20 years of growing I still love learning yeah somebody that's doing it a different way and I see successful I could just I'm an open book all day long I want to take in their plethora of knowledge and learn from them um and I just still think that there is a hefty time period of people that are are younger that see this coming up if they're afraid to get into it or think I will never get that chance I thought that I thought I would never get that chance it's going to take zillions of dollars you know but the proper game plan and being open to people and asking for help is you'll get people in your corner that are going to want to help you succeed also you got to put in the work you got to put in the work you know like got to put in the work you got to be organized yeah even for you to get here you know I've uh gone over your story with you too you know like you don't go from nothing to something overnight it's the putting in the work sometimes it's a stepping stone you know you got company number one or job number one leads into job number two and three but that love and that passion it'll get you there yeah be I think something that I've really learned the past few years is just be patient you know things take time you know obviously you got to put in the work but but also things aren't going to happen overnight you just got to take your time with it be patient and not rush to make decisions that's a big one dude I mean think about you know you have a great partner Chris you know you guys are best friends right now but I mean that that's a key pivotal moment is picking your partner it's the person you're gonna be married to for the next however many years or longer right um so it's it's when you're making big decisions like that you just got to slow down and take your time with those decisions yeah you know not rush it so agree I really appreciate you you coming on and I really enjoyed the conversation it was good yeah thanks Brandon I appreciate you having me here thanks bro appreciate it see you yeah I don't know I mean I smoke cigarettes for 10 years and The Vaping is what got me off of it like vaping nicotine it got you back on or no that's what that's the only thing that got that got you off of cigarette yeah was vaping and then that became impossible and then this is great because you can like Tucker Carlson it up and no one knows you're addicted to [Â \_\_Â ] nicotine exactly yeah this is great but if someone asked me where my drug of choice was it wouldn't be we it would be nicotine yeah have you quit at all yeah and then I would I had start taking antidepressants because you quit yeah I like get chronically depressed without nicotine it's very strange is it just over like just years well this is you know this is a neurotropic and it's a dopamine uptake thing so I just think I you know I had a [Â \_\_Â ] crazy childhood and when you go through crazy [Â \_\_Â ] you get yeah like I was always in fight ORF flight growing up so it's like those that's what causes chronic depression because you're boosting cortisol early age and you're in a deficiency when it comes to do dopamine serotonin so netin felt like I was at zero yeah is Zen the go-to now no because if I do this too much I can't take a [Â \_\_Â ] really yeah [Â \_\_Â ] [Â \_\_Â ] up my any oral nicotine [Â \_\_Â ] up my digestion oh so this is like for planes or that kind of [Â \_\_Â ] but usually I'll Vape yeah so I quit for like 2 years and then it's got you back on yeah you know uh

Brent you know gave me one and I was like he gave me a six and then I got sick oh yeah the six is I don't know how people there's like a 30 no yeah there's like crazy like who's doing this I have no idea I mean a six got me sick I'll tell you what though hot sweat I'll tell you what I was at the comedy store and I popped his in after taking like four or five dab hits and the [^\_^] Zin hit me and I greened out it C you got cross faded whatever the [^\_^] that means well you mean when you drink smoke weed well well I had one cocktail no usually like I can drink and smoke weed I don't have a problem but one the Zen hit after like a bunch of dab hits I was pretty [^\_^] it was really good Ash too and I stood up and every went oh yeah and blacked out and then um Matt from Master Club caught me as I was falling it was like [^\_^] like a phone booth toppling over holy [^\_^] so you toppling over is another thing like 250 66 six d Almost 67 yeah yeah and he caught you he must have been a big dude I heard I could hear I could hear everything but I couldn't um I couldn't see anything like it was a very if I could if I could do it again and not be at the risk like my L they gave me a Coke and I was fine so it was just like my blood sugar had crashed probably from the hash not eating and then getting that nicotine hit at the same time and I remember when the nicotine I'm like oh [^\_^] something's wrong I probably should go to the bathroom and handle this like in private what it was about to happen and then I stood up and then I all I heard was whoa whoa whoa whoa whoa whoa whoa and then I could hear everybody trying to hold me and it was like yeah like uh it was embarrassing and then in the background I was with Frank Castillo in the background I heard Frank not again so I guess it's been a pattern there where yeah you spent a lot of time down here in La yep I work I work here a lot and and I lived here for almost 15 years home base is Central Sonoma Sona yeah and and you spend time down here what do you what have you been up to like what are you doing down here a lot um primarily I work with the nursery so uh during the pandemic I started up just a quick brief thing during the pandemic I took a gig with a Consulting client because everything had everything got weird right and I was like I need I need to have a consistent income and then um that ran its course moved back to California and I had consulted for Highline in like 2015 when they were getting started and I just they were part of my humble group of friends uh I've known him for a while and so I was running a few quote unquote Labs here but mostly like whenever I've had like grows for myself it's not been for money it's been for R&D hunting new genetics and so one of the guys at Highline would come by and take a look at like what I was hunting he's like do you want to start licensing out genetics I said sure and then I kind of pitch them this whole idea it's like look I got the seed collection I've been building for 20 years I've got stuff that doesn't exist anymore I want a safe place start popping and hunting this stuff maybe we do something larger so we went on a we created a joint venture gold Highline genetics the the nursery down in La so there's nursery and humble Nursery in La next door it was a drro that went out of business but they had a micro license so we took that over and we were going to build that out like put a 100 lighter there so we could showcase use that for the marketing do small drops with Catalyst all this kinds of stuff we got stuck in like license and permit H in LA and so that whole thing stalled out and then the market was extremely volatile after Co we're still kind of coming out yeah see 23 just kind of all went yeah and so everyone felt that so I came in and started helping them more on the Sal developing the sales team developing a sales strategy which was essentially uh not not spending so much time trying to U promote the business and sales on Instagram social media but to go meet people and spend time with them and develop a real relationships so that strategy worked out we're doing really well and now I have like a larger role in the company and I wear a bunch of different hats so do I'm doing that I still consult so I'm developing a project in New Jersey South Dakota Minnesota um and then also like the last year and a half I just kind of went to every state met a bunch of people that were doing cool things in these different states and I was like looking at how unhealthy the market was in California I'm like let's see if people are doing things different in other states and let's import that like California has been exporting so many things out of the state um



let's see if we can bring some Talent from other states into California import the knowledge yeah and just the whole the whole uh everyone's had their own challenges but they're also doing their own thing you know there's different things that you know people have created their own lane so I got to you know just basically exploring that so the Consulting I'm working with BIOS on a light we're about to drop it's called The Bridge um and uh I stepped away I just stepped out of bean stock so that's done for right now I'm going to look at the fertilizer thing a little bit differently so just yeah they Consulting that and then there's a few other groups that I like uh like advise doing some development and just grinding New Jersey and Minnesota two awesome markets amazing I mean Minnesota I hear what are packs at right now um is limited license well uh Minnesota might look like Michigan Jersey the the pound prices are like 3,000 and higher and that that's a limited license state that is a limited license State okay and I heard Minnesota's up there too though Minnesota is but they're doing things a little bit differently so they have um a better process for social Equity applicants and the application fees are like significantly less if you qualify for that but Minnesota's just been kind of wide open because they like decriminalized it and then it really started to look like prop 215 but now they're coming in with a license so I don't really know how that's going to shape out but it's an exciting Market but uh smaller licenses or I think it's going to be kind of a mix yeah it's I think it's going to look like Michigan yeah and then what do you what do you you're Consulting but you're also uh helping with cult genetics yeah and through through the nursery and are they going to be licensing your genetics uh the nursery is currently licensing my genetics and then I I'm not exclusive on that so my goal is to make sure the nursery is successful so that means like throughout all my travels all the people I'm meeting if I find something exciting I'm able to like bring other breeders into the program that I'm doing well with and so now we have other breeders that coming in like we're we just licensed a genetic from Surefire so I'll go to the pheno tastings and I'll be like yo you know I think this is going to work for our Market you want to make some money so it's and then then I get to build that like our library it's not just a lot of times people just kind of like hold on to something that's making them money but I think that's limited I think that like if there's something that's good I want to bring it and it every Rising tide raises All Ships so if I can bring in something that's special and unique that person can get reward rewarded for their hard work now they're an ally of mine vice versa we can do collapse we can do some development um I don't have to work as hard on that one thing so I can take my energy and put into developing other ideas that can be profitable so it's not like a lot of the times in the Cannabis space it's been very territorial around especially around genetics and then ultimately that genetic gets out and there's all this [^\_^] drama and it's and it's all it ends up just you know maybe it'll get attention but it's like negative attention whereas um i' like the last couple years I've just been kind of like let's just do whatever I can to continue to promote collaboration like uh Evolution Evol it's interesting when someone sent me this really rad post and I think it was like it was showcasing how I think it was like a type of bacteria that took in an organel and then that's what created this that's what was like the building block of life I've got it saved I'm going to pull it and I'll repost it but it was this this collaboration between two organisms that created a new organism and you could look at it like well maybe they started out competing against each other but in effect both of their traits collaboratively came together and created something new so that happens through competition um unintentionally but it can also happen collaboratively intentionally and then you can create an ecosystem that promotes more of that Y and so um the whole time I've been growing weed uh I've just been learning how nature works together and I think that we should be mirroring more of that behavior and I've put those things into practice I wasn't like when I first you and I first met I was like guarding every single [^\_^] one of my secrets and this and that and it was actually through the experience I had with you where um you know I worked on the Lux manual or whatever but it was It was kind we kind of stumbled into that whole thing and then that

ended up like that ended up creating all this other opportunity you know and I could have been like if you want this I want x amount of this and that and that and that's what everyone does and they're holding on everything so tight but I was like [Â \_\_Â ] it just like Let It Go let's do something cool and then to this day we were just talking about that people hit me up and they've got a PDF of that manual or they've got a photo of it and they're like this is what I've been using and it really works out thank you and then that an opportunity for me to have a conversation with them well what are you doing and then maybe there's a meeting point where we both can make money together yeah and that has been like the greatest approach which has been different than how a lot of us started out especially when legalization happened before that it was a little bit more collaborative but we had to be collaborative but we were also like the forums like that's how I found about Ian all that was collaborative the the big thing for us on that is we see a lot of people in the industry not give credit where correct the foundation I mean it goes through not only your sop on how to use your lighting but genetics I mean guys that are taking you know somebody's work of art that they've you know spent you know years or you know time and energy fenal hunting and then they're just taking that and then not giving them credit I think for Lux when I reached out to you and I asked for your permission uh um to to put you in the manual um it was a collaborative effort where you would get credit for what you what you did and and I think you know a lot of people don't necessar I mean a lot of people understand where your background is but they don't understand like you were like the Pinnacle of LED uh in the very very beginning when nobody was using them yeah you were like driving you were a driving force in that and the reason why I was a big fan right because I listen to the kiss podcast with Tad I mean he really well spoken guy I mean extremely smart right and I used to listen to his podcast every single episode like I was obsessed with it right and you were on there a lot and you had a incredible you were the only guy in the industry in the Cannabis industry that was really uh talking about and testing LEDs like you were on the Forefront for sure and before that um and that was that's why I didn't make as much money as other people did during the medical Market because I be I was obsessed with trying different things you know like the same thing we were just kind of like talking about recording engineering like at the Forefront like what excites me is something new like a new sound or a new delivery system for uh nutrients or all these that and I'm probably less focused on that now but at the beginning that was what got me in the room every day was trying something out and which led to a lot of bad ideas in bad systems it always does I mean it it always yeah we've developed a lot of different lights on locks that we didn't release you know and you remember the Coliseum do you remember that n oh man I I'll show you but like we built like uh do you yeah it was like PVC a PVC Tower where you connected these 6 in like 3ft sections and then you would have like a yeah I remember seeing you posted that on and you're like so they there were three levels but I was like okay I had this spot where I had like 24t tall ceilings and I was trying to run another business at the same time so it's like how many lights can I put in this room yeah and so you put the HPS bulbs in these um light tubes and you burn the [Â \_\_Â ] out of yourself on those things but yeah uh but that was like the first time where it's like oh we don't have to just do it the way that everyone's doing it let's and it was a terrible idea it was a terrible system but it got me think thinking about lighting because of the vertical tube the vertical tubes and then that was when I started looking at the forums and seeing guys like Ian hanging bulbs so we started hanging bulbs and then deep water culture there's this whole process of playing around with all of it and then essentially what ends up happening is you run into a problem with it which then teaches you like with deep water culture we didn't know about oxidizers or dissolve the oxygen at the time we were chilling the water but you'd still get problems problems and it's like okay this system's got too many problems let's kill let's cut this back and then it ended up you know thinking about different forms of lighting cuz power was a big issue so like you going back in the medical days it's like you might have this

building you might you know I was getting 5,000 foot spaces but they only have 200 amps and the one thing that I knew is that like if you stole power that's how you get in trouble like everyone I knew that got jail time was because they a tapping power and it's like you know God bless those guys I wasn't willing to take that risk so it's like how can I do more with less and that was the whole process behind all of it so it's so that's what led to like playing around with induction lighting do you remember that um no I don't yeah so it was like a different it was like a more efficient form of fluorescent lighting essentially oh yes induction I remember it yeah the the tube yeah there tubes and all that I never tried it though you know and so there's induction lighting and then there was like the first LEDs which were the blur pool and there were like 200 WTS and there were these tiny little UFO things things and maybe you'd get an ounce out of your yeah I mean it was just terrible so what did you work with fluence on devel because I know you were pretty close with that team so what happened was um I was working for uh this one out this one group that bought a bunch of land in Desert Hot Springs in atlanto and then they got a medical grow uh in the valley and it was the same kind of thing I think there was only like 400 there and he wanted to try and do x amount of lights and I'm like well the only way we're can do that is if we move to something like we can't do that with hypers sodium we have to do that with something else and I was doing a lot of research at the time and fluence used to be called BML so there was um oh it's escaping me there was a there was one company that Nick clay worked at and uh I can't remember the name but there was a precursor to BML but Nick and uh they were developing Horticultural lighting but then they had a difference in how they wanted to do things and Nick peeled off and started BML bio started around the same time too Nick worked with uh Neil yoro who was a NASA guy that was developing yeah there's this whole like weird little group of science guys that's developed a lot of the Horticultural lighting and then they all stole from each other and screwed each other over and turned into a different companies uh but I had called BML and met Jerry did you remember Jerry no Jerry Kieran the guy that would eat dessert for dinner and breakfast no no so he was like he was like an Ivy League uh dude that had come on and help develop fluence so I had called BML somehow got on the phone with Jerry and he's like you're asking questions no one's asking so I was asking technical questions he's like can we meet we're about to launch a full spectrum new company cuz BML was marketed as an aquarium fixture because of the non-compete they had with um the compan is not around anymore and it's bothering me I can't remember it co brain right yeah um so I said sure I'm down to look into it so they had uh every year for a while fluence was doing this thing called photox and I went to the first photo X which was in San Francisco and I got invited into this room no business being there but it was like all like the guys from Canada all the big cats from California that had the big licenses tons of Engineers bunch of business guys from other companies and they did this uh the coolest thing I'd ever been to was like science focused on cannabis Horticulture kind of the first of its kind and they had like a lot of thought leaders there and it was super inspiring there was maybe only a 100 people there and I just got connected with all these guys that essentially would build the first round of the business in Le in legal cannabis which is the the fluent spider kind of they they used it as a marketing so they brought in all the guys that were going to be early into the market I'm in this [ ] room and um I got to be a part of that conversation and hang out with these guys and talk with these guys and connect with Engineers that were doing things you know this is like the first guys that are putting setting up Chiller plants and big boilers and taking server room technology and applying to cannabis all these silly ideas that are cool when we talk about like how to create the most efficient room maybe not that practical now that we look at it you know uh back then and then I helped I was like the first guy to do the multi level and promote that and all that kind of stuff so I was able to get in get the lights early and then meet everyone that was getting the lights the full spectrum lights early and then everyone was killing their plants with the lights um and I did my first round with it like everything was struggling and so I H up everybody and using Instagram

and tagging and all that and figured out who was tagging fluence bioengineering and I just collaborative started data mining everybody and then sharing my results to figure out that we had a problem and then I met this Builder SL kind of engineer guy named Nicholas maderas who went on to help found another lighting company called agnetic but he he's like a crazy genius guy and he hangs he hung out with a lot of agricultural scientists from Davis so got connected into this whole network of uh and that was the first time I heard about VPD and he's like and he would always say he like well no one's following VPD this is why everything's not working I'm like what the [^\_\_^] is that like you know I'm learning as I go and so that was Data Mining all those users finding out that we all had similar issues the big issues that we were taking our methodology from bulbs high pressure sodium and then going right into it which was most of us were running our rooms at 50% relative humidity and 75 degrees and then the canopy temp was between 78 and 80 that's too low surf temperature too low but the but the ppfd was only like 600 ppfd at the canopy right so um once you bump that up to like a, to 1200 everything just chokes out photosynthesis stops you have all those those issues that we see all the time which is how you came up with your correct procedure exactly so I just I looked at what everyone was doing what everyone was having the problems next run flipped it around ran the immunity higher ran the temps uh I I still and also kind of factoring in powdery mildew some of the problems that people are having like how do we how do we take this apply this to the methodology and then reduce conducive conditions for other types of problems and goes into how important procedure is yeah in every aspect of cultivation right right I mean your the LED community in my opinion you know just was built off your procedure which is cool yeah I mean it's awesome I mean I knew it yeah because I was running it and I tested it you I I paid you for Consulting yeah you you hired me I didn't know who you were either well I was so I was a big fan I know I know you know I knew that I I knew that boy I was aany of clue that was connected to all that you were that was connected to Lux yeah connect well Lux uh the whole network of guys that you worked with yeah so it was it was cool I don't think I told you no no you didn't which was smart and I think also like um I think it would have put more pressure on the relationship earlier on CU I was just starting the consultancy then and part of what worked was like I was really confident in that process and but if there was somebody there that had you I probably would have been intimidated you know and it might have wavered the confidence if I knew everything that was connected to that you know so it's better sometimes just go into a situation be myself you know that it worked I think I worked with your Growers at the time yeah I paid I think I paid you like 3500 3500 bucks 3500 bucks and paid you for Consulting we went through a run yeah we went through a whole run um I used your Sops and it and it worked great Y and and I was stoked yeah and at the time I was just such an HPS grower and I really needed help um you know I really like Tad's podcast and like I said he's really well spoken but there's only organic information on there like he's tried to Branch off a little bit has he recently um I think he has um you know well I think that he's mostly looking at regenerator farming because those are the products that he sells well I mean it seems like his family was huge into yeah they had a big nursery and and I think that I I think that re there's regenerative farming is a future for a lot of large scale agriculture but when we're talking about a plant Factory it's different and indoor cultivation and things change you know Rock Wall Coco and media is it's different and I figured that out by trying to use a lot of what I was learning from Tad's podcast y you know Kus Camus CP yeah but you were you were you were you were bringing in products that were you you understood the the benefits of bacteria and beneficial yeah you were implying all we were talk about that a lot yeah I I would I would do what I can but to be honest I'm just not that talented you know to to actually create an ecosystem in the media that is Nei neither am I yeah it's really hard it's hard like guys like Steve canwell yeah uh Chris from Flor and Flame but it's it's also it takes up a lot of bandwidth and you really got to be ahead of it and for me I was like you know at the end of the day you got to pay your bills right so I really was trying trying trying working with you listening to t you know

kiss podcast cultivation podcast and um just couldn't get you know what I wanted at of it and that's when I kind of started going more working with big a and coming up with you know uh nutrient formulations that they were using right um which turned into you know a whole another thing and and I agree with like uh some of the points that bugby made um it's about you it's about proper and improper use so people get um you know it's kind of faded out a little bit now cuz the market shifted towards efficiency and yield you knew that was coming I knew that was coming you know I was growing in living solo beds for a while and part of what we were part of the philosophy behind that is going to drive a higher quality product um which I think is debatable now you know I think that there's a lot of things again proper use right so you can like I worked for a big a uh company um and I saw them improperly use salt-based fertilizers and just destroy their top soil and part of what we were doing was revitalizing the top soil so bringing in a lot of carbon bringing in a lot of biochar bringing in a lot of those things that people are you you know those products and practices people are using so they wouldn't have to just like hit their land yeah with tons of phosphorus yeah you know and that would be the solution is like more phosphorus more phosphorus more phos and it's like it's not it no and trying to explain that to the guys that are producing our corn you know all that that are just hitting everything up with like they just don't know nor do they care and that's the crazy thing like for them it's just about um getting the yield out the commodity like that's it's a whole other world but they should care right because what they're doing is they're killing their future and they're not they don't real they don't realize it 100% you know so there's there's proper there's there's proper use and improper use and I think bugby said that the best because when he was coming out talking about I think he was on your podcast right and there was a whole conversation you know the religious conversation between organic and synthetic and still people you know Market themselves as organic I think as a way to try and create more value for what they're doing um I don't know if you can you know people might me I don't know if you can 100% prove that but I think that if you're like growing outdoors and you're doing things regeneratively you're creating overall value across the board and you're going to get a different expression from that plant that might have more value but I don't think the consumer Market has caught up to that I think we're talking about a connoisseur market like I know guys that are getting 800 still \$800 for an ounce you know that are all living soil veganic whatever every time I see veganic I laugh I'm like okay yeah that's hilarious to me I tried it two years yeah yeah yeah and I mean it's just marketing in my opinion and then I know guys that are growing in rock wool and growing with salts and getting 800 an ounce and they don't tell anybody that and like for a while like people would um buy my work and label it as living soil and I would just be like it's not you know what I mean it's a mix of organic and synthetic but people would smell it look at it smoke it and be like oh this has got to be living soil weed so we're going to call it that and I would see that and I'd be like yeah nothing is real you you have your own cannabis brand now yep poetry plants which is just been like my identity in the Cannabis space What where where is it distributed where can so we're doing small drops in California and then right now we just did a drop in Illinois with Legacy um they're an Athena grower as well and uh I've been a part of kind of guiding them through the process bringing them the genetics making sure everything's there being there essentially being there to consult when needed um um and that team there is doing a great job and uh Illinois drop's been really successful so I appreciate everybody how's the how's the brand doing in Illinois like what are the names of your your strains and what's so we just dropped the aesa which is a creation of mine from it's rainbow belts uh 20 times Atomic collider 9 and then midnight Funk which is a SHP cream pie which it's like still going strong that strain still going strong um I think mittens is the one that really put that one on too with bones bones grown or whatever you know I don't know if I can tell everyone's real name on here but yeah those guys uh that that that so I that strain came to me a couple years ago through a homie and I was like this is amazing I want to breed him with so that's what the midnight Funk is

sharp cream pie times Atomic collider 9 basically did this whole Atomic collider n line um which is a lot of sunset sherbet and raspberry Kush Gorilla Glue and dog walker OG and form cut eventually what the whole thing is but why it was for me it was exciting was because it was a fast terrain it was really pretty and it was a good um it was a good donor into other things to try and maybe make the grow morphology better and speed up the flowering time because a lot of grows still are like fixed on an 8 week flowering time so my thought was like I can take some things that go 9 10 weeks find find some selections that are going to finish in eight weeks from that that still have the characteristics of the receiver and how many genetics are you you selling in the po po tree plants line um right now we've done we've dropped one in California um and there's two in Illinois so we just got started we just got started I mean it doesn't need to be a big book of genetics there's a lot but we're rolling it all out so I've been hunting with Highline since 2022 and then we've dropped a few more than that um through through Highline but we've had to take uh most of our customers it's changed in the last year but most of our customers were outdoor in depth Growers so when we're selecting for Su grown we have to be selecting for that and so uh you know we we hunt earn you know from like 5,000 to 10,000 beans a year and then we go through how hold on you hunt how many 5,000 to 10,000 beans a year depending on how much bandwidth we have so at Highline yeah oh my yeah and I would do more more astronomical it's not if you think about what we did with hemp like with hemp we were hunting millions of seeds you know to make selections but it you know I usually uh I like to pop at least 50 of a variety a 200 is nice um and then what we'll do is we'll pick four to five from that and then we'll just rev those selections and then uh we'll run those in a full term and you know early depth late depth tests and then a few indoors and when I still had my labs up in I was testing the indoors there but I had to shut all that down um and then you know part what we've learned is we have to make sure that what we're putting out to the market is pretty bulletproof that like anybody can run it um and so that's not necessarily selecting like what I like the best what I'm what it's more about what's going to perform the best in the most stressful conditions and then what I like the best is what I'm starting to drop into the brand how are you Illinois's Market compared to California market for your new roll out what you um it's been a lot better in Illinois yeah yeah yeah um so there's a lot of markets that are limited and then they're kind of underserved and what's happened uh with a lot of those limited markets is like the big MSO groups kind of came in struggled and then are dumping some of their grows and then younger guys are coming in and figuring out how to take over those grows and then bring a life into it so the guy that's um kind of leading the charge in Illinois is a guy named Ryan Hendrick uh he and I went through very similar experience in Pennsylvania during the pandemic and that's how we became friends I'm like hey you got screwed that way too I'm like so did I like let's go grab a beer you know yeah and he understands what consumer value um and I identify that early on with him and he was the first guy to say hey would you want to do like a licens thing with the genetics I'm like yeah so he was the first guy to kick this off and then I'm like let's let's this is fun you know this is cool because my favorite part of the process now is hunting and selecting genetics yeah and you got the foundation with Highline correct and yep and you can just do all the work there help them y so it's a whole web of collaboration and then that's leading into setting up Nursery collaborations in other states with Highline we're able to bring our genetics to other nurseries so if you're a nursery in another state and you're interested in bringing in new genetics and part of what we want to do is just continually bring new content to these farms and prove it you know like we're going to go through the year and a half or two years of testing which is how long we've been testing the Gen when you're when you're doing 5,000 pops a year yeah uh we're going to do more too like I'm I'm moving because we're making our own season a lot lot's happening fast yeah and you're giving a a lot of new access to a lot of new cold dears and markets that don't have them correct and then also selecting things for those markets because every Market is like a different palette and a different consumer um and I think that's going to continue

to develop because we've had so much of like the gelados get out sourced out and they it's interesting because I was just watching like uh yeah I was watching this YouTuber that's that's interest that's funny he's like you know like I don't even know what you call him but you watch Goblin nuh okay um and he was reviewing spray pack okay you a flower and one of the things is like he didn't want to he was doing it for the people he's like if I die from this die for this but one of the things is every flower looked the same and it just was treated with a different flavor and when I look at it it all look like Lemon Cherry gelato to me that was just spray packed so what's happened is that like we've had like this runs Lemon Cherry gelato wave and what's been keeping it as alive is people adding artificial flavoring to it you know instead of developing like an actual new genetic with a different flavor profile and different effect so it's kind of it's interesting that that I think that's going to die out and I think some of these markets are going to start popping back up with wanting uh different flavors and different profiles and hopefully we can get the uh consumers off of Just focusing on THC as being the value metric 100% because that's limited so much and most of it isn't even real I will tell you this in Illinois they the testing is real so like when I tested genetics and made selections here in California they tested significantly higher even in just the reference tests compared to what we tested out there so that created a new unique opportunity because some something one of the strains that we dropped here tested like 30% or something like that um and then out there it was testing at 13% yeah I see that in different markets all over all over the place and Puerto Rico is one of the markets where I see just really high numbers coming out of Puerto Rico like it doesn't yeah physically make sense no exactly I get tests all the time I'm like come on bro like let's get real here I know yeah you're using Athena and it says 4% but let's let's be real here I mean right and I don't think we really understand what's creating the effect because I've I know like something like Oreos or purple punch you know will test High legitimately right yeah but it doesn't really create an effect that's desirable so what's not creating that desirable effect and you would you would think if THC was the value metric for all value metrics it would it would be valuable but it's it's not you know so um I hope we can expand the a bit and also just there's a whole large base of possible consumers that won't go by weed anymore because they had bad effects from it being maybe too strong in a certain way um and I think people look at like low Tec numbers as being like always poorly grown right meanwhile meanwhile if they buy a black market pack there's no testing result on that yeah you know and a lot of the stuff that's going in those packs is probably testing around you know below 20% oh definitely you know yeah and so I think it's just a lie and it was there's there's a few lies that happened early on uh with cannabis legalization basically big companies came in and they had to figure out how to sell it so it's like okay we got to create buckets that people can understand uh what if there's like over a 100 canabo but we're just going to pick the one two we got THC we got CBD and then it's either indicia sativa or hybrid and none of those are value indicators and everyone's cannaboid system is subjective and now we've just driven towards having one really extreme effect from smoking that I don't even really enjoy anymore like I showed you what I'm smoking on right now which is like his Burmese tricks cross from uh from from always be flowering and I haven't gotten it tested but I could tell you it's probably below 20% but I have a good experience from it I want to pick up my guitar and play music I don't feel like I took a per cette like three perco setes and you know I can be a dad and I can participate in life and have it just be you know a filtered experience in a happy way which is what can of St has been for me I think it's just time it's just time for it to flush out for people to get educated I'm pushing that so like in Illinois we had this drop and they were like it tested too low we can't sell it I'm like no we got to figure out how to sell it well what do we do we have to lower the price like wave my royalty what's the cheapest we can sell this because I just want people to try it hopefully you know if the price is low enough they'll try it you know and that's seemingly working where people are now trying it and be like you this is great how is the

sell through good awesome yeah great what did you guys end up selling those units for uh I think the like eigh out the door for the lower TC was 24 oh eight that's not bad at all no so like the the standard price is around 40 yeah wow you know what is that 24 time8 it's like a12 wholesale three grand yeah yeah you're great yeah yeah but it's illinoise it's Illinois yeah you can't do that in California no no and in California I'm trying to figure out how to do a \$15 eth out the door that's where that's that's the next play yeah like CU When you know doing the drop with in California I looked at like what PE what people care about the most here is price so how do we create the highest quality with cool genetics maybe play around with canident cannabinoids so it's not all got to be like 28 to 32% let's see if we can use use price as a way to expand people's pallets and reassess um what the value of cannabis is when you're Consulting and working with these Partners do you have a good idea of what your Coster produce is for flower yeah yeah I mean it's it's different in every it's different in every building yeah that we figure that out look that do you what is it what um again it's different in every building so it can be on average somewhere between 400 and 800 that's not 400 it's great indoor uh in some markets yeah okay that's great I that's really what it comes down to but those lower price points mean more automation you know you're looking you know you're not going to be hand trimming at that price yeah you know I talked to a lot of guys on facilities and it it was funny because my break even point on my facilities 250,000 yeah I got to make 2 a month uh a month yeah it's a lot of money you to break even you got to make 250 and I talked to seat toown Gabriel just the other day on the phone Y and I know what my number is it's 250 and you know I asked him what his number was what's your break even he 250 I'm like holy [Â \_\_Â ] yeah and that's a how big is the can 400 light facility 400 lights yeah you know mine's a lot bigger but you're Greenhouse I'm Greenhouse yeah sou econom is a scale built in yeah but uh I found that really interesting but he selling his packs for you know double than I am right so so you have to do more volume and that's the other thing too is the price per pound goes your cost per pound Goes Down based on your yield yeah so now you see the trend is like people are aiming for you know 90 to 120 grams a square foot and we have the technology now to push that um and you know I think it's arguable whether or not you get the same quality out of it I mean another thing I agree with Bruce bugby on is that it's a zero Something game you're going to push more yield but you're going to drive a larger surface area which dilutes the canabo the quality yeah deles quality you yield delution yeah yield delution right now there's some something like Georgia PI right or baby Yoda those are two things where I've gotten great quality out of them and hit High numbers but that's the genetic potential um but something like baby Yoda's got to go like 10 11 weeks so it's all this math that goes into it yeah it it yield delution seem to be a pretty normal term in big a right with regular you know tomatoes and everything you get yield delution normal mhm and I think the the Cannabis industry you know back when you know the you know six PB 10 pound a light you know runs you got in trouble for that right I mean I think I got a lot yeah because I was like what come on man we got to troll this nonsense I mean there's that balance if you're pulling I think they were going to sue me too because they thought I was an employee of L cuz of the manual yeah I got to I was just like you guys are ridiculous yeah we won't we won't even say their name no no but that all got squashed but yeah it's I mean if you're if you're growing over six pounds a a light I mean it's it's definitely you're going to definitely have yield delution you know do you know anyone that's had actually six pounds and the whole thing too is the whole By the Light thing right one of my good friends named Tony American a Hydroponics up and Hayward um real tight he's my boy and he would put 2,000 watt single-ended H Delux HPS is over a 4x4 and he would he would be getting like five five and a half and he said occasionally he would hit six but you got 2,000 Watts over a 4x4 I mean it's a lot of ppfd it is and if you look into like everyone doing the under canopy thing now too you're seeing yeah you're going to see some increase in y old but I I I don't with the underc canopy this is just my opinion and I don't know a lot about it um we're running it right now yeah just started but the difference you're the



lighting expert so I'm just going to you know you tell me if I'm right or wrong but it seems like when you're doing under kopy you're spreading the light across the larger surface area y so you're maintaining the quality but increasing the yield am I no that's that's um yeah yeah I agree with that I think it depends so I think why the underc canopy lights have been so successful is because what's been dominating the market are lower yielding varieties that only sell if they have a specific color right mhm and what we all know is that like if I put a top light over like a an lcg or a runs like the top third of that canopy is going to purple out but then we start hitting the point where the lowers are not as developed and they get green right which then people have to sort out of the pack and they're not going to get the same value for that would you agree with that yeah okay so what so you can observe that like by being closer to the light you're going to get more color more more of that expression that's desirable for the consumers so if we put that inside put those lights inside the canopy we're going to fill out those flowers They're going to finish uh close to as quickly as the top and they're also going to get the color so with the under canopy lighting I think why it's working right now is because this is the genetic that's taken over the market and so once that shifts we'll see if they are as re as as relevant um and I and that's it's really interesting to see that not only has that that runs gelato phenomenon captured most of the sales it's now changing how we grow it's now changing what we're growing with in those methodologies yeah um I tried so with fluence because I helped them out so early on I was never an employee of them either um but I got to I got to be a part of some of the R&D Pro processes and part of that was testing out um inner and under canopy yeah because it's not new they use inner canopy for large ey yeah it's not new it's just being it's being adopted now I think mostly because everyone's growing Lemon Cherry gelato or something like that yeah and that's not a great yielding variety but so if you can get 20 or 30 % more because if we're looking at the math of it let's say I'd say the average yield from Lem gelato over a 4x4 is probably like 1.2 to 1.5 that would that's what I've see all right or like a traditional like black runs or regular runs there's some outlier crosses and I see junkies develop some things that have that nose and flavor that yield more but if you're able to put you those you know couple hundred Watts inside the canopy and get 30% increase in yield that's a big deal because you can the big issue big thing is like if I let's say I grow I'll use Georgia piie as another example if I grow that I'm going to get 90 grams a square foot with that with without having to work for it without having to do anything additional but when it comes to selling that I might sit on that for 6 months and then I might have to sell it for \$300 less so what these big farms most important thing for them is sell through and yelled so if they have 100 lb of Georgia pie and it only took them 30 lights to get that and then they have 100 lb lemon CH gelato but it took him 60 pounds to get that they're gonna 60 lights yeah yeah whatever they're GNA they're going to pick that lemoner gelato because they're going to be able to sell that get the money because everyone's kind of living hand and mouth still yeah and like if you have a killer yield with Georgia Paya your facility that doesn't matter if you can't sell it you got to make that 250 no matter what yeah so you're going to switch over the lemon Che Auto it's cuz what the it's because of what the buyers are that's what that's what they'll come in and buy you know they'll smell it they okay I'll take all of it right yeah you know Georgia P they're going be like there no color with the under canopy what pretty interesting is if you took the Lu Lux 200 watt bar yeah and put it Upside Down Under The Canopy yeah it's the same thing you had the under canopy light well that's what I did with the so the original spiders right they had the removable bars and so with first thing I did with fluence is asked them for extension cables for those bars and then I would remote the driver mount it up on the top of a rack and then I would put those bars everywhere you know and they thought I was crazy and then they were like okay let's try and make a light that we can do this because I was just like make everything as remote as possible so I can keep playing with this first guy I saw doing that kind of stuff was uh Alex was mango spreading it out uh putting panels in between on

sidewalls yeah drop down yeah like early on early on like uh and and a little backstory too like I used to I used to work his his products in Florida when I was like 1920 I didn't know at that time but like the Miami mango was like the mango was the thing down in Florida was mango and blueberry and so um and it was like all a surfer networker guys that worked all that and Alex was like a part of that group so that was how I originally was like Miami mango and then I you know however long ago I hit him up when he was doing the social media thing he was posting so much Tech so much uh of the little tricks that he was doing because I think Alex is first and foremost like one of the best growroom Builders and so he would he would always be troubleshooting and figuring things out because he had cultivation knowledge he would be applying like all those little things and that's become you know a lot of what he developed early on become standards which is cool to see but that I hit him up I'm like was it this group that you were working with I'm like oh [Â \_\_Â ] bro I built My First Recording Studio off of yeah he wasam mango yeah I remember meeting you and him together at MJ Biz and you filling me in yeah yeah so long story there but pretty cool and and he was always doing stuff like that and then I would try and figure out my own way of doing it and Y I've listened to uh a lot of podcasts that you've been in right you kiss first smoke of the day you know and and a lot of different um pods that you've done but I've never heard your story yeah and um haven't really shared it a little bit so um I'm from Florida uh I was heavy into music as a kid music and basketball once I start joined a band like 16 basketball didn't matter anymore uh and everyone in my band smoke weed I was like in Australia hardcore so I was very judgmental in high school um I come from a family that struggle a lot with substance abuse so my my thought was that if I just don't do anything I won't catch that demon in my family right so it was super judgmental so all the guys that I grew up with that I'm still friends now when they see me like in the weed industry they just [Â \_\_Â ] die laughing because I would be like you know preaching to them every time they would like spark up a bow at band practice and I'd be like you you were raised in like a really religious Family Christian yeah I grew up like like 80 born again Christian were like the pastor of the church had like um a Rolls-Royce oh that kind of Christian well it was like in Flor Florida um you know being an 80s kid you know both like my dad I found out late way later that my dad used to grow weed and he never told me about that um but my but my mom and my dad when my mom was pregnant with me she and she used to be like a hardcore hip be like they hid their whole story from me until like my mom passed um a few years ago and then all of her friends started telling me like how my mom really was I'm like my whole [Â \_\_Â ] life I didn't even know you know my mom was like dealing Coke I'm like what I'm like what is going on but I think what happened is um what if we look at the like the whole Arc of it is that a lot of the hippie boomer generation right and when the 80s hit and rean became president uh they all got serious and the the solution to create Community was to get really heavy into this like uh mutated version of hippie Christianity right so it was very like experiential um which is what drove a lot of like the evangelism all of that so I like I studied like how did it get here but there was like a whole hippie movement that went heav Christianity and then it became very materialistic during the 80s because ' 80s was the ' 80s was a lot of Boom a lot of success in South Florida um because my parents moved to Florida in the 70s and it hadn't really been developed but when I we've all seen Cocaine Cowboys right yeah like when that boom happened in South Florida that was in the 80s and that's when all the banks came in and that's when a lot of the mob came down from Jersey and started to develop in Florida even more right and the bank all those Banks like that whole all South Florida arguably was built up because of cocaine money right and so there was a the reaction of that too was like a lot of hyper Christianity big churches all that so I grew up in that and um my mom side of the family um it's like very traditional from New Orleans so Southern um like my great-grandfather was the uh superintendent of the Norland PD and he was the one that ran the mob out there's old uh news articles he was the first police chief to hire African-American police officers and he got kicked out after he he got asked to resign after that which is a cool little

subex so he's actually in like a lot of the uh history of like African-American and police and all that some of those books and no one told me all this I had to go find all this later um but like War veterans even after they knew you got into cannabis yeah my family kind of blacklisted me after like I had to keep all that you got blacklisted oh yeah they had me arrested yeah they had me arrested and thrown a no mental institution so yeah it was is uh after you left FL Florida yeah yeah yeah long story we'll talk a little bit about that maybe because we want to hear the story it's pretty crazy how did how did you actually start growing cannabis um so I was so I was selling it so I basically started smoking weed because huh this is so stupid but you remember Y2K yeah yep and everyone was like the world's going to end 100% And I was I was like 1819 and everyone's like the world's going to I'm like well [Â \_\_Â ] everyone around me's been smoking weed and having a good time I'm GNA [Â \_\_Â ] at least smoke weed before the world ends like let's try that and so I was at band practice and I had to hide it from some of my band members because I was so [Â \_\_Â ] judgmental towards them so it's like if they saw me smoking weed I was going to to eat [Â \_\_Â ] forever so there's one guitar player that was cool and I'm like yo let me try that so smoke weed had incredible experience I was like oh this isn't that bad I don't think I'm going to get addicted to this right I thought it was going to lead to like serious substance abuse well you know I just saw that in my family like I have family members that um I don't even know where they are anymore like they're homeless they got addicted to fentanyl they got a um they're on the street somewhere you know we tried to help them out and they just kept getting in trouble and real dark [Â \_\_Â ] um but so I just kind of looked at all of that you know there was a lot of alcoholism in my family and a lot of weird abuse that came from that so like I just didn't want anything to do with that I didn't I I never felt like uh did well in school and I was kind of fast-tracked to work through some of the relation some of the um you know I could have had a I could have had a seat at a different table because I did well in school and because my grandfather was important in New Orleans but I refused it it just wasn't into it picked weed and rock and roll um and so I got into I started smoking it then and then um you know I was pretty you know I didn't have a lot of support there wasn't money on my my mom's side on because of what happened with my mom and my dad there was no support um you know if things were dire and we were about to be homeless there would be a check in the mail so we did have that so if want to talk about privilege it was that but it wasn't like I didn't because I didn't accept like this the scholarship thing or whatever and I like I didn't want to do that they're like okay they were not giving you anything kind of thing cuz you didn't want to go to school college well I I did but I didn't want to go through the program that you know like I tested high on this like Duke thing so I had like a FastTrack Duke and then I went and I took a look at that and I just I it just made me depressed and felt like I just didn't feel connected to any of it and and this was also around the time where I just coming out of I was coming out of the Christian Church coming out of that whole thing I was seeing that there was a lot of um lies I was kind of like waking up to a lot of it seeing a lot of things um you know my mom my mom had uh a best friend whose son was a couple years older than me and uh God I got some crazy [Â \_\_Â ] stories I don't know if we have time to talk all about this but he ended up he ended up becoming like the head of like this oil Empire and then went bought all this land in Gaza and he was like half Jewish and he got brought into this crazy Network he's he passed away no one really knows what happened happens to him but he started the first his name was gumma AAR really interesting Wikipedia Deep dive but I was around all these people that were like really intense doing crazy things and it was there was a religion kind of woven into all of it and I just saw a bunch of unhappy people that were tortured and so I'm like oh this doesn't this doesn't add up you know I would go spend time with my family and my dad came from uh a family my dad was the opposite and my dad was Dad side of the family was more connected to organized crime in Jersey there was like you know very elite Garden District New Orleans political and I go there and everyone wasn't happy and it was abusive it was like succession in a

way you know yeah and I'm like I'm good like I don't I don't look at it as a gift and and and I have a different perspective too like just because someone has grown up with um you know people call privilege or money that doesn't mean it's a good thing that doesn't mean there isn't a cost to that no I think it's kind of a it's a curse it is yeah it's it kind of could hold you back but not only that not only that you become um enslaved by that institutional money and that's a thing that I've seen happen with my family is that because of my grandfather having wealth everyone in the family was always um sub subservient to that and I that's just not in my nature yeah I was like nah [Â \_\_Â ] that you know um and I'm also in Florida which Multicultural you know and I grew up in bokeh which had like some of the most money in the world and then you know kids from Haiti Jamaica like my best friend growing up was from Cuba um Puerto Rico uh a lot of Brazilians and um you know so I I got I felt more um like I could be myself around people that didn't have those airs you know and that's what I was into and so [Music] um you know I started so I started a recording studio um I basically was working three jobs started recording studio and started recording bands and um I got a scholarship from the the local State College ended up paying me like five or six grand a semester to stay in in college there because I did well my acetes and everything else so I was like I'm going to take that they're going to give me money to go to school I did that for two years but I took all that money and I put it towards building a recording studio started recording bands and then next to the recording studio in Del Beach was like a wood shop guy who was like a crackhead his name was Jimbo and he had a finishing shop and uh every week this Surfer guy would come by drop off weed and I'm like it was the best weed in Florida and so I became friends with him and I started buying weed from him and uh one day he was like you'd be good at doing this I'm like what like doing this I'm like for real yeah selling selling yeah so I started selling out of the recording studio to people would come there and then we threw a lot of parties and then um and then because I was selling one of my recording this is a cool [Â \_\_Â ] story no one not a lot of people know this so Florida was also like a big rehab place did you know that like the rehab industry in Florida heard a little bit about it but not much yeah so you get a lot of people that are junkies that are coming down there to get clean a lot of wealthy Junkies you know second generation money that went off course right and got addicted to drugs coming down there so that was a huge part of the music scene too cuz you would have people um that were in huge bands that would be sober there and then they would be like kind of starting their life back over whatever so I you know I was like close to a lot of the guys that were in Marilyn Manson uh I was in a band with uh Brad Stewart RP he was a great guy but he passed away from a heroin overdose but he was down there for a rehab and uh I met him and started recording his band he was the original bass player for Manson um and like when I got kicked out of my you know I was always kind of living between warehouses and friends houses at the time because once I started not following the path my family had they're like you're out you know good luck my dad didn't really want anything to do with me my dad thought I was a maniac um I was always getting in trouble we were always breaking into warehouses and throwing parties and doing all kinds of things but it wasn't my dad always used to say you're like a drug addict without the drugs that's what he used to say to me be like well it's your fault no but um so I I started uh recording all these really rad bands and my whole goal is to get a record deal um and one of the artists that I was recording was a guy from New York that was coming off heroin and moved down to Florida he was like the son of like this guy that ran like a lot of this major a agency in New York and so he started running out my studio all the time and he would come in and buy like a quarter pound for me like a top dollar and he would just sit there and smoke through the whole thing in a week he was like the best customer I ever had and he was just stoked I had good weed and then we were record and I playing on his album helping out well his drummer started coming down that he used to play in a band with and his drummer was one of the largest indoor growers in New York um and he got arrested after I moved to California so I F tracked this guy but that show the show

Weeds was based off of one of his dealers and she ratted on him so like that whole that in that whole show um I'm not going to say his name but if people want to know I'll put I just don't want to put it out there you I'm saying cuz I don't know what happened to the guy but that show was based that show was based off of what was really going on with that woman like a year or two later wow so they were writing that while it was happening and you know nobody really knew that um at the time and he would come down and record uh with this other cat and he would see me selling weed out of the house and so he was you know he was comfortable with me I didn't know anything about him being a grower or anything like that all I knew is he had a recording he told me he had a recording studio and a rap label right that he had to shut down because he got held up at gunpoint by one of his artists and he had like \$500,000 worth a vintage recording equipment in this apartment in Greenwich Village so I'm like what are you doing with all of that nothing let me bring it down here I'll set it all up and I'll record you guys for free and then I'm going to get all this like legit Next Level gear for recording it took me about 3 months to convince him of that and then he said fine so I went up to New York I cataloged everything brought it back down but while I was up there he had he had me start doing like personal assistant things for him like running around picking up stuff this and that and he basically what he would have me do and then this was ongoing is he would give me like a purse full of cash and he would like fly me out to Oklahoma or Chicago and I would go there and I would buy like a vintage muscle car or classic car and he had this crazy auto body shop in the Bronx where he was trying to do a show and he was taking vintage cars and updating them and remodeling and putting them back on the market and making money so this is the way that he was laundering money yes and so I didn't know that at the time so I'm sure whatever you need he G me some instructions and then I would put this car in a trailer and drive it back um sometimes I like I one of the times the trailer broke down how to drive the 67 Cobra Mustang down to Palm Beach from Oklahoma the whole way and that thing peaked out at like 64 mes hour but every so I drove this it was basically Eleanor from Gone with the Wind drove that thing from Oklahoma to Florida and it died right when we got to Palm Beach like 20 minutes from the house where we were dropping it off so I did that for him but he would pay me like you know four or five grand to go do this and then I earned his trust and he lived in a penthouse uh and on Wall Street and he had like a stripper baby mama there that was like from the hood was a trip you know but I knew we had rap label I'm kind of stupid I don't know what's going on and then there was like a room in the apartment that was you know you know he would do business in I don't know what was going on and then he was an on and of again heroin addict and he would relapse and then go to this Clinic where they would do some sort of like really quick cleanout and it would cost like 10 grand but it was like something back at the the day it was like some Asian dude that would clean him out and when that happened once um he basically said hey I'm going to be going through this I'm not going to be able to work I need you to do the work for me and that's when we went to one his first grow and he took me to this like uh it was like a row of warehouses in Brooklyn and it was like a beautiful wood shop tools everywhere and there was like a big false wall with a mechanical arm you know like at the movies press the button the whole thing comes out then there's a giant bank vault door and he opens up this bank vault door and we walk up and above all the warehouses was like a 200 L row it was all living soil too which was a trip and he's like we got to I need you to cut down all these plants and we're going to throw them all away I'm like why he's like they're they're ruined and I'm like what do you mean he's like look at this and he showed me like they're all webbed up from spidermites so like one of his workers everyone there was a junkie like they were all like making a ton of money and doing a bunch of heroin like heroin was a thing so like he had a whole group of people that would work for him that would then like go through bouts of like heavy drug abuse and then not show up to work work so that was like my first experience in the grow room and how I got kind of queued into that and then you know I had one of his cousins living with me and out in Florida and we got into it and and uh and uh the whole thing got ruined cuz this cousin

kept throwing parties at the house and I had all this equipment there that I was responsible for so I told him no more parties at the house but I had the house all built out so it was soundproofed where the recording area was and so he would bring like these homeless people over and party right and I got like half a million dollar worth of recording equipment in there so I flipped out cuz he did it again after I told him and then I guess one of the homeless people were in the backyard and I didn't see him so we got into it I was choke I started choking him out cu I was basically going to choke him out and drag him out and kick him to the curb at that point and uh this guy I didn't know this guy was in the backyard I clear out everybody else and he came behind hit me over the head with like a 40 o closed malt liquor bottle fractured my skull had a [ ] seizure hit the ground right then they robbed me and they got in their car and took off I actually went outside dizzy with like that front end of microphone stand I was going to beat the [ ] out of this [ ] guy and I know who he was he was like some like ratty looking white dude and he pulls out like a 24in [ ] machete and I'm like I'm good and then I sit down I'm like I think I got to go to the hospital you know I drove myself to the hospital I was in the hospital for two weeks blood got in my brain and thought I was going to die and I was like man [ ] this fighting [ ] yeah you know yeah it's like we're we're all like you know we're pretty fragile uh and that's why I just never I had a couple other instances too where I've seen people like you know getting fights and die in front of me and stuff and I'm just like that's made pretty much a pacifist on both things because it's like uh and it was a blessing too cuz I probably would have killed him you know how pissed off I was uh but that was the end of that situation with uh the guy in New York I basically you got out of that crew I got out of that crew because it created a lot of drama and then his C his it was it was his nephew that was with me and I was kind of mentoring him and it went South I wasn't ready to be mentoring somebody so then I you know I called him up I'm said I got I'm done with all this and then a month later I got a record deal with geffin because I was sending music to guys out in California and they're like hey we'll get you a deal we'll get you a demo deal if you can get out here so that was like that was the sign I was like all right time to get the [ ] out of Florida so I moved to I moved to LA in uh 2005 um very quickly got to deal with A&M which became Gaffin um but they weren't paying me very much and I moved into a big warehouse and I was had a video production company so I had the the recording studio and I would do video and this was right when Final Cut came out and I was very early onto that and I gotten um a gig and I would sell weed all the MMA guys but I got in with this company called American top team which was one of the biggest MMA companies now I've heard about it yeah and Dan Lambert and Primo and all these guys so I got connected I got connected through those guys through through a friend in another weed relationship down in Florida and they had me write metal like a metal theme song for their show and they're like can you operate a camera I said sure can you never operated a camera can you do video editing said sure never video editing can you do post-production effects and all that said sure never did any of that and then I would like buy these DVD training videos and stay up all night drinking coffee smoking weed and going through every [ ] tutorial and then I would build something for them and you know these guys were Fighters they were like oh my God this is amazing and I'm like really like cool so I got into filming and shooting all their Productions and built a whole video Studio off selling weed and then turn that into a legitimate business you know and I was making incredible money at like 22 23 years old and touring around doing all these shows that were right below the UFC um I produced two of the world submission wrestling tournaments obuby filmed the one out here in Long Beach first time really out in California was when I came out here um to do that and it's you know like Eddie Bravo Joe Rogan was there first guy smoked weed with in California was Joe Rogan no lie no way no [ ] lying yeah outside Legend outside of The Comedy Store um so I got tied into the this whole MMA group out here one of the guys name is Scott Nelson who's got a really wicked stem cell treatment lab or clinic in Mexico right now called um chips this FYI um so I got connected

with those guys who are all all connected to growers in Mendo CU like in California and in Hawaii the guys that were like competing in practicing Jiu-Jitsu all the time they made their money off growing and selling weed so they could just Jiu-Jitsu all the do Jiu-Jitsu all the time so when I moved out here I came out here for music but I moved into a big Warehouse in Huntington Park that we were going to turn into like a green screen stage and we were filming uh this show for this guy named ed Suarez who is the manager for Anderson Sil Silva and so I got to hang out with all those guys and he had a clothing brand called Sinister I did a bunch of t-shirt designs for him I did a bunch of video production for them and I worked with Scott Nelson and we were building this whole show up and we built a green screen stage and and uh connected with all those guys but the first night I moved here I'm pulling I'm in the I'm like in a lat you know Latino dominant area Huntington Park you know I'm a white dude from Florida I come out here I roll up to this building and um uh there's like a art Deco building in the front and and and this [Â \_\_Â ] guy walks by me as I'm unloading the U-Haul and I'm like holy [Â \_\_Â ] that that looks just like Pat smear Pat smear is a guitar player that was in a band called the germs that inspired Nirvana and then he went on to play with Nirvana he was the the other guitar player Nirvana and then um started food Fighters with Dave Gro so [Â \_\_Â ] Pat smar walks right by me I'm in the hood I'm like what the [Â \_\_Â ] so I walk up I'm like I put this I'm like I go white you know and I I walk up to him he's outside smoking a cigarette like hey hey are you Pat smir and he goes yeah why you know cuz he's kind of got this artistic F I'm like what the [Â \_\_Â ] you doing here he's like my my band the germs practic is here I'm like what so like the most legendary punk rock you know punk rock band is practicing in the warehouse in the front of the warehouse row that I just moved into and that warehouse ended up being my first grow in La very quickly soon after that um and I was was just smoking weed with the germs all the time oh amazing so there was this front Art Deco building that had lockouts for band rehearsals and they did music videos and filming and stuff like that and so then Don BS lives in the Don B's a drummer and he comes down and he's like this skinny little punk rock guy like a relic and uh I'm talking to him he's telling me everything else he looks at me goes hey you want to smoke some DMT and I'm like what the [Â \_\_Â ] is TMT he's like just imagine you die but you yeah and I'm like I'm like I'm kind of interested can I take a look at it you know I'm like why not you know I was doing crazy [Â \_\_Â ] then you know I was dropping acid and getting on flights and filming Russian Mixed Martial Arts events you know doing stupid [Â \_\_Â ] like that um so I went up there and he pulls out this big ass strobe light turns it on and then hands me like a crack pipe with the DMT in it and he's like all right I'm going to hit you with the strobe light right when you hit it I'm like no I'm good I'm like what the [Â \_\_Â ] you trying to do to me and I'm in this like weird ass [Â \_\_Â ] room with all this punk rock memorabilia and like weird dolls pinned up and and taxidermy head just like a weird you know punk rock groy room that you would see like out of a [Â \_\_Â ] movie and I'm like no but I'll smoke some weed with you so Don ended up being like the guy that would always come over and hang out in the front room of the grow and just wait for me to hand him an ounce and he would just sit there all day long until I would give him free weed and then I'd be like Don you want to trim he's like nah I'm just just like what you got you got any table scraps you know so that whole area over there ended up being one of the coolest experiences because um we ended up shooting all these music videos there shot a Snoop Dogg video um got the jam with Snoop Dog because I had the whole rehearsal space down there I was like Snoop I'm on geffin now I'm a developing artist and he's like you on geffin I'm like yeah I got pictures of it I'll show you and he's like why we going to make some music I'm like I got a whole Space down here we can jam and then we end end up jamming for like six [Â \_\_Â ] hours delayed the whole music video smoking blunt after blunt first time drinking Hennessy you know and all Long Beach was all of his crew from Long Beach was there I mean there guys rolling around in wheelchairs like whatever you know he pulled up in this dusty ass Bentley I'll never forget that and you know we did that there was a bunch of like really awesome um we did this one music video for Beirut and the D and

Rachel McAdams was in the video and then um and then like Ryan Gosling came this is like way so next thing I got Rachel Adams Ryan Gosling this is before he even became huge and they're all helping put the music video together so it's like I move out here and then all of a sudden around all this incredible Talent um for me like most exciting thing is Mars Volta rented out our warehouse for two weeks and did a whole music video series in our warehouse and I was hanging out with uh Omar and Cedric and their whole band and their band would do jazz sets every night wherever they were and so I set up they were rehearsing their Jazz gig every day in my rehearsal room and I get to [Â \_\_Â ] sit there and smoke weed and watch like some of the greatest musicians alive what's insane is like you did that with a bunch of DVDs yeah and learning how to make videos yeah yeah with some weed coffee and DVD and just like now shooting production and um we did a we would do discounts for USC guys so like um there was this cat hero who wrote and directed Atlanta he shot my music video he shot all his early projects here um a guy named David Gelb who did uh who produced and directed hero Dreams of Sushi which w a [Â \_\_Â ] Oscar um this guy named Ace Norton uh all these young guys that were coming out of college was like the where they would use that to shoot uh their videos we did the coolest asop Rock uh video um I don't if you're into like some of the independent hip-hop but uh the song's called nun shell ped we did like a whole Zombie thing we had like 300 people there all dressed up as zombies while while you're running this video and music production you're growing weed next yeah I have like a six lighter no I built a loft and so I had to I had to grow in the music in the Production Studio and I was Lear getting weed back getting good weed back then was very difficult incredibly difficult yeah and the thing for me is like our power bow was already like 67 Grand a month because of the film studio so it was a perfect cover and there was always people smoking weed there so it was just kind of worked out and then we would throw um we would rent out all the warehouses in the front building for all like the early dubstep artists so like a lot of the early dubstep shows happen in Huntington Park off SoDo and slaon um and there was like a whole like a there was a guy that was really dialed in with the lighting he was doing like new Laser Technology and he worked out of that space um and he got tied in with all the electronic artists there and that's when we started running for those shows so we were doing Raves there um you know and it was it was and because this is the [Â \_\_Â ] craziest thing side note so one day there's a knock on the door we got like 200 lb of weed cuz we got the guys down from Mendo here and up in the Loft just full of B full of turkey bags we get a knock on the door and uh there's a cop in the front right and so I open up the door I'm like [Â \_\_Â ] I call Scotty there's a cop down here so Scott so Scott opens up the door and Scott's cool as a cucumber with this I mean I learned like game from him one of the coolest tricks Scott told me is if you ever get pulled over start picking your nose and pull out a [Â \_\_Â ] nasty goober while the cop's talking to you and he'll just [Â \_\_Â ] get get back in his car and walk away he'll never ask for your license it's a good it's good strategy something gross cop n I'm [Â \_\_Â ] cool you know yeah it's like the co trick no I have Co you know um so this cop's like what are you guys doing in here he's like oh we got a videoproduction Studio this and that he's like oh yeah like what kind of videos you shooting like what what's going on he's like MMA MMA you know Jiu-Jitsu he's like oh yeah he's like see the on the mat sticker that was Scott's Company at the time it's like you guys affiliated with on the mat and Scott's like that's my company and then the cop just melted what you're Scott Nelson and he starts doing Jiu-Jitsu moves in front of him and all this and then all of a sudden this this this cop there was like treated Scott like he was God and then they did all these training videos which is terrible now if you think about it like teaching the police how to like effectively choke out people after that after that relationship yeah yeah like no we did you guys do them in the in the studio uh I didn't have anything to do with that but want to say that but I was I observed like like that that cop looked at me as like a weirdo musician guy yeah um but Scott became friends with them and when that when that uh spot got compromised God bless Scott I got a call hey I got a call from officer Dave they're rating you this



day and I had like 48 hours to turn everything off shut everything down and get everything out and clear it all out so I call it the Jiu-Jitsu Mafia you know which is like where cops and weed growers would go roll together and that might have been why so much weed ended up why there were so many cops that were silent investors and dispensaries it might have been through that whole fight World um I think that we've you know this is kind of a touchy subject and I've said a lot about like you know law enforcement in the Cannabis space it's been you know kind of a weird thing but you know everyone's just everyone's people right they're all people 100% right and you know there's probably were a lot of law enforcement that looked at this whole thing is this whole War on Drugs is being a lie right and I don't know I mean it's it was it was definitely I was definitely very grateful for that phone call you know because I've had a couple incredible near misses in this industry and one of the things I think protected me is I never went too big and I never got too greedy every when I saw that was like chasing money heavy even still like I've been a turtle at this and I've been able to walk away from it and go do other things you know if I needed to I just loved the science I loved the development I loved the exploration of it and I like the danger it was exciting you know like growing up you know there a lot of people live in a lie and it was boring and you really got to you really got to you really get to meet the real world in this space and I think you learn a lot more I think there's a lot that we could take from our experiences that would help the world be a better place because you've got like the LIE of what everything is and then you've got the world that most of us kind of existing in about how things really are going on you know yeah there's you know just like in every culture or every you know group of people there's good people and there's you know not so good and it's the same way with cops yep 100% there's great cops and and then there's some not so good cops and there's there's a culture around it and we see what happens when we you know look at the current situation in California it's pretty terrible you know as far as a lot of the areas like when I was in LA in the 2000s was very different than it is now you know and uh we don't want complete chaos yeah no 100% I mean the like you said like you just said you know um people are just people um but you know I grew up with uh a guy that's that's on the SWAT team right now and you know we hang out occasionally we're not really close but when I do hang out with them at my buddy's barbecue or this or that the the stories that he tells me that he has to deal with being a a cop every every day yeah and the [ ^ ^ ] that he sees on a daily basis um they go through a lot of stress you know mental constant mental stress so it's like at the end of the day just be cool you know just be cool just be cool with with be cool with everybody but you know I just respect I'm big on respect you know and if you just show respect and and keep your head low and keep your mouth shut should have any problems I I think I think the issue with it is everything's just moved towards extremes and then that creates a culture within every group including law enforcement and in a way I look at like the adab all the protest everything a lot of law law enforcement is like oh you don't want any of our help all right cool we're going to step out of this let's see how it goes oh that guy just robbed you oh maybe I won't go after him yeah like and there's not a lot in it for them because there's a lot of um there's no reciprocity and in the same token I think there's been a pretty sick culture in law enforcement that I've witnessed firsthand I have had horrible horrible I've had experiences with uh with cops where U my entire life has been changed unfairly like I had um law enforcement try and plant drugs on me once you know I was in a situation where I was just [ ^ ^ ] full compliance I hope I make it through this right whatever you say officer but them trying to get me to touch uh packages of drugs like handing it to me hey what do you think this is well I'm arrested oh and I'm like that's not mine he goes come on Lindley what do you think I'm trying to [ ^ ^ ] with you take it I just want you to tell me what what you think this is have no idea what this is no I don't think you're trying to [ ^ ^ ] with me I think you're just trying to do your job but that's not mine and I'm not going to touch it yeah and having them hold me there and [ ^ ^ ] [ ^ ^ ] with me waiting for me to say something right and I've been in a situation where I got arrested by three cops for

no cause right and I've had situations like that and that triggered a whole series of events where I almost lost my life so I think the problem is it's like you have the degeneration over our society to some extent which is creating you know real Extremes in the culture and then you know do you walk around I mean I won't ask you this but like you're walking around with a gun all the time you you get a sense you get a feel you have you have a power there right so if you're a power if you're someone that intrinsically feels powerless and you become law enforcement to feel powerful it's [^\_^] dangerous yeah 100% you know and that doesn't mean that there aren't people out there that are trying to do good public service and all of that but so much of our society is just complete and total [^\_^] [^\_^] right and if you've got you know an IQ over a 100 you can see that there's just a lot of [^\_^] going on and that the social contract is kind of degenerated quite a bit so I don't think adding I think we have to have intelligent thoughtful conversations about it I think we have to say what it is but I think that the more emotional people are getting about it the worse it's getting the more extreme it's getting you know um you know I was in Pittsburgh when uh in a hotel room watching like you know whoever was down there throwing Molotov cocktails at [^\_^] buildings and seeing the police come in state police come in like you know front row seat watching some of this [^\_^] go down and uh it was it was it was scary but more so was incredibly disturbing because I was watching um the agreement that we have to be in a society together where there's some sort of order completely fall apart and both you and I have kind of been you know one you know a couple Shades out of that order because the LIE of prohibition on cannabis all that I mean couple Shades out but still respectful but still respectful right that's we're not we're not going to robbing people yeah yeah we're not I mean there's I mean this part of the thing for me like with the journey with cannabis is trying cannabis being like oh [^\_^] this is this is helping me in some ways I could see how it could hurt me but it's helping me and this is a lot worse things out here and why is this evil why is this demonized why is this not allowed because of a lie all right well what else is a lie you start looking at things like that you start peeling it back it's probably why there's so many Libertarians and conspiracy theorists in the wheat space because once you start working if you were working with this plant when it was illegal and you kind of you kind of step into a different world as far as the way you see everything yeah like my Optics on the world changed I would say it was deeper it was richer and it was more authentic and now it's more socially acceptable arguably optically and socially it's legal right like even though it's not federally legal like people don't like you can go outside and soci it's legal socially it's legal yeah socially is permitted whereas like growing up you you know it wasn't accepted you were outside of your you had to hide your consumption it was if I got caught with an ounce of Florida was a 5-year mandatory minimum sense um you know and that that created a whole culture that is part of the police culture in the police state and it's going to take a long time to untangle all that there's no quick flip I think everyone was like you know they'll hear a politicians say we're going to do this this and this I'm like no there's a whole long road of detangling Decades of lies and [^\_^] to the point where it's actually going to be normalized and that's part of the reason why a lot of these legalization programs in the states fall apart is they have no idea what they're doing like they have no idea what they're up against you know look at New York you know they have no idea what they're up against they're going to UNT they're going to detangle an entire uh economy and culture that's been built around this but just like having a couple conversations and Licensing come no it's been going it's been heavy and it's why you see the healthier programs are in the states that were probably had harder prohibition laws and it was more restricted and it's slowly opened up and that's and people have been upset about that because we it's a lot harder for guys like me and other people that don't have the capital to get into these markets to participate in it it's like there's a you know there's boundaries there and all these big msos came in like what the [^\_^] they don't represent us but at the same time it slowed down all of the nonsense there's a

there's a benefit to how some of the stuff rolled out and now would be the time you can come in and start creating those opportunities but um you know California New York it's [^\_^] mess yeah it's a mess but they looks like they just closed down 100 100 illegal shops in New York just recently they did so but that's the thing it's going to take heavy enforcement heavy enforcement right now in California we kind of in a pickle because to fix the flagrant Behavior here that's going to destroy the entire industry here yeah because like they let this stuff go on here for a decade now whereas New York they're like oh we're going to have to fix this now they got that Governor over there in New York that's and the mayor New York all that they're really working hard because so many people invested so much money into that legal Market but in California they just like stumbled around and there's a whole lot of money moving around y you know it's not being tracked it well it could be going into politicians pockets is my guess I'm sure the corruption goes all the way at the top here and all you have to do is start looking into things like the hom Key Program the housing the homeless program yeah yep like \$650,000 for a little Adu yeah where's all that going yeah you know who's running that Oh Google's a part of it what is going on why is Big Tech building the houses for the homeless and how come they're 10 times more than what it would cost for me to buy at MSRP off the shelf right now you know and how come none of the homeless are actually being housed yeah but all the money went out and you look at that with all these programs and this contributes more to the degeneration of the social contract which is the agreement like Hey we're going to trust the government to create order and then we're going to have some rights and we're have the ability to do business and take care of our family but once that goes away and then the enforcement around the order is still there but the order doesn't exist you got a big [^\_^] problem being a being from the Cannabis industry and and the culture where do you think most Growers lie do you think they lean towards conspiracy or more libertarian because if you really look at as cultivators we already don't have a lot of trust for the government no I think most I think most Growers have been I mean I'm going to talk about Growers now and from the last 20 30 years okay like there's a new generation of Growers that are coming up that are learning at these big facilities maybe they work for these big msos that's a whole different generation now that's a whole new culture a whole new culture and none of the old Growers are really doing a great job fostering that new generation right I'll tell you that much because of our past trauma the libertarianism not trusting this new not trust you know seeing seeing an Us Versus Them thing across Generations across paradigms all that but most Growers most Growers that I know including myself are going to be less trustworthy of [^\_^] everything yes because we have seen the [^\_^] double speak we have seen the [^\_^] where we like oh yeah that's how it is you know you've lived it you've been in it we all lived it yeah like human behavior Alis Huxley said it best every man is trying to es Escape his sweating self and there's certain ways that were going to allow you to escape yourself there's other ways were not and this is one of the ways that um you know some group of rich white dudes back in the 20s decided you can't do that anymore essentially I mean it was yellow journalism Rand Hurst all that right and that was decided and that got created and now and now we're here and then there's a whole business connected to that and that's the thing it's like I mean I still there's a lot of people where I'm like you don't you don't know about freeway rcky Ross you don't know about um you know you haven't seen that movie I was like watch that movie Kill the Messenger right like you haven't read any of those books like that's that's real they're you know the government does what it deems it has to do to move through a mission which means there's no rules we have we get those rules but if you know we're fighting communism or whatever there's no rules you know and I think that are um are you an ' 80s kid too yeah I 85 you're 85 so for me the big moment was uh waking up to go to class it was was my freshman year in college and a good friend of mine called me up turn on the news right now um a plane just hit the [^\_^] World Trade Center yeah I was in high school I was just getting ready for school right we were all getting ready for school and we turned that on and that

was the moment where I was like what like do you remember that feeling yes yeah and then immediately after that everyone's like America [^\_^] yeah everywhere everyone it was like all of a sudden it became a brand that I never even knew about and everyone was just pumped up but it wasn't real cuz if it was real it would have lasted it was a response to something completely fracturing and fragmenting and falling apart and that was this idea that we had and then nothing made sense after that like I was like what what are we doing what are we doing and now the same politicians that were speaking out about the Iraq War and everything they're All Pro Ukraine war now and it's like nothing changes it's all [^\_^] that's it's all it's all about it's all narrative it's all about the global economy it's all about this power that power it's and and all of that so all that is also fundamental to the philosophy around the social contract so part of the thing for me is like the more that that perception of what was real whether it was in the Christian church um whether it was was the government whether it was the school systems once that just starts ticking apart you know I dropped out of college one day I just was sitting in class and I had this realization [^\_^] this is just a degree Factory that's all this is you come in and they just pump out degrees but I'm not really getting anything here you know uh that that I'm going to use so I remember sitting in this class and I just took inventory what do I want to do and I wrote a list out you know and I wrote the list of them my goals were and then I then I put another list down does any of what I want to do anything I'm doing now in school have anything to do with that is it going to get me there no and I got up I left my bag there I left my books there and I just walked out of the class and I never went back and I was friends with the literature teach and you know they were like you know they were paying me money I just left it all I was just like [^\_^] this you know I'm I'm going to go work on this album I I'd rather be working on right now and um I ran into like one of my literature at the gym and the school had been trying to call me and I'm like I don't want anything to do with it anymore like I'm done and the lit the I ran in my literature teacher at the gym and he's like the school thought I had killed myself or something I'm like no no no no no I I'll go in and tell him I'm fine I just I don't think there's any value of me finishing this degree I cannot figure it out like it's a lie and then we have this conversation and it's like that now every single one of my friends friends that continued with their college they're still in [^\_^] debt y they're still in [^\_^] debt like what they're still paying off that [^\_^] and none of them are using the degrees they got right and I was just thinking like damn I'm glad I didn't go to one of those schools you know and so I think it it's been the college thing been pushed on us as a society um what matter before from as kids we had mattered before yeah as as kids I remember you know I I never my parents didn't have a ton of money and um I just knew I wasn't going to college and I remember being in high school and they' you know do these uh have in in in when you're a senior and a junior they have the different colleges come talk to the high school hey you know this is yeah you know what's up and then my friends would ask me what college are you going to I'm like I'm not going to college right and then the counselor you know you go with the counselor and they're so where what's your next plan what college are you going to you done okay without College huh yeah and and arguably and even as a you know a junior or a senior in high school I just understood that I wasn't going to college and right and uh I would let him know I was like I'm not going to college and they're like you're not going to college what is what is wrong with you and that was what was going on in high school too cuz by the time you hit freshman there putting that in you yeah and that your all your value is college is college and I that was the thing for me you know um where I just started going huh and I got kicked out of my first high school and I then I had to move to a big High School uh so I was at a smaller Christian High School and like very early on I was just in uh I was just in trouble all the time and uh they did the mid year they're like this isn't the right SCH cool for you no let's let's change it up and uh so I went to a school that had like 6,500 kids it's a huge high school and that was the best experience but when I got there like I saw a different

version of the lie and it was just you know cuz I got there I was from a private school so they immediately started FASTT tracking me like put me on student council and all this stuff you know because I was asking the teachers questions and none of the other kids were asking about things that were going on like would you like to be a part of the I'm like sure this is the path towards going to college and then like what I saw there was just more [Â \_\_Â ] and I dropped out of that real quick and uh you know and then you know like music was you know music and the everyone that I played music with too uh my next door neighbor was Eric Andre we played in bands together all the time um that was but it was a real thing you know and he did all that crazy [Â \_\_Â ] he does on that show as people ask me was he what was he like yeah they did the same stuff was you know doing all kinds of gross [Â \_\_Â ] but that was more real you know and that felt alive and so when you come out of something that feels dead but everyone's telling you it's alive which was you know Outlaw counterculture where people could be themselves I could be myself right that's the thing like um that's why I still love La too I can come down to La I can be myself and talk to anybody you go to other places you go to these other states people are still in that whatever that Paradigm is this is how the world is yeah I think it's really important for the you know especially as a kid to it's okay to ask questions and think for yourself like like even with what you're being told you know it's like is that the right path even though you're being like just drilled with it right like is this the right path for me and and and that's happening like the kids now are getting drilled with the new thought process but the mechanism and the manner of how it's happening is no different to me than growing up in a religious background like it's still the same ways of thought control and this isn't um to discount or discredit like as I've gotten older um like the New Testament and Jesus' words have meant more to me now but I had to I had to escape the religion I had escaped the religion for it for me to understand the symbolism the meaning of it um how violence is in the answer right like that violence just creates more violence like once you begin a cycle of violence it's really hard to get out of it and um just all those stories have meant a lot more to me now but that was through a lot of ups and downs and and also just coming out like when you grow up and you've got all these adults that are creating a container for you and then telling you what you have to believe without there being any room of exception and then there are being like this immaterial or conceptual idea of like burning in hell yeah yeah all that like I look at like hell is a state of being now but when you're a kid you know and then you know I I would always ask questions and I would cause problems I've always caused problems by asking questions cuz I just be over there scratching my head but to shake that to shake and I still I think that the other thing too it's like when you grow up that way I still have a part of me that is deeply still rooted in that that I don't think I'll ever fully Escape so I have to question myself all the time like am I seeing it this way because of how I was conditioned as a child or because it's objectively true yeah right and working with yeah questioning yourself right but working with that's the thing for me my journey with cannabis was like make money so I can do music and then it became no grow plants and learn about the universe because I would start you really see cause and effect yeah right and you really you see what you put into something what comes out of it and then there's an understanding of all those patterns and that was like all those first conversations with Tad like I was high off of seeing more and more of these parallels in the garden with life right and and in a way looking at it now it is kind of biblical because we were supposed to caretake the Garden right and what was the gift the gift to that is like you take care of the garden you learn about the universe and then you become bigger your understanding of life becomes bigger and more truth is revealed to you it connects you with nature right and it's not to worship I see lot of people that worship cannabis right no no no no we're we're we're above plants as far as uh uh Consciousness hierarchy but that doesn't mean that plant life doesn't have a Consciousness that doesn't mean that plant life isn't there to teach us a different Rhythm and teach us things that we need to be bringing into our life to escape this lie like there's a fake world that's been put

over the natural world that we're just in all the [^\_^] time and now uh you know people are short short cutting that with psychedelics in my opinion which I did you know I totally was like okay let's go down the road because you do psychedelics and you get a lot of that information really quickly because all those filters come off chemically and then you're flooded with all of this and then you have like this rapid very quick form of Enlightenment which could either be Hell or Heaven depending upon where you're at but really the better path is just to be meditating with things that are alive and caretaking them so you can understand how what you your actions well your causes create what effect and then from that that's everything else is opened up and that's one of the things that's been the most beautiful thing about the prohibition about cannabis is that you got people at every in every PL like all the tent Growers all the guys growing all connecting with plants all connecting with whatever and it's mostly been the guys that been growing been the people that have had less resources that have been doing it because there haven't been options they didn't get the education they're not learning about biology uh and chemistry from school they're learning about it by working with the plant and then they the effect and the relief that the experience of the plant gives them from their sweating self in the [^\_^] hell that they're existing in then opens up more truth of the universe which then changes their life condition and how they have a relationship with the outside world if you're going to tell me that's not God's work what the [^\_^] is you know what I mean yeah I love it that and that right so it's like you can look at like the cost of prohibition but every cost has a benefit every benefit has a cost and that's one of the benefits and that's one of the things that I look at with this new generation of kids coming up that want to be a part of the space like we got to pass those lessons on right if it just becomes about like getting high and being a part of some Escape culture or money you're missing the real value you're missing the the part of it that you know and that's been the thing in my life like I've been able to sit down with anybody from any place in the world any level of life and inside of music and inside of weed like I can connect with anybody if I'm jamming to a good song and they're there and Jam a good song and we connect there's joy there if I got a good [^\_^] awesome stream with a new profile and we're sharing that and we're talking about that there's joy there that it doesn't matter where you come from y you know and I'm like I've like had that experience with like some of the most powerful celebrities and you know guys in the [^\_^] gnarliest gangs and cartels and that's like where God works right and that that's that's the that's the great thing now you can get lost in all of that stuff stuff but it's just really highlighting that opportunity for us to come together and for there to be that Evolution through collaboration which is what we started talking I don't know if you filmed that but like how like the most advanced steps in evolution happen through two collaboration not through competition yeah you know competition might drive that point and like competition might be the driver that essentially creates a force collab but that's where those next levels happen y right so you know that's been a part of the experience and then for me and and then working with the Garden open me up to experimentation with more substances which uh were a part of my life for a while they're no longer anymore because I have a very different experience of it um you know I got to see the cost of taking really extreme psychedelics and thinking that was going to be a way to fix things with me you know and to to to improve myself or to get through past trauma um and I think psychedelics uh I think what's happening with the Psychedelic movement is terrifying right now that it's being commercialized so quickly what what section of psychedelics like psilocybin and mushrooms or like other kind of I think I think we all have to look at them a little bit differently um and that's the thing that's not really happening right so it's like they're all being kind of grouped together as under the name drug well under the name psychedelics really right so like we seeing a r like what can what the roll back of cannabis prohibition is doing socially is having everyone rethink um how we look at substances overall which is a positive thing but the problem is the same problem we had with cannabis which you got these profiteers that are

coming in and there's an good argument to be made that all that speculative speculative investment all these Wall Street Crooks that came and all these guys that came in and pumped all this money early into cannabis has created you know majority of the problems um because of chasing greed not chasing that Universal understanding that these things can open us up to more so I would argue that um you get more value spiritually and personally of cultivating these plants then understanding the relationship they have when you take them right but you know you know creating a bunch of consumer package Goods over things that have been used in sacred rituals for thousands of years and then turning it into a [^ \_ ^] Diet Coke yeah bro it's not gonna work it's gonna be a [^ \_ ^] disaster yeah and and so I look at all this and you know uh we talked a little bit about it cuz like I tried to escape there was a period in my life where everything was falling apart um lost the record deal was in a really tough personal situation and you know I started growing for this group and they were like a private Collective you know everyone was getting raided this was around 2010 2011 we had these phases in prop 2115 where everything would be good for like six months and then LA Times would be like there's more weed dispensaries and Starbucks McDonald's Taco Bell combined what are we going to do about this problem and we'd all be like please nothing you know I'm getting 3200 a pound right now please don't do anything you you know and then they would come in and raid everybody and then if you had um if you had anything on the arm if you were Froning to a dispensary so I would work with dispensaries get contracts with them and I would get paid like every 30 days and I was just looking for consistent um consistent Partnerships with dispensaries at the time where I could trust them you know cuz when you're there's nothing scarier than walking out of some shady dispensary in the valley with no protection and you're walking in with like 50 lbs and walking out with like 150 Grand and that like 100 foot walk to the car like was the walk where you were like I remember your [^ \_ ^] heart's beating in your [^ \_ ^] ears and you're like I got to make it to the car got to make it to the car because that's when you get robbed that's when you get jacked that's when you get shot all those kinds of things it wasn't in the grow it was in that transactional process so for me like I I was a young father um I was like I really believed in moving forward on legalization because I understood the value that I I was getting from the plant overall right all the stuff we're talking about starting to dawn on me then um and I still wanted to like try and find a music career cuz when you know geffin basically folded in an island de gym and they dropped all the developing artists we were in the middle of mastering our album and it was like overnight went from hero to zero and I'm like [^ \_ ^] this I'm never going to work with a label again I'm going to fun it myself you know go back to go back to the original plan um and uh you know that didn't work out because I got completely obsessed with cultivating cannabis and stopped playing music for a period of time like I just went fully into at all um but you know the the hardest part was getting those consistent relationships you know it was everyone had their own little tribe right um as far as who they who would work with who and you had to be careful about it there was a lot of people in the valley that were all mixed up in a bunch of other stuff you know like there was like a lot of the weed people in the valley were also part of the porn industry and everything that went along with that which was not always really great and so you got to you to be kind of careful about who you worked with and I was just looking for people that shared the same philosophy that I did around the plant and around the product and en and enjoyed all parts of the process but those guys would get shut down and so um through a few friends and a family member I connected with these guys that allegedly had like this private Collective um so I started growing for them got closer to them and then one night I was like going through something and I was picking up I was either dropping off wheed or picking up money from them and the main guy just like looked looked at me looked through me you know I didn't really they were a little weird right they were a little weird they were like into crystals they had like a like a strange mly group of people like older women and you know 20-year-old guys that would hang out with them and they were kind of new Agy and woow woo um and you know

they he basically had this really intense conversation with me and I was in like a manic moment at the time and it resonated with me and then they invited me to do like a journey with them now I had already kind of experimented with psychedelics on my own um and had gotten some value out of it and at the time I was just at a super low like I was at that point where I was you know I was just not I was miserable as a person Miserable as a person and I think what happened was like uh when you get a record deal at least back then like you get like the biggest ego shot ever you know and you're hanging and you know you got all these people telling you you know what your career is going to look like and everything else and you're you know I was you know hanging out with you know some of the coolest artists in the world and you know you build an idea of yourself you know and that's why like a lot of people again the music industry young they get ruined by it because what they're really creating is a false projection and that's that product that the music industry is going to sell but you believe that that's you but that's not you most people are [^\_^] up you know and you got to get through all that stuff before you can have that kind of attention so I got to that very tip of that and then it all went away overnight so that false ego that highly toxic narcissist Rockstar version you were in your 20s yeah I was in my 20s yeah I think in your 20s yeah you're you're really vulnerable to Ego right right living like Entourage you know all of us right I mean when you when you get into your 30s to mid-30s you kind of figure out none of that [^\_^] matters like I don't like status I mean some people are stuck on status or ego or whatever right it's a lot of it in the Cannabis because can in the Cannabis world it's kind of been funny because it's like uh you know I've had the opportunity to experience being more of a rock star here than the music industry you're a rockar in the Canabis industry and for me like as I always people say it's humbling I'm like no it's not humbling that's building your ego up it's the exact opposite of that yeah it's cool like I I love it and I try and use it in a positive way I mean I've been a real [^\_^] shed starter online but when I meet people in real life um it's just you know where you at let's talk you know whatever it's human human it's the same reason why like music and weed connects everybody from every Point Place and that's been the beautiful part about it and you know I love going to the events and hanging out with people and getting to know people so in your 20s like you were like we're all vulnerable to that we're all vulnerable to the ego right and um and most of us are running from whatever [^\_^] trauma we grew up with Y like we haven't got like you come out of high school and you start partying you start doing stuff you start find your way yeah you start taking risks but most of us didn't come up with the tools to figure out especially my family has just like a dark complexity to it um where there's a lot of nasty stuff and it's much easier it was much easier for me at 17 to just leave my house and be like [^\_^] all this yeah I'm going to go and do my own thing but that doesn't mean that I um I dealt with the weird trauma whatever people want to call it like the sh the darkness like you still the darkness doesn't go away just because you want to pretend like it's not there you still have to understand what it is confront it and pull that [^\_^] out of you yeah you know you got to be conscious of it right yeah and because your your upbringing stays with you I don't care who you are right it always stays with you and sometimes it takes psychedelics to grasp it well that's that's the thing for me psychedelics became a way for me to see that life is much bigger than just my experience and all of that and and psychedelics are a reminder that we're more than just a material being that there is this whole interconnected world that we're a part of um but it's like taking a heavy dose of all that information at one time before you've actually done the work to hold it it and earn it and ground it so like this these group of guys that was the whole thing is like they were going to take you on these Journeys you know they were like quote unquote Shaman right uh I call them plastic Shaman but they were the whole idea behind it is they would take you through these Journeys you would set this intention and then they would um help you work through those things so you can become your higher self they had all this language I'd never heard before religious language essentially because most of



these Shaman groups including this one are just little Cults right and they're creating a new hierarchy and when you talk like that it sounds like a it's it was a [^ \_ ^] cult but in California a lot of that is concealed around counterculture alternative lifestyle right and now I look at the world and I see Colts and a lot of things that I wouldn't have identified a cult now just based off of the way that is designed structured the messaging all of it I think politics are a cult now and that's also how I feel about what's going on with the Psychedelic movement is people think that they can take psilocybin or iasa or MDMA and Shake free of their demons you might experience the demon in that experience and think that you've gone through it but no this the there's it's just kind of like ringing a bell once but it's not carrying the tone like what you know psychedelics is just ringing the bell you hear the tone but really like you have to be the tone of change within yourself which means understanding the parts of you that are that are dark like right if we go talk we're not get too into psychology but understanding you know the whole idea of of of young and Carl Young and all of that was understanding your Shadow right confronting it being fully aware what that is and accepting what you are capable of fully embodied in your Shadow so it doesn't get expressed unconsciously right it's like that's part of the thing with violence if you get triggered emotionally and you let the demon out you know you could you could ruin everything for yourself but if you understand that Darkness within you thank you then if you get triggered emotionally where you might unconsciously Express something horrible and violent and destructive uh that's less likely to happen if you understand what that is you know if you're conscious of it you're the Power of Now you read that book yeah of course it's e y um it's great because you can observe yourself you can observe your thoughts right so if you can observe your thoughts who's observing who's the one observing right yeah right I mean I think that's really big well it's it's it's it's it's about it's about understanding that we are we are all good and we are all evil right like we all have the capacity of that and then by observing and understanding those that those base reactive actions and desires but also knowing what it creates right going back to the Garden cause and effect um and that's been part of my journey is understanding that more and more like I used to troll things I didn't like that I thought were undesirable online and then I watched what that created I mean I had fun with it I still laugh at some of it but at the same time uh I think it did a lot of harm to people who might have deserved it who am I the person to be the one to decide that number one number two even if it was justifiable that energy I put out there and it and it it will come back to me because that is what I planted that is the seed that I planted so like this whole idea of being like an online Batman is ridiculous um really the path now especially after and we all kind of lost our minds during Co and I think that's when I started being like [^ \_ ^] it I'm gonna say what I want yeah you know at the same time and that developed a bigger audience for what I'm doing and it was but it was all feeding the same thing that that's destroying our our whole state of being collaboratively together so now after looking at what it created and sitting with the feeling right I didn't need psychedelics for this maybe I smoke a little bit of weed and then I would sit with the discomfort that I created and I would I would get over the ego part of it because when I would put something out that would be like you know a flaming hot Cheeto of a post everyone you know I would get addicted to the attention of that and then that be started to become my value and my identity and then like you were just talking about reflecting upon that looking at what that did wait what am how am I creating myself right now do I like this and then like I pulled this whole move where I started putting positive posts up about people and companies that people like to [^ \_ ^] talk right I think I did one for Athena right I put a comment about what I saw you guys doing that was right and at the time you you know everyone in this industry likes to take down anybody that starts winning you know and it's it's a competitive strategy you know but it also then breeds a lot of mental illness because then people start characterizing like a brand or a company uh in a specific way and then everyone associated with it and it gets real tribal and it just it's not productive um so I I tried to flip the script

on that and I got doxed I had people come making you know uh digging up every dark part of my family going after my wife like I got it back back I was cuz I basically like I'm tired of this let me try something else and then I I also knew that I was going to reap what I was going to what I sewed I'm like I planted a bunch of sick seeds and then a lot of the people that were following me were the people that are the most unhappy with themselves and then it's a lot easier to look at the outside environment and just blame that for why you're not happy and it was really hard to go through all that but it was something of a real traumatic experience well gra you were conscious enough to take a step back right and really break down the kind of where you were getting your feeling of importance from right yeah it did not have the value I wanted to create yeah because that's not where I started in the space that's just where I got the most attention yeah the you know where where where I started was focusing on bringing people up yeah and cultivation philosophy and Tech and then all of a sudden nobody even knew I did that no one even knew that I was growing and working in this I always knew you did it because I was a fan I was a fanboy long before you were and everyone yeah and then everyone like Tad would call me up he's like you okay buddy I'm like I'm just trying something out he's like all right you know you know people would be like what's going on with Nelson right now and then for me it was just I I guess I probably you know you know things my life got hard again and then when your life gets hard you shouldn't be on social media that's one thing I would say like that social media is a psychedelic drug right because you're connecting addictive one at that well yeah you're connecting to a specific kind of collective Consciousness the same way that you would if you were taking a really extreme psychedelic drug so I guess I hadn't worked out all of my demon right and then that came up with this new form of of connectivity and uh I mean I still like to make memes here and there cuz it's funny I mean I like the humor part of it but the the issue of it is that it's it's so easy to look at what's wrong and make fun of it it's really [Â \_\_Â ] hard to try and come up with something that compete with what's not healthy and take its place so that was the that was the moment I had when I like I got burner on the phone calling me to ask to take down meme posts you know it's like you're going to kill what I'm doing right now and you know I guess I felt like a lot of it was righteous but at the same time I just look at what like everybody's going to reap what they sow and then I was realizing I was just planting the wrong seeds you know and so I was like let me put a positive let me see if I can come up with a positive post about burner and I really wasn't like too into everything that that guy had created in the space I still will say this that I think that overall what he's created has been a net negative for the Cannabis culture and I could talk and I could talk about that in a way where it's thoughtful and not hateful uh and I think a lot of the um transitional guys from the black market to the legal Market have tried to hang on to too much of the darkness that's on the street and bring that into the mainstream and that's the worst thing that we could do for this business and but that's not for that's not for me to like Dole out social media Justice I mean everybody you know everybody is going to get the fruit of what seed they planted yeah you know and I might be able to put things together and see the patterns and see where it's going but now I now my objective is just to find good people to work with and let's do something different that feels about her yeah do something POS who cares what these people are doing who cares just let them do their thing it's going to it's going to play out how it plays out maybe they win maybe they lose who cares the world is small and also infinite yeah you know it's really uh important to stay conscious of of of how powerful your words are right and and with with Athena and the team I constantly reinforcing um we have a strict rule we do not talk bad about anybody I mean you guys are good at that yeah cuz I've definitely tried to bait every single one of your sales people yeah and how they hold up [Â \_\_Â ] perfect y I might get like a raised eyebrow yeah like one of these they're like yeah okay we're with you but we're not going to say [Â \_\_Â ] every a lot of people do it to us a lot of our competitors just beat us up non-stop right I see that it's non-stop but but for us you know for my dissemination to the team is

just look we don't speak ill of anybody like it happened uh a while back long years ago and I brought it up on a call and I continue to reinforce it to where look we we it's just we don't want to put that out in the universe like that um and and you always get it like when you when you're dealing with somebody and if they um talk bad about another brand or somebody or company it it it feels dirty and I I really don't think that helps the business well it's coming from a deficiency so for instance like and I can speak about this with myself like when I would go um and things still piss me off right but I then I just talk about it with like a SLP group of people where I can flush out my feelings on something and then figure out what the opportunity is in it but like a lot of it was coming from a place again like you know [Â \_\_Â ] would get under my skin and piss me off so much but why right well because there was something that I didn't have in my life that was filling up that space or it came from a past trauma so like in that what ended up being a psychedelic cult that guy that was running that whole thing um you know I went on this journey with him and it ended up just being they were giving us experimental psychedelics I don't even know what they are they're some of the most powerful substances I've ever taken my entire life and different from DMT and different from iasa and everything else I kind of uh you know experimented with before but part of it was like this hierarchy thing like he was creating his own type of a narrative and Midway through through I realized what it was you know and he was hunting vulnerable people and so for me I would project I maybe it was a bit of a projection but I would see people doing that in this space and that's when I would get pissed off because I went through hell getting out of that situation with those with those characters and had to restart my whole life like saw the [Â \_\_Â ] the evil like I really necessarily know if I believed in evil before that experience but no I did after that and I would start seeing guys in the Cannabis space that were cul of personalities that like shared a little bit of that Spirit lineage of a cult leader that I [Â \_\_Â ] hated but I hadn't fully let go of my anger or the fact that I I put myself in that situation right so part of it was like projecting out Old Wounds right from being a situation where I had given my power to somebody that was uh not worthy and not only not worthy just playing [Â \_\_Â ] evil so I would see these patterns and when you're in that situation um you know I was in survival for about 3 years you're like you're hyper aware but also I think I was like and maybe maybe one of the psychedelics that I took from them like [Â \_\_Â ] flipped to switch for a minute cuz like there was one Journey had with them where [Â \_\_Â ] was not the same for a hot minute after that you know even after the experience after the experience yeah like the um my perception changed I think it per probably permanently changed to some extent but that's you you figure out how to adapt to it and move through it but you know it's and and that's the danger or the risk maybe the risk of some of these substances we everyone's brain is different right um you know I've also had had trauma once in my life too so it's like you don't you're playing around with some things and you don't know where it's going to go and so I look at like you know again I go back to look at the commercialization of a lot of psychedelics it's like oof it's scary yeah it it can go sideways real quick especially when overall the mental health of the world is that it's alltime low things are a little bit more heated a little more triggered let's give somebody a potent Consciousness altering substance that could turn things on and off that won't reset for a minute right um so I think that like part of it too is just you know because when I came out of that that situation and that cult um you know I I had like a period of time where to get out of that situation I had to just basically walk away from everything and and I was homeless I was like a government Lea uh I was living on the streets for about a month and then um I connected with uh you know some hippie dudes you know kind of lived that that experience in a little side note I think that the only way you're going to solve any leader is going to solve the homeless problem is by going and living on the [Â \_\_Â ] streets and understanding what it is because it's a completely different world it's an underworld you know and you going into government relief they set you have a motel vouchers they give you food stamps and so I went on uh

they and the motels that they put you in like it was in the Bronco Motel uh in South Central you know and it's basically like bookies prostitutes and guys running whatever they're running out of there yeah so you're still into that same energy it's all around you and you got to pull your way out of it correct so I went from like um like a subliminal and pathological evil and darkness with that Shaman group to like outward War like being in South Central's war and I'm a tall ass [^\_^] pasty ass white dude right everybody there thought I was a cop you know I had guns pulled out me a number of times um actually have one experience where I I became friends with one of the guys that were one of the guys that were in the mo Motel on the other side of the little wing and I went over there to hang out with him and one of the guys that was with him thought I was a cop and he pulled out a gun and all I had all I had left was my guitar and all of the seeds that I had made like I had my seed collection and um the guy had the gun out on me he was convinced I was a cop I said can I get something out of my bag I'm going to give it to you all right and I pulled out this mason jar where I had all these files of different seeds and I said look I've been growing weed for the last 10 years right you think a cop these are all this is my seed collection I went through everything it's like pre98 Master Kush times coconut cush this is a Thailand race I worked all this I went into all the detail it I'm going to give you these seeds just don't shoot me now would a cop have [^\_^] weed seeds takes the seeds [^\_^] opens it up looks at him and he's like confused as [^\_^] and he goes probably not I'm like cool can you put the gun away goes yeah and then everything C down holy [^\_^] I'm like and and now that is I could argue you people say weed has saved people's lives that [^\_^] saved my life because the dude that brought me over there was tripping that this guy was going to shoot me he was trying to talk him down that guy was like saying shut the [^\_^] up this guy's a cop this guy's where was this at this was at the Bronco Motel yeah uh which is I think it's like slo and Western whatever I driven by driven by there a couple times just to like be like [^\_^] made it out how did you get in that situation because that was when I with him pulling the gun on you well no the there was so what happened was like basically when I started Living on the streets when I let go of every personal possession I had you know and just with that with that group with that group I just basically let everything go and walked away from it and uh there was a lot of things that let up to that I'll write a book about it one day I'm not going to talk about on this podcast yeah I was pretty intense too um but when I let go of everything I owned I experienced a freedom I had never felt in my life to not have anything to not have anything and that like Turned something on it was like a psychedelic psychedelic experience of its own to not have any material things like I have my guitar and I have my bag with like some [^\_^] in it and I was like there's you know I was like picking fruit off of trees and getting avocados you found freedom in it yeah I found freedom in it and I you know I did a lot of survival camping and stuff like that growing up and so I had had experience Sur surviving been lost in the woods a few times um and I had like a period of my life during my teen teenage years where I was spending a lot of time in the bluid mountains hike the appalation trail so for me I was kind of looking at it as like a different version of that but very quickly you know I tried sleeping on the beach and then I had like a group of people uh that I I think if IID hung out long enough were going to try and kill me on the beach I experienced like incredible incredible moment of like threat trying to you know the parks were a little bit easier to sleep in but the beach was not I thought the beach might be be chill but there's some weird [^\_^] that goes on on the beach in California at night and so the next morning I was talking about that with these like hippie uh [^\_^] homeless guys and they' said said you got to go to government relief and that guy was like no really you need to go to government relief he like they emphatically told me that they knew something they knew something coming down the PIP yeah for me like I was not supposed to be out there I couldn't handle myself whatever and so that went into the gr which is like in Santa Monica and you wait in line and then they put you into a job program and then they give you like bus tokens and then motel vouchers and then you get to pick they give

you a list of like what motels they have availability and are all in like the worst crime areas so that's how I ended up there cuz I was the only motel that had vacancy so I guess the government has some deal with these motels and people shack up there and so that's how I got to that motel and then when I got there you know there's it's a whole other scene everybody there's looking at me like who the [Â \_\_Â ] is this guy right 6'6 white guy 6'6 white guy right and so every day I would just get out of there and walk around and kind of get an understanding of the neighborhood um and you know [Â \_\_Â ] pick fruit off trees and avocados and stack it up and I was trying to like stay healthy you know I had like bags of pomegranates it'd be funny like sometimes someone would come up to me on the Block there or whatever and you know [Â \_\_Â ] come up to me like they were going to hurt me like what are you doing here and I'd be like you hungry and he be like what and I'm like here have an avocado and they be like yo you're the craziest white boy I've ever met but that like me just being generous and not having any fear and then they would like you know be pomegranate banana and apple whatever they would eat in front of me and they' be like what the [Â \_\_Â ] are you doing here and then but it would diffuse the threat yeah like because it was just so off the wall and so uh there were like three rooms that had like prostitutes in them and then like um I heard this commot and I go outside and this dude's beating up one of the prostitutes in the parking lot and so it was like an l and so I was I was on this row and I look over and then there was all the gangster guys had this whole part of the motel and the prostitutes were next to me I get anxiety talking about this [Â \_\_Â ] um so I just I didn't have any fear at the time maybe I was just completely psychotic but I went down and I got in the middle of the dude beating up the prostitute and I just like stepped right right in the middle I stepped right in the middle of it and I said something intense I don't remember really what it was but I just looked him at the eye in the eyes with no fear and I said you're going to leave right now you know and I was calm but I was fierce and this [Â \_\_Â ] looked at me like I was the craziest person he had ever met in his entire life and he like rubbed his head took a moment [Â \_\_Â ] turned around and walked away and and the three gangster dudes were up there watching this whole thing happen they're sitting there smoking [Â \_\_Â ] parliaments he's like come up here smoke a cigarette with us what the [Â \_\_Â ] are you doing and I'm like he was beating up that lady what the [Â \_\_Â ] are you doing and I'm like I don't give a [Â \_\_Â ] they're like you're crazy you know and then they started taking me on runs where they would go to gas stations and like do drops they had all the these series of gas stations do drops pick up cash this and that start bring me around then they started asking me to help them with all this like Tech [Â \_\_Â ] so what they would do is they would um they wanted me I didn't know this at the time but they had me build like dating profiles for them online and like to date girls yeah so what they would do is they would do like U like casual encounters on Craigslist and I would take pictures of them and then post all this and everything else and what they were doing is there were they would go find white women that wanted to you know sleep with a black dude that were like rich white woman and then they would do these things on these dating websites where they would go on the date and then Rob the woman and come back with all her [Â \_\_Â ] oh my God yeah and so they told me they were going to pay me for help and the first time they the first time they did that they came back and they like had a purse they like gave me this woman's purse and her [Â \_\_Â ] phone and I'm like yo I don't want anything to do with this I didn't know you were doing that I'm like I don't want this phone he's like no this is your payment I'm like no I'm good I don't I don't want any of that right so um I'm not going to tell this whole story I might write about it one day but um you know I was there for a bit and then there was a shoot out there and those guys got into a shootout and uh I just stayed in my motel uh room while it was all going down but every night in that area there was like automatic gunfire but this time it was there and um and then I then I woke up the next morning and all the windows were blown out in that motel room and there was like blood all over the the mattresses are on the [Â \_\_Â ] um window and there was like blood all over the place like no cops showed up there was no bodies and

they had like he had like his baby mama in there with like three [^ \_ ^] kids no cop showed up no cops showed up the [^ \_ ^] went down and then there was like everything the whole room was turned up there was blood everywhere I don't know what happened all I know is there was three kids in that space that were sleeping on that floor in the motel and uh I just [^ \_ ^] changed you know like I was and I was last I saw those guys that was after a couple of weeks and I was always trying to I was trying to be a positive positive influence at that point with the whole thing there because I'm like I'm stuck here and then I'm going to start this job program now part of the reason why it's like I was so ashamed for of of you know my family had kind of already blacklisted me they didn't want anything to do with me because I grew weed and then when I got involved with those guys like you know my whole personal situation had fallen apart I'm not going to get into details about that but like I had a kid with a girlfriend and then that just went South and it was a really unhealthy situation and I wasn't healthy now I will say this now I'm friends with my first son's mom um everything worked out how did you pull out of that so I called for help cuz things got real violent one night there and I thought I was I had a near-death experience and I knew I was going to I knew I was probably like and I'm not going to talk about details about that that's okay yeah that's fine um but I had a a situation happen and um you know I reached out to my mom I like Mom I don't think I'm going to be here for anymore I just want to tell you goodbye right something like that I had called her a couple days before this event happened it's actually a crazy [^ \_ ^] story so I had call her after that shootout happened there and just like hey like I'm going to get myself out of this situation or I'm not you know but I had like not talked to my mom for like two or three years I hadn't talked to my family for a while and um she's like where are you I'm like I'm at a motel in South Central I'm in government relief I was homeless for a bit but I'm going to come out of this I was was committed to coming out of this completely on my own so I basically called my mom I didn't talk to my dad at all at the time um just to say goodbye right if that happened like I was that was where I was at you know a real low point and so the day be this is what she told me the day so she the day before this crazy event happened a bird she she used to sit by this window in her house in Florida and uh we shared a favorite song by Simon and Garfunkle cuz my mom was a hippie was called Sparrow so the day before um the day before this crazy event happened um a sparrow flew in and landed on my Mom's arm in the house and was just screaming at her and she's like I got to go to LA and find Nelson that's what she told me right and so she called my dad I hadn't talked to my dad for 20 years because they were divorced and um and then she called my aunt and that was the problem my aunt my aunt was a cop um and so they they the next I had my phone off um I came out of the situation where I thought I was dying and I turned on my phone and right when I turned on my phone my mom called I'm here with your dad and your aunt we just land in La where are you we're coming to pick you up so they came and picked me up and then a whole other [^ \_ ^] series of events happened but but that's how you that's how I got out of how that's how I got out of it yeah dude that's [^ \_ ^] heavy yeah yeah it which is crazy multiple Close Encounters of death yeah and then then after that didn't stop because I wasn't in my right I was freaked the [^ \_ ^] out still from left over from what was happening with that group that cult correct yeah yeah because they were they were U you know I saw that the head of that group and it goes back to exactly what you said yeah when you're doing a substance like well they they did psychedelics it it stays with you it could stay with you it can stay with you for a while but I they had basically banned me from doing any more Journeys with them so it had been like probably six to seven months because I was I was I was active in that group for like six months and then I figured out what was going on and they Banned Me from participating in the rest of the group stuff but they still wanted me to grow weed for their Collective and I was kind of locked into a situation and then what happened was the grow that I built out that I was running for them I had to live in that grow um because I was basically just coming up starting over the other grow I had to shut down like I told you and then we had a grow in Glendale but this is a

[Â \_\_Â ] crazy story too I would work at night sleep during the day right and I just I just turned on like more lights put like all of my money into this spot I had like 70 grand left and I put it all in getting this spot going and there was like a 400 amp panel that never been used that was old but it it wasn't on a smart meter and I'm like [Â \_\_Â ] this is great like I might not get a power Bell for this meter because they would just come by and read the 200 amp panels so there's like total 600 amps so I got this all going deep water culture crazy setup hanging bulbs everywhere um and I turned on that breaker now and got the got this this a first day day one right and I turned that on that night and I shared uh this was underneath the six six Street Bridge oh my God I got the craziest [Â \_\_Â ] ending of this story this is so badass it was like the last spot that I had um was under the Sixth Street Bridge built this out by the way Sixth Street Bridge they redid right in La um and a side note they would the landlord there also an MMA guy wasn't a nice guy to be honest but he would uh rent out the space for movies so I'm growing there and all of a sudden I find out there's a film that was going to be using the exterior for the for some film which was stressful as hell like I was constantly in a state of stress but he would run out the building for like 10 grand and then one of the movies they wanted to be inside the garage part of it and I was like no no no no and I had to tell like the the location director I'm like I'm growing weed here I can't do this he's like we'll fill it up with coffee so they shot this Justin Timberlake movie and turned my grow garage into like a tobacco shop for the set and meanwhile I got all these actors in the space and I've got like a 60 lighter like five feet away and everybody knows it well on set just heated but they probably figured it out and they shot for like a week and I'm like tripping the whole time tripping and so on the so the building would almost look like a piece of cheese like a big piece of cheese because it was basically one building cut into two properties and then there was a firewall between my building and this other building that was behind it more tucked away under the bridge and I figured that my neighbors were up to something but you don't ask questions the prop 215 you just minded your own [Â \_\_Â ] business but I would see people coming at night and working so I got this I updated everything I did a couple runs I was like the AC is not working right I switched the AC out I did all the work myself did all the electrical work myself you know bootstrapping the [Â \_\_Â ] out of this this is going to be like The Comeback grow after I have to shut down all these other things get out all these other Partnerships and when you got like your spot rated or shut down doesn't always mean those Partnerships ended back then yeah like you'd have to deal with people that like were not cool they weren't going to take an L you would take the L you wouldn't but they were not going to take the L so they would hold that you'd be like an indentured servitude some of these people and some of them you can tell them to [Â \_\_Â ] off and a lot of them you couldn't you know so it was always you're always kind of in a heightened sense of stress so I'm getting this spot going the cool thing is it had like 600 amps so I could really blow it out and I turn on the power and then like you know I sleep during the day work during the night and then like 11:00 a.m. um am might 10: or 11:00 a.m. it was like later morning early afternoon I just woke up like Wide Awake like something tapped me on the shoulder um completely present usually I'm I'm not a morning person I need my coffee need to have a real ritual read the news whatever no I was just wide awake completely alert and then like five minutes later I'm hearing bang bang bang bang bang bang and that breaker at an issue turned on was popping back and forth heavy so I run in there and I hit the mains to turn everything off wait for the thing to calm down and I start hearing explosions outside so I go outside and was it Anderson I forget which street it was but right across there was the the Transformer was arcing shooting out like 15 20 foot elect electricity so I guess they were growing on the other side of me and they were stealing power right so there was that Transformer could handle that entire drop for both buildings but no one had ever turned on that 400 amp surface except me cuz it was old they didn't even know it was probably there and uh so I turned that on and it overloaded the Transformer was my guess blew the Transformer blew the Transformer so I call the I

call the fire department and mind you I had just gotten all and I'm still in this [^\_^] group I'm trying to get out of this group I'm thinking this girl is going to be the way to get out of the situation where I'm relying on these guys I got clear the [^\_^] and I didn't know what I was going to do I was just uh everything was [^\_^] every it was the darkest moment right so and this is what also led to the homelessness right this is part of the problem this is part of what triggered it all so I call the fire department hey the transformer is shooting electricity out is there a fire no and they're like well call the power Department call lwp I'm like can you just hang out on the phone for a minute because I think there is going to be a fire because it was [^\_^] explosions [^\_^] blowing up you might have seen have you ever seen anything like that before yeah I've seen um I've seen Transformers you know like Ben Ben it yeah it's like [^\_^] Thor's Hammerhead right and so she's like all right I'll wait the the line to the drop lit on fire like a [^\_^] 12in firebowl right onto my next door neighbor within 30 seconds their whole roof was in a blaze holy [^\_^] there's a fire you need to get here right now I had just put you know how we would grow with the bucket system in dwc I just put all my clones in the net pots with the hydron you know maybe they they had vegged a little bit and I had a tent there that like a big tent that I was vegging in so while that building I brought my dog over to some other Warehouse photographer guy I knew threw my dog in there cuz I live there with a pitol and while that building was going up and the fire department's on this way I am taking every [^\_^] plant out of that deep water culture system and throwing it in that tent cuz I knew they were going to be in the building and I had my mom's in there and I just I'll never forget the feeling because I'm feeling the Heat come through the wall and I'm like I got to get as many plants that whole building next to you starting off the whole building next to me burned to the ground right okay so this is and it's going up cuz whatever happened it triggered it wasn't like a little bit of fire here it was like the whole roof went oh my God while I'm staring at this 25t flame you know right underneath the Sixth Street bridge and I'm in the other building throwing all the plants in these in the tent cuz I knew the fire department's going to be in there fire department shows up and I open up the door for them and they come in I just leave the door open and they now my building wasn't connected to theirs but it looked like it was a part of the same thing so they're throwing all these you know I threw everything in there tight it up tighten it up as much as possible because I just if they came in there I knew there was going to be police and they saw plants in there maybe you know if they didn't see the plants maybe they wouldn't look you know I'm just [^\_^] panicking right like I just got to cover up as much of this as possible and so they come in they make sure all the main Breakers are off and they start fighting the fire and then I [^\_^] leave the door open and I just book it over to like down the street to this other Warehouse where this this guy Jimbo I knew that was there and uh and I'm just peeking out there watching them fight the fire they get the fire out and like 30 45 minutes later like 60 da agents show up right [^\_^] windbreakers I'm just just like oh God I'm I'm going to go to jail today and I guess the fire department called the people next door called the whoever owned that property or rented it out and all of those Nexters showed up in their Escalade while the DEA was there and they arrested all of them and I'm sitting here watching all this happen like down the street and I my only thing I can think of is that they thought that they ran both spaces and they're taking burnt trays out and all the equipment and I'm seeing all of it come out there's a whole crew bands and then I'm watching those guys get arrested and I'm like [^\_^] so I had to go back to the crazy Shaman group's place and crash there for like a week you know go back into the other evil yeah and and I came back there a week later they had replaced a Transformer and I started cleaning everything up and setting up a new run oh my God now what happened was they didn't take your equipment no that's well I was no you don't understand because it was just a bucket system right there was a chiller a bucket system and then hanging HPS bulbs they didn't really know what it was cuz it wasn't hoods I was doing the Jack me offer test run [Music] you know what I mean it didn't look



like it just looked like some [^ \_ ^] you know Mickey Mouse setup I guess um and so I got everything cleaned up started working on get I had to get now my building there the firewall protected it my nothing happened in my building but then like a month later this crew this construction crew showed up to start rebuilding that that building next door and that was the end of the show there cuz it was a bunch of like you know weird you know you know it was like it wasn't a real construction crew you know what I mean it was like whoever was connected to that building and they started [^ \_ ^] with that building and there was all kinds of problems so you had to shut it down and that up all your Capital yeah and I was I was I was cooked at that point yeah you know so you know it's uh it's been a it's been a crazy path so that was like when I was 29 and then you know my my family came picked me up they didn't know what was going on with me I was trying to explain them I was just like just take me home and you know do whatever go to therapy whatever you guys want whatever my aunt you know she ran like the mental he Mental Health Department for the New Orleans police so they bring me to New Orleans and they want me to go they're trying to put me into some weird experimental home right that was like it was in the hood in New Orleans and it was like a bunch of brand new track houses in the middle of the hood it was a weird like pink and pastel houses and so I'm like I'm not really I'm not really they all thought I was on meth or something I'm like no you don't understand that's not what's going on like I got out of a bad situation I can't really talk about it but I wasn't on any drugs I was just really skinny because I wasn't eating you know I was eating [^ \_ ^] food off of trees you know and I was out of my mind you know super like when you get into that point where you're in survival all day every day um you're not going to think right but you know do you do you think that it was the effects of really stemming from [Music] leftover what what those psychedelics did to you at that point kind of flushing out or you a combination of both 100% yeah yeah because like what I yeah it was a combination because it kind of It kind of destroyed it destroyed a part of the way you see the world for a period of time yeah you know exactly and and who knows if they were plant-based you know it could have been some synthetic combination of things they were getting the substances made by some chemist who allegedly had some ties to the government and there was another Shaman group that was a part of all this that they had learned the practices and ritual RS and all that from and they were really tied into Burning Man this group so they worked heavy with like the guys that started up Burning Man uh one of the guys in the group was the lawyer for Burning Man like the main lawyer so they you know and they went hang out with act famous actors they would go after a lot of scientologists they would go after actors that were scientologists and try and bring them into the group so like I would be around I'm not going to name any names but like there were like really famous people that would go um do Journeys with them so you thought you know when you're in that you you're like oh I'm in place yeah like famous Grammy awardwinning musicians you know who I became friends with after because they got out of the situation and we talked about it you know I'm still friends with them I won't name them I'm not going to you know I'm being open and honest about all this but it's like you know they were praying on people that were vulnerable uh people that thought differently and had resources or some kind of talent that could be used to basically serve whatever their interests were right yeah um I was too crazy for them though well I saw through it I get I get why you would get sucked into that especially when you're seeing influential people be a part of it right no there was they were a part of the Hollywood um like a Hollywood party scene too yeah right and and you see that I see that now yeah right I see that now and I'm like who's pulling the strings on this move you know um I think they moved out of I think after the uh I kind of blew up the group for a minute you know um and caused a lot of problems froming my way out the door because I when I realized what it was I've shifted my attention towards tearing it all apart yeah and uh they moved off as psychedelics and you know because they prayed after a lot of people that I knew too and um some good friends of mine got caught up into that and never recovered you know I was for fortunate to recover you know um but yeah the after effects of

that they they moved to ketamine though that's what I know that they mostly used for their yeah the Burning Man scene's pretty big in they all moved into like really um potent camine so that's what and you know I've never done camine that's one of the things I've never tried so not interested in it either it's like that that's what they're using to like try program people and you know and uh these guys were dark dudes and you didn't know that at first it they came in positive um speaking incredible truths right feeling seeming like they had a lot of power and Mastery over the world um around a lot of influential people would speak at events you know uh I see the same kind of things with like a lot of the guys that run like MLM campaigns on social media yeah like the Tai Lopez weirdos pbd I mean I like the pbd podcast but it's like they're all creating their own cult so they can enrich themselves um and it's a it's a pattern right now is like the Golden Era for Cults and K men like it's crazy right now right now yeah it seems like it since Co pretty much yeah so you know I just went through it all earlier than most people did before it was a thing like there wasn't a lot of Shaman groups and all this this is before you know this is like before 2012 and so um yeah I had this whole thing happen then then you know basically I didn't want to go into that home and my where that this is New Orleans back to New Orleans where my parents trying to figure out what's going on with me and like just get me out of here I'll come out of this and I'll tell you guys everything I was terrified to tell them that like somehow I'd fallen into a cult and all this you know I was just ashamed right and then was homeless and all this crazy ass [Â \_\_Â ] and they all looked at me like my whole family had socialized that I was a drug addict cuz I grew weed so there was already like this understanding that like and plus there had been a lot of my generation in my family that had become addicted to crack and meth and everything else so they just thought I was another you know part of that right but that wasn't what was going on I was going through you know a potent Mental Health crisis at the moment coming out of a ton of trauma having somebody tried to murder me the night before um they came and picked me up and just trying to process all of it and needed just a break check out so what where you're at now I mean you you have a family how many kids do you have I have two kids you have two kids and you have you just had uh a baby not too long ago oh he's five now he's five but I remember when when you when you first had him yeah so yeah that was crazy yeah you think like now when you have a responsibility like that because you're married yeah and you have a you have a you have a little fivey old boy and an older boy right yeah he's 15 yeah um that Foundation what is that like for you like now with that family structure and Foundation do you think that gives you more ambition and drive and structure with how you're dealing with life today AB absolutely I think that um once you have kids uh you really become a man because then your life isn't the number number one most important thing their life is and on when my first son was born I wasn't ready for that right and that's what triggered a lot of you know a lot of the stuff that came up for me during you know um being a father before I was ready not in the right situation not in the right relationship nothing was healthy and that's what was the big lesson and luckily I came out all the stuff before he was you know old enough to know like I got through all that [Â \_\_Â ] early on and then I was able to come back into his life as a healthy adult and then from that place I you know I had to regain trust with everyone in my life because they saw they didn't even understand what it happened and I couldn't really tell the story because it was so [Â \_\_Â ] crazy yeah you know it was almost easier for people to think that I was like got addicted to some crazy street drug yeah cuz like what had really happened was [Â \_\_Â ] bizarre yeah yeah you know so um I think you know for me I think that was the big change is when I met my wife and we we had a baby girl and I was I was a little wild you know I went to Bernie man every year and we'd build an car and kind of lived you know a pretty different lifestyle than I do now right um cultivating cannabis all over the place just you know doing whatever yeah and but when when I met my wife and we had our baby girl that that completely changed everything yeah like it for the better oh for the better yeah for sure like um the Foundation of of home and having those kind of responsibilities um I'm not even people the guys that

hang out used to hang out with me years ago don't like you're not in the same place  
no they they couldn't even recognize me now right right so um but sometimes  
it takes something like that I guess you know it it doesn't have to take what I  
went through I mean no yeah um and I've always [Music] um gone out of my way to  
experiencing things on the edge um I've you know I'm not like that anymore but I've  
always lived extremely um across the board um but it does it it shifts  
everything once you realize that like my my like like what I'm giving to the world  
is hopefully a better ver better generation than my generation and that's really  
like now that's the goal and how the biggest opportunity for me in being a father  
was not trying to escape the Demons of my family or the past trying to create a new  
family where I'm all that [Â \_\_Â ] stops with me it doesn't carry on to my kids  
kids and I look at like uh the hell I went through which I authored for myself like  
I'm responsible for that experience that I created it was not a victim I went into  
that but I look at that as like the way to close that close that chapter with my  
family and that that's not going to happen with my kids they're going to have their  
own struggles they're going to have their own Journeys but they're not going to be  
coming from that from that vibe that had to come out of with my family where there  
was just so much weird darkness and right now I see that with my and that's the  
biggest Joy is to see that my that you can rewrite you know the story y you know  
you don't have to be the effect of someone else's cause yeah right yeah and you can  
then shift your environment by setting a bigger cause for your life and that it and  
that was the thing you know like I I find I found out when uh my first son was born  
I found out my this this lovely lady who I'm still friends with now but we were on  
and off dating we kind of parted together and all that but I found out a month  
after I got dropped from geffin that she was pregnant and it was like whoa like I  
you know so dealing and that's been my whole life like a week before my 5-year-old  
was born my mom passed away so I went from seeing my mom for the last time watching  
her get a very rare and aggressive cancer and then flying right back out to to hold  
my baby being born and my whole life has been like I didn't have any control of  
that yeah but that's been my life yeah my life has been a constant series of  
extremes and now it's really like let's let's not create that let's try and find a  
way where we can move out of the extremes and I think in a way all these experience  
experiences have prepared me to be a positive hopefully a positive influence in the  
world right now because now when I look at the world I was like [Â \_\_Â ] I kind of  
went through that 10 years ago and now I'm seeing the extremes play out overall and  
I think a lot of people have felt that and I think if we got through that in our  
own life it's why I'm comfortable telling you the story about some of the stuff  
I've gone through and talking more about it is that like you can get through this  
like you might think you are at the end you might be in hell and it might be just  
full of chaos but that's just one moment and all of the suffering I've gone through  
has just deepened my ability to be able to connect to other people and help other  
people yeah and understand and not judge exactly yeah an acceptance and and we  
should be honest about our struggles cuz so much of the world is about projecting  
out this false idea of who we want people to buy from you know this a false idea  
that we're trying to sell so people we buy things but people are flawed um you know  
the more honest I've been the more comfortable I've been about talking about what  
I've gone through the more that I get to hear other people's Journeys and then  
understand them and we have a lot of people in the canvas industry that have gone  
through some [Â \_\_Â ] yeah and if they're comfortable to share what they've learned  
and they feel welcomed to work through that I think we can have some real progress  
that can come out of this space because we're all like I was just talking to the  
guy that I'm working with on the it's growing my flower for the California market  
and we you know my group of I have like a group of men we all are real with each  
other and we all talk about how we're all reformed outlaws like he served yeah he  
exactly where we are and it's like but like we didn't die we made it through it and  
now we're trying to do something positive with our life so that gift of us  
surviving through this we have to give back we have to pay it forward by like yo  
this is not the way let me tell you I already went down this road barely survived

you know here's here's here's a better way here's a way to look at this here's a way to come into this yeah so that's the gift we can give our kids and their friends and it's crazy you know cuz like I got a 15-year-old in high school right now you know everyone in high school smoking weed already and you know I talk to him about everything that's going on in the space what to stay away from this and that and then like yeah you can guide him now yeah I can guide him like this is why you don't want to do that and it's not about like I don't want you to think just because some I'm telling you something's dangerous that that it's exciting like no there's realterm consequences with this I'm not going to demonize the Cannabis flower like like you know and he's he'll be honest with me about his experiences though because I didn't put all that religiosity behind it like that I grew up with where I had to not tell my parents about what I was involved in yeah he has a mentor to go to he totally and so it was you know he he he told me the other day that like everyone that he's hanging out I'm not going to blow anybody up but he was like we're all done with this and this I'm like why what happened and he's like well we read that LA Times article you told me about about all the pesticides and the Vapes yeah yeah and I'm like there we go yeah you know and I'm like and then we talk about well how do you think those products got to you who's selling those are people that people that are selling pesticide V Vapes to kids those are people that are evil you know like we you don't want to give them any money you don't want them to be part of anything and you you know and so I'm even thinking about like is there a way that we can talk about this with the kids in high school educate them like as you go through your process of Exploring Life and all of these things this is an there's there's like a natural way that we all went to it and we had to lie about it and then there's things you want to stay away from yeah you know I just got a text message from my my wife her her cousins kids are buying cannabis in Georgia from a smoke shop Y and the mom is she's freaking out because she doesn't she hears all these horror stories of you know fol laced cannabis or which is true yeah but you know I just told her I was like look it's thca you know and you're she they're going and buying it from SM shot is it clean no idea to know you have no idea most likely not because we know how stringent cannabis texting is so is it clean probably not right and so she's like well what do I do you know cuz you the kid doesn't have access to cannabis but you don't want to you don't want to smoking you know dirty you know well the only thing you can do is really educate them on you know because I've busted out like my son can saying pesticides by name now and we've talked about what they do to the human body because they're going in like look you're going in maybe you want to smoke weed and you're in high school whatever when you're not you're not supposed to do that that's not legal first and foremost it's the first thing I say but like you can't tell that to kids they're going to do whatever they want but one of the things you need to understand is that all these pesticides uh were designed initially to kill people and then they were reformulated to kill insects so let's look at what each one of these things do to the insects and what each one of these things will do to you and then you need to ask yourself a question whether or not you want to have those kinds of problems because you're coming in there to get high you're not getting high off of this you're screwing up your endocrine system you're screwing up how your body's going to regulate hormones you're screwing yourself up in ways we don't even know because these are the warning labels around ingesting or breathing this in we're talking about combusting it turning into a totally different like yeah comus we don't even know right so it's like you know it's not worth it like okay maybe you want to experiment but you don't know what you're experimenting with right so you can do all the research in the world but and and we're having that trouble on the legal space right now on the regulated space right we're having trouble figuring out whether or not I mean I think definitely dispensaries and these medical markets are better but there's always a moment where we have problems where these things get through and nobody has any idea what happens when you start vaporizing these chemicals what you know you're obviously I'd rather him start growing his own yeah they there go send him a light and tell him how to grow Hydroponics and grow

tomatoes yeah the you're you're one of the most intelligent guys that I speak to in the space when it comes to just overall General cultivation knowledge but also laws and cuz you're you I just talking to you you retain information really well and you digest it and can understand it for the guys that don't really understand what the THC laws are and what the hemp bill is can you do a breakdown on like THC in general and the hemp Bill and and the legalities surrounding that so um so the intention behind the farm bill was for people to grow hemp products that had no psychoactive elements into them right so the the idea was for for fiber grain seed and then the canabo that were non psychoactive that could be used as a neutral like CBD maybe CBN right we know that those aren't psychoactive but the way that they wrote the farm bill um was around how a plant is considered hemp or cannabis and that was directly focused around one molecule the thca molecule so there was a guy up in Canada I forget his name but they wrote the regulations on how to define cannabis and hemp off of Delta 9 THC which is the heated up or decarbed thca molecule so the plant will create Delta 9 on its own usually in low Trace Amounts but it's usually going to be represented as thca which then when it gets consumed or aged that thca converts to Delta 9 now also with the hemp bill it has you have to test whether or not something's cannabis or hemp whether it qualifies for cannabis a hemp in the field through a pre Harvest test that you schedule as the farm so when I'm was growing hemp I'd have to call the regulator out and then he would I would tell him I'm going to be harvesting in 30 days and he would come and test the the flower he would take like an apical Bud set from different plants and then they would test that to see whether or not it was below the Delta 9 and if it was a little bit higher then you had to destroy the crop sometimes they give you up to one % in some states but it's basically the whole process and the whole intention was to make sure that you weren't growing psychoactive cannabis instead of hemp and if that accidentally happened or you got the wrong seed stock you'd have to go through the the process of trying to appeal and trying to get that through but you know something that's 1% certainly not going to get you high anyway that was an arbitrary number that was set up by one guy and then it was applied in Canada and then they just took that application in Canada and put it into the farm bill so it was a starting point all right so that's fundamentally how the government views the same species of plant just they they they fragmented in two forms one that's going to be psychoactive one that's going to be non- psychoactive but they Define that around Delta 9 that's the problem right so the intention of the law is not being honored anymore the intention was you can grow H you're not going to grow anything psychoactive and then people got creative and looked at how they defined what was cannabis was just based off of the Delta 9 and they started to play around with chemistry and how you can take hemp flour and use the precursor which is like CBG or CBD and then convert that into psychoactive chemistry so people were taking non psychoactive canabo and then converting them into all the other things that ended up getting into smoke shops and everything else so verting the intention of the law which was if you're a hemp farmer you're not doing anything psychoactive it's going to be like neutral Health hemp fiber grain all that and they used the language of the farm bill to get around that but the intention of the farm bill was for non psychoactive products to come out of hemp right yeah now people are arguing the way that the testing regulations was written you know that thca is not Delta 9 therefore it should be can they want thca to be treated the same way as CBD but we know that thca when you smoke it it turns in a Delta 9 and become psychoactive right so it's gotten real granular and Technical so people can essentially use a hemp license to sell the same exact products that are in a regulated dispensary uh or or medical uh State program right which good for you you guys are syntax Savvy but at the same time it's you know if you've how much how much did you you spend 250 Grand a month to keep your business going in Nevada and 18% tax 18% tax regulation F testing and yeah and I remember when you started and the when you started that biggest project the road that you had how much time and money you to put into that and that you like sold companies and put money back into that and it's been and the whole goal is that I want to just grow legal weed

do it the right way yeah exactly that's the thing that we were sold right uh getting into this space is like essentially is like we're going to become a partner with the state and then the deal is we'll make sure we're following by the rules and creating a you know really quality product and we selling to the program and the government gets to take all the money they want from the taxes and then overnight you have hemp Farmers that have no very little oversight no testing just creating an entire Market that's duding this Market that so many people have invested so much time and headaches and brain damage in getting so and at the same time because we're all from the Cannabis industry you know part of Us Part of Me looks at the hemp guys that are doing the TCA flower thing I'm like smart and the other part of me is like [Â \_\_Â ] you you know because it's like we just wasted all this time if it's that easy but it's not real it's a scam because what they are that if we look at the intention that the intention doesn't match up with what the idea of the farm bill is now the com complexity with that you got all these Republicans right who have come in and built and been a part of or active like North Carolina like a lot of the politicians there are owners of hemp companies that are selling cannabis asde Nationwide hemp derived flow right whatever it is and meanwhile at the same time demonizing the legal weed programs because those are Democrat developed programs but they're selling the same thing I like listening to Ronda Sanders talk about the dangers of recreational doing a recreational program in Florida and then at the same time promoting the hemp program there and it's like clear double speak and someone tells me that they don't they don't know what it is I don't believe them anymore I think that all the politicians understand that what they're doing is getting early into a market basically um fragmenting the legal and licensed Market which is unhealthy which needs a lot of work which needs a lot of help but isn't it it's this is the part of it where people can hate on you online oh this is the way this is the freedom path for cannabis you know and we've all been bitching about all these legal programs but we've also know that we were honoring the intention and this is the stair step towards legalization okay you guys are going to let us we're going to do it we'll play by the rules and then we're going to use you know our our investment and your investment in us to be able to shift the laws and deschedule and reschedule and make this progress go through and it's a slow untangling of prohibition um that I think is actually a smarter way of going about this like just legalizing everything overnight is going to lead to more War on Drugs because it's going to be a disaster and it's going to cause all these problems that we see in New York and everywhere else where people are smoking [Â \_\_Â ] that they don't even know what they are it's going to have long-term Health consequences and ultimately you know my 15-year-old kid and all his friends are going to be getting all that [Â \_\_Â ] and killing themselves so I don't want that either but so the hemp industry is just kind of doing that in a lot of respects and if you go to these hemp flower markets there have fake coas on things like you don't know what it is most of it's just back door packs who knows if it's got pesticides all these kinds of things there's zero regulation and there's zero regulation on pesticide when it comes to thca flour that they're not tested they're not tested for it now nothing is unless it's fif for 25b low risk you can't use it on hemp but no one's really monitoring that so like the labels Ia you know it's happening yeah you know it's happening yeah right and a lot of this product is just back doored um and there's a whole way that all this this happens did it start with the Labs understanding how on the hemp side to kind of spearhead the the movement of you know not testing for Delta 9 but testing for thca I think it started with um no I think it started with there being markets developed especí starting up with like HAC and delta8 and I think it it started it started yeah it started with the with the hemp chemistry lab yeah it was it it started with there being a surplus of CBD biomass they didn't know what to do with that they didn't know what to do with and then they got creative and then most of those markets were developed outside of the country first like Japan like people were uh exporting in hemp products and other markets that were psychoactive and then shortly after that those Markets started to develop in the US um and it was really first like the Delta 8 but early

on cuz I was you know I I managed like a, acres of hemp and had a small hemp farm and um was doing seed production and all of that and I saw that happening early on but it was going internationally because the hemp industry collapsed in the US and then people were trying to find other markets outside of the US and they hadn't really developed the smoke shop market yet and then that started to happen when big Brands um you know like cookies and all that started doing Delta 8 and started to promote that and then you started to see more ubiquitous movements towards bringing those products on the hemp shelves and the hemp or the uh hemp store shelves or smoke shop shelves but it was also along theide tooth katum you know so there's all these like really like Ambiguously regulated products that started to kind of enter in the market I saw Delta 8 and thco you know first and then it's just kind of led into other other types of things which didn't let in the thca market um or now you can just go into these shops and buy flower what about local law enforce I know on a federal level hemp bill is the hemp Bill and that's legal right but on a local law enforcement if you're driving around with 100 pounds of thca flour it's a it's a it's Russian Roulette so if you're driving around with that most of the time you're getting arrested and get in trouble um especially in the states where like it's really blowing up it's more it's there's more prohibition like yeah but you you have a say if you have you're rolling around around with a hemp license and lab testing that says hey this is TCA flower I mean well that the the it depend on um how much work the cop wants to do but I'm hearing that it's getting harder now where the law enforcement it was they'll take it and they're going to get it tested and I'm hearing that happen on the consumer level too so there's I know people that have like da transport permits for hemp product I think if you have something like that you're going to be left alone but what I am hearing about cuz I'm going to a lot of different states and and hearing like in Indiana they don't really care if you if they pull you over and you have TCA flow they're going to arrest you for it or F you for it whatever they're doing there and they're going to get it tested and there's like more strict uh protocols happening and it's affecting the consumers more so than the producers so it's like this gray area where you can get away with Distributing it and selling it but as a consumer you're not protected right and that's kind of the scam because it's being sold as one thing but it's really not right so if it's if it's being sold as hemp but then you know it's being treated as real weed in states where it's still illegal then you're getting scammed and and like the cost of that is not just like an upset stomach or you know food poison longterm side effect long yeah long-term side effects having a record having to go through all that maybe having your life take a sideways turn and you're like I thought it was hemp flower so it'll be interesting to see if there's any lawsuits that come out of that have you heard of any lawsuits I heard there was a lawsuit of a a girl that was in Florida or something she smoked some CBD flour and you know tested hot for THC yeah and ended up filing some lawsuits I mean I'm sure there's going to be a whole lot of that because a lot of people are making a lot of money with it and people get pissed when I talk about this but at the same time it's like it's a shortcut why did they get pissed cuz they're making money off of it and you know and like sometimes I've spoken in the room loud enough where things happen you know and and they just like ignore this this is how we're surviving like I also understand too it's like it's really hard to make it in this industry you know and it's like this might be a way for someone to come out of a hole and they've had a raw deal or whatever but at the same time it's about the cause and effect like what seat are you planning what's going to come out of this now the other thing is like if if uh Trump wins the election and we've got more push on the Republican side politically we could see it continue on for a long time because because um the Republican judges that are putting being put into place uh Supreme Court all the way down are litterless so they could just read the farm bill as it is they might throw out the Miller Amendment because the Miller amendment is basically going to kill any products that are Postman post Harvest manufacturing so you can't like all the CBD Market everything like it's a heavy-handed Amendment what's the Miller Amendment the Miller amendment is an amendment to the farm bill I think it's going

to go for review it's already it's already been put on the bill for review it's got to go through the process I think it's like somewhere around September but it basically um it's an anti psychoactive hemp Bill and their way the way that they're doing that is is basically regulating basically saying it's not allowed to manufacture any products chemically from the plant post Harvest like it's just flow extracts no just yeah the only thing you do what do what can you do with it like I'm assuming it would be textiles yeah like industrial type products I mean I thought that but that's the problem because that would kill all the hemp industry I think there's some problems with the seeds as well I think it restricts how like it would kill everyone that's trying to do the hemp thing the right way too because I don't even know how many decorators are in the United States but it's like there's not a lot of industrial manufacturing of hemp going on right now most of that's like kicked over to Indonesia and it's just a really heavy it's a really heavy-handed bill that would kill everybody I know that's doing a lot of work in the space and I think there is a valuable neutral Market that can come out of hemp where we have beneficial cannaboids that aren't psychoactive that people can take I think that that's been a real positive thing to come out of all this so the Miller Amendment super heavy hand so it's basically everything is Extreme it's going one way yeah a little too extreme it's too extreme so that would be a problem for everybody and then you know all the guys that are trying to do hemp the right way can get angry at all the thca flower producers because they kind of try to R it they're ruining it yeah they're ruining it and it's like you know you got these YouTube guys on here that have um you know I won't name their names but they all have thca flower Brands you know it's a lot there's a lot of this stuff going on and they're getting um a huge unfair Advantage by playing this by developing a market quicker that's undermining all you know we know how hard it is to build a brand in this space how to build a facility to do all the work that we've had to do and then to have like a streamer come in start making like your nut 250 Grand off of a thca flower thing and then pretend like it's not psychoactive but at the same time like sell it as a psychoactive product yeah it's uh you want to kind of [Â \_\_Â ] go kick rocks you know yeah yeah exactly like you're in the I feel like you're in the wrong business right you know like you didn't go the right path maybe you should have went a different path well I would just say that anybody that feels that way I think it's going to correct itself and if it doesn't then we're [Â \_\_Â ] anyway you know what I mean like if things just stop making sense so Democrats get in where do you think it goes Republicans get in where do you think it goes I think Republican so Republicans coming in um I don't think rescheduling or descheduling is going to be on any agenda I think that we'll have legal weed through the farm bill and then we'll just have more of this thca stuff is what I think will happen and then there might be like states that have issues with it and states that don't but I think there's enough Republican investment in the hemp industry where it's just going to be like they're going to double speak the [Â \_\_Â ] out of that what exactly what's happening in Florida yeah exactly yeah 100% And you know we you know I threw like a little [Â \_\_Â ] fit about the Chevron Doctrine you know getting thrown out and everyone's like doesn't really understand what that means that yeah what break that down that just you know we and and I want to clear to say that like we have a lot of problems with the regulation agencies but what that allowed was the regulation agencies like the EPA the FDA to make deciding factors on laws without having to go through the courts so it's basically like was the court saying you guys are the experts we're going to let you decide how we do this and they also decide like the consequences if you go against the regulations right so now they don't have that power anymore um and it's gone because it's unconstitutional to be able to allow a regulatory agency to act the same way that the courts are acting there that's the argument that's being made valid argument problem is that judges don't understand you think judges understand complex can avonoid scientists are going to be able to rule on what's going on with the Cannabis and hemp industry in a way no have The Regulators been doing a good job with it either no but we should have experts that are the ones creating the advice like we should be we there



should be more of us writing the [ ] regulations for this industry not these nitwits that don't know anything about any of it and then you want to put it all in the hands of the one judge that can legally take gifts from corporations now what do you think's going to happen with that yeah right absolutely and so it's like I hope insanity everyone that's like all stoked on this I hope you're worth billions of [ ] dollars and can buy politicians like some of the other [ ] people that we know that have tried to [ ] [ ] up in this space because now there's one more huge thing for them to get a lot of problems out of the way so if we look at that right uh maybe it's the judge that decides whether thca is hemp or cannabis and it has nothing to do with science it has to do with how the somebody's experience and opinion on a certain situation and how they interpret the farm bill well we look at it okay so it's like it has to be tested this way or by other you know uh acceptable measures right that there's language in the farm bill that's just like acceptable what's acceptable who decides that now it's going to be a judge where is this going to go yeah so it could go you know a lot of people are gung-ho and getting Trump back in because there's a belief that the economy is going to come back in and we'll have a better life because of it all the other time the other thing that's going to happen is he he when he was president he took out a ton of regulations that protected us from pesticides like that's the thing people don't understand like for farming in general for farming in general he brought back chem chemistry you know that we shouldn't be using on our food and he made it all permissible and so there's a cost to all that and so what what would happen is the hemp industry testing for pesticides on their flow no there's no sensible regulations how long is it going to take for sensible regulations to happen then they can't even figure out what [ ] hemp is you think they're going to be able to write regulations on this anytime no it's just going to be a giant money grab and whichever industry throws the most money at the governing politicians that's who's going to win now if the Democrats win this is my thought I think that we'll have another narrative path it's going to be all about sentiment virtue signaling and um you know identity politics more of that so it's going to be all caught into this whole thing about social Equity programs it's going to go slow it's going to be really broken it's not going to work out there's be like the corporations are just going to come in and do deals with the social Equity people and we're going have this whole path and then they're going to create a program where like you know they're going to let people that were more impacted by the whole thing get a leg up but there'll be a corporation that's just paying them their 70 grand a year to use their light like the same [ ] yeah it's so it's just we're kind of screwed either way we're I I I think that overall people are going to hate me for saying this but I think that that sloppy path even with all the social Equity stuff and all that stuff that's not real that's been shown a lie I think trying to get that healthy is probably the better path trying to have a license Market where we start we we take it upon our ourselves like we the people bro like who gives a [ ] what they think or what they say this is just the rules that they set then we have to come in and try and correct those rules intelligently logically and thoughtfully so as long as we get more engaged in working with the regulators and talking with the politicians we might not get what we want but we could steer it closer and closer to something that makes more sense whereas with this Farm Bill thing it's just going to be whoever's got all the gold going to make all the rules yeah right yeah and it's going to be just you know which some people are they're cool with that but that doesn't create a structure and that doesn't create a product that's going to be safe you know that's to create something that's going to lend itself to class action lawsuits 20 years from now when someone's got a new kind of cancer that came out of all the [ ] turp spray that's being put on all these [ ] lcg packs that are back doored as H yeah 100% so what do we want to create it's up to us yeah you know all these people are just [ ] front men you know all these politicians are just front men but we can get in there and we can I mean we've seen you know Elliot's like a bull in a china shop from catalyst but he's doing things that are causing change to happen and you know he's doing it like a madman but we

don't have to do it that way we can help create a path towards change towards fixing things you know Elliot's just doing it the best he can in this weird you know everything's become a goddamn reality show yeah the only way you get attention is by turning into a reality show yeah but we don't have to do it that way you know moving on to schedule three what do you where do you see it going you know it's up it's up in the air right now everyone says September what do you what do you think for schedule three oh I think I think I I don't I think it's G to take a long time yeah you don't think this year no no it's not a first of all it's like probably low priority yeah it's probably not even in the top 50 of priorities and it's just a fun thing that politicians say it's again it's all about sentiment right our world is dominated by sentiment and you feed sentiment to make people feel certain way so they get the support that doesn't mean that's actual action but I mean at some point it'll happen you know even if it did happen do you really seeing that as a mean anything positive other than we can get bank accounts the positive the positive thing is going to be the funding for for pharmaceutical research and this is the thing like I'm having a change of heart on all this I mean we're all of us at some point like we like to bag on pharmaceutical companies because it's pretty corrupt here and they shouldn't be allowed to advertise and pay pay buy our news stations right that's [^\_^] crazy um but um it's not all good and it's not all bad and what the pharmaceutical research around cannabis is going to do is going to develop plant-based alternatives for um medicines that will be superior we should be funding that we should be looking at that that was part of the reason why we did the legalization thing anyway is to be able to R&D this plant understand how it can help improve our quality in life um treat and cure diseases in a really [^\_^] awesome way you know that's a good thing um and I don't think the pharmaceutical Industries have any interest in participating in the commercial recreational Market with cannabis they're going to create totally different products you know like there's not going to be like a f fiser Lemon Cherry gelato gelato brought to you by fizer no it's gonna be some funky ass name no one's going to know it came from Cannabis but it's G to like maybe be a part of like curing I mean they're already on the end of curing cancer you know and all of this and it's funny I had this whole thought that like the whole uh mRNA shot that everyone had to get or most people had to get was just a giant beta test to see how people were going to function with the new mRNA technology that's going to radically change all of our lives for the better so it's bad what they did and how they did it but all these extension life all I mean the MRNA vaccine was created like that whole technology was created as a cancer treatment drug and it wasn't working and then they pivoted quickly into uh Corona viruses and then it was thrown out in an ineffective way and they lied to everybody about all of it but at the same time that technology has value that's now being developed for all the cancer research and they were able to do billions of [^\_^] trials on all of us but it could have a positive ending if you look into what's going on and that's interesting um we just don't know how what do you think the positives with Mna uh vaccine I just think that that's it's a new delivery system it's a new way I all of the Cancer drugs I think it could Cur they're curing cancer right now we might not have that problem anymore the RNA thing could also be a part of like regenerating our cellular structure having us live forever or whatever live longer it's funny we're like approaching nuclear war at the same time that we technology is developing things that will regenerate our bod so we can live longer and not have the same kind of health problems right so it's like at this we're reaching this point where it's like are we going to blow ourselves up or are we going to live forever yeah which one's going to win you know I but the MRNA is a part of all of that and you know I've gotten to be friends with some people in St Louis that are in the Cannabis industry that also know people in biotech that are doing that work and they're like dude this [^\_^] is for real like it really does work um you know you can look at like uh the OIC thing has become a whole craze for people losing weight but um it's curing people that have it's curing symptoms for people that have Crohn's IBS other digestive issues I mean there's all these things that come in a fashion and that are judged because of how

they come in a fashion but actually have a lot more benefit than we only understand so I think that if schedule 3 were to happen with that I don't think anything's going to change with the commercial Market at all I think it's just going to allow for money to go into developing uh more medical Technologies and more medicine from plant-based from this plan which is good and the real thing that people need to be thinking about is Big tobacco who's been losing market share to cannabis and big beverage who's been losing market share to cannabis nobody that that's watching this podcast or we hang out with or talk with is going to be competing with any products with pharmaceutical companies we're going to be competing with pro products with Philip Morris and Southern wine spirits all those alcohol companies or we're going to be working for them or with them at some point and we'll have to carve out a lane for that and that could be good or bad but that's really what's you know and those companies have like big tobacco has a lot of broad utility patents on devices to combust cannabis and all these other kinds of things they're like they've they've been they're just waiting and and and really just the chaos of this Market has insulated us from them stepping in and having more of a play because they've tried so you see schedule three is a net positive if once it goes through I do yeah yeah yeah I do I mean I I don't I don't think any of uh I think the overall population will get a net positive out of it I don't know if we'll get like us cultivation I don't know if yeah I don't know we're going to we're just going to look at him like okay whatever but I think overall things will come out of it that we don't care about anymore that was like we would wave that flag when we were trying to get legalization but now that we've just been getting hammered we got it prop we got a taste with 64 yeah that's the thing you got hrid and everyone lied to us and it was all a bunch of [Â \_\_Â ] and you know and now we're just everyone's mostly cynical but while we're kind of like bathing in our own cynicism something cool might come out of it that might [Â \_\_Â ] really help our kids yeah and that's you know we just won't see it because we're in our own bubble yeah you know sure or if we or if it comes out we'll be like we don't trust that remember the [Â \_\_Â ] shot yeah yeah yeah just how we are you know so dude I really appreciate you making the trip out thanks for having me yeah this is a great conversation yeah had a good time really really enjoyed it thanks Brandon appreciate bro see cool how many Lots did you test 12 12 Lots one didn't pass just took what he had cures it normal dries it normal harvests it normal no special treatment takes those pounds sends 12 lots to the lab 11 come back pass for him as thca flow one doesn't and now you can take those pounds put them in bags sell them in 32 states sell them to gas stations sell them to smoke shops ship them in USPS boxes UPS FedEx Air Freight regular pounds that he just grew traditional firl just ready to go game changing like it's it's over it's almost a defacto legalization have you have you guys ever done a podcast before yeah yeah yeah we've done you've done done a few yeah about this subject or yeah almost always cannabis of of some what subject are we talking about but I mean I mean the hemp Bill and THC and all that stuffa flower he's more of an expert than I am but I talked on it quite a bit and so uh a little bit of background is we started off hel law way back in medical 2007 is when you started I came on around 10 mhm uh went through medical till I went to recreational all the clients were like none of these business lawyers have any idea what we're doing they're all completely useless we need you guys to come in begrudgingly we entered into the business worlds we hired a bunch of people and uh pretty much after that it's been cannabis business law and I broke off went and did Consulting little side stuff and did that for a couple years had a lot of fun came back and you were ready to scale the firm and after that he's been kind of ongoing consultant for everything that's hemp been thca related but also helps with like going into farms and helping them understand their processes and what they and then also actually evaluations which is a big thing because I do a lot of litigation so just bringing somebody in and saying what's this place worth like you know because people have these wild ideas that what they spent on a farm is what their Farm is worth so yeah it's like building like a hot rod or something right you're like yeah you put Grand into it you're probably never getting get 50 out

yeah yeah well that's how it is definitely right now definitely and so it's just been Full Throttle ever since and I went full into hemp once I saw the writing on the wall where I was like this is this is how we get in this is how it works and uh kind of just stuck with it and here we are just Full Throttle into hemp and thca trying to help businesses pretty much hold on and wait until everything sort of switches over and keep them in the best Spirit possible yeah you know of compliance to because it's not like we've been given a road map that's very clear yeah and the road maps we were given had sections that were cut out or suspended or whatever it may be and at that point it's just everybody do the best you can yeah you know stay within the laws that are written and everything that's ambiguous best practices yeah but you got to do that part you know it's the wild west was fun but it's coming to an end yeah well I mean going over these questions and learning about THC flow it's still the wild west yeah I mean definitely right now oh yeah more than ever last toah is what I think I don't know yeah yeah so Aaron you're the attorney yes um and then Chris you're strictly consultant yes I just do Consulting now so uh I ended up forming think Industries brought on Danny who's done the other side of the industry which is retail management uh product flow marketing massive campaigns on MOS uh msos and uh multi-chain stores so that was the aspect that we were kind of missing as far as our operational aspect and uh brought him on board and then um once we kind of got our footing there we talked with Aaron and said would you like to pretty much come onto our board as our chief legal guy and and that's how C cultiva law guy no that's how think Industries was born right after cultiva so uh cultiva you went in 2016 yeah we started back in 2016 um before that it was seven-point law and then went to cultiva law um lost a partner started cultiva law and I did that all the way up until this last year okay it's still cultiva law right now then cultiva law we just merged with another firm called Harris leowski okay so that's a larger international law firm so it kind of gives me a deeper bench with some of the international law and and some of the stuff that is coming up with the hemp industry and the Cannabis industry as it relates to to things going forward in international law so it was a good match for us so if if some of the viewers or guys listening want to get a hold of you what do they search for uh you can just search for Aon Pelle or think Industries I'm Chris Gerard hempen cannabis Google or think. Guru t y n k. Guru G Ru and that's where they can look us up look at what we do see if it's a match for them and reach out Y and this all started because Devin yeah you know he uh I called him because I heard about you know the thca flower and what's going on and then he took it from there yeah man my jaw dropped and I found out about the I thought that everybody who was basically pushing like the thca flower was like G test results for right yeah I was like this is just like a reckless game that they're playing here and like yeah you open my eyes to that for sure it's it's really weird once we started to break down the mechanics of what was there where it was like huh this is interesting I well people were operating at a national level but nobody knew if things were going to turn the corner or not like we were waiting for some court cases or somebody to take a position on it some sort of precedent yeah something that said something and then once the ninth circuit said I don't think that this is an issue I don't think and then there's this big case called um that's uh that happened recently where judges no longer have to give deference to these administrative agencies so it used to be that if somebody like the DEA said something the position was well that's just the way it is unless it's an arbitrary or capricious position and now we don't have to do that anymore and the judges now don't have to give that deference to them anymore they call the Chevron deference and so the fourth circuit was one of the first courts that when the DEA kind of gave their position on this thca subject mhm they were like we don't see it that way we read the the farm bill act the way way it's written the cultural Marketing Act of like 1964 yeah it it's it's all all cannaboids derivatives salts and isomer thereof yeah are covered under Industrial Hemp as long as they contain less than 3% THC on a dryway basis so all in isomer and derivative includes Delta 9 Delta a thcp thco hhc although on thco small side drift on that um there's been countless studies on it it's a very controversial subject and and

they've even gone so far as coming out with an opinion on that specifically of thco and that came from vaporizing which I'm not a doctor by any means but every Medical Professional I've talked to said if you pretty much inhale or vaporize any acetalized compound at all you're risking some sort of lipid pneumonia and like we saw the vitamin E scare back in the Vape days uh 20 almost killed The Vape industry it almost killed The Vape industry and and it they were cannabis Vapes and they were using vitamin E acetate it was the acetate or something that creating those issues and so TCO acetate there's an argument for it now I'm not a scientist biologist any of that we have those people on our team and I'm sure that they have amazing things to say about it they're way over my head but eating it is really I think what it was intended for right where it's it it hits you like a joint but it's in edible and so but everybody did what they did so other than thco it's been pretty much knocked down every other time yeah yeah which is interesting to see because I mean we all grew up in an age where when the DEA said something that was it game over no more Marios yeah exactly that's it so it's it's kind of nice to see a little bit more logic I guess into it to where they're reading the law and going no this is what it says and unfortunately that doesn't support your position but kind of got to deal with it just like we have had to deal with their decision this whole time so it's a balance it's trying can um for people that you know aren't familiar with it can you break down the 2018 farm bill yeah so the 2018 Farm Bill took something that was very controversial Industrial Hemp um there's a huge history about it I'm sure most your people understand the you know the racism and every and the industrialism and everything that was behind Banning hemp back in the 30s and basically creating archaic marijuana laws that were wild um but through that hemp kind of got nailed to the wall too cuz they literally couldn't tell the difference like that's they they really couldn't because when you grow them side by side everybody thinks that hemp grows like bamboo and cannabis grows like a Christmas tree and it's like well if you plant cannabis at 6inch spacing like corn it's going to grow like bamboo y because they're all going to just spend their energy competing to reach the sun over each other so they grow tall and lanky just like we used to think only hemp grew and same as similar for hemp you know you obviously you can grow actual like industrial hem with big spacing and it'll bowl out in'll Christmas tree so because of those issues in verifying essentially which was which after they made all those drug laws about cannabis it became banned along with it and you could only get it through ironically places like China and all that we're the only ones really moving with hemp in any industrial scale um Farmers uh obviously you know can remember growing hemp cuz it was World War II they were still enough people around remember it and a lot of people actually lobbied with uh Mitch McConnell and the farm kind of groups that are in the uh Congress to push forward a new crop infrastructure Industrial Hemp because it was ludicrous to have something that didn't in intoxicate in any way be treated as essentially a schedule one the same because nobody could tell the difference between the two um so through that enough Farmers got behind it the US hemp Round Table had a big part in that massive part in in fact the very language we're talking about um I I see remember everybody kind of looking around each other when these language proposals were coming around just going all right but doesn't this technically and there's a lot of people like no it wouldn't ever mean that like of course it couldn't mean that it's like that's ridiculous you know it's thca which honestly like they all kind of had a point back then like everybody just looked around the room at each other and was like all right I guess this is what we're doing and then everybody just stopped for like a year and a half after after the hemp bill was signed to like legalize Industrial Hemp on a scale initially before it was signed into a law there were pilot programs those were ran through universities uh State programs things like that you could essentially sign up through the state and they would let you do their research for them as what it was for um there was no res marketing was included in those pilot programs which is of course the sale of the goods so it was not just research but it was sale and that becomes a business right yeah and so 2017 is whenever I got into took off really hard harder than I'd ever seen

marijuana take off ever to date and that's pretty big considering we thought decent money came in to cannabis at first you know being one of the first two states to go we saw all the the new money as we called it the very first money that went in and that that was substantial and then you pivot over to hemp a few years later and 10 times that's being dumped in yeah all because of you know the banking relaxation and and especially after the farm bill was signed it was pretty wide open so in 2018 president Trump signed the farm bill into act um pretty much giving the green light for industrial hemp to be grown as corn the only stipulation was that it couldn't have more than 3% Delta 9 THC and first we saw of course the CBD boom that died very quickly after that yeah you kind of saw I was going to ask you that because you kind of saw like this everybody started growing CBD flour or you know and it went real big and real bust real quick real quick and it was kind of it seemed like it progressed into this you know thca flower it took about like what two years about 2019 2020 I think 2020 was when start show when it really and before that we saw Deltas yeah we saw Deltas but the TCA was also like some opinions Rob Knight and a few other attorneys started coming out with some opinions about thca not being any different than anything else and it's started opening the floodgates for some of that St the Risk Takers came in first and then nothing happened and then they kind of put their exactly and then you got msos with websites it was it was funny like you know these people would call and they'd say I know that people are selling this and we have the budget to do it bigger how is this legal and we're like well it's not that it is it's just that it is I think was the best way that I could describe it without giving like an opinion was like it's it's just ambiguity but it reminded us so much of medical and the ambiguity around medical cuz we didn't have rules but then we realized this wasn't ambiguous yeah medical and like California and back all over it was it was it was just like all right well yeah technically you can't do this but they're all doing it yeah um and now it's it's we're seeing the same thing but at the same time it's not a it's not as wild it's not as um it's it's I'd say a further risk because it involves the idea that anything can get overturned any day but in between like thca and CBD so CBD crashed and this is right when like everybody's trying to go into Oklahoma and all kinds of stuff's going on and in that you know these markets in in the recreational area right before Co started like struggling you know a little bit and then was starting to kind of like go down downhill downhill downhill well so then people were getting out of cannabis and then all of a sudden all these hem farmers were popping up and they were like oh Delta 8 nobody knew what Delta 8 was and then all of a sudden that exploded I mean spray packs and all that stuff that was going on everywhere was there the memes were great really to be H like that was the best thing that came out of that were memes but everybody was selling like I went to New York I went to all these different states and there's these weed shops and none of them are selling any actual like cannabis flow it's also sprayed flour it's all \$40 an eight \$60 a candy bar and none of it's got a drop a Delta 9 in it but you know tourism so they're just blowing through it with all these hemp products and that's when I think it kind of clicked of like oh this is the Gateway this is where it goes and did they really need to do spray packs at Delta 8 with the way the law was written because right now it just seems like they're just selling thca far that was kind of unnecessary right I believe that in retrospect yes it was unnecessary um but at the time like people would say yeah you can do thca and most people's response would be like you can go do that I'm not trying to go to prison and lose all the money I already just built in this and like lose everything and it's and and everybody just had this fear and then of course you know the recreational Market put a lot of pressure on that being you know not a good market and so it really solidified like a lot of people's risk tolerance of not to get into that and and so they just went with the spray packs because they knew that was safe that was the safe bet that was the way to get in and like yeah so it's like you phases we're going phases here yeah and I don't even know if they meant to do it because most of people that were selling Delta eight sprayed flow had no at least from what I talked to had no concept of selling thca down the road they were like no this is

just what it is and we'll find new iceers and we'll find new sprays and we'll roll it in new stuff and we'll just keep it going make new bags and all that it'll get and when they didn't even need to do that I mean today where we're at exactly but it does take somebody that willing to to kind of also take that risk it's like the first time you saw a dispensary brick of motor back in you know 2008 or whatever in California this is really happening like and then all of a sudden it was like and then there's another one and pretty soon everybody's like well if they're getting away with it I think that I could probably and not even getting away with it but like they're really doing this and so it does kind of take those first couple Pioneers I guess you say to take the risk that first person to take the risk and like validate the concept so the rest of the market is willing to get into it shipping you know massive amount of weed across state lines which could also be chasing the problems yeah right you know like that you're at the end of the Whip or not you know Ian you want to be the guy at the beginning of the whip like when you're when be ahe of the group yeah you don't want to be the one that gets caught and and that's the thing is that we've seen some enforcement actions of course North Carolina being one of them you know there was that what we call a tamping down of the industry I think that's actually a quote from a DEA agent it's like no prosecutor a federal prosecutor yeah camping down is they which is where they come in andc flower industry yeah to where to where they'll come into certain markets that are getting in their view a little wild they'll come in and they'll find the people that are doing other things usually right like the people that are sometimes coloring a little too far out the line you know maybe they're involved in other stuff maybe not but it's enough to get them more interested than just some guy with some hemp flour in a defensible case right yeah and so at that point they go in they make a big production out of raids and all this stuff and they just never really charge anybody take everybody's money and everybody's product leave everybody really shook so in that way it just stifles the growth a little bit so it doesn't get out of control and that's the weirdest thing to think of like the fact that I guess we're saying it out loud is pretty crazy but very similar to pop 215 in the DEA in California same thing it really is and it's the same thing that even the way that consultants and lawyers were advising people they're like you just need to start acting like a business you know what I mean they're going to treat you like a business if you act like a business but oras the old saying go goes you know don't break more than one law at a time if you think you're breaking one law but don't break any others you know if you're going to have a you know 20 pounds of cocaine in your trunk use your turn signals you know and so it's the same thing with if you think maybe they're going to take a position on this cannabis thing you know pay your taxes or do the things that make you look give some legitimacy to your business so yeah exactly can you just for the people that don't know can you break down you know the difference between thca and Delta 9 and then Delta 8 yeah definitely so um so every plant has this chemical inside of it that's genetically encoded that activates uh cbga formation which is probably one of the coolest cannaboids that I know of but cbga comes in and that's like a precursor cannaboid like a mother cannaboid based on the genetic makeup within that plant and environmental aspects that flip like epigenetics that plant will either convert that cbga into cbda or thca and those are uh CBD and THC but in an acid form so a less active form uh a form that's not readily absorbed as well um by the body but um very very great um Everybody swears by it I mean everybody I've talked is like this helped and So based on that you've got thca so pretty much um all cannabis is going to have one of three major cannaboids CBG only because of some of the phenomenal work that they've been doing over there at you know um charlott's web and CW and all the other places under that me mega umbrella now um by creating these tailored genetics that you know Express certain cannaboids in Mass uh because before you get a little bit of CBG and it was funny as we figured out if we actually the neglected plants that sat in Solo cups too long the ones that were in the back that you're like yeah it's already full we'll pitch those if you actually went to go flower those out they had Trace them of CBG in them and it was something

to do with the way that because it was over stretched and and basically over vegged there was a build up of CBG that was beyond the conversion is how it had explained to me and that was where we first really saw that was like in 2010 probably where like me and my my small group of people first saw it um nobody really talked about it they knew it was there but it wasn't anything so then we get into hemp it goes into CBD thca in that there is a process that needs to occur in both which is that decarbing decar oxil um heating a long exposure to light even enough exposure oxygen will eventually convert that thca or cbda into its active metabolite which is CBD or THC usually you're going to end up with a Delta 9 THC just because of the breeding uh we have seen delta8 measured in cannabis before I know everybody says that it doesn't exist in Plants well it does we've seen it it's it's not common right now but it does exist just in smaller amounts that would take a lot to extract so that thca comes out people usually extract it out say off of either um an overage of THC production through a remediation procedure um say you're growing CBD flow and you pop hot in your state or your a department allows you to remediate that THC out of your distillate and that's your pro protocol and they let you go forward with it this extra THC a um is essentially in some areas allowed to go from manufacturer to manufacturer so long as it's creating compliant products so less than 3% Delta 9 per serving um gummies are a perfect example you know and nobody had to do Delta eight gummies but so on a delta8 so by heating thca yes it does convert to Delta 9 which is one one of the things that like everybody who gets in this needs to be aware of is like don't cheap out on your shipping you know watch your environmentals whenever you're shipping how long is it going to ship over a weekend is it going to sit inside of a hot truck for 3 days I mean you've had cases with multinational shippers right like FedEx where they seize the property and hold it and then they're like well we're going to test everything and it's like well you're it's like it's summertime right now and you've got that in a big metal can like it's converted yes so like going to be a lot of Delta 9 at least half because of that and so there is a um a safety concern to that as a business that you want to be mindful of your product's age its exposure to light heat um open air for a long time so people that buy older material relying on coas from a couple years or a year ago if it wasn't stored properly theoretically it could have gone over the threshold in storage of to Delta 9 TC right which is why they gave things like the 1% negligence limit and things like that because they're like hey environmentals happen we understand we said 3% but we're not going to be over the head if you're up to 1% and as long as it's you know not 15 20% and and so it's been great now with Delta 8 that was interesting because it was the first way that people figured out in my opinion to get altered in some way from hemp because they were able to so making distillate is is very similar to making liquor to where you're just basically at at certain temp temp certain things that you want boil off and you're just watching that temperature and recondensing it and capturing it and isolating or at least you know separating it that's a basic distillation of alcohol THC distillate CBD distillate all of it well it turns out that if you hyper degrade that crude that you started with to turn into distillate by adding acids to it usually LS acids um there's a whole problem behind that but leis acids at creating a very low ph and then running through a distillation process under hiac actually changes the molecular and like I said there's chemists that are Way Beyond me but it changes the structure from a Delta 9 molecule to a Delta 8 molecule which they're very close together on testing for a long time they didn't couldn't even test for them independently except for a couple people uh and at that point people were Mass adopting THC like a lot of them didn't know that it was Delta 8 because they weren't educated on it everybody was like oh it's weed which is another thing of like just cuz you're selling fake drugs doesn't mean that you're not guilty of selling drugs so on the on the flower side with the hemp Bill they're getting around it with thca flour MH on the extract side they're getting around it with uh Delta 8 THC Delta I mean that's the beauty is that because the CBD Market crashed so hard you can pick up is for pennies is what it used to be and just run that through your conversion process and do 100 l a day of XYZ cannaboid whether it's



hbc whether it's thcp thco um it's all chemistry right you get a good biochemist on your team and make sure that they can do these things and create these but in that there's some concerns that I've had with like clandestine operations that do it because there's a lot of unknown things about that like like if you're going around converting molecules and pieces are breaking off and flying around and running into each other and the soup that you're making what's to say that some of these pieces don't come together and form something we don't know that might be concerning and so and back to the Lewis acids issue is that there was a big demand spike in really high quality analytical grade Lewis acids that would really cleanly do the conversion um and because of that um the demand grew a lot of uh less moral people maybe got into the operation or less ethical and were like Bottom Dollar acid the cheapest acid we could find they experimented with like sulfuric which is terrifying but they they tried all these acids and came out with ones that still tested on their test machines as these cannaboids and so you add a lot of inferior which is why you see some delta8 that gets swirly and degraded really fast as opposed to others that stay just fine and uh that's kind of the issue that I've had with the with with that whole thing is just unscrupulous people putting you know unknowns out there which are just doing nothing but reinforcing the position that c hemp is weed and taking us back to where we were before which is kind of my concern I mean delta8 has a place there I know a lot of people that find relief from THC but the Delta 9 especially the levels of today are a little high for them um they they can sometimes have a negative reaction to high THC that's kind of the opposite of what they're going for um but what delta8 has allowed them to do is find a relief from a THC get them understanding about cannabis and about the plants and looking into it a little bit more and learning more and maybe hopefully changing a mindset on this whole thing um but also it's because it's like half the high is the way I describe it it's like a diet cannabis okay people usually don't get paranoid like they do with high THC Sometimes some people do have a hard time but uh and then also like the like I'm going to just go pass out on the couch and not do anything I know people that don't smoke weed cuz they're like the only thing I do is eat everything and go to bed like I don't need to do that every day yeah but Delta eight you know it loosens then they're able to enjoy THC and have a good time and not suffer from either of those it's actually kind of cool to see like and and that's been my message to um the recreational Market that's just absolutely gone hard after hemp because of they they think it's biting up their market and it's like no these are people who have never consumed your product they don't like THC they might get one from a friend one day but they're going to come buy your product now if they get more familiar with it with Delta eight and you know the paranoia of this is illegal goes away and all these other things kind of ease over time that could be a consumer that you couldn't have otherwise had that eventually goes maybe I'll just try these little 5 milligram gummies and they find out they just ate too much last time or they smoked too much of it last time and THC is an evil and now you have a consumer that wasn't before so it's it's really alive I think that the competition between these two is insane it's they're driving each other and one aspect you know one of the biggest things I've always said to clients to everybody is Lay Your footprint while you have it like you have a mechanism to lay your brand and lay your footprint on a national scale and instead you're going to sit in one state and complain about how this one thing in another state is killing your business no go Build It Go Just shatter every idea and concept you ever had go put your brand out all the way across the nation through dros the ability to white lab white label in drro right now is easier than it's ever been do you see a lot of your customers doing that having a legitimate licensed cannabis facility in a state but then they also have a hemp license and a thca line that they're Distributing in I think it's like 32 States right about that yeah 32 we have clients that are doing that and then we also have clients that take the opposite position that Chris is talking about like just open hostility working with legislature to stop it the west coast is pretty much taken a position that any amount of THC and anything shouldn't be allowed unless it's within our closed loop system so they're yeah so they're taking

one of two path yeah there people are like I'm an entrepreneur it and then yeah trying to tear it down which is weird because like really when it comes out cannabis is cannabis it was all all made illegal together for the stupidest reasons we all at least know somebody who's been negatively affected if not ourselves by these crazy laws that were put on the books and even today banking regulations and the stupid stuff like we just got knocked out of a bank because we work with a company and I haven't mind you had that happen in a few years and the fact that it happened again was just almost jarring because I'm like wait it's been like five years and we're very open with our banks we're like look here's our clients we go through their compliance everybody's happy they're fine we pay our fees they're good and for some reason they got bought out by a new parent bank that wasn't okay with it and it's like that type of stuff happening is insane like you're talking about payroll accounts tax accounts all these things and it is an issue and honestly like there are some tier oneish banks that are out there they're you know First Citizens here at MJ I've been talking to them for probably the last year and they're closely like yeah we got payment process we got all that stuff I'm like no way no way so I we'll we'll see how it works out cuz everybody always says they got some right yeah but I mean I just don't understand why somebody can't swipe a card I get that you know credit rails and all that good stuff and compliance and billions of dollars in costs but the fact that nobody's come with an alternative that's actually worked and it's taken a bank to just roll the dice yeah I it just adds a lot more paperwork so they charge you for that extra work that they have to do and I mean honestly like I'm fine with that like I I significantly remember walking duffel bags of money to a bank and scaring the poor bank managers because we're doing a legitimate legal license trans somebody's buying a license but it's \$350,000 inside of a duffel bag and the poor lady that's been working at a bank her whole life that's in like about ready to retire I there's a duffel bag full of money and she looked like she was scared of it yeah and it blew my mind I'm just like so I'm okay with paying fees man I'm good with that as long as they're not insane some there there are some banks I've heard some wild stuff do you have any c do you have any clients that have a legit like in a state and operate a thca hemp license out of the same facility often times not the same facility there's many Z almost every state has a zoning issue to where you can't have them in the same facility some say on the same parcel um so depending on the state for the most part though as long as you've got separate properties and they're being leased by two separate companies and stuff like that Most states are okay with that but no adjoining doors no nothing that lead to Diversion from one to the other it's like look this side can export your thca flower but you better not be getting it from next door yeah Clos Loop yeah unless you're doing it the opposite direction like in Oregon you can sell your H material into the recreational Market you can have like a a hemp conversion license is what it is and so but selling it backwards is kind of the thing that and and this has always been my thing is that we need to run these parall when you're selling it into the market it increases taxes and when you're selling outside of the market it decreases taxes but that's the crazy thing is that that's the solution right is that like all you have to do is run these systems in parallel allow them to trade back and forth in certain States if you don't want if if you want to monopolize the Cannabis Market in your state I'm not the head of government I can't tell you not to I mean we kind of are we're voters but you know there's a lot of Voters that have different opinions so it's it's one of those things where if you were to run them in parallel allow them to move between each other and then also in export States like Oregon California a couple others allow them to export only and not sell in state you would be literally saving these crashing markets across the United States literally Save Market California's crisis is not over production it's the lack of the ability to I mean Wisconsin would have the same issue with cheese if they could only sell it to people in Wisconsin right it's like but you got to give the people the opportunity we grow the best weed in the world on on the west coast it's like let us give it to everybody else but we can't we have a Clos and that by the way is a ridiculous

throwback to the there's nothing that really prevents States from doing that the the the co memo was the reasoning behind it but there's no reason why we couldn't do interstate commerce it's just none of the states want to do it because they they're afraid they're afraid of the government taking away their Road funding or their whatever and and I get that you know I mean they've they've used it a lot Oregon what was it Idaho's drinking age yeah Montana speed limits drive through Deary stands in in in New Orleans you know government says okay we'll just pull your funding if you don't comply and the stat say okay I'll comply I remember uh when Devon had a Eureka moment right because what what's the what's the hemp brand that you're you're GNA start homage hemp and um he takes his normal traditionally grown fir1 and sends it to the hemp lab Y and had it come out all of it passed I have one stram that didn't pass and it didn't pass at. 3% Delta 9 but it's still under the 1% negligent threshold so you could still probably something else yeah I do have a question there then so like at the 1% like negligence I would assume that you still need to test under3 on the COA right otherwise you're when you non product M when you remediate it if if you if you remediate the product to lower it then yeah if you bring it down to3 it can be open market now the negligible got it you're just kind of just p holding to who you can sell it to if it's over3 and under one is like in your state manufacturer to manufacturer Colorado's great about it um certain states are really set up well to allow you to say Okay that was you know a genetic anomaly or an environmental anomaly it's not subversion or it's not intentional screw and so at that point if you people usually make that into secondary products if they're very concerned um usually if it's a situation to where you can increase the mass without increasing the THC I've known a lot of people that tend to turn those you know flower products that fire a little bit hot um they end up just dusting them with CBD isolate and then the mass increases but the THC doesn't it's kind of like with this I mean it I mean you how many Lots did you test 12 12 Lots one didn't pass of no you just took what he just took what he had cures it normal it normal harvests it normal no special treatment takes those pounds sends 12 lots to the lab 11 come back pass for hemp as thca flower and one doesn't and now you can take those pounds put them in bags sell them in 32 states sell them to gas stations sell them to smoke shops ship them in USPS boxes UPS FedEx Air Freight like you just took FedEx Isn't that cool yeah there there are some certain ways you need to ship that'll make your life easier than but you can now take all those pounds and ship them to gas stations create accounts like game changing like it's it's over because it's the National Market all of a sudden you're talking about instead of yeah but State Market regular pounds that he just grew traditional fireflow just ready to go yeah and so I mean it's we I wrote an article calling this a little while back and and I think Aon begrudgingly was was super happy about it posting it um but uh it was it was titled the defacto legalization of cannabis and it is a controversial subject because it kind of pulls the rabbit out of the bag but or the cat out of the bag but it is one of those things that like somehow someway along the way we've created a significant impact to the prohibition of cannabis through hemp significant to the point to where it's almost a defacto legalization you've got you know something that now before it was like okay we're going to test it well okay what are you going to test it on are you going to use a GC Mass spectrometer like that heats the sample first cuz technically you're altering my products to get the result that you want that's got to be a problem right doesn't that tend to be a problem down the road well that yeah that's the argument right you converted my THC to or my thca to THC you did that I didn't do they have solutions for that hlc hlc and then um U I think it's uh PLC um those two use uh cold liquids like methanol stuff like that as a carrier solution but even in that like your preparation of the sample if you grind your material and you tap it out a couple times and then you scoop off the top you're going to have like an 8% variance of potency between if you scoop off the bottom where some of that stratified Kei fell down to as opposed to the lightweight Leaf went to the top Y and like this is how everybody's getting test numbers test the bottom of your ground up pile man yeah it's that simple 38% let's go I always laugh

about the oran test that came in for the concentrate at 103% yes what somebody just Mis it because it's calculated by% it means somebody's thumbs on the scale right can't do that that potent so one question I have for you guys like I've seen people who are selling like thca rosin yeah how how cuz you're heating your material right mhm to turn it into rosin so how like hey rosin maker no everybody so um the thing is is that it's temperature and time that creates decarbox silation so right if it's exposed to a brief burst of heat you may notal that it doesn't you may not hurt it or you may not convert it over far enough now whether it's it's homogenized to make it more compliant or whether which is honestly like we've come across some stuff in smoke shops that's obviously distillate mixed with rosin yeah and it's like you know it's it's it's like a rubbery weird stuff and it's you know it's sold at smoke shops and this is the stuff that bugs me but um it's it's definitely there's there's ways to create a product that comes down but honestly you don't convert a tremendous amount of it if you're a quick press on your rosin if you're not exposing it to high temperatures cuz really you're looking at 180Å° Plus for some time like 10 20 30 minutes depending on you know a ton of other stuff but uh dryness all kinds of things but like whenever you're talking about taking a product and and and basically exposing it to what like 40 or something like that it's it's pretty low it's pretty low for like what 15 seconds yeah but you're also removing all of the plant material you know what I mean there's all that weight that's no longer there so like you would think that the ratio would adjust and like Delta 9 would spike way up or at least theoretically so far in the test results that we've seen now now don't get me wrong there's a significant less amount of rosin on the market because of this exact issue but I think that what there's there's two camps that are on this there's people that may not care to be honest there's there's there's always going to be outliers that are like just Rogue operatives that are just going for it regardless of what the test result says they don't have business license nothing they're just going you know they're on telegram just pushing and so there's that demographic but then there's also the people that'll make it more compliant by adding in like an isolate to it by by increasing the weight without increasing the THC seen a lot of that people mixing so with carts specifically right they will Market it as a thca cart and then when you go to look at the card it's like you know 200 Mig of thca and then like 800 Mig of Delta eight right exactly assumably to drop that ratio and and that's the way that there and so there's like ranges of safety it's it's like the rings of Dante's Inferno um to where you've got like the most sketchy one that I would say is selling direct to Consumers at of a storefront completely untested material right yeah that would be the that would probably be the most risky one and like like that's that still happening that's still happening yor ad didn't even get tested by him like they just got buddies just rolling tubes in the back and just making you know basically went from the gray Market into a storefront and then they're just doing it call why would you do that when all your fire flow is getting tested just fine I mean that's the thing is that I don't think a lot of people understand hemp yeah lack of Education cannabis is cannabis it's all hemp it's all cannabis unless it has over 3% Delta 9 yep what's the difference between the testing requirements between hemp and Canabis I know it's a difficult question because state state by state by state is with cannabis but just in kind of a general overall rule what are the testing requirements of hemp potency that's it no pesticide there should be more and we we encourage more we encourage more control yeah but that's the that's the biggest issue but I mean arguably like there are some states that don't test for pesticide Washington doesn't force people to do testing for pesticides they'll uh they'll te they they're they'll test them so the Washington State Canabis where we'll go and test except for extracts they make you test for it but Oregon on the other hand they make everybody test so it really is a state they make you turine test like there's it's so wild all yeah they make they have turine test do you have any clients that go over and Beyond and do what's right and have like testing of pesticides at the minimum on the packaging legit testing where say this is clean cannabis clean hemp you know Canabis canisa you know um flow and it's clean and and

they're Distributing it that way yeah and that's the consumer side of Education too which is like when you're telling people like you're talking about gas station weed and it's like I don't know if I want to get gas station weed but if I did I sure want to know who I'm getting it from like yeah I'd want to know like that that what yeah what kind of company is this is doing this because there are companies that are doing it very lowest level and then there's companies that are really trying to say like we're going to be the leadership in how this is are the standard so sales reps distribution pay your taxes do the test be a business either be a business or or or you know be in the gray area but do one don't try to do both because it's like and and that's where we see people fall is like I can set somebody up with a great structure we can set them up with great liabilities and make sure they have great Sops and they're following you know the right States and they've got the right locks on their web all that stuff but ultimately it comes down to if they don't do the stuff that's necessary the bright paperwork they're comingling funds it's just treated as one giant pile of fun like that's going to be a problem down the road if there is a problem you're going to have a hard time as opposed to the guy that you know or person that that has um you know a full accounting that has taxes paid that has business licenses that has insurance that has COA testing and and that that is the issue here is that there's the testing it's not that people don't want to do the testing and honestly it's coming down to where cuz we just ended up in an article um in Florida and I was it was the Miami Herald and Times article um about quite a few farms and like the levels they had in there were insane there was like 1.8 billion cfus of something I'm like that's that's but wait it's a pre-roll why is it tested wet why did you guys test it wet and nobody would ever give me an answer and so like we had finished product that was wet tested that somehow in the second test had mold I wonder how that happened and then they were like oh yeah it's got all this crazy Delta 9 in it it's like well I pulled up the the ones from before it left the facility and it doesn't so and then you find out that they basically took the samples waited a week to put them to the lab and then had this this Epiphany to double test it somewhere else somewhere after they water tested them I'm guessing it's a pesticide method that I've heard of I I don't know how great it is versus if it works but um so they get it all wet then they reclose the package and they send it off to a new lab couple more days later and then they're like look it has all this mold in it all this yeast all this growth of everything and like it's it's very frustrating because it's it's just a lack of information getting out there it's like look and and we flat out told them we said look if if ever you want to do this again we're fine with it we believe the industry needs to be just as legitimate as layus potato chips needs to be I mean you've got a basically a blockchain type of tracking on most your products nowadays because consumers like that on kettle chips it's a tater tracker I think Unilever even has a QR where you can trace it back to somewhere and like these are the types of things that need to be implemented in hemp so then you can look and and people have to adhere to standards so then that way it's a mature enough market to be safe to be effective and and actually ready for prime time on a national stage because until you have testing that makes sense until you have some sort of um safety with products there's always going to be naysayers that are able to pick apart your industry and keep it down well they're trying figure it out too right like they're like some of these agencies we've had issues with we've said hey well we know our clients aren't using pesticides everybody says that by the way but there are some people that are just like I I know these guys in their system like I know that they weren't using and then we go through and we figure it out and we basically find that they're putting the test samples in paper bags and then we test the paper bags and the paper bags have the stuff that they were accusing our Cent which was by the way was like a something to get rid of hornets and I was like why would our clients ever put something to get rid of hornets on an indoor grow or weed it was like it would never happen so so the industry itself is figuring out their own Sops and their own ability to try and you know keep the industry in line while they're making their own mistakes too because all of is kind of brand new but

it's tougher still because the people that aren't good guys um are so out there it's like it's like gu going down the freeway and seeing everybody doing 90 and you're like well I only want to go 70 like can I just go 70 it's like yeah but when you get pulled over and you ask the cop why you're getting pulled over it doesn't matter that you were saw three people pass you doing 90 it's that you were doing 70 and so it's like it's a speed limit it's not a speed option go [ 55 ] and be happy you I'll get there but are you gonna do full coas on your your homage brand I will be the first supplier that I purchased um that I worked with um um tested just for moisture and potency um going forward we're going to be doing microbials pesticides potency moisture it's just right it's the right thing to do and like you need to build the consumer trust I think like in the market right now nobody trusts the gas station weed the Delta eight or you know what I mean like they'll smoke it in a pinch because they have to but like people prefer to go to their drug dealer that they trust and they've been working with you know what I mean like they just they trust them more than they trust the product that's on the shelf and like that's why in my opinion yeah I mean that is interesting actually you wouldn't assume that that would be the case but it turns out you know you know what I mean well it's like what you were saying like I know I know Bob I know he's not using pesticides I've been to his facility seen that right but like when you get onto a consumer scale and you're like spreading product across the country like you don't care if I know Bob and I know that Bob doesn't use pesticides like you want a third party to say like verify Bob doesn't use pesticides you know and and that is kind of issue is like most of these guys want to test they don't want Regulators coming back on them because a pesticide came up or whatever they don't want to live in that world of stress so like it's it mostly comes down to the throughput of doing adequate testing which is something I always advise them like look you've got to be so far ahead of your ordering schedule and on top of your Logistics and flow that you're able to test and meet your consumer's demand or you have to sacrifice sales those are really the only two options because you end up with bottlenecks and testing and that's why I'm like look if you can afford it put an hplc in your facility that can do all these put in augur growth put in these things in your facility and build towards being able to do inhouse legitimate you have scientists coming in and signing off on the protocols the Machinery how you guys clean it how often it needs to be clean all this stuff so then it adheres to the same standards that you would have an analytical lab adere too in that section if you do that it becomes significantly easier you've got your microbial growth that's three days you just can't I mean there there's some cool stuff coming up that that seems to be kind of pushing the envelope on shortening that timeline but whenever you've whenever you're selling \$1.8 Million worth of product a month and it's going out as fast as it comes in and you've got to all of a sudden slow your growth down by 30% because your lab had a backup yeah that's a really hard decision to make and I think that maybe some people are trusting others a little too much and they're like no I've been working with him for a while it's always tested clean before like I know he's not a problem I can move this stuff while I wait for the other stuff to clear it's like all the right intentions It's All the Right Moves but who knows maybe he just was a little light on this and he had to pick up some from his buddy that uses Michael buttin all something that if it comes up you're pretty much vilified at this point because it's pretty sketchy but it is it is important I we always advise our clients testing is the best practice find a way to do it as fast as possible and as economical as possible because it's a big expense you're talking \$100 a test minimum more than that full panel three to four yeah full panel three to four how you want 8X over just doing potency and moisture 8X you can get potency and moisture for what's the lot size there is no mean and that is the problem burglary I mean it there's there's an avue and and there's easy solutions to all this stuff there's so but everybody's so tied up in being afraid of cannabis destroying lives or you know just stuck in this old thinking or they're afraid of what they don't know but that's tough it's tough to like the the bringing it in house does add value but as he was saying you know having that third party say that

you're good does kind of give you that timate leg piece of mind for your insurance really um to where you know your good product's going out you know it's safe so if anybody says anything be like no we test this all the time look at our credentials behind it I know that the state won't certify us because they don't have a program or you know if something pops up double verify at a test for when something does look weird um little things to keep the cost down because it is intensive so I mean when people complain about the price it's it's a lot to get it to the consumer it really is and it's because the ancil businesses realized that you know they're the only town you got you got hemp producers thca producers complaining on how expensive it is to get it to the producer or you mean well I mean what are you saying try the legitimate my lot size is 5 lb here in Nevada and my test is \$350 for that lot size I've got 10,000 cfus on aspergillus mold and yeast oh my God aspil 10,000 C that's we actually did the so so hold on you're saying the him you got the him producers had you're complaining amazing yeah they really do we got it hard they they actually have the freedom to grow industry the Cannabis industry has had the freedom to grow government it's been stifled for sure yeah I think at least that's my opinion I think that the Cannabis industry has been a great stimulus for the governments um I think the hemp industry yeah that's true uh but the hemp industry has been about economy farming and product creation Now in every aspect of this yeah there are shady people that jump into everything I mean you look at but I've talked to people throughout like recent history that have done all these weird emerging things like the guys that started Netscape it was the same Wild West the guys that started supplements back in the 80s it was the exact I I heard the same stories in isolate chasing that I heard from guys from Rex all Sundown from the 80s in supplements and it blew my mind it's like oh this never changes just Emerging Market New Market govern government agencies trying to figure it out and making laws federal laws on the fly on the fly when they shouldn't be based off of who knows what they have to say who knows what their vested interest is and I I've always been here for the absurdity that plants are illegal personally I think all plants it's it's insane to have something that can grow wild be illegal to me I'm just not with that but I do understand all the safety and risk but it is one of those things that we've got to a increase the safety for the hemp consumers and B stop just absolutely skimming every layer of of survivability off the recreation market like both of those need to happen in order to have a good cannabis Market cuz you're right recreational it's in insane so many people have asked us to literally just take licenses like do you want my license I'll just give it to you you just take free you could have it yeah for production for sure I'm like oh my God I'm like wait I'm going get a license yeah and so it's it's there's a lot of stuff that you know once Interstate comes up then the FED gets to come in with a testing and standardization and those that have taken the time to actually instill a good protocol good testing practices good products and safe consumer like behaviors those people are going to be best suited to move forward and actually make the real money yeah like that's what I think so so now that we understand that pretty much all cannabis is federally legal right each state has its own guidelines now what like what are some big you know what's going on in California I mean that's a big Market what are the guid lines with hemp and California and some newer stuff that you're seeing states do that now that they're starting to understand the farm bill the West Coast like California they just did an emergency bill so that and so they're kind of shutting it down and Oregon had already done it shutting the hemp stuff down yeah to to the point where it's basically because it used to be um that yeah anything with any traceable amount of THC any detectable amount of T any detectable amount of THC is basically needs to be done through our closed loop syst Washington did the same thing yeah so that that that's kind of the West Coast so we still have several other states that haven't taken that position and we have some states that are really like have written it into law um one of my favorites is um uh Minnesota where they where they basically wrote a law that basically mirrored the farm bill act at the state level and said hey as long as it's been extracted from you know. 3% you can do whatever you want so you go to a bar in Minnesota and

they have cans of cans of sodas and and it's like 0.5% you know and it's like I think they have 5 milligram limits or something like something but at the in any event it's like they have stores it's it's basically part of the system but but it's a state regulated it's all like they wrote laws to mirror that bill and so it's like it's it's still a patchwork and that's which you know makes it interesting I think well and then I think to complicate things even further is that you've got some states that opted out of creating their own regulations so they're under the USDA yeah they're under farm bill yeah which is like literally growing corn you want to grow corn cool the only thing that they ask that you do is check in with your local um FSA office to make sure that you're you know um basically keeping up with your crop and then and you know where you're at and when you're testing and when you think if your testing dat is changed and a lot of them will have you uh some states were just having self test for the longest time which can imagine there was probably some people that took advantage of that but um but you know you just hire some guy that's on a list to come out and take the test and Tada you're good and so but it doesn't cost some crazy license fee like like there's the background checks and stuff like that that you got to do they do cost money but it's not \$10,000 or \$50,000 or \$250,000 for a license it's it's like yeah you want to come grow a crop come grow a crop right and you look at the Timeline too right to get something like that done like if you were to apply for like an actual cannabis license month if not a couple years in some states I don't know how my partner's uh he had a license Chicago has a license in Chicago retail and his took 18 24 months something like that crazy time it's it's you know but Nevada I think one cool thing about Nevada is that the fair market Price was set which I I'm usually not really a big fan of like the government telling us what we can sell things for that's not like in me but it's probably the only thing that saved the damn Market here for the longest time so fair market value they were like you can't sell below fair market value to anybody no no they what no earlier on earlier on what they were doing is the state was making a fair market value and the last time I I knew what it was it was about \$2,200 a pound right that's what you would get taxed at right and so so you could sell \$1,000 oh but you were going to get tax you're get tax at 2,200 oh ni they changed that January 1st 2024 okay so because because it pretty much doubled your tax it did and so but but what their intention from what I was because I think like Senator it was probably Senator tick at the time was probably the one that was talking about it back whenever I talked to him about it it was back then and so that was the intention yeah the intention was to set a market price to keep everybody because I'm sorry every single Market in this entire cannabis ecosystem whether it be hemp whatever recreational gray Market everything actually the gray Market's probably done at the least but everybody just takes each other out it's brutal like everybody's just it's Friendly Fire left and right and retailers are that way but I feel like producers or Growers are much more like of the community minded of like willing Farmers it depends on what you're looking at right like a grower for the most part is going to hold on to a price until they get desperate and they need the money right like I think we've all been in a position like that where it's like I like I need to get this [Â \_\_Â ] out the door you know what I mean yep and at that point it's like go comes through and he says I'll give you a th000 for that and like your typical price is 1,500 get it out what do you do right either turn off the lights or take the you know what I mean you set that new precedent and now that guy thinks that this quality is worth a thousand and he's going to fight tooth and nail to find that somewhere else until he finds another desperate person I've just I've seen a lot of that like I agree that retailers Drive prices down more than Growers would willingly yeah but like Growers if there's over production 100% work themselves into that situation where they have to you know what I mean they're just not going to be able to sell it if they don't drop the prize and it's just you know I I'm I'm not sure what the resolution is for that really because like I said I'm not they're just trying to survive yeah I mean people are just trying to survive but then you've got opportunists that are taking advantage of it in some states you know the retailers



are now the ones over the barrel and that's weird it's really yeah I would say that California and New York the two places where I've seen retailers were they're having the hardest had the hardest time as opposed to I think that was just because it was there was a black market there that was so established in retail that when the retail came out to compete with them they you know you can shut 70 of them down and next week 50 of them are open again so it's like yeah you're like so but but other states didn't really have that problem and I I don't know why other states didn't have that same problem but in California maybe it's just because cannabis is part of the DNA down there already and it was just so yeah I don't know because it's very unique because every other state you go to retail is the winner no matter what but but in California like retail it's tough to survive and it's almost the opposite it's the producers that were making it and same thing for New York it's like they have that same problem but also the the Comm the the the Cannabis industry in itself that's a moral dilemma like what are we going to do about all these criminals that are selling weed and it's like well what were you before and it's like well I was a criminal but I'm doing it right now and so it's like this thing where they want to do something about it but at the same time it's like that that's the reason we did this that's why how we all started here all they got to do is get aemp license I mean two grand let's go it's it it's like a bull running through a hallway at this point like like you're just like get out of it way it's it's coming you know maybe run behind it you know it's Pandora's box right like you're done now like how do you put that back away like I know we've had conversations about this right there billions in it now billions of dollars are dumped into what was I don't know considered not okay a year ago yeah this isn't guys growing weed in their mom's basement this is like people that have money invested in this and they were looking to do something about it like up until like a month ago the farm bill act had like specific Provisions to shut this down the entire industry down about intoxicating uh intoxicating cannaboid which is a funny but I mean they were they the the two versions that we're seeing like in the last month uh from both the Senate and the house don't look like they're going to do that so what's it looking like sorry yeah what's up what's up Chris what's going down it honestly looks like they're really pushing the go farmer go kind of thing like they want boost Farmers more than they care about arresting people for cannabis yeah so is it looking like it's looking positive for Delta 9 THC is gonna stay at three and it's not going to be a ban on total THC that's what it looks like now but predicting politics has never been my strong point I just want to point out I've been terrible you've seen some drafts and and and with these I mean initially the drafts came out and and some great groups had worked on it you've got groups all over you've got groups in Oregon you've got some in Washington like campus Alliance and you've got NC CIA and you've got all these and then the group that it's an uh what's her they changed their name and I can't remember it now uh it's ciao but but um it's the one gal down there in Oregon that's did a lot Courtney yeah Courtney Courtney Mor uh she she actually did a lot of policy work with them um and and in there was a separation of like fiber and seed and more valued constituents and I assume that it's like no no no and I was told point blank no this is to make it so then the fiber and Seed Farmers don't have to jump through so many hoops and from this conversation how many Hoops have you seen I mean there's not testing I mean testing for what testing at what size lot it's just to accept them from testing is what it came down to which is great honestly because like yeah there's a lot of money in canabo whatever just Elin but in fiber when you're talking graphing carbon Nano tube Replacements you're talking building materials I mean energy and all kinds of other stuff comes from this it's trillion dollar industry like they're fine with separating off because they're like okay cool now we get to have this defense and Aerospace and like crazy trillion dollar smaller group though yeah and it's a smaller group it's easier to manage nobody's really a big you know troublemaker and these you know fiber Growers they're making textiles and Plastics and all these things and I'm a big fan of those I hope that all this cannaboid money does so well that it's able to spill over like Bitcoin spills over

into freaking altcoins and just basically fund Plastics and and fund renewable energy resources and fund you know different textile practices and things like that so then we can you know you're looking at the carbon credits alone are pretty astronomical talking what are you what are you seeing happening I mean because it seemed like that's what the hemp bill was originally kind of for right was for construction micr Plastics it wasn't sexy nobody went into it there was almost zero dollars comparatively that went into plast I mean there was like Titan bioplastics and a couple other monsters that got a few good alus behind them but ult ISM and high Capital don't often times go together uh unfortunately I it does there are occasions where you've got very altruistic people with high Capital that are able to really push the needle forward um but this one's uh one of those things where like textiles it's not you know even if Under Armour calls and and wants to talk about Blends and all that it's still not appealing enough as yeah but you can go make a 100x over here with this but and there's no real need for infrastructure because it's just people to people whereas like got to build a building and you've got to create distribution and talk and then you've got to undo poly Blends and Cottons and work your way into the weaves which is what they're doing now you got a lot more hemp Blends coming you're seeing more progression andas like just at the snail's pace compared to especially when you compare it to cannaboids like cannaboids is a lightning bolt and literally the real benefits of what I believe the real benefits of hemp to just us in general as a planet and as people is like watching paint dry it's wild um but like I said hopefully it'll spill over hopefully somebody goes no this is insane like look at how we can remediate soil pull toxicities out of it create Safe products create Energy Products stop mining lithium like yeah those talking points have always been there and they were what helped pass the bill in the first place but it's just not really nobody's actually put up into it and I would challenge anybody to actually do it I mean it's one of those things that like if somebody does it it actually is it's got some great implications but I don't think that they see enough maybe profit or something in it or enough sustainability what do you mean you said lithium thank you oh like like so so so like lithium Mining and all that stuff you guys probably heard some things about how like it could be bad um I personally have a very neutral subject about it because I'm not as educated on it but I do know that you can take hemp essentially biochar which you could use remediation Studies have shown that by taking mediation grown hemp so like toxic ground that has certain things in heavy metals stuff like that it'll pull it out of the ground and you put it through this system that creates biochar and in that almost nearly all of any of that bad stuff comes out in the oils or all that stuff that gets collected and isolated and then your biochar is essentially a graphine replacement and there was a phenomenal doctor that has unfortunately passed away um but uh dino who had proven that not only do biobased batteries or hemp batteries in in this this case that we were actually working with them on um were they better for the environment of course but their structure apparently improved over time to where the battery would get better to a degree or it would allow the flow of energy more efficiently I guess and and like I said some of this stuff's way above me but this is direct from him and he had patents on this stuff so he knows what he's talking about for sure is there any companies that are working on a hemp battery or yeah oh yeah there's there's there's well biobased batteries in general hemp just happens to be you know everybody's got extra socks laying around so it's they try it and it works so by biobased battery you mean that like the hemp is able to pull let's say just for example lithium out of the soil and then you're a lithium alternative so like right now lithium batteries are like our biggest like you know because they're great they're great discharge they're I mean they're awesome batteries they're great cells but now we're looking into Ultra capacitor capability where you can have very high discharge without losing safety cuz like we all Remember The Vape stuff right when they first came out these guys didn't know what they were doing they're building their Vapes wrong next thing you know they vent off a battery cuz they drew too much energy from the battery at once and the battery basically nuked like it sprayed out all kinds of sorry it sprayed

out all kinds of hot fire became a road flare burn people it was bad yeah well in like a few lithium objects over time some Samsung phones those little roller scooters did it they caught on fire yeah and and but like lithium technology is is a phenomenal stepping stone into creating a safer reliable product that can be grown renewable and can actually heal like P other heavy metals like cadmium and and and like pesticide like it actually it's a phal remediator and there's tons of data out there on this not just like my theory but no um there to where it'll actually help pull bad toxicity out of the grounds lock it up and then when you pull it into a biochar it separates it out and you can turn that into a battery so now you've taken bad soil you can't grow a crop in made it to where you can grow healthy crops good food crops remediate it and then you just take this essentially waste thing that had all the bad stuff in it you pulled out and turn it into a battery that could last and can have applications for very high discharge like semi-rs yeah try and drain a lithium battery too fast they always vent always and so you need ultra high fast discharge without venting that cell and Ultra capacitors start moving towards like very high output very high discharge very safe and and and like Ultra capacitors are definitely there's tons of groups that are working on them with bio uh they were using switch grass sugar cane pretty much any waste crop any or or waste from a crop to make this hemp just became great but like those are the things that I think everybody's kind of lost sight on what what what about on the plastic side is there any companies that you know of that are really focusing on producing like hint Plastics cuz I think that is but I don't know the last time I've I think Titan was the last one that I heard of Titan bioplastics was around for I think there was a a really nice lady Amy that was on that one that we had known but I don't know of anybody that's really pushing the envelope a lot of them are more like opaque um like uh Vape like I think Escobar did a bioplastic um vaporizer okay um there's another company that was here at MJ Biz that would that that came out with um like you pull the battery out you can recycle the battery the packaging is all recyclable like bioplastic and stuff so definitely pushing that direction but as far as scaled like Coca-Cola is going to use these for their bottles it it comes down to nobody's willing to put in the money to shelf stability because the thing about biodegradables is well they degrade and so you don't want stuff degrading on the shelf right you want things be able to be stored for longer term and things like that and so to do those studies cost literally throwing tons of money away yeah and there's people that are occasionally willing to do stuff like that and push us forward in those areas but it's just we're all waiting you would have thought the Cannabis industry would have been more quick to adopt that but again it just came down to money it's more expensive for me to put this in a biodegradable hemp thing than it is to use a plastic one and so yeah so just go is creating the hemp plastic cost effective compared to regular plastic or is it like more yeah I don't know the difference but it's more expensive enough that people didn't adopt it it's a lack of Drive expensive with scale obviously yeah of course of course I mean you know plastic comes from a byproduct of a byproduct of a byproduct of crude oil so like being able to cross apply those things like if you look at like what corn does and what crude oil can do all the different things it can create mem's right there yeah right there with that's the potential so I mean it can reduce Reliance on maybe both of those things either altered crops or you know um things that you know are definitely not good for the Earth floating around yeah I I think I wrote down construction purpos that is that with hemp creete yeah hemp Crete's phenomenal I mean they figured out I think how to even store energy in the walls of hemp creete structures which blows my mind I have no idea you seen any him like H creete houses going up right now I Joy would be the one who would know all about that was all about that yeah she's big big big on hamr huge and she was actually one of the people that really turned me onto this way before anybody else like in 2014 she's like Chris do not get your eye out this ball look at hemp and I'm like okay and she was talking about that back then yeah like talking about my buddy made a hemp creek block you know it was light it's so simple and it was strong really lime hemp herd and water it's pretty flame retardant too it's it's

phenomenal stuff uh very weather resistant flame retardant good insulator like insulator too it's it's it's really amazing when they started like 3D printing houses with them they the prototypes they like 3D printed a house that was cool that was really cool but it's Mass adoption and and you know maybe Rising Timber prices and all these other things might lead to a demand to look for Alternatives but right it's hard to get industry out of their you know their ruts it's it's you know billions of dollars and generations went into creating this industry whatever it may be you want to upend all that the equipment overnight the buildings the processes it's a process it's a give and take and we see other unfortunately what I think that there's a lot of is Regulators tamping down to allow the people that already kind of have a large market share to maintain that large market share kind of to come from the mainstream Industries like if you look at say and I'm not saying this but like warehouser for instance Timber industry whatever um I'm not saying them but like allowing them to perfect their ways so they can keep doing what they do because they know the government they pay their taxes they've known them for a while you know it's it's it's a relationship between industry and government that's gotten almost toxic to a point to where it's very hard for these new things to come out because they're like but what about those 100,000 jobs and the generations of work and the the TX rofs they got and that there's a lot to it that's holding it back it's not just because the government doesn't like it it's it's a hell of a thing to undo we gotten ourselves into quite the mess with cannabis with with the new Farm Bill kind of drafts that you're you know kind of seeing come across a line do they have a timeline of when they're going to get those over the line or well should have been 2024 um supposed to be but we we think it's coming it's going to happen in 2025 because it's kind of overdue and it's not a small bill that just deals with cannabis it deals with so much more billions of dollars of Industry STS uh uh subsidies and there's Administration incoming that has you know a very a very um different take than we've had in the past so I imagine that things are going to look very different than we've ever seen I'm not saying they're going to be good or bad but I don't think that it's going to be bad hemp or cannabis in general I think that we're only starting to see the opportunities and what good for you I mean it's not that it's not going to be Rocky everything's Rocky right but like it's not going to be a cliff I don't think so I'm not predicting politics I already yeah so so that that was one of my last questions do you have an opinion on the current Administration legalization of cannabis on a federal level do you think it'll go reschedule or deschedule so I yeah but schedule he's already come out and supported schedule three but also like nobody noticed this last term that he was in so you remember federal court if you uttered the word medical marijuana in a a trial proceeding they tell everybody sit down and shut up tell the jury to get out admonish you for saying that word and then bring the jury back in and say you are to disregard the term medical marijuana the federal government does not recognize that and would literally make them strike it from the hearing then luckily you know a great hearing came along that you had worked on that that allowed that to be even uttered in court which we thought was a big deal cuz it was just literally like judges would yell at you for and like threaten you like fines and who knows what else but um then we had the head of the ex well and that brought about medical necessity which is like hey if you're dying you have a right to do whatever you want like you're dying save your life however you can um which is great that's very necessary and came out of common law from you know way back in the Brits but uh more recently we've seen a situation where the head of the executive branch Donald Trump at the time stood up at the podium and openly said I believe medical marijuana helps people I believe that it has great effects when cannabis was dead set in a schedule one status now nobody noticed that nobody said a word about it and a lot of people because maybe their opinions of him maybe didn't want to hear him say anything let alone that I don't I don't know what it was but nobody said a word nobody ever went hey wait a minute did the federal government just say medical marijuana is real like the head of the executive branch that can actually change

this law say that it's real say that he believes in it and believes that it does have benefits to people that are sick and hurt like Whoa We just heard a president say that well Obama did too like he said you know he said medical was no no worse than it couldn't be considered worse than alcohol that's what he said he didn't say I believe and the benefits of Medall marijuana which is Wild for the executive branch to say at the time yeah he's always been consistent on that position I think that yeah which also kind of doesn't it's hard to tell how that'll Faire because schedule 3 doesn't make any of this legal no it's huge for taxes and I think that'll make a big difference in saving a lot of companies because you get payroll now you get some stuff and even you know all all the workarounds that we've been dealing with for 28 is such a big deal but schedule three is not going to change much else you're all still in violation of the law money laundering act fing Bank secrecy act it's all still applies yeah so nobody's legal suddenly because we're schedule 3 because none of you guys are FDA approved unless yeah do you think schedule 3 is really enough no I don't it should be do do you think it gives it to the pharmaceutical companies everybody's worried about it because they're they're sophisticated they know how to deal with the FDA they know how to get things passed by the FDA you know so it does but again there is a toothpaste and a tube to get back into right like we're not talking about a few people with a little bit of money we have entire States infrastructure built on cannabis so I think that I think we're you know in for a I I think we're still in for another five years of messiness um but I've been on The Five-Year Plan since my fiveyear plan came up in 2025 so we got to legalize this year I've been wrong for the last five years I was we we have a joke that uh one of my I was speaking on a panel and one of my mentors I was on the panel with me and I said you know they asked me when it was going to be legal and I said well in the next 5 years and he leaned over and he laughed he said you're on the 5year plan too and I was like what are you talking about and afterwards I asked him what are you talking about he's like oh I've been on the fiveyear plan since 74 all right that is but you've seen a lot more movement man I mean it's a lot more movement now I think that I don't see us going back in any means I think that the federal government's been been very smart to allow the states to absorb the liability and the risk and all that stuff to figure out how this is going to turn out and all they have to do is say okay we're not going to put you in prison for it and as long as you're doing it by you know a state's program or whatever and as long as you're not doing these other things you're fine and some we have something to say about at a production level you might want you might not want Federal like legalization because that creates consolidation it creates larger players that are competing at a different level that moners that we are we we are we're all mom and pop shops right like at the end of the day yeah we don't have multi-billion dollar companies behind us so there's something to be said for like maybe we don't maybe you don't no I'm just kidding no it's it's it's definitely one of those things that like I do think that yes the money's coming to it but at the same time you've got to look at the the aspect of um the way in which nobody cares about it anymore the DEA like they're like whatever we're done with dealing with this the postal inspectors are done dealing with this everybody's done dealing with it yeah so confusing it be easier for them being sh all over the place now I mean not how do you like you just you open up the box and you're send them the coas you give you you call up your assigned Postal Inspector and you say hey one of my packages got held up what the hell's going on they say let me look into it for you and they say look do you have coas for this and you're like yeah and you send them the coas and and that's the thing that I think everybody's kind of missing the boat on this is like oh my God they're all getting away with this loophole I want to say this as clearly as possible there was never a loophole it's not a loophole it's not it is it is a direct intentional act that was placed into the law that was given plenty of debate and many Minds looked at it and had the opportunity to debate each other on it and it still became what it is so it's not a loophole it's like this isn't illegal everybody's like well how are you getting away with it getting away with what it's it's hemp it's hemp this is what the hemp

law says this is what I'm adhering to this is I mean I'm working with the postal inspectors I'm working with my bank I'm working with all I'm a legitimate business and it's like every and I and I get it because every especially in places like Nevada and Florida and other states that had very very costly licenses very lengthy application I mean the application was insane and the and the and the money requirements and all that were above and beyond which I get because there was other states to let anybody with a couple hundred bucks have a license and that didn't do very well for anybody Oklahoma enters the chat and I mean flood yeah and so AR we're going to see a I think it'll end up a states rights issue that there'll be some states things they're going to allow interstate commerce there will be a few guidelines that are mostly consumer safety faced but then what do you do about all the prison laws and all the sentencing Reform Act and all the other things that cannabis is intertwine into I think that the but to that to that point of like farmer is going to get it no I I do not believe that conceptually or logistically they could so so the only reason why they only have THC and C you have cannabis has over 400 and something compounds in it that we know of they would have to isolate each one of those test The lethality of them go through all the studies on those isolated compounds just to get approval on that one compound like like uh um D dronabinol um or or epidex those type of things like THC a Marinol is also what it's called so you have to isolate figure out when it kills people if it does then do clinical trials then you can start moving it out into certain areas and you have to do that with each compound you can't just take this group of 500 compounds and go this is our patent yeah but they have the resour some of those some of those pharmaceutical companies government takes forever yeah no that's true they wouldn't have the time to do it is what I'm coming down to it would take them 20 years to secure a patent on the whole plant for is a profitability there for them like is the motivation there for them to go after that might be Point yeah not not for full spectrum I I've always believed that full spectrum is the safest because it's it's raw form they're looking for medical like antagonists of of receptors they're looking for a very specific purpose to make billions of dollars off of yeah and so why would they waste all the time with all these unknown variables and their testing of all these other compounds they don't know anything about because like right now there's Labs that are trying to figure out how the plant goes from this pheromone complex to see BGA then splits off into whatever canabo so they can do it in bioreactors so they don't have to worry about farms and supply chain and hurricanes and floods destroying their multi-billion dollar medication supply chain none of them's going to go from the plant to the to the everybody always sees this thing of like a plant getting ground up and made into a tablet no it's a plant getting ground up analyzed all to hell then they figure out how to synthesize the same molecule and then that molecule gets made into a tablet yeah and so full spectrum cannabis cannabis flow I've never had an issue I it's not going anywhere it's it's it's it's coffee it's corn it's it's a compound which is the argument for Desu right right it's compound yeah exactly now if you want to start scheduling THC Delta 9 that actually makes a little bit more legal sense right yeah from a legal standpoint yeah because it's IP protected for Marinol under the synthetic form right and technically it's the only one they seem to have a real problem with so really it would make more sense for them to just schedule Delta 9 THC and then leave everything else just left to be like until they find out something else like C's cancer like you know wipes out some disease or some crazy something then they're going to be on that stuff like quick and they're going to isolate that one out and maybe over time yeah maybe they get the full plant but generations and hopefully in that time a lot of laws change and you know they're not able to do it because that would be pretty nuts but look where where they're at now they're not known for being the great you know altruistic minds of our generation I don't think no so the wild west yeah I think you know flower is going to be great for a long term but concentrates and isolates those are going to get weird because technically if from a legal aspect wouldn't the only thing the federal government would have to do to shut all this down right now is enforce their patents extraction on all of

these things they have patents in for like converting to delta8 was patented by the US government in like 2014 or something like that or 2011 like all they got do is walk into any big operator and go cease and assist this is our IP right yeah yeah if you wanted to spend the money to enforce the patents but I just don't see federal government doing they haven't so I mean it's it's it's mostly about safety it's about you know they're scared of things yeah and the more time that goes by and the less people that lose their mind because they looked at a a cannabis plant the the less they're going to think that's going to happen so yeah we'll get there well I think this was uh really informative because I mean I don't know if you guys have done a podcast breaking down the entire THC market and him and what it means and the abilities but um I don't think I have I've talked about a lot of other things but I haven't talked on this before so it's been I haven't heard I haven't heard anything about it right I haven't heard a podcast about it that's why I was excited to do it nice yeah and kind of opens up you know the eyes to to the community and say hey maybe I want to do a hemp license especially if it's looking like it's not going to be changing in 25 right because just license your brand into a hemp license youra line maybe and you're and you're legit you know set your footprint we do have some big msos that are doing that and and there's a lot of opportunity for you know smaller companies that have good branding to do that yeah I mean if you can't beat them join them right right and do it right though yeah like do it with the testing do it with the right team pay your taxes you know make sure you're putting clean product in the market right um not saying that I'm going to do that but I'm just still going to be running you know Nevada state if you're in cannabis you got enough to do yeah yeah I got enough going on with Athena so it keeps me busy definitely um I appreciate you guys time it was really informative thanks thanks for having us we really appreciate coming out here and getting to you know hopefully inform some people yeah awesome thanks let's go have some fun tonight yeah yeah we got some parties go go thanks how do you think uh attendance was at at MJ this year compared to last well it's a little different from past years getting yeah a little slower I it's like attendance is the lowest i' I've seen I would say so too and even like the events it's not the same there's less culture based events more sales based After parties and events first doing stuff for the culture yeah the the the parties out here it's like more of an event to go to than the actual show % yeah that's what it's that's what it's turning into y you know I think when they separated everything into different Halls it kind of threw it off a bit yeah made it more spread out it's a lot of just moving around for people too like all day and even for like people that are here it's a long day you're going all morning all night yeah yeah for sure we um I know a little bit of your story but we've never gotten that deep into it like how how long you like when did you get into cultivating cannabis uh I got into it it's probably been like 12 13 years ago now and uh it was all by accident I was managing restaurants in New York went to go visit my little brother out in Humble and uh saw the farm I was back in the the good old gray days and I never left I went back to New York packed up all my stuff came back and started moving dirt and learning how to grow that was it yep went from moving dirt to taking notes and working my way up and learning everything I could so you you started cultivating in Humble did were you on the mountain or yeah we were up uh up outside of Willow Creek so we were up on the Deep on the hill yeah and I I went from no cultivation experience to running large scale essentially commercial facility how how big did you start off uh we started off the first year it was only six like 100 by3 green houses and then like half acre of uh full sun and then we ended up with 12 those green houses and then a full acre full sun that was that was your first cultivation my first yeah wow you didn't like no one light two light four light like full send and you know were you always a greenhouse from day one yeah on the F yeah I always never I got to skip all the trimming uh initiation part of it so she just went full cultivation y straight to Greenhouse I could I could pull tarps and move dirt so it's a attractive pull from them at the beginning yeah you told me some crazy thing you know once like they would they would give you like 60 Grand for the season and then would it just be

you or team so it was me it was essentially me and my two brothers and my brother's best friend were we were the core people there so we were team of three team of three of us we were the guys there every day and then we bring an hourly labor for you know big pushes like Harvest and stuff but yeah we essentially get a budget till that first harvest and we got that first weed trimmed and that was that was it so you get get up on the M Mountain you get your 60 grand for the year yep right is that what it was y 60 Grand probably for the first like till July you start trimming that first your first harvest so you got to no matter what you got to make that work got make it work yep there there's no options you just figured it out and I made it work did you did you guys do outdoor up there too yeah we did outdoor we did mix light uh pull depths and then we had you know just straight outdoor for uh live Ros and mix light HPS yeah where did you like where did cuz you know you're running 100,000 ft in Nevada right now yeah um and one of the your biggest strengths that I see is you're really dialed in on irrigation strategy did you does that self taught just watching no that was just the after I start I came back to Vegas after I left California after I left humble and that's when that it started coming on the scene and all the information started coming out about it and I just to straight in to learn as much as I could about it and you know it all made sense so I wanted to you know learn what I could to put it into practice Yeah so you it was more you never did really solid irrigation strategy up in Humble obviously you know by fil or or whatever yeah it was by feel or by you know just schedules we'd put together it was never there's no science-based reason to why we were feeding essentially versus having that live data where you can make day-to-day decisions I've heard some crazy stories up there you know about just crime and like what what was it like on the mountain you it was still the Wild Wild West a couple years ago you know it's I'm sure it's not what it was 20 years ago but there's still a bunch of uh lawlessness that happens there's there's reasons people live out in the middle of nowhere like that yeah like you being from New York right you know coming out there was it I mean were you welcome in right away or no I don't even think I would say I was welcome in till the day I left really I mean of course like some of the local homie Growers but there's so many other Outsiders and aspects of people like we didn't really socialize up there there's like a little bar in town we I was there for six seven years on the hill and never went to that bar once it was just something you didn't do you didn't socialize around you did you didn't socialize no I mean and that was still kind of like on the on the end of like what do you do for a living oh I'm a landscaper or we wear construction yeah it wasn't a something you talked about in public like yeah there's always that risk of you being followed back to the farm and yeah I like I I remember I remember hearing stories from you about just people disappearing and yeah all all the time it's even the gas station up there it's a little tiny town of maybe like 800 people there's probably like a missing po posters for like 70 or 80 people they're just all like from the month before what people from like like trimmers come in there from yeah that was essentially like the big thing that hire a bunch of Labor and then just not pay them like that yeah unfortunately what what I know you know we used to get a lot of trimmers from like South America and is that same up there yeah that was our crew I mean they come in and crush and yeah did you ever run into any problems no we were pretty good about vetting our trimmers and like if you were messing like messing up or doing stuff we didn't approve of you're out of there right away like we didn't did you run into any issues with the locals with with uh not we had a couple crazy locals but nothing like we didn't handle but yeah definitely locals and had people putting up gorilla grows on the back of our property which was fun to try to get them to stop and then so from from Humble you came straight out to Las Vegas yeah I came out to Vegas I had opportunity to go work with uh some guys that are coming out here from Humble their uh their spot fell through so I ended up working somewhere else their Las Vegas spot yeah okay so you came out to to work yeah to work that spot yep and then where did you end up um kind of planting the flag I ended up going to Shango um just waned to work again I was waiting waiting for that spot to open forever and no work so bored bored and then you know that was



kind of towards the time of all this irrigation strategy so I was like I'm learning about all this stuff I'm and I want to put it into action I need a place I don't want to put up a little tent in my house and so so I ended up going there and then ended up meeting you I think maybe 6 months into being a Shango oh so that's when you were you were there for 6 months and how what was your role at at shingo so I ended up just being their irrigation like specialist so essentially alls I would do all day is just monitor all the data kind of come up with the formulas of our feed schedules and kind of build it on rooms and then keep that data and build it like per cultivar and and help them kind of figure out that aspect of their growth and you just learned that by videos and videos whatever information I could read and then honestly trial and error you know it sucks you got to learned some hard lessons sometimes but you don't know there's there's there wasn't a lot of data out back then about it so there's a lot of things like you had rough boundaries and you just had to try it and see if it worked out if it didn't Y what were you guys you guys in Rock Wall Coco what were you guys at in shinga we were rock or Coco Coco yeah the two gallon like Dy bags okay y okay and what do you think like the Journey of learning how to you know crop steer and and kind of dial in the irrigation what's like what's your philosophy on it like do you are you in line with everything like aoya and we teach or do you have your own little secret sauce I mean I I take all their stuff with a you know as a good Baseline and then obviously as you grow and just tweak stuff here and there there's certain certain strains that like to sit out of higher e certain strains that like a little more pH so it's I would say I just have a little bit of my secret sauce of just tweaking it per strain and and trying to dial them in as much as possible how do you how do you manage that like what's like what are you looking for on like different cultivars mean you're the big thing is your transpiration rate um not only your daytime transpiration rate but your your your overnight transpiration rate you might have some plants that their transer transpiration rate overnight is just a straight line down and then you have some that some that just sit and don't drink and don't don't transpire overnight so then you can play with your irrigation schedule throughout the day and the ones that don't transpire overnight and those feeds earlier so then they can still get that nice slope back and they're not they're not drowning overnight and how do how do you like what what what's your process of monitoring that like what like what's your workflow on say if you get a new genetic or a new cultivar new genetic new cultivar uh I'll I'll get the data back on like from our substrate monitors which we using grow link right now I'll check it every day every morning every end the day throughout the day I'm on that thing constantly just checking and making sure like before the first feed in the morning I'll check make sure everybody got their dryb backs overnight make sure everything looks good and then end of the day I'll check it too to make sure we're on track M and then depending on weather throughout the day we'll check it because if it's for us being mixed light if it's cloudy or we get extra Sun I have to make all the time changes to the irrigation to either add add hit take away hits to keep everything y happy with running the indoor spot and Shango and then moving up to like a mix like Greenhouse like where do you where do you lean towards I love mixed like Greenhouse I mean I think I love it more more or less for the challenge of it it's for me more mentally stimulating it's always I'm we're constantly making changes every day you know because we got the other aspect of Mother Nature that we have to deal with yeah you know indoor you get you do you do have to make changes but once you get a good recipe set the majority of your crew is like cleaning all day and you know what I'm saying it's it's a lot more keeping stuff clean and pruned and manicured vers you know dialing in all these little environmental tweaks throughout the day and trying to keep everything as as normal as possible in the greenhouse yep with irrigation strategy in a greenhouse I mean with the variables are you always adjusting you know your your irrigation times and staying on top of it constantly or you do you have a process of like what's your what's your process on that so it depends on time of year you know summer and Springtime I can pretty much get a good schedule set it and and let it rip um as we're getting into the winter and stuff

it's it's more of an everyday look at it because we get so many them yeah and we get so many cloudy days out there so it's just kind of playing with the weather and what's what's coming at us okay and are you are you riding things down like how are you how are you yeah I have notes and journals on upon journals and I always take notes throughout the day and then at the end of the week I'll go through that notepad and then I'll I'll highlight all my important stuff and then I'll transfer it into like my my final digital Bible of essential of like the hard hard good stuff good data I want to keep for the week so I can go back and look at it what are you what are you mostly tracking when you're doing that on your notes I mean the biggest thing is just plant health of the of the plants and the weeks they're in and then kind of the the external environmental and internal mhm so kind of looking at all those are we seeing PM in a room if we are what's the humidity what's the temps what have the overnights been and just kind of keeping that data so we can go and kind of figure out why we're having you know these reactions and is it environmental is it something we're overfeeding so it just helps keep track of all that how many times a day are you feeding for how long it depend uh depends right now it's probably only like four three to four times and they're like four minute hits Okay so small hits throughout the day and what size dripper uh I think they're half gallon half gallon per minute yeah okay and then um half gallon four minutes three to four times a day Y and is that in summer or that's winter right now that's winter summer some cultivars will take like 10 to 12 Hits 10 to 12 hits yeah wow so you're almost tripling tripling in the summer but that's why and same same four minutes yep and you'll see our I mean you've seen our yields over the years they double triple in summer spring and yep I mean that's transpiring more eating more Yep so uh half gallon per minute drippers and then what size pots uh we're about gallon and a half okay yep straight cocoa straight cocoa were you always a straight cocoa grower or no we were like we did some he living soil stuff no till beds and then we had you know our our pots and and just organic soils so I went from soil to Coco what do you what where are you leaning towards I mean I like Coco commercially 100% because you got there's less uh variables for for stuff to happen you know you have so many variables in living soil where you got to go you know send your soil out get it tested figure out you know what's off what's causing all these factors with Coco if you know you have a good base with it and then sterile like you know it's if you're having nutrient issues it's the nutrients yeah consistency and uh repeatability yep with no till coming from no till organic were you guys straight organic or you guys hybd like organic and synthetic no we were full like full organic making compost teas and like thousand gallon compost tea Brewers and and which where do you lean towards now synthetic yeah just I mean consistency I mean I'm not I'm not seeing any degradation in the product like the product looks great smells great we have great Tarpin we're not getting cardboard TPS I think it's just all how you handle and process the flower yeah what what's your what's your thoughts on that like like um where do you see a lot of cultivators kind of missing it on on the quality and tpping I think the the biggest thing is just the caring and drawing process I think everybody's like in a rush to you know get to Market or get their money back and and they don't they won't take they're not taking that extra week to let it sit they're not burping and they're not you know putting it in a room where humidity and temps stay the same throughout the process yeah we learned that uh on the new dry that we built that was huge y that like what was crazy is like our dry rooms before were just janky kind of they got got the job done I mean they got the job done but that you couldn't you could dialed in yeah yeah what what what were you seeing in the the dry rooms um previous to now like what what are the what are the major uh differences and improvements uh just just now just the keeping the environmental in there um the old driv would take a couple days to get down to 60% humidity and with the new ones are down in the first day the old ones would sit at like 80 75 for a couple days that's that's where you get all that microbial growth and adds to all your fails as well with the labs but what I was so surprised is the increase in quality like remember when we like the flower that we were doing was was good it was great you know um but then

when we changed up the dry rooms the whole pack stuck together then yeah it got loud we have sticky weed I think it impresses a lot of people here in NADA and the only thing we changed was the dry room was it that was it that was it and just it's just keeping those that environment where it should be from the start and not having it go from you know 90% humidity to 60 in three days you want it there right away and you know help set up the the curing process for those tries so you're saying it's really important to get to that 60% humidity right away right away or or pretty close like I mean if you're in the ballpark but I feel like a lot of guys you're sitting in a room you don't have enough dehumidification and you you got a room full of plants and you're at 85% for 2 days before it gets down like a lot of stuff can happen in 24 hours the plant's still living so I'm sure it's degrading a little bit and and not curing and setting up what's the what's your curing like temp humidity time like what's your what's what go to our dry time we're usually around 7 to 10 days um we want to put it in there at you know at temp at 60 59 humidity around 55 okay um and then we'll just let it sit to 7 to 10 days we'll start the Bucking process um but during the whole time when they're bucking and and throughout the all the other rooms we have humidifiers in there too so that humidity never goes any lower either so we keep that humidity current throughout the whole whole backend process what's the the setup like um what kind of humidity deuses AC like what the I know our our dehumidifiers I think we have about four andin in there and then uh we have ultrasonic humidifiers that everything's all filtered and all set and you're just keep it keep it don't change it let it just let it work its way out and and finish I was blown away just like the increasing quality yeah it was insane it like I didn't understand like I I knew like the curing process process is is really important right but I didn't understand how big of an impact it made on turpins and flavor and overall you know just flower quality it's huge yeah it made a huge change in a quick one you seen you seen people like they'll Harvest they'll spend all this time and and energy cultivating and then they harvest in the same flower room or just like a open garage or you know yeah they'll dry yeah they'll dry in their their their flower room yeah yeah it's it's insane we we're running you're running currently HPS th000 Watts yes and then we did a test with thousand watt LEDs and on a DLI level on paper it looked great it was smashing HPS th000 Watts yeah on D what like it was like 30 40% more yep D and we did two rows right yes something like that um put up thousand watt LEDs that had 30 to 40% more DLI and on paper were like hey that much more DLI the yields are going to increase yeah what did you see decrease you saw a decrease big decrease yeah you did you see a decrease or you saw the same as HPS I thought it was the same it was pretty close to the same but I would say the I don't know the quality of the the way the nugs were set weren't they're more space out not as tight like on an indoor I mean you see that kind of increase on LED you're going to see that and yield major right but in mix light what do you what do you think like what do you think your philos like I think it's big part of it too like we do we do rely on our canopy for that that heat from the HPS for us you know um not having that extra heat it goes back to you're not transpiring as much so you so you think think the leaf surface temperature was a big impact on yeah 100% cuz and then you're losing instead of you're you we we noticed the big thing during that too is we were feeding two times Less on the LED rows than we were on the HPS rows because the leaf service T same strain same everything so you're getting two less feedings on a cycle that's starts to add up yeah that that was mindblowing I was really really surprised that's what we've always struggled with is in the winter is our DLI because we you know we're losing that natural any help from the Sun after 4:30 but you also got a factor you're losing the leaf surface temperature increase yep which transpiration moving more so he tried it and same same but I think the HPS is definitely the move for for Greenhouse mix SL is that is that go to that's you know when you see LEDs in Greenhouse like I'm sure it can be done if you're in the you got that perfect climate for it you know and there's climate War the leafers temperature yeah you'd have to yeah it's interesting cuz I thought we were going to crush so yeah so did I did you you thought so too huh yeah just getting the a th000

watt LED top light it's insane it's insane the increase in DLI and ppfd Y and we didn't see any difference no you're saying less weight I would say yeah and over overall like structure and quality I would say less like weight same it's same same there wasn't like a any weight differ but the quality the flower did you guys use LEDs at Shango no I use HPS HPS have you ran LEDs before or no not solely no so you're just straight HPS guy yeah keep it real y um one thing that we worked on a lot this year was two two main things uh lean lean farming practices and schedule like what what do you what do you think the the biggest things we learned um regarding those two subjects this year I mean lean farming I mean in it's it we've learned a ton I mean I think every day we're still learning with it it's a great principle to kind of bring into your facility and teach your staff like what the meaning behind it is because then they'll start looking at things and you know every touch we can take away every day and get rid of is more time put to do to do other things like we've seen it all throughout our facility by changing tiny little things like we used some examples we used to soak our 99 clone cubes break them up put them in trays now we're getting trays are already pre-filled and you're just feeding them and you're not having to worry about all that extra prep work and it saves days on the back end um another big one we do is we veg in place now you know you lose couple days in those rooms but we're able to turn a veg space into a flower room and we're also able we're moving the plants when they're little so you can move 2,000 plants on a Baker's r back vers pushing carts all day back and forth moving plants so yeah that that was something that we didn't knew this year was veg and place um how do you think the overall canopy Management in plant health is with vegan in place how how long are you Ving we're like 14 to 18 days rending on time of year okay um we're still we're still in the new stages of the canopy management with vegging in place um we're kind of learning as we go it's it's not too bad um we've learned you know always want to keep a couple extras cuz you're going to have some then uh don't make it and fall out but other than that it's it makes it super easy I have the guys come in and top everything so we try to keep everything at the same height if need be there's some strange we can let rip and and not top but with with with topping we we've talked about it uh before on on this podcast and it's like topping no topping what have you learned it's I'm B I'm with it's just bad back and forth I've done it both ways genetic dependent 100% genetic dependent I've seen stuff that I've topped and looks great and then I was like well I think you were there and you saw it and we were walking through the room you're like yeah we got to top this one yeah and you top it it looks fantastic you let it go natural it looks crazy y do you monitor that and write down the Toppers and non- Toppers y just keeping my notes Y and another thing we did was started to monitor stretchers and we we broke it into three different categories stretchers uh shorts and mids yep right and then that that kind of tells you where you need to put your trellis netting 100% which which is gaining tremendous amount of efficiencies yeah it it turned a job it used to take them you know day to set Trist in a room to you know one guy takes them like an hour or two to go through and set everything and we have the sizes already marked out on the benches so you just go sub that you guys did do that yep and then we we're adjusting it as we go through this first year run on it so we'll have quarter every quarter obviously throughout the season the plant Heights are going to change so our cuz the climate yeah our sizing is going to change so trying to build them a guide for that now so then they'll have it set throughout the years so then every time we move in a room they know boom set it done they don't have to worry about trellis until we Harvest so so you you're that that was one thing um how so the rooms are 70 7200 ft yep each room except one of them and we got eight rooms yep one of the one of the rooms is 11,000 sare ft one flower room that's a big it's the big one that's the big that was that was our old bedroom yep that we converted into to flower space flower cuz we Ved in place what um with the with the trellis how long is it taking a guy to do the uh full trellis in 7200 square ft with what you're doing now with one guy and help maybe help with somebody for half a day you're talking maybe four hours four hours yeah and and that's and you're marking how many different uh marks do you have on your on your

poles for your trellis so we'll have like three so you have your short medium tall okay and based on what genetics going on that bench you'll put the trellis at that point Y that's big makes it super super easy and just efficient for everybody they don't have to go and look back and or guess and slide manually Slide the Tris down and spend all day trying to work plants in and just have the plants work their way you know throughout the Tris yeah how long is it taking you to harvest 7200 ft uh we just got it down to I think we were like a little under 7 hours uh they just broke a record last week how many people uh we had nine nine people at Harvest yep and that's including there's some people just you know recording weights and moving racks and hanging stuff in the dry room so that's I want to say six or seven guys just cut everybody else just moving plants and and then uh how many days are you down before you turn and burn uh right now just to keep everything on schedule or six days between Turn and Burn six days yeah what is like why what's Tak what what's taking you know six days what do you what's your process I think the majority of it cleaning cleaning usually only takes them a day day and a half the big part is uh prepping Coco we get all our cocoa you know raw and blocks from Sri Lanka and then we break them down and rehydrate them so takes us a couple days to get that all set and then after that then we're good to go that usually takes them about two two and a half days with the Coco with the cocoa yeah yep yeah but we just got that new mixer so that should uh speed some stuff up andt have you hooked up the potting machine yet or no not yet they just got the cocoa machine hooked up before I left yeah what are some other efficiencies with lean farming like on on on a mindset level like when you're d dealing with a process or workflow like what are you thinking about I'm always thinking about just touches of like how many times anytime you know we go and write new Sops for something new I I'll make sure and go you know work with them work through the flow so then I can do stuff and just be like okay why did I touch that twice there to get it to here yeah you know if I can make it from here to there and one touch instead of two or three how do we get rid of everything in between and did I teach you that uh kind of a little bit I think we I think I had it in me I think just brought it out more when I kind of understood deeper of the lean farming yeah I mean even on our old spot in California like it was only the handful of us to run that whole thing so that that was just kind of how we were taught too of like the less we can move something or touch something it's going to make our 16 hour day a little bit easier yeah I think lean farming is a mindset 100% it's a mindset like you're you're looking every time you're in that facil like you said it's really important for leadership to work with their people CU if you're not down there doing the workf flow in the process seeing the inefficiencies but as as leadership you're you're always I bet like when you go into a when the team is working like the way my brain works is I'm always thinking I'm always watching I'm watching how where's where are they walking like how far is that distance where is the tools at like how many times are they touching a process how can we lean it down like what can we do and then you go there and you test it yourself you do the labor and you're like oh this works hey guys what do you think about this right like do you guys think this is a good idea and let's try it and see how much time we've saved like how like from last year the 2023 to 2024 like on what are some like how many days do you think we've saved how much man hours I mean months months yeah yeah we at one point we are like two two months behind and then we added a whole bunch of new efficiencies added maybe one more person on the team and we got caught up months in labor yeah and it's it's always just like you said it's always taking the time making sure checking in on them you know and and looking working with them to see like okay how can we make this more efficient or make them even understand they could be doing a process like pruning and I can have a technique that I could show them that makes more sense in their mind and make them more efficient so they're not taking their time on plants and you know every time even when someone starts in the greenhouse and we're pruning I'll give them a timer or a stopwatch and I'll be like make sure this is what we want to do but make sure you're not spending more than 2 minutes on this plant cuz if they get it 2 minutes 2 minutes on a plant per of our benches uh one

person can finish a bench and a half in a day so if you can keep not keep them on Pace but keep them so they're not you can easily get lost in prin of your plant you know as being someone in a greenhouse you could stay and manicure a plant all day so if you put a limit and then they kind of see what they're getting done in that time frame and then it gives them a good base of how to get everything done that's big yeah I like that you know you know and they don't need the stopwatch all the time but it just give them a mental well yeah they they you you can kind of mentally feel what like what two minutes minut feels like yeah yeah so you like okay so you're not get and you can take those minutes break it down on the day and know what you're going to get out and how many how many guys you need yep to get that room done to get that room done and you know how how long is it taking you to strip a room uh right now maybe like two days okay how many guys uh between 4 and six okay so you're stripping uh 7200 square fet how many plants uh roughly we're like 24 to 2600 depending 2600 plants with four people in 2 days yep yeah that if you didn't have those metrics broken down in minutes you you wouldn't know how many employees you would need you wouldn't know there's so many different things and also it it uh you can kind of track on who's good at what exactly or not let's say more efficient in other areas I could have somebody that's way more efficient pruning but isn't efficient in filling pots yeah or moving pot you know what I'm saying so I I use that as a as a big thing too is kind of see where everybody's strengths are and keep those people together in the facility and you know it's a big Improvement on workflow yeah yeah uh we've gotten really really efficient yeah um I think what do we post Harvest we're currently at what like \$35 a pound yeah that's go like what does that include \$35 a pound for post Harvest trim package labeled ready to go out the door that's insane yeah like 30 and that was that was before the packaging machine yeah that was before the machine what do you think you can get post Harvest down to Total labor in in a bag I mean cuz you guys think our packaging is probably 70% of that \$35 so yeah I mean probably under 20 bucks 20 bucks 17 to 20 easy once we get that machine fully cranking but yeah no it's a it's a big deal um the another thing that we really worked on this year's schedule like the important like how to you how important is the schedule for a cultivation I mean it's it's everything like it's it's a heartbeat it's everything you know I always tell my guys if we ever get behind in areas um there's some things that we could push back a couple days and move around but the two things we can never push back cutting clones moving in and harvesting like those dates need to say stay safe that if you miss a day or two late on pruning in the middle not the end of the world but being a day or too late on that Harvest or be a day or two late on cutting clones that puts everything back for the whole you know the whole year so what so Harvest cutting clones and moving in yeah are the three Hard dates that don't you know we don't miss those dates how are you managing your schedule right now uh right now uh we developed what is air table that we're using um it works great you know we have it all scheduled mapped out for into next year year and a half almost yeah for a whole year you mapped out a whole we mapped out a whole year um and what what are you tracking or what are you scheduling inside air table I I mean every everything from cutting clones clean out of the room moving in um throwing in their tasks for let's say day 21 prune day 42 prune throwing those in there any task related goals we have for that room is all an air table so as I come through like it's easy too for us like you look at the month I have everybody's workflow essentially done for the month you know I just go on there double check make sure it allows me to put people where you know they need to be and stay on point with everything what I found really cool was we did the 2025 schedule yep on a table and then we in air table it breaks it down into you know you can see the time and and kind of break down and you can see where you could fit another Harvest yes you know walk walk how did we do that like walk us through that process I mean we it was the way it lays it out visually you can see blocked out so you could see the flower time veg time Harvest um take down and clean up and you know transition so it made it really easy for us to just look and like you could physically see where we had a a you know a 10day gap we can fit something versus having to just

look at a list of numbers and be like okay how many days back can we slide this in yeah so yeah super Game Changer how much will that how much will that one Harvest generate in Revenue one Harvest r i mean over couple hundred grand yeah yeah it's me it's a big deal yeah I mean schedule schedules everything yeah you know it's it's I'm surprised you know when I go into some cultivations I don't see a tip schedule like you got to live and die by the schedule 100% cuz you know you if you have to it normally takes you six days to clean a room and in the middle of the year for some reason something happens and takes you two weeks to flip that room you just lost probably a harvest and a half for the for the year y I mean that's another cool thing about air table it will show you cuz like we have that 1 11,000 ft room that takes us a little longer to clean it shows you what that two three days will do over the year as far as pushing the schedule back and making stuff catch up to other things yeah so it's super dope yeah no it's it's it's a yeah it's big um with with hlvd like you're you like you've experienced what I go I I go into the facility and I I know you you've kept it really clean and um we've had hlvd in the past but I don't see you ever having it like I mean I'm sure you come across it but never spot it yeah I try to get it out of there as quick as possible um we've we had it when I first got there um it was pretty bad I got spread everywhere yep um and then after that it's just kind of writing out the Sops for whoever's working in mom and veg and and really keeping a tight ship on that stuff if we have stuff in there that isn't tested yet there's a rule like no one's no one's touching or topping it before we go get it tested just to stop an easy spread cuz all it takes is one one dirty one yep with um what's your what's your process on that what's your sop of of monitoring monitoring I mean big thing monitoring you're looking at structure when you're letting them veg you know you let them veg for two months and you're you're looking at the bottom branches are they going straight out I mean you'll notice it they'll just go they go flat yeah they'll go flat and crazy and then and then there's like the stress test we call like you just tap the branch and that thing will fold and break um and then then we'll obviously we'll send it out to my I think we use my flora DNA to uh do all our hlvd testing so quarterly I'll test all our moms anytime we get anything new in we test it before we put into production just to stop that threat of spreading it y yeah and um how often are you testing probably quarterly unless yeah or and or if we get some new stuff in that before we we take cuts off of it we want to make sure yep no it's a big deal and then just keeping Everything clean with bleach you know we use a little higher concentrate than normal for for our scissors and stuff when we're in the Clone and Mom room and but that's an all good reason because we want to make sure we're not spreading it you so you're uh dipping your scissors before you move to each plant yeah so they're whoever let's say they're cutting clones the whoever's cutting clones they're keeping three pairs of scissors in a in a cup of bleach as they're working through that way they're rotating through the scissors and that the pair of scissors is sitting in that cup of bleach long enough yeah get the full disinfectant yep how many harvests are you doing a month uh right now we're at like 2 to three uh going into this next year we're going to be at like uh 2 three 4 rotation and what what do you pulling um grams per square feet right now uh I have to do the math on that but it's about 20 is it I think it's about 20 yeah you think that's I mean look I mean indoor you know I used to pull 60 to 70 gr of quality flour um consistently you know on indoor yeah but Greenhouse I mean it seems like in winter it's like 19 to 20 gr of square foot 100% And then in summer it's like Max 30 to 35 right yep like I've heard some wild numbers on grams per square foot in a greenhouse that what what's like what do you what's like average you're you're seeing in Greenhouse cultivation I mean I I just like kind of where we're at anywhere between 20 and and like 40 you have people that you know there's always going to be outliers but then you have to ask the question of like is it full of Bettis and are you passing testing yeah because you can we can't grow big you grow big monsters in a greenhouse you're going to get betrus you're going to get Bud rot you have to you know we like we have the environmentals that we have to deal with and you know Mother Nature is not always nice so you start putting huge monster col

in a greenhouse it's only yeah rep recipe for disaster eventually yep how are you keeping your night humidity down uh right now we're running dehumidifiers in our green houses overnight yeah that was a huge that was a big Improvement we made y are you seeing um an increase in plant Health when you're doing that as well yeah 100% lowering the humidity at night yeah we're seeing huge and and for us like being out there like we're in the high desert so you would think we wouldn't need dehumidification but in the winter months just it's so cool and and we need it at night it makes a huge difference yeah I always did Greenhouse with no deu yeah same you too yeah yeah was that the first time you used Deus yeah in the greenhouse but as we were you know trialing it out I saw the where it could be useful you know as we were kind of talking through it it just made sense because you'd watch same thing collecting data you'd watch the graphs you watch overnight you watch that humidity Spike every night to 78 80% 82% are getting better dry back yep and now they're getting better dry back cuz the humidity is where it needs to be and it's not not too too humid in there for them to not transpire yeah I I mean we're here at 4500 feet elevation um humidities are average what 15 to 19% yep um and like you said you don't think you'll need a dehue with with humidities that low but it changed the game yeah huge and and helps too with like the little monsoons we do get but when we get monsoons that humidity goes up to like 90% they quick yeah it's a it's a it's a big deal yep with with the two harvests um how's your guys' sell through right now for the N Nevada Market we're blessed right now as far as sell through it's it's good you know um essentially we're they're waiting on us the package even with the three harvests like you got just consistent sell through we haven't got to three yet but yeah once we do I don't see it being an issue yeah how do you how do you think the Nevada Market is right now it's different um I I think there's a lot of unfortunately I'm just going to say it not a lot of quality flow in Nevada so you're starting to see a lot of fall through and you know the quality brands are starting to stick around and really show out and and stay current for the you know the end consumer but the markets I don't know it's all over the place right now yeah I mean it's a big tourist Market too so it's like a hard what do you think that it's from Talent density out here or climate key what I think I think it's a little bit of everything and above yeah and just you know people just trying to get product out to the market quick and they know not curing it properly driving it too fast not curing it properly not storing it properly um fortunately you got a lot of these dispensaries and you spend \$560 on an ath and you get it and it's CR you don't even need a grinder you just grind it in your hands in the dust yeah it's cuz it's just not being stored properly yeah where do you like to see your humidity levels when you're packaging on your flower you try to keep it like between 55 and 50 yeah and and your moisture level on your flow like 10 to 12 pack as we're going into packaging that way when it does if it does go to The Dispensary or does sit somewhere that the humidity is not proper for a couple days still gives it a chance to get to the consumer at a at a good moisture content yeah that was one thing I remember you telling me a story of a uh a smoker somebody buying our flower was like oh can actually yeah feel the mold what feel the what he's like yeah he's like feeling how moldy it is cuz it was like squishy yeah it was squishy cuz he wasn't educated I was like that's not mold that's it should be squishy he thought it was mold he thought it was like root like no good cuz it wasn't hard because it wasn't like yeah it wasn't rock hard yeah yeah wasn't falling apart yeah he had no idea he's never he never felt squishy weed before yeah which is wild that's wild that is wild it's a lot of educating to the consumers even the local consumers it's just they're starting to get there where like you know trying to get them more educated on tpin and not not this battle of like 31% THC is is King yeah 100 are you seeing it's just still THC dominated or yeah unfortunately I think it just has to do with we're such a big tourist Market yeah because you got I mean all these people coming different states different countries the easiest thing for them to look at out of all those numbers is going to be THC y um I personally you you know I like the rs11 load testing is where I go that's I mean that's where I'm at too I don't know if I'm getting old or Fu everything I smoke now it's fire it's all it ends up coming



back at like 16 to 18 yeah I don't want to get blitzed yeah no me neither I want to smoke a little enjoy my time chill be able to function throughout the day so I think hopefully that market will start to come along and better as we educate people I know like we've been doing too like we've given out a ton kind of that rs11 is samples to people and they everybody loves it yeah yeah and it's somehw of our lowest testing Vol and so it's like getting it's my favorite to smoke yeah mine too and it's like getting them a custom like okay it's okay to smoke something that's out of 14% it's not you're not going to have a bad time you're going to you're going to be you're going to get high you're going to enjoy yourself you're not getting screwed over like I that's what a lot of people think in the market here of like if it's not high THC they're getting taken advantage of no some of the best flowers low testing 100% CU lcg is 16 Y 177% and you're either going to have tpin or THC so it's very rare you're going to see high numbers on both unless they're doing something yeah one thing about you is you're always pheno hunting yes like you're you're a monster like what do you got going right now like what what how many how many like how many you popping how many seeds are you pop in at a time like what what crosses are you running right now we just finished up a big coffin candy one that we worked on for over a year and a half that we got from like 230 230 fenos down to 31 and we just got test results back so we finally got that down to like the final nine so out of 231 you picked nine yeah okay um so finally got those back and then just started a a new one um just did over he over 180 uh 180 seeds and they're all amoretti crosses from uh SYM symbiotic oh yep so that'll be a fun one how how many how many feno hunts are you doing a season a year I try either one like we did one big one I'm probably going to start breaking down into smaller ones throughout the year um now I have as we've added this space to I have a little bit more small benches to play on because obviously feno hunting we want to do it in the smallest area possible because that's real estate that you know you can lose out on yeah what what breeders do you you popping uh right now I did uh the last one was symbiotics and a compound okay and we have a bunch of bunch of stuff from them with with pheno hunts like as far as are you seeing a lot of cultivation facilities in in Nevada feno hunt or they're just some running I think a lot of them are running and unfortunately they're not only running but they're renaming yeah I see that a lot like there's there's people that have uh five or six Lemon Cherry gelato on their menu yeah how important do you think it is for a facility to continuously feno H I think now the way the way this industry is going you have to like you have to have either that strain that makes you stand out because if you're in a market where there's a hot strain you know that we all can cultivate well and you go to that market there's you go to The Dispensary now you have 12 Groves all growing the same thing so finding that it helps you find that diversity for your you know one your brand and then to the consumer yeah yeah 100% with with the with the crosses that you're doing right now out of the nine like what what were you looking for with those with those hunts for me it's I'm I'm always going after like Tarpin the nose and and then obviously the other things that follow behind that is like the nose on it and then the smok ability of like the translation to the nose is like my number one right and then after that struck sure is it going to yield how difficult is it to grow CU you get some strains that are fire but on a commercial level unfortunately it's not they're not viable yeah and obviously THC numbers yep unfortunately you know I wish it wasn't like that you know it's uh it's um it's rough because we got to throw a lot of fire away yeah there's a lot of genetics I mean I I it's not even just us it's probably ton of people all over the country and world that are just like they're getting these Cuts or finding these fenos of something that tastes smells amazing hitting 14% And then it goes them trash yeah and we're never going to see it again yeah because you can't sell it yep yeah it's crazy um do you think that's why you have so much sell through in Nevada because I mean and we we can't keep inventory in stock yeah I would say that say so that too and just like our our overall like passion to actually care for the product throughout the process like we make sure like we want to make sure our stuff's going out at its best quality to the consumer you know as far as we're not

sending out a bunch of dry stuff we keeping everything tur block bags use tur block bags essentially we're creating a product that we we want to smoke y you know with with your experience on large scale Greenhouse mix like cultivation like what's some advice that you would give some other you know mix like Greenhouse guys uh don't be scared to try new things in the Greenhouse uh also [ Â \_ Â ] just take notes a lot of notes unfortunately with Greenhouse the big disadvantage we have versus indoor guys is only get one shot a year during that time of the year to try to make adjustments so if I in the winter if I see something happen and I have to wait till the next winter to make that adjustment whether it's closing blackouts early or messing with heaters and settings so just keep those notes and just always revisit it throughout the seasons yep cool man back to MJ you going you going to this show yeah I'm gonna go go look at some stuff yeah did you go out last night no no I a little bit I did I'm good trying to be trying to be trying to behave until tonight yeah you going to connect tonight I think so yeah yep yep all right on all right brother I appreciate you coming on yes sir yeah it was good hopefully uh some Growers learn something from this yeah I hope so all right man How long you been in the States now? 10 days. 10 days. How's it? Yes. How's it? Really good. You've been a road warrior or what? Yes. 3,000 miles so far in 10 days. Where have you been? Uh, I land in LA. I drove to SAG the day after. As soon as I land, uh, I start the seat project because I coming here to make a seat project. So as soon as I land the day after I make the first reversal because I have you know 10 days window to do it. So as soon as I land I make the first reversal spray hit the bubble gum because I'm coming here I'm reversing the bubble gum. So reverse the bubble gum. After that I'm being a road the day after directly visit Humbonk in Humboldt. Eric see his farm and he was harvesting some nice plants some new feno is doing it too. I give him a new seeds, a lot of new seeds for him to hunt for this season on full term and see how he's going to come for the the wash and the return on the on the hash. Uh the day after we drove down to valley rating, visit Rob at Umbber Valley, see his facilities, visit all the team, see his two facilities even and give him some new seeds again to Fenant and see a few feno see his entry for the Olympics. and uh see a lot of good thing interesting at at Umbber Valley Rob facilities. Coming from Europe and being in the industry, you guys have been in business 30 years you've been doing this. Yeah, we celebrate the 30 years last year. How how are you seeing the difference between facilities in Europe compared to what you're seeing in the United States? Yeah, here it's way more professional than in Europe we have only the Swiss. Now the Greece coming, Portugal a little bit and now Holland with their 10 license, they can have big facility to grow. We have in Macedonia too a few big facilities growing medical cannabis in a kind of like hard of state facility you have here really good with all GMP and GACP and really good manufacturing uh building. But overall here the level and the quality and the involving of the team the knowledge is way more than what we have in Europe on the big scale. on the big scale in Europe, are you seeing a lot of like the guys that came from the culture kind of going into that direction? Because you kind of see that here in the United States where a lot of these guys that have been doing it in bedrooms and basements kind of scaled up and are now producing large scale commercial with licenses. Are you seeing the same thing in Europe or is it more bigger companies, corporate companies kind of like a little like Canada or these, you know, more corporate ran guys haven't grown cannabis in Yeah. All the big facilities in Europe fail most of the time like 90% of the company and big facilities in medical is going to fail. And after they're going to call someone like me or someone knows the industry, they all hire someone from Canada or Israel, big agonom. They pay super expensive and they fail. What do you What do you think, you know, from those guys coming in from other crops, big a or tomatoes or cucumbers or whatever going into cannabis, what do you think their biggest challenges are? No, the thing is we need this guy to scale up because us as cannabis grower we never grow at big scale as this guy growing. So I think the best combo is to have an aronom on site and to have an cannabis expert like us on site and to work as a team. That's how I get the best result even on working uh with the

University of Voken in Holland with Doogie my partner. It was there all the time and I was advising by distance. And we have Philillip which is a master agronome he can grow even vania in greenhouse in Holland. So it's super expert on growing any kind of plant. But cannabis he didn't know. So without my help on tell him how to make a good phenomenon, how to growing and how to harvest, how to dry, how to cure, we get a [Â \_\_Â ] nice result. But as a team alone it was just [Â \_\_Â ] up. with and me myself if you put me in the same situation as tomorrow like this huge greenhouse I never been into it I will fail the same as him process and workflow on big cultivation and scale utilizing that team but when it actually comes down to growing a quality product I mean you're you're running a consulting business now what are you really helping these big facilities because you're doing Greece you're doing Portugal Go. Uh, Switzerland's big. What's that? Switzerland. That's one of the biggest I make now and have the best results so far. We we've been into what are you what are you finding they're you utilizing your knowledge for mostly when you're going into those facilities? The work the work and knowledge about the plant because most of the people work into this facility don't know or most of them didn't even grow before. They maybe have one person inside know about the plant like that's actually knows how to grow cannabis. Exactly. All the rest is just theory and they have read book or see documentary but they don't even be into. Yeah. Starting from ground zero which you know after 30 years or however long the chance I have for Switzerland though it's there was growing CBD before. So it's kind of similar not even if it's far from the quality and the way we growing but it's kind of the grow the plant feed the plant how she's react by the light the hair the condition that's they have little bit uh how it works at least they have this in mind so it's more easy for me to ex explain exactly what we need the condition for the night for the day reduce the humidity at the ends really important uh Stop the double layer production for flour. For example, keep this for veg but stop for flour because we have so far a big issue in all these big facilities. The problem my big problem is to save first to save the crap they was losing from the first consulting company or bad team they have employees before me. Then to restart ground zero say look you forget all what you learned before and we're going to restart it from zero and now we go on my way and what I have so far from Switzerland like you see in all the video I send you we double up the production before they was using metrop there was um polar feeding every two days a plant they was treating the plants at least twice a week with any product I didn't even know that this can exist on the market and hover feeding the plant a lot consuming a lot of nutrients I reduce I change I put Attena just working with a program and easy working with the Athena program yes and I put them at program and SOP and the book my advice now we double up the production they don't have to feed anything by Folia only the first week of veg till the first week of flower stack once a week only once a week no even high PM because it's a GMP facility in GCP if we don't have to spray I don't want to have to spray anything so we just press stack on veg till the first week of flower and that's it just use the program 3.0 EC 6 PH most of the time to 6.2 too. That's it. What are you recommending? Are you recommending a lot of what we've kind of put in the book? Are you making any variations to that irrigation strategy? Uh yeah, it's so complicated for the first time for this kind of yeah, you know, beginner I will call them to directly start with feeding and P1, P2, P3 and reach really a nice irrigation strategy. But I have my own uh way to do it. And we talk with Michael is not like a special way. I talk with Jack a lot about it. And so I just ask them to have 20% runoff on the feeding in veg till midflower always and have like between 20 30% dry back. Super simple. That's only what they has them first to get good result and so they can they can understand yeah how the planes feed why the dryback it's important why the runoff it's important and how to correct uh you know not too hard and never over cororrect if it's too low the pH or the EC and just go slowly and smoothly and then it's all good and so far from feminiz seeds to clone to seed production is just amazing how simple But it is how change the life of even cleaning the tank or keeping the tank clean and all the lines clean and I just myself in my own garden and since

production change from since one year in full irrigation cocoa hatina what you were using you were doing organics before Athena yeah only what since 20 years you've been doing organics for 20 years only hand feeding and bio organic all the way only. What What was like I mean doing something for 20 years and then making a change to Athena like what sparked that change cuz that's a big you know it's a big change. It's a big change. Jack is a big reason for that. So big shout out to Jack. You can really say uh thank you to Jack to put me on Atina. If not I will not change. That's because he's really pushed me to do it and I see how he's professional and yeah I can just have a try because he was really push me and ask me and I say okay you really going to do it. It took me a year though to change it to give me the full line and I wait one year to change and you just let it sit there just wait and see. I was like not you know still on turn on like breeding and my plant all my mom for me was a big things to change because if I change I have to change for everything my clone my mom and my production of seeds and even my production when I make the phen hunt and my entry for cup yep when you were growing organic what was your process were you doing beds were you doing pots pots but I was mixing my own soil bringing two different kind of soil mixing with amendments with trerma microise with azos with microiz from biotabs as well. I was breaking up a few tablet of biotabs to make some nutrients. I have my own recipe since long time. I find a really good balance on what I want mixing in the soil. And after I was only feeding with a base biocana veg and flour and their bio boost that's it and using their bor only the bioana line basically just borizo bioga bofllores and bio boost that's it and I was flushing for three three weeks three week to one month yeah but you had that organic amendment already into the soil so you can flush for three weeks right I mean I can I want all my plants to be just fully yellow when I harvest it. I don't want any green leaf. Yeah. On my plant when I was harvesting. I want a full sinence and cut it when is the right time to cut. When going from that step to from organics to Athena, how did you start the transition? Did you go from clone to veg or like what what did that look like? And then what media did you switch to when you went that? So I still have all my mom at the time I switch all my mom was in soil still and all the rest I switched to cocoa to little cube of cocoa straight cocoa straight cocoa and I feeding all the mom. So I talked with Jack because I was worried to switching oil in powder and mixing and switching everything. So the recommendation of Jack was using the blended line for all my mom as I'm hand feeding and I don't have a lot of runoff. I cannot really collect all the time and it's little hard. Mhm. So he tell me use a blended line I 2.0 for all my mum and my clone and that's what I'm doing so far. And the thing is the difficulties for me is I have more than 75 different genetic in my library. Wow. That's the basic. Yeah. without adding all the new selection, all what Michael and Aiden bring me every three months like all what we do. So I have so many new genetics and all the oldies like all the aes I have from back in the day have the naval selection A5A C5 ash A's n cut all these is super difficult to feed and to keep healthy. Yeah, even even I mean even nutrients between 75 genetics is extremely difficult. So, blended line 2.0 is the [Â \_\_Â ] that everyone's happy. Everyone's green, all the stems green, even with the LEDs. I'm using only sunlight LEDs in my garden. And it's just been so great so far. And you know, before my brother, because I'm only working with my brother and my brother taking care of all the mum and the veg. That's really his things every day on a daily basis. 77 and he's using only AT1a and now he can really say thank you. You win so much time on just making the preparation. Yep. Before we was making each bottle different for each plant pretty much. Oh my god. Because the AES don't like calm mag for example too much. Don't like really much silica. They really like low EC. 1.2 that's the maximum for aes basically normally before. Now 2.0 she's happy. You're just feeding one thing to every all your moms and it's working. Can be a Skittles, can be a A5 Haze, can be a champa, can be a grease bucket, can be a French cookie, can be anything to receive. Yes. Are you making any adjustments to the recommended fee charts that we recommend or I feed every day on hand and that's little cube. Okay. And it's all fine. Just just the Athena blended line too. You see? Yeah. Yeah. Now,

when you transitioned from organics, um, and the other thing, sorry to cut you, the other things that's no more PM since I'm using latina was a big thing before we have in Spain, it's super humid and even more in Barcelona area and most of the plan like OG's, Whitefire, the gelato, all these kind of plan take the PM like easy crazy in veg. Why do you think the Why do you think you you you lost the PM now or or I think what what do you do you think it's the nutrients? the nutrients I change even the garden I I switch I have different garden even on the garden on the basement where I have a backup where most of I tell you the white fire gelato service I have a few kids that's the the one going to [^\_\_^] take the PM and spread to the other plant normally most of my plan didn't have but I have two or three really like sensible going to taking no matter what mhm I have to treat this plan hard normally thinks I'm using antenna even though without IPM I don't need to I don't have y the the tissue of the cell walls of the plants have obviously way more elier y the leaf the way more thinner and like yeah you can see it's way more elier in in everything even for my cutting uh the z cut now in less than yeah I have 10 days a full tray roots what do you when You're doing your cuttings. Are you feeding blended or proline? Blended. Blended. Two EC. Y 2 EC to cuttings. Blended line. Working great. Great. Yep. Um are you using Proline and flour or or Yes. So all the production I have for seeds production? It's only with proline now. Okay. That's all the production. As soon as take out the mroom and leave and going to veg veg and flour, it's only proline at 3.0. zero easy. Super simple. Super simple. Now, when you were transitioning from doing organics for 20 years, what did that transition look like? Um, going from, you know, pots to media to, you know, uh, feeding what what did that look like and how did you do it? Uh, so on pots, I was hand feeding every two days my plants all myself. So I know exactly what they need every two days. Now with the cocoa, I have one gallon cocoa pots and I'm feeding every day to get 20% runoff and my Yeah. And have my 30 to 40% dry bag the first four weeks of flower. Then I go to 50% dry back till the end like till week four five till week 10 because I push 10 weeks for seeds production. I'm going 50% dry back and still 20% runoff if I can. So you pull back dry back a little bit more. Do you do that to kind of stress the plan a little bit more? Yeah. And to have less humidity level into the room too because we have less big space than you guys have here. So I'm always worry about the humidity and with the LEDs I see like they have less hot. So, you know, I need like to really like to be sure on the dryback and what I have. That's the best combo I find. Dry out the room a bit. Yeah, exactly. What did you see going from what you were using before um to Athena on because seed production is we haven't really talked about seed production on what did you see with that transition? Before I have like per light I was producing with a double-ended between 600,000 watts with 10 plants to 12 plants per square meter I was doing an average 10k seeds per light 10,000 yes with organics yes on average on okay can be seven if it's a cookie for example like small birds and big seeds that's all the plants going to produce different seeds so On average, I was doing 10,000, but now with antenna and the cocoa and all the combo I have now and the I made I make more than 20,000. 20,000 seeds per light. Yeah. More. My gosh. Last time we made with Michael with seven light 145,000 seats. And that's all on different stren. And we have Cookie, we have Sherbet, we have Grease Bucket, Champire, Rainbow Belt, Z. Even the Z was [^\_\_^] huge producer on seed when I was not expected that much Z on the half table. What do you What do you think? And we beat on one single plant 5K seeds on one plant the last time. So it was like how on one table we have 12 plant. So one plant give us [^\_\_^] 5k seed. The pink pennies cross Marlo we just did 5k seeds just impressed over doubling your seed production. What do you think it is and simple and that it's automated when before I'm broking my back every day watering my plant have to see if they need or not. Now it's all automated. My plant is way greener till the end too. I was struggling before the last two weeks in organic and in soil to keep it more greener, no burn the tip of the leaf. And really I need to really push the plants to ripe the seeds. Even the Z I have to push to 10 weeks with Atenna. I never get that green that color and that LC till week 10 and keep that easy. But I have to tell you I reducing at week seven

I'm going down to 2.6 not I stopped three at week seven like end of week six I going down till week 10 and I reduce like by .5 EC every every feeding okay so about week seven you start dropping a half EC every every week. Yes every every tank. So I'm making a new tank every two days. Okay. So I'm making like 2.76 the first one then 2.4 then 2.2 then you know 2 2.0 2 1.8 y and I stop 1.8 1.6 that's my limit. I never go down than this till the last 5 days and I straight put straight raw water. Okay. Last five days raw water but only but that's for seeds production. If I was making flower production for smoking and sell my flour, I will do 10 days flushing. Okay. Are you using fade or no? No, for seed production. No. But for but I'm using for flower in Switzerland. Okay. We using fade the entire program with fade. Even in in Greece right now. In in Switzerland with fade and proline. How are you finishing? Are you still flushing in that big facility in Switzerland or uh the last three days? Last three days. That's fine. Yeah, the last three days. That's no big deal. And they have a really great result. We have all the analyze super clean. Yeah. Even after the extraction they made it's all really really good. Yeah. Nice. They're super happy. They win a lot of money on nutrients to switching from some different brand. They made a lot of money on winning just not spending on a lot of nutrients. they was using before and products they were spraying on the plant too. So this is was terrible. Yeah. No, it's awesome to hear. What are you what are you doing out here now? You um you're and that's feno. Sorry to cut you in Switzerland. That's feno. So like you see we spread like four different seats. We have more than 3,000 seats feminized for four different strain on testing. And another uh part of this facility we have a big phenomenon from when I fenant at at again part but 100 regulars. So how big of pheno you're doing pheno hunts in that Switzerland facility and how big a hunts are you doing all at one time? Because now by the time I'm done with the feno ant we need to produce something. So we produce some feminiz seeds and that allow me to test some new seeds. So we testing 3,000 feminine seeds and that's just making oil for the THC medical market for Switzerland. Yeah. And then I make my fenolent. Now I'm pretty much as soon as I get back I'm come back next week. The day after I'm landing I'm going to Switzerland harvest the feno. So we're going to have some new strain just harvest. The next day I'm come come back from Cali. So I'm super exciting to see the result from Sudzan because we have really good result and then we're going to produce this result of phenoine for the production for the medical market. Will you bring those those phenos that you're hunting into THC seeds and I can offer them to the market? Yes. Do you of course is there anything like do you usually you know offer everything that you're doing to the market or do you hold some some things back? I hold a lot of things. Yeah. Yeah. Yeah. You kind of have to. Yeah. And the thing is, um, I just get two kids recently, so I have to step back a little bit from the releasing and be get out a lot of thing. And we opened the vault on a regular seeds at Spanabis today, two years ago. I give the possibility to a lot of grower to have access to a lot of thing I was not releasing before. That was this last 2024 spanabis. Yes. Yeah. And now it's like we have so many good things coming for this next year. Like I'm super exciting now. I'm going to release a lot of things I was hiding and I think it's time for the market to see all that. And that's why I was in Cali too because I think that's really the time for you know the public to see all was we was hiding and working on some. So more collaboration way more. Yeah. You have a lot of collaborations coming. What are you doing out here in the United States? Um like you're a m you're like a legend. You're a legend in Europe, right? Thank you. for for crossing and and and uh pheno hunting and seed production and and and genetics and breeding. But what are you doing now here in the United States? What what do you have going on? Uh so we I make now a seeds batch with symbiotics in sack traversing the bubble gum and eating a lot of things. So we have a lot of collab coming even with soi. We have this blue mosa and ping zaza coming with bubble gum. I collab with surge. We have the aanana cross London punake. I'm going to cross with a bubble gum. The UK cheese cross London punake cross with a bubble gum. Uh we have cross with uh den and dikat benzi. Uh zazul. Uh what else from him? The zop cut. We have Rob from Umber Valley. A lot of collab coming with Rob from Umber

Valley. I cross his lemon cherry pie with my pure Afghan is bad with my pure Afghan. Now cross with different runs means cross with Chaya cross with Amarello. Are you bringing a lot of these cultivators uh genetics into your breeding facility and then crossing them there and then giving them back out? Yeah, I give them the half of the seeds. Okay. And after they can hunt and do whatever they want if they want to release and sell the, you know, the open to do it. Yep. I think it's better to keep in house and till we find a good thing together and release something together. I think it's more powerful to do that way. Yep. For sure. I know you and take the time and no rushing as soon as we done something that's always why I'm doing even with Shiloh I was doing this on the past for any breeding we do research been the same he gave me the first seeds like five years ago when I was helping them and I just land in LA and I was um thankful and lucky they was just harvesting the London pumpkeint feno hunt they was doing at the time at the cookie facility so I get my hand on a lot of unreleased cross just with numbers and make like help them to pick up a few fenos a few number was really good just to see in before only I think was just smoking this and burner and private and figure out what's going to be the berry pie and all the new lines they're going to release. So was fire and at the time he gave me the seeds. So he gave me a bunch of seeds. Burner did. No, Serge. Serge. Okay. No, no. Serge gave me a bunch of [Â\_\_Â] like um only cross you have at this time. And so I just came back in Europe and pop all the seed he gave me. Find a fire male, find a fire female, keep this and start to breed with. So I have the London mink come from that. I have a male I still using now uh from this phenomenon. Did you have you done a lot of work with cookies at all or feno hunted any a lot of those crosses? No, just research. Just re with search. Yeah, just re with search. Okay. So, that's how the connection is. Exactly. What are you What are you doing with I know Jung you and Ivan were talking at Jungle Boys. What are you guys working on? Are you working on anything? I give him a lot of seeds. So, now you have in his hand. I think Roj. So, let's see. I hope I'm going to see the facility maybe tomorrow or so. I still have today. Maybe go down there. Yes. So, let's see. And I see they have a new breeding facility. Ro sent me all the new rooms they have. So, I'm exciting to see what they're going to do. I do like a lot the white gummies at Spanabis. He gave me a bunch of [Â\_\_Â] They was not releasing yet. So, the white gummies. No, no, the weed. Weed. Yeah. Ivan gave me a bunch of jars like the white gummies, zours, lcz, candy cartel number 19, candy cartel number 54. Still have all in my mind. The best was white gummies so far. LCZ was amazing. A perfect blend of gelato and skittles, but exactly what you expect from a rans cross, which if it was really gelato sis, that's exactly what you want. like the structure and the smell and the looks amazing. How how much do you how much do you focus on effect when you're feno hunting and and doing these crosses? What made you pick the white gummies over everything? The experience. The experience. The experience as the effect, the flavor, the taste, how is smoke, how burn everything. Yeah. Was just on point. Checked all the boxes. No, the thing is I won't so smoke more and I just want again. Yeah. Yeah. That's what I said. And the first thing I ask, please keep me a jar. Yeah. You know, because I won't smoke some more, you know. And from what it is, what is the cross? The first thing I ask even this, what's the cross even that's the best and what it is? What genetic what genetic it is to get this result? Yeah, that was my first question. And after can I have some more? Yeah. So you you're originally from France. Yes. And and you how did you get into the cannabis industry um in France? How did you start start growing? I started smoking at 11 years old. Was super young just hash with some friend until the first year of the college in France. That's like 10 11 years old. That's when you go to the really college and that's where you really hack like 3 hours and like more freedom as a kids and I was always staying with kids older than me and doing doing shitty [Â\_\_Â] So I smoking early on at 11 and start to sell hash at 12. Wow. and have the first like beeper and tattoo like we have the first beeper and the first number and after with a text the beeper with the text and start like that bro and at 14 we have a lot of issue in our neighborhood a lot of like kind of gang things and a lot of like uh people like get shoot in my neighborhood. So my parents

take the decision to take us out from Paris and go more south France where is more chill in the region where you make the cognac it's very near the vineyard when they have corvier and hennessy all these big cognac brand that's I was right here and my brother I have older brother than me have four five years older than me so at this time he was 18 18 French have a driver license most of the time when you get 18 you go to Amsterdam You have a car, take four friend, drive to Amsterdam and have a weekend. And so they see what they have to see and do what they have to do. He bring back some weed with him and I find one or two seeds in a purple like all maybe Jamaican purple weed at the time and I try in my garden uh just a little pot and try was not really nothing but I figure I oh I can grow some weed myself. After maybe two years I was 16. One of my best friend in this area was come from Chile and I see his father growing some weed on his backyard and we was studying a few branches but like in July and drying was just leaf and shitty but I say oh that's why you have a lot of box with like dry bud like shoes box in his in his bedroom. So we sneak a few bird and I say okay that's really great you know you can grow outdoor it's free the sun water I say okay so I really started at my parents outdoor houses and uh going from there what what was the the change from France to Barcelona uh I have a big evolution in France I been outdoor growing big outdoor after I at 17 I get back to Paris with my older brother so I leave my parents parents and I like don't want to stay here. I want just come back in Paris, be in my neighborhood and do my [Â \_\_Â ] So since I'm 17 years old, I live with my brother or alone. I'm not stay with my parents. So I was with my brother doing a lot to Mr. doing a lot to Amsterdam just start to find like the best K the best K2 at the time. We have access to a lot of good weed at that time. Uh I think was even Shanti and Neville was growing South Holland in 99 and that was the time I was always in Masterish 99. I was maybe once a week or even not twice a month minimum in Mr. buying weed and coming back to Paris and later on I own a grow shop in France. I open a grow shop in French indoor hydro shop 1 hour from Paris cuz I don't want open in my neighborhood. So I was driving every day 1 hour to open my grow shop and come back to my house and still have a grow in my apartment and I set up different apartment and have different growth. So after work I have still to drive and go and watering and was and watering all organic still selling good weed in France good price making was good money and starting to take my weed go to Amsterdam and sell my weed to Amsterdam coffee shop to not like be around and don't be on a French market and like be more safer and they pay me more expensive on a coffee shop in Amsterdam. So I was driving to Amsterdam and go to hack times and present my weed to everyone and show to even Arya and S everyone like oh my we sour dage and so first of all I meet uh Doogie at TC like 2010 uh at the hack times 11 say oh be great if you can enter some lassage in a competition for us in THC seeds. I said, "Okay, great. Still grow in Paris, my weed." And I was driving down to Spain, my country of weed myself. Was driving Paris to Barcelona. Was around Barcelona, the Bureau Cup 2014, driving my weed and giving in head in hand myself the night before the the competition and I win first with lassage with my first selection. first really like anton really good and the judge was award marks Mr. Nice. Shentiba, Carol from SuperSativa Seed Club and one other dude really good grower like the George Cvantes but younger from Spain. So I was super stoked to win first and have my first cannabis cup from this legends and the second was 10 from DNA. So I beat 10 DNA. So it was not even like a small cup because I see okay TJ was big was just starting to be big in 2014. And I say okay I I really have something and on the back note of the cup I have a little notes from Shanti with a happy smile and say oh like how many kilos did you produce and it's really good. So I was stuck. Yes, I really have something motivation to another level. And so enter again was in April again. Enter in September in Expo in Iran. Win first again enter in the hack times cannabis cup in November get the highest THC result from hack times and we didn't win this year. But the thing is we build a [Â \_\_Â ] because in Sativa in 2014 act times first 10g DNA no crocket first 10g crocket second 10gna third was maybe I don't know phenofinder with silver amnesia bubble or something like that if I remember correct and we get force like Danny Denko tell us oh that



the first time the highest as THC strain didn't win the hack times but how you can win first and second with Tangi when DNA and crocket they're the same. Do you do you feel like you know doing so many cups and being involved in so many competitions do you feel that all of them are completely transparent like as far as like nowadays it start to be more nowadays. Yes. But back then it was a little bit kind of who you know back in the day. I don't think so. I think it get by the time though. I get it get corrupt by the time. Mhm. When the cups get big and after it's really big when you win something and the coffee shop sins too. So I think it get little bit corrupt. Yeah, I think he get a little bit corrupt at the end. That's why he lose a little bit the reputation. Spanabis. I don't think so. No, it seems like No, no. Spanabis I I was judged VIP, you know, and I was judged most of once and I I don't think so. I think it's really transparent. The quality of the entry is really big. Uh the last year was 55 entries just for indica which is is a lot. Yeah. And you have grower from all over the world entry at Spanapis, you know, American and all Europe scene entry. So that's I think that's a good competition. The ego clash I think is one of the the best for me. Ego Clash and Swanabis the most honest. Yeah. The one the best honest before was Expo. For me the best cup ever made in Spain and the most transparent was Expo because every hunt if I enter in Sativa I'm judging Sativa. I'm judging all the rest of the entry. I sending my entry and I receive a kit with all the entry of the rest of the sativa. So I know exactly in front of me what I have if my entry is correct or no. And at the end of the event when they give the cup they give you a little book and you have all the notes from everyone who vote you and who vote you good or no. Okay. So you can even look like okay everyone's put me correct or you can see I know a few people [Â \_\_Â ] me and oh why you put me four and five when the other put me nine and nine and nine and a half why you put me four and five you can see the people has them you know for me that's the best transparent cup ever made in Spain and the transparency that's that's this one yeah you can feel that when you go to spanabis that it's real transparent It's the culture is strong like really strong. Yeah. We don't really like the fake. No, you don't like the fake. We don't like the fake. That that the problem is like I talking on the previous podcast like the the like America fake the world on all the rename and all the [Â \_\_Â ] like that. That's just terrible. Even here in America, I know people didn't even smoke the real Z. still didn't have access to the real skittles cut thinking they have they don't have think they have the real gelato 41 they don't have they don't have so when in Europe they tell me oh we smoke good Cali no you don't smoke good Cali you smoke Cali but you don't smoke good Cali the good Cali it's even hard to find in Cali even the Cali market doesn't have access to really good quality all the time they have yeah but it's hard to Fine. So how you in Europe you can smoke the good from K? No, a few people in Europe smoke the good because they know the good plug in here. They're going to find the good weed and send over the good weed. But it's a few people. No, most of the people. Yeah. You're seeing that kind of become really predominant of just like this normalization of just changing names of genetics and then saying it one thing when it's another. You don't see that in Europe. For me, I see this in a seed game. All the fake seed banks popping up every year at Spanabis. You have a new seed bank popping up and two years after disappear. So, we have so many seeds bank doing the same [Â \_\_Â ] The white label and renaming and changing the name for the same seats they're going to be packed. Yeah. So, I we have exactly the same issue. Yeah. But it's all start from here. If a fake name start from here, then it's going to follow for all the time. Yeah. Yeah. Out of out of all the cups that you've won, out of the 30 years you've been doing this, what is the one that you're most proud of? I think last age at the bio cup because was the first one and spanabis spanabis 2016. For me, one of the biggest year was 2016 as I won Spanabis first with underdog og when the second was Kali Kush farm with karma stuff like strong og's and the third was true cannabis with chem valley cooks with like crazy chem cookie on point. Yeah. So won that cup that year was huge. Yeah. Super huge. So, and the day after I won Legend of Hash with a hash entries, I made entries. First, you won first. Second, second, second on the VIP judge and

second on the public choice. Yep. So, when the VIP judge has Sam Skunkman, Bubbleman and Tony Verzura. So, was the for me the three big hash head at the time. And so, win that cup the first time I enter, first time I go and I won. So the day before when Spanabis won Legend of Hash and maybe two weeks out of 420 was one month after I won Elit Cup first with underdog and second with another SH. I took three cup at the edit cup too that year. So I took like five cup in two months. Yeah. So it was huge. Yeah. So it was a good year and undergo is a really good cut to really good. It's cut from JJ basically we get like back in the days. Amazing. Yeah, I don't think people I think a lot of growers do understand, but there's a lot that don't how big it is to win spanabis. I mean, it's like the way I look at it from the outside coming in from being from the US. I'm like, if you win Spanabis, it's the pinnacle. Like, it's it's winning the Olympics to me. The Champions League. The Champions League. That's Am I off basis on that? Is that is that pretty accurate to say? Yeah. Yeah. Is that the Champions League of the cannabis? That's the World Globe. Like you can't go higher than that. No. If you look soccer and you like soccer as you guy like football for you that's uh for us that's win the Champions League and you that's winning the Super Bowl. Yeah. That's what it is. You know, for us at the Champions League as soccer most like culture and you guys have a football culture that's win the Super Bowl. Yeah. Or win the NBA Allstar. Yeah. That's what it is. Yeah. It's huge. We have all the best players like the NBA Allstar. We have all the best grower player in the in the industry is going to enter at Panabis because they won that cup. Yeah. You know, because everyone can have access to that cup that when we people ask me what cup I'm looking for to win, the only one missing uh that Emerald Cup and Ego Clash, that's the only two cup I didn't want in my career. I won't try to enter a world cup even if it's now it's little less you know on a good moment it's but even change sadly but I think the reputation still there seen a change in emerald cup a bit it isn't in November anymore it didn't happen like it was before the celebration and all what it was you know it's it's too much with the legalization and all that like I think back in the day was really really the best event we have for the cannabis even be better than spanabis. But now I think really spanabis take over this kind of really like ging of cannabis internationally with everyone's coming and I don't think any other expo in the world can take that. I think it's already been too long. The the flag has been planted. Yeah. It's been like 15 years strong and since 2010 the cannabis scene in Barcelona, we say the capital of cannabis of Europe is Barcelona. It's not Amsterdam anymore. It's really Barcelona. And Berlin was really good in June. Mary Jane was really amazing experience and really good. But I don't think Mary Jane's going to replace Panabis. Yeah, I I couldn't. It's I was thinking in first though because legal is legal when Spain is not. It's in June, so it's more summer vibes. Kind of really, really good. But you don't have all the club scene you have in Barcelona yet. So I don't know how the club scene is going to be in Berlin. By the way, we're going to open two TH seats club in Berlin pretty soon. Flower. Yeah. Yeah. Soon we're going to make the production. The TH seats club. I'm taking care of the production. As soon as I get back, we start the facilities. is going to be all set up, all growwith antenna and we're going to put all the original breeder cut on the [Â \_\_Â ] menu. What's What are the laws in Germany right now? You're opening two stores with partner. We have partner in Germany. They're German. Okay. And they're retail stores. It's going to be a cannabis club like Spain. Okay. Exactly the same as Spain, but we have the production. Now, what are the square footage laws on regulation of cultivation of cannabis in Germany right now? Uh, it's just you allowed to grow for your 500 member. Okay. So, it's similar to like Prop 215 California. Exactly. That's great. Yeah. Yeah. Those are those were the days. So, it's going to be a good It's going to be a great market. It's going to be a great market. It's already booming. Any hydro store, any grow shop in Europe, they sell out on anything. Okay. Even the old light they was not selling. They was hiding things like two, three, four, 10 years. The really old magnetic ballast. They still sell it now because they need [Â \_\_Â ] to start. Um, with with the with the clubs, you don't have a certain amount of plant count. You

just 500 members. Is there a certain And yeah, certain amount of gram per member like 50 gram I think per month per member. 50 grams a month per member. And is there any like tracking on that or track and trace like metric? Let's see. They just started. So I think Germany is going to track but you know how plain it is. It's super hard to to track plant and a live plant. Yeah. How how difficult was it for you guys to get the license for the storefront? Uh our partner get it pretty easy in German is just apply for it. Okay. Pretty simple. And it's local probably local ordinance. Exactly. Each region have his own little laws. Exactly. So for the moment we focus on Berlin which is a capital and the biggest city and where is more cannabis friendly at the moment. Yeah. You have a few time like Munich uh they don't really want buyer control this kind of thing. They don't want us. Yeah. What do you where do you see Europe going in the next five years like as far as across Europe more commercial cultivation more stuff like Germany popping up like what do you see being the biggest markets? Yeah, the Spain now is going a little backwards when we don't have the situation really great on the club. They have a lot of red like you said at Spanabi. They still continue red. They get notice to close a few club. The mayor of the Anon C1 club, the entire 200 club, but this is like between six to two years. So, let's see. But it's been like that since 2009. Since the beginning of the club scene, I'm here since the beginning. They try to close, they try to red, they try to w you outside and get you and bust a few people. It's been like that since the beginning. And Spanish really hard and they fight for the right and they know they can have it. So I don't think it's going to change. It's just a little down power. I think a down years for them, but I think it's going to come up. I think it's going to come up strong and as facility growing I really hope like now only Holland have 10 licensing and big facilities to grow Germany is going to grow a lot. I think Germany is going to be the next uh two years you're going to only hear about like German grower Germany they're all going to grow. So really this market pop a lot. So you think Germany um is going to take a big big portion of market share in Europe now? Yes. because they're going to have the right. That's the only place it's legal in all of Europe. That's the only That's the only place you can go. It's 100% legal. Spain is not. Holland is not. No one the commercial facilities in like Switzerland and Greece and stuff. It's just medical. Just medical. Just medical for the medical. Exactly. It's full medical. So all what I'm doing in Greece, all the production is just for sale for the medical market in Germany. Mhm. And England. That's the two biggest market in Europe now. That's Germany and England and Germany. Now what they do uh that's going to help a lot for all these big facilities. See the legalization in Germany. Now a simple doctor can give you a prescription super easy. No like you call a doctor you pay 50 bucks you have back I have back pain I have headache I have insomnia. I want cannabis medical. It just give you a prescription, pay 50 bucks and you go, you have an application on your phone like weed map. You look, you have like 150 different strain with different name and THC and price. You order and you get deliver. You know where the pharmacy is carry and then you go pick it up. Did they Did Germany put a tax on it on the medical market? Yeah, of course. Okay. What What do you know what the tax is? I don't know. I think it's 20. Is it 20% or something like that? Is that pharmacy product? Yeah. Yeah. Yeah. And so it's now it's so easy. The medical cannabis market in Germany is booming. Yeah. As you guys know, know back in the days prop 2015 was like you go dispensary, you buy 28 gram as soon as you can even to resell to someone else on the streets. Mhm. So what's going to happen in Germany? Are are other um areas in Europe going to be allowed to ship into Germany, you know? No. No. So it's just medical market. Yes. On medical all they come from Macedonia, Poland, Czech Republic, Greece, Portugal, they all sent to Germany in England. Mhm. But as recreational all have to be produced in Germany. Yeah. For the club. All what you're going to find in the club have to be produced by the club. So no exportation from America, no nothing supposedly. How's the culture in Germany? Um, like compared to Spain, do you think the cannabis culture is as strong as Barcelona as far as the consumer side? No, they smoke a lot of weed. They do. I do. Yeah. Less harsh than what we do in Spain. Spain and France, we have a big hash

culture. Way more uh deep. Italian, Spain, and France. Sorry. Italian is big on the hash culture. So, I cannot forget this dude. But uh all the rest Holland a little bit but they more into the weed. Belgium the same and Germany is the same cuz they don't have access to the good hash we have and more north you go more expensive it is. Yeah. So same for like Copenagen they have a market and the difference. And so they have access to good quality hash on different because they have a lot of travelers and bringing Nepales and charas and good hash from Marco. But Germany is super hard. Normally super low quality hash and they find like wheat from Amsterdam or local have really good grower. But as German super hard law, you really won't be low key like France too. Yeah. So the scene is not as popular as it is in Spain because you know the law was super hard. But when we've been on expo we see a lot of German grower and community really huge and big but more secret with I know that you do a lot of consulting in Morocco. Yeah. Right. What do you Since 2012 2012 so what 13 12 years. Yeah. Yeah. But 12 year I start like really um helping them and bringing seeds from THC seeds and starting like with five different stren,000 bubble gum, 10,000 Senour, 10,000 dark star, 10,000 critical hog all feminiz seeds to see which one's going to come out and give us the best return on the hash because not all the strain are good to grow in Marco and the problem they have they don't have any knowledge on genetic and what they doing with their soil. So 12 13 years ago they was all watering with sprinkler starting early morning to watering all day long and they stop at the end of the day. So it was for me like totally wrong like their buds wet. It caused all kinds of problems. But there was long races so they only grow their long races. So that don't for them doesn't matter. The ch is super resistant hard plant. no really branches like just a single sting. So was kind of like really hard for them. But as soon as we start the feminine seeds so I started irrigation and tank and mixing tank and bringing nutrients and mixing my nutrients and feeding my plant and make a schedule and make one plant each matter on drippers in the ground. Yes. On the mountain. So it was super hard to do all that the first year like big shootout to the team bring me there and pay for all that thing because was like to to listen to pay for the tank pay for the irrigation put this online listen me and trust me on the schedule on the feeding with the nutrients I bring them was not that easy but they make jangle like big trees on the mountain when normally they're like super little was like huge So they were super happy. So since then like they always every year call me back different big farm, different families and I go all over the mountain and try to help them as as much as I can for their soil too cuz they was using a lot of big bag of salt. They have like the orange, the blue and the purple on different NPK range. Yeah. And they feeding all that to their soil. Even if they mix with like co sheet and horse sheet and a lot of natural things, they can mix their soil, but still they're feeding with their bad powder really cheap and shitty and at the end of the day is really bad for the soil. Did you see what you did on the cultivation side really increase the quality of their hash? Yes, a lot. A lot. buy the plants by themselves. The health of the plants totally more the quality of the hash, the quantity. That's what they look for. It's really the quantity and all that hash just going up into Europe. And that's why that's all all for the world. I will say that's that's the 90% of the hash you smoke in the world come from Morocco. So even in Israel, you smoke some Moroccan hash. even in Africa. But really the low grade for forever has been the top top top quality is going to Europe. It's going to Amsterdam. It's going to Paris. It's going to Spain. It's going to Italy. That's the most countries going to buy the best hash. What What's like their extraction method? Are they still doing water hash or is it Now they do everything. Before there was only beating. So they beat 15 minutes with a big plate with a certain screen they have and they was beating by 15 minutes dried flowers. Yeah. Only they dry. Look, they harvest midepntember to end of September for the latest and they dry until December. They never build a plant before end of December start January. They wait the cold. Oh. It's not because they wait and they lazy or doesn't want. And we was like how why you don't do it before? Because the only weight is get cold and super cold and now they beat. That's make way more sense. Kind of like beating

Keith or something like that. Exactly. And they beating and that's for way more. And that's how they get the most return on their plan. If you beat earlier, you get less. That's how they figure out too. So when you go in Morocco, you really figure out like, oh, you're thinking sometimes they really do wrong or they lazy or they work really like in the dust. But to make what they do in their condition, it's like just amazing what they can do and what they have access to because most of the time don't really have electricity stable. It's really like mountain. Humboldt is a luxury front of Marco. You know in Humboldt you have like grow stars even since long time I've come here. You have grow star since long time people know how to grow. You can have access to big truck. You have road. Yeah. Road and access. In Morocco is no road and access like that. You're walking to farm. It's the wild wild west. So it's Africa. It's not America. It's Africa. So the road is not the same. The trucks not the same. We don't have big truck. They have truck. But whole truck from France. That's Africa. It's a trip. So it's not totally different than here. Even the drip, the irrigation, you don't have access to anything. So you have to create everything. Even in Europe, we have to across store market are not as huge as here. So we adapt always and find a way to figure out how we going to do it. But Morocco is like 10 times more. 10 times more. What kind of like community is like in Morocco growing this? Is it like more I don't know kind of gr obviously it's gray but it's is it like just regular everyday farmers or are they a little bit yeah know it's been centuries so you have to understand you have three town in Morocco they allow by the book by the king to grow ke to grow ke so it's it's legal in Morocco it's legal on three town okay from history and on the book is right by the king of Morocco they can grow ke in this region because that's the only things grow and what they going to survive so this three town region kind of is a can grow ke it's right on the book but ke not hash so the ke is a plant and you harvest the plant and you smoke the ke from it so that it's not illegal but as soon as you beat and you have hash and you press it then it's harsh that's it's illegal in Morocco that's illegal even if the farm keep as he can have any control of any cops army whatever it's going to be fine but if he beat everything and keep oil in plague and keep all press in his garage what else would you do with the ke yeah they're smoking a little pipes normally back in the day was a sepsy the name of the pipes of Moroan pipes is a sepsy They was smoking the ke into these pipes. Okay, that's it. You just can't push it together into hash. Exactly. later on like some I think they see from like India and Afghanistan how they do hash over there and so maybe we can do the same and that's where they got that's how they get it and make a block and after make but even in France we have the uh the club of aishin in 1860 something so it's been really like more than centuries they're smoking hash in Paris so that's been smoking hash from India and Morocco since centuries. Mhm. So it's been making this thing centuries. It's really a culture over there. Even a lot of worker from the south, the poor people from South Morocco, they know the moment and they all go up north to work to find some work. Like people even from Europe, they was flying to Umbal to train. Yeah. And that's was last week I was in they even say they have only Argentinian trimmer like crazy. like hundreds of Argentinian travelers. South America, it's Costa Rica, South Argentina, Brazil. 2017 have like some French, some England when I was there and a lot of Chinese trimming here in the United States. In Humboldt. Yeah. Crazy. Like team of Chinese all over the barns in Humboldt Garber and all over modern mountain. Chinese trimmer all over. Probably seen that come off now, right? Yeah. Not as much. What's so with the the hash in Morocco it how like legalities of going into Europe like so yeah now to finish now they make everything so they beating before and now they have all like one of the best we have to shoot out it's polino from we flower is one of the one of the first to grow the barraud in Morocco like big scale and like take a free track on a mountain and beat the and walk like on a freezer truck, even [ Â \_\_ Â ] burn his face with hash. Uh, and make a crazy like fresh frozen dry static clean on a mountain and bring back and that's really started like okay and now they do on scale. So you have like from one of the now the I would say like the the biggest scene is like all the biggest Italian hashmaker good Spanish

good French don't get me wrong but the Italian really are like artisan hashmaker even in Barcelona they take over most of the hash cup is Italian artisan hashmaker really like on top of the game these days and in Morocco too they really like go there. They have team like 20 30 kids young. They stay there all the season. They grow the plant. They harvest. They fresh frozen. They make the isolator. They freeze drying. So it's the they're leveling up. Yeah, they level like crazy. We have some static crazy harsh bricks coming from the mountain. Uh some Yeah, some really really crazy. Nowadays they go the same seat as you. They can even like take a lot of 9 weeks harvest, a lot of THC seeds, a lot of symbiotics. It's a big like camp of like breeder fight on the mountain who's going to have the best hash train. So now we team up with symbiotics. Big shout out to Aiden to make the connection like two, three years ago. Uh, and now we all work together and cross all their [^\_^] with my [^\_^] cross my [^\_^] to their [^\_^] And we have a big big uh cross catalog big collaborations coming and yeah they're one of the biggest ash trend at symbiotic like Michael and Vids they killing it for even the Mike Mike Village and Symbiotics and you are making all kinds of feminiz. Yeah. Now we working together. I'm making all their feminiz seeds now for Europe market and even for Morocco, for Europe, even for some Americas. like we make a lot of things together. Uh so we cross all their genetic with mine, all mine with their and all their new with mine. We make phenomenon together. We hunt on our things. So yeah, it's exciting. I've heard mixed reviews on feminized and and regular um seeds. What's your take on feminiz as far as being stable nowadays? I won't say like you can even make me mum from families. Back in the day, everyone was say no, you can't. But the experience say yes you can because I can see even look this dude in Canada. We just talking this morning on Instagram. Ritual ritual green cannabis is making selection of lassage feminize and French cookie feminize since maybe four five years now and running this selection as production for his facilities on big scale. Yeah. and super stable, super stable, super good and is getting fire. And he tell me like I'm super proud when they can have access to a real cookie cut and they growing my seeds and over cuts and say it's way better. Even the sage seeds way better than a single cut. So I'm super proud of the feminiz seeds we produce right now and the stability they have and how strong they are. Yep. So I'm confident enough to say yes, you can. Back in the day we was like regular seeds. I will don't breed with feminiz selection but we can keep a m and make production for flower purposes. Yes. As breeding I prefer to not do it. If I have to I do it because a cloned like gelato is come from a feminize and we all breed with gelato. Yeah. So we cannot say oh no [^\_^] feminize. Gelato. All the gelato cut are come from feminized project. A lot of nowadays cuts from America come from a feminized project and we all work with. So but your preference on is not to breed with feminiz. Yes. If I can have even just to reverse I will not reverse a feminized plant. First of all to make all the feminiz seeds I made it's only come from regular and stable regular. That's the first things. And after if I have to rebreed, I rebreed only with regular. If I can have the choice, I will choice only regular with regular. Yes. Okay. Yeah. What about back crossing? Have you ever bat crossed? Yeah, we do. I do a lot of B eggs or even like F2, F3, F4, F5s. Depend what I want on the strand and what I expect and what my goal is. First of it, you need to have a goal when you breed something. If not, it's just going on nonsense and it's just the lottery and I'm too old for the lottery. When you start in a young kid, you can Yeah, you play and it's a lottery for me. Back cross, it's a lottery. No, when you just play as breeding. Now, when you back cross, you need to have a goal. Why you want back cross this plant and what you want improve on or maybe it's better to cross to something and get a good selection of it and recross again with something stronger to get to your point you want to the plans. That's depend the project cuz backcross it can be good but for me sometime you're losing time on something you're going to find better and just losing your time for for the community of growers that aren't that familiar with breeding. Can you go over like F1, F2, um back crossing, BX1 and kind of explain the different Yeah. So when you go and you cross on the F1, you took just the first generation male female from a

normal the first cross that the F1 cross. Then you take a new male from that selection and a female cross together and you give you the F2 and then on and on and on. So what you do is just when you select that just um isolate really what you're looking for the plant you're looking. So like for the banana pudding, I just stop at the F2 because it's just big banana producer, super strong, exactly what I was expected from the plant and all what I cross with this banana mail. I know all the offspring is going to come with like more stronger stamp, more side branches, little bit more inter node and a lot of resin production. So you're you're breeding F1 female, F1 male, and then they you pop those beans and then you breed the F1 male with the F2 female. Yeah. And then you get an F3. Exactly. Okay. So you're like interbreeding the male to the offspring. Exactly. And what why do you what do you look for in doing that? Like what's your goals when you're to really have the offspring the the progeny really is going to be as equal as the parents as not too many variation when you do that you really want your offspring always like karma does with his edger when you pop at banger it's only sour og gas all the way tall plant little internal it's going to be the same so if I want do the same file assets then I just have to do on the same way and all the offspring is going to be exactly the same. That's what we have today. Yeah. So you're looking for those same traits. Exactly. And what you have to put to get most of the things the closer of my plants original clone and not too many variation. When we're releasing F1 like everyone does, you have so many different variation that's super hard to find something close to the clone only to the original mummies. Then if we do more work and we release F4, F5 that what we going to release that's something really close to the M. So as breeder today releasing F1 we give way more uh possibilities and um different gene then just isolate the gene we want from our parents. Yep. Now with BX BX is a back cross right? Yes. Can you explain BX? So you select a M and you recross just on the same mo again and again. So you take you have your M you select the F1 male and you hit your M again. Then from these seeds you take a new male and you again hit the M. Oh, so it's the other way. Exactly. You just keep always the same MS as receiver all the time and back cross with a new male generation. Okay. So it's like the opposite of F1. Yeah. When the or we go F1, you go just always new female, new male, new female, new male, new female, new male. Yeah. Always improve your selection. You take your best female, your best male from this offspring crossing together and go forward. So I have the best OG with the best Afghan. I mix together. Then I want the best selection from it and the best male crossing again together. And then at the end I have an OG Afghan like super strong all the seeds you're going to pop is going to be only OG Afghan no more OG no more Afghani is go in one direction your offspring is going to be well no matter what the OG Afghan you want and you have selected all the seeds going to just be like the mum that's what the spring when you go forward F1 F2 F3 F5 that's exactly what you want yeah that the when you're breeding um back crossing you can still have something from the grandparents after when you go more F1 F2 F3 F5 you isolate really the gene you want so back is doesn't really come you know came out on the progeny but when you make a back cross of a male of his mom you have way more things chance to have things from back oh you get you get expressions from you can get more expression from the past from the compared to an F yeah that's what I figure. That's what I see for myself. That's interesting on my experience. Yeah, that's super interesting. What is it when you breed uh a brother and a sister together like off the same same cross? Yeah, that's why I did always for banana. Each of my regular project I only make F2s really not really the F1 most of the time. So I always select the best the best uh sister and brother. What I said like for London Punk Kush me in the example when I get from S the seeds the male I have really similar to his sister just have little bigger intern but as smell as strong as fast is similar. Okay. So I know in crossing these two I really going to have something similar on offspring and even more and more on the second generation and third generation. Okay. And that that so when you're breeding brother and sister together that's comes into F2s. Yes. And then you breed those offspring together that's F3. Yes. Okay. And then back crossing. And as soon as you reach F4 F5 it's pretty

stable. It's pretty like homo sapiens like all the offsprings coming really like like your parents is but like the mummies is but some crosses when you're bringing brother and sister together you're seeing like for the banana you you got to F2 and you you were happy with it. I'm happy with the male from it so far. Yes. From the male. Yeah. Yeah. I just keep a male from it. What what do you what do you look for? What makes you happy with that male? all the offspring gave me the result from the offspring that's exactly what I want when I cross this male with the plan I select because I don't cross this male with all the female I have but the breeding is always I take a direction if I select this male is going with this kind of female I don't going to put all my female with a male and make all and going to be happy I'm selecting the one really is going to for me match you select your males based on the offspring yes and what I want go and what I want do with this male Mhm. I just don't like, oh, this smell is good. No, I flower them out to see first if they fast, how they react, if they resistance. Most of the time I post even on internet. I even put them on my roof the winter. See how they resist during the winter if they don't go crazy. I put them even in spring and summer. See if they're going to flower fast or no. If there resistance to mild, if there resistance to shitty to I don't know caterpillar and if there resist to anything. Yeah. So just to clarify this. So BX back crossing is taking the offspring and crossing it with the male the female or the male the mother or the father backcross back cross to his mom to his own genetic. That's the back cross to his own genetic. Yes. And then um F1 is to cross brother and sister together. Yeah, right. Cuz you won't make your M stronger on making back cross and just try to isolate really what your mess have and trying to get it better. That's normally what we do when we back something. We really want like this one stronger and looking for the gene exactly on this one. And when we go for is to make something better than the original and make something stable than the original. Okay. So going forward, yeah, it's it's to make it more make something new and more stable. And then going backward or make something new and to go backwards, BX is to make something more to reinforce to reinforce to reinforce what you have before. And when you go forward is just to make something better, but to be accessible for the public too because the first breeding project first you because you have a clone. The first thing is, oh, I have this clone. I want the public can enjoy it. Yeah, that's the goal to make the seeds for the public. Enjoy it exactly what you enjoy in your garden but not give your cut away. That's the purpose of the seeds basically. If I won't take it from the beginning. So if I want give the chance to my customer to enjoy exactly the French cookie I have, what I have to do give my cuts or make seeds? So I make seeds. I chose a good male going to match with my female first. I cross it. I test the offspring. I see if I'm going in a good direction or not. Sometime you don't go the you don't like the offspring. You don't like the direction is taking. So it's okay. Change the m or trash being all these seeds. It's not good. Make a new one. Cross another direction. See, okay, I'm happy on that one. I redo it again. Retesting. Okay, I'm happy. It's going good. So you can reinforce it this selection with the mail again and say okay that's my French cookie with my avan again and that's always now when I pop the seeds what's going to come out okay now we can release now first we test we send the tester out and we have four different tester I have a tester in England's going to test in hydro I have tester in tener going to test out I have tester in Holland's going to test I have tester in France and you get feedback from all these different growers Yeah, minimum five four five and me I include myself in the five. So I'm testing myself and send at least four testers on different country and different environment. I want one is growing in hydro. I want one is growing maybe in cubes or maybe mix of cocoa and soil one outdoor in tenarief. So I want all this feedback and everyone's happy with if they all happy and myself include we release we chase a name and we release it. If not we never release anything. How what's the how long does that process usually take to to release something? Nine months to a year minimum. Yeah. That's why Yeah. That's why it takes just have two kids. I have to get back and not release anything for like a year and a half. I can't if I was releasing a lying just you wouldn't be THC's you know they just ruin



your brand yeah no we don't do it but that's why I was like for a minute not releasing much because I was a little bit out of testing in the garden for a minute so we was not be able to do it but that's why yeah we do it only that way yeah yeah yeah backing since a year now that's why we make the release from the selection I made from Fidel Fidel give me some seat the rent means in Jlo and I make selection recross happy with a halfspring remake a batch and we release the seed at spanabis. What's your what's your relationship with symbiotics and Mike? What is your guys' collaboration look like? Uh we work together now as like partner. We really have a spot together. So all what we do it's all together. So I have their cut, they have mine on some space and uh we do cross all their genetic with mine most for the the harsh market I will say first was our first but now we see all the genetic we have collect between us uh I can tell you I think we're going to have one of the biggest menu at Panabis 2025 I think it's going to be a movie at our booth because with all the lineup we have with Amarello reversal and the new now I'm making I don't even want to mention the name to to not get too many people exciting and burgers on the DM but I have so many thing reversing already and it's been interesting uh it's just like insane insane for the hash scene for the flower scene all what we have it's insane and I just um Aen Just finished a testing of the rainbow bell 2.0. We have the fletcher cut house with champaya. I reverse the champa from them which is mimosa papaya. Was one of the best hash we just show off showcased at spanabis last year crossed with rainbow belt. We have American river extract. Just washed it. I just have a little try last week. It's bro I think is a next level hash. It's like the ois tropical like hash that's amazing and get you high where it's normally all the ty papaya you can smoke all the way you never really get high of it but this is get you [^\_^] high as [^\_^] and it's the as [^\_^] like you have the z you have the papaya you have the tropica you have everything in there and the [^\_^] high and you were going to release those seeds I think so we testing the seeds right now we testing in house. We washed it to see how is wash and now we have a few tester out if we happy of the offspring. Yes. We're going to release it. Did you come up with a name yet? Did you Champion belts? Champion belts. Yeah, that's Michael and Vince find the name. That's Champion belt. Yeah. And it just pure pure for washing. Pure for washing. That's crazy. Yeah. Yeah. Nice. Yeah. Yeah. Even the flower is nice, but I think it's going to be way shine way more in hash scene than than still you you still see a flower market for it or Yeah. Yeah. It's huge golf balls, super frosty and really nice even on outdoor beds. She was pretty. Yeah. So I can imagine in indoor. Yeah. So yeah, we have so many things cross with their champa London mink cake and the califang watermelon. They have so many. And now with Amarello and and the news coming and mine too. I reverse bubble gum, reverse the pure gun. We have so many different reverse with their own genetic as well. So by spannabis we're going to have a lot of testers already test. So I think we're going to come up with a crazy list. I'm gonna have to get some from you. Crazy list. Trust me. It's really like insane. Um, what's your what's your bank at Haze Strange look like my bank at home? Yeah. Different strain in total. Yeah. Now maybe 100. 100 different H. H. No. Haze. You mind? Oh, no. Different haze. Five. Six. Five. Yeah. Five. Six. Pure. Pure. Pure haze. I have ash A5 A that was naval selection. The C5 A, the hashplant A, the Neville Haze Lassage, which is a Haze and the Hazana which is the Neville Haze cross banana I made and select and I cross this with a London minkake. And now we have with search the Hazana cross London minkake which is calling the London haze. So yeah, seven, eight. What do you compared to, you know, you you spend a lot of time in both obviously Europe and and the United States. How do you see the seed markets being the differences between the seed markets? Uh you guys, yeah, the genetic is going too fast here. I would say stuff being released too fast a little less unstable you think. Yeah. The thing is you have more so more you have more you can have instability. The thing is in Europe back in the days we doesn't have many seed bankank so there was really like consion on what they do like for example Mr. Nice chanted know and teach me how to make the feminiz seeds but never made himself for his own catalog. He's making feminiz seeds for bulk for other company but not for himself as Mr. Nice. It's only

regular seeds and read regular seeds from his own catalog. So Simon was the same serious seed was only making regular and just recently uh start with feminiz most of the real burer from back in the day sensed was only selling regular for a long period of time and starting feminina really late so we don't have many seed bank for real in Europe real seeds maker a lot of seed bank a lot of white label seed bank but as real seed bank and a real seeds maker. We don't have many. So I'm like here it's way more. We have like 10,000 more like seeds maker in America and breeder like doesn't have the knowledge than all the old guys we have in Europe as breeder and seeds maker. Grower yes breeder less in humbult you have some knowledge but the people don't talk. They're not friendly. It doesn't really like share that much than like montain people in Europe. They mostly like friendly and open scene like you see it's more social. We all like small and tie together and exchange and give more advice. So it's more open for us as seeds maker to share knowledge and make maybe less mistake than America. They all rush for the dollar and all rush for the new gelato new skittles. They all look for that since 10 years. Since 2015, I come here every time it's all look for the new Gelato, the new Z. That's everyone's looking for that. They want this new hype. So, I think more you're going to cross and less test, more instability, but more chance you can have to find the unicorn. I don't know. That's just the here for me is just going too fast. That's just my thing. It's just going too fast. when in Europe we like our classic when here it doesn't like so I think that that's come from the history in Europe we like history and we think with our history and we really like good [Â \_\_Â ] it's going to stay forever even food music heart anything in Europe it's [Â \_\_Â ] stay in America can disappear in a minute for anything when in in Europe we have more I don't like attached to the history and the classic. For example, Amnesia is going to stay forever in Europe. You can go in any club, in any coffee shop, all over [Â \_\_Â ] place. Amnesia has critical sango and now Mimosa. Yeah, it's Mimosa. It's a classic Europe. The original the Mimosa cut that you guys. No, no, the cut I have the mage cut. That's the breeder cut. But I mean the mimosa the strain as it is the name and the selection everyone's made in Europe it's a classic now in every club you can find mimosa on the menu most of the time coffee shop the same as name and the quality of the the weed do you think that's affected by the end user because it seems like here in the United States everybody wants new new new new new right is it that same kind of culture for the end user in Europe No, no, no. It's more um the UK market is more like that as really following the the America trends and the hype. We want new new new. In Europe, we want the new, but we want the good new. Yeah. Doesn't have to be so much. Exactly. So much new and fake new. It's not like the new new. It's not new. It's just fake. Yeah, that's the difference. Then we like the new, but the real new if it's real new as flavor, as testing, add experiences, that's new. Okay, great. But if it's just new by the name and the bag, yeah, just new on the hype. The [Â \_\_Â ] Yeah. In Europe, you can fake thousand people one time, but you cannot fake, you know, one guy thousand times. So, good luck. You fake one time everyone but after you don't gonna affect anyone. Yeah. That's how it's going to happen. And that's you know with all the fake for you know from for you breeding for so long and being in the game for so long. What what advice do you have for, you know, breeders um across the industry about just overall breeding and and where they're going? Uh takes your time. First advice, takes your time and uh have a goal. Take a direction for it. My breeding, I have books. I have books of breeding and what I want. So I put notes on what I expect and always put down notes and write notes to keep notes and track on everything like your seeds when you pop the health and take your time. Don't rush the process. If I the best advice is take your time and trust on you. Yep. 100%. I appreciate uh appreciate you making the trip out, man. It was it was good to talk to you all the from Europe. It's good to get a different perspective. I think this is the first time I've talked to anybody from from your market or had them on. It was good occasion, you know. I'm traveling here so and we work together in Europe as well, you know. Yeah. I receive so many message do you work with? Do you work for Attena? Do you work for I say like guys, it's just good to me. We just working as good uh

as good osmos. I call it like this a good Osmo, you know, like you're professional. I'm professional. Jack is professional. I have a support I need. I have the help I need. And your product [Â \_\_Â ] works. Yeah. So, and I have the reputation. I really like talk [Â \_\_Â ] and say the you know if it's work or not, if it's good or no. That's why I was skeptical to try and look since things I'm trying I cannot like I cannot thinking to do it without now for the seeds production and all what I'm doing. So now I'm making a new garden and a new phenolant with hatina and I'm going to test and see how it's going to come come out. But all the new strains so far they all react good. So I don't see why not. But I'm always testing, you know, new light. I'm testing LEDs light all the time. So I have a new company. I have DI with their UVABC light in between two LEDs 800 fixture. I have different company always send me things to try and give them feedback. So now the only thing I need to add the under canopy light to really see if I can again scale up. Yeah, I was going to ask you are you doing under canopy? That's the only thing missing now on the on the new trial. So I'm waiting for a few under canopili to try and really see what is going to give to my garden if going to improve or not if going to you know let's see for the seeds production can help or not. What's your favorite top lighting right now about uh on on your top lighting LED? You say you're testing a lot of ones LEDs for me sunlight. so far is the best brand so far. I have some sunlight lighting. Yeah. Yeah. Sunlight. S A N. No sun. Sunlight. S A N light. Okay. Sunlight. Yes. Is made in Austria. Nothing is made in China. It's all made in Austria. It's nice site. It's all really professional support. Great light. I develop my production from that with antenna. And look since I put this no like problem before with is light I have problem with nutrients and lacking and always like currencies on calm mag silicat anything like the stem like starting to be like purple super easy the leaf more dark green my brother was going crazy always what's going on I cannot like be deal with a few like genetics under the LEDs don't like see a [Â \_\_Â ] jump. It says super happy. Yep. The What do you think it is about the sandlight? Is it the spectrum? Yeah, I the spectrum. And look, sunlight per square meter I'm using now is only 250 watts per bar. So, it's 500 watts per square meter. So, 500 watt fixture per square meter. Okay. Per because the two fixture a small fixture. So, the two fixture to give me 500 watts per square meter. And I'm making the double production of seeds when I was consuming pretty much thousand watts before in double ended. And so I consumed the half of the watt and produce a double of the seat. Yeah. Yeah. Consume way less air con, no dum and I'm running irrigation automatic. So, it's just like amazing on the finished flower with uh LED compared to HPS. Do you with that new light that you're using? Do you see do you have a preference between HPS and LED finished flower? Um the HPS have more like swirling opening kind of flower structure when LED is way denser. Yeah. But if you have a good distance and I playing with like when for the light first of all the first 30 minutes is going crescendo. It's never like full light uh as soon as this uh the light on. Uh secondly the first week of veg and I'm 25%. Then I'm going to 50% the last week of veg. I passed to 75% the first week of flower. After 2 weeks, I put 100% of the light capacity. Then on week seven, I start to reduce at 75%. And I leave the last two weeks at 50%. Do you adjust your temperatures as well as your lighting when you're doing that? No. No, you just leave it the same. Yeah. Okay. Y um what do you like running on Celsius uh through flower? So far I get better result on colder temperature than hot temperature. So even the Z I can like I show you picture after the Z was never looking like that before and I never have more hot than 23 Celsius. Mhm. And the minus was like 16. I was between 16 and 23 the winter some the winter run. I never had the run like that. Yeah. On all the plant. Yeah. Cool. everyone. So now it's full summer I have pretty much the same is happy but less happy when I have like 28 29 and the minimum are 24 25. Yeah. But you get a better quality when it's cooler. Yes. Yeah. And to keep the water cooler it's super important too. The the water temperature up to 23 for me it's not good. Like 24 the maximum for me. Up to this you lose like a lot of oxygen in the water. The nutrients not the same. Your plant doesn't have access to the same minerals. I think it's really [Â \_\_Â ] up to have your water more than 24 degrees. Yeah, 100%.

What is that? 24. That's my That's what I see. That's the really the limit for me. 23 is really good. 24 that's a maximum. After for me is [ ^ \_ ^ ] up. Yeah. So, no more than you know uh 74 degrees Fahrenheit. Yeah. Yeah. That's for me that's really the limit max. If the facility is really hot and your room temperature it's like 28 29 you can maybe feed at 23 24 but that's really the maximum. Yeah. But for me I always the goal is for me to always irrigate with a water two between two and three degrees less than the room temperature. Okay. That's always my goal. Never feed at the same room temperature. always two to three degrees less. So if I have a room at 23 24 degrees, my water have to be 20 21. Yeah. Yeah. That's in always that have to be always that's when I'm going facilities and then when I'm fighting Gree that's to have my temperature water at the I kind of find the sweet spot like you know 68 to 70° which is 20 about 20 to 21 and it's cost expensive to cool the water. Yeah. To hot the water it's easy. Yeah. To cool to keep it cool. That's one. It's getting expensive for a facility to keep cool water all the time. Yeah. A lot of you could just keep it in a cold room, you know. Yeah. Put some Yeah, you can put if you have the volume. If you have the volume and all that. Europe is all compact and things. So, put air con on it. Uh put some ice on it. Try to keep it cool. But we try. Yeah. Well, I appreciate you uh coming on. I enjoyed it and uh it's great to have a legend like you on. So, thank you, bro. Thanks, bro. Thank you, bro, for having me, too. Thanks, man. It's a pleasure. Talk to you later.

this episode was with my floral DNA one of my favorite parts of this episode is when we get into DNA fingerprinting DNA fingerprinting gives the breeder or pheno Hunter the ability to catalog genetics by DNA sequencing using something called a CCI certificate of cultivar identity this will give Growers the ability to verify if they are growing the right genetic by simply sinning in a leaf something else that is really cool is that it gives the ability for the enduser to also verify the genetic they are partaken in by a my floral DNA QR code on the packaging of the flow or concentrate I hope you enjoy it thank you guys for making the flight out home base is Sacramento thank you thank you it's a pleasure for having us Dr Fernandez Dr Adan why don't you uh Dr Fernandez why don't you go ahead and introduce yourself and I'll move on to Dr Adan so h my name is Angel Fernandez I'm the CEO and co-founder at my florna in addition I'm a scientist youu clay I originally from Spain I did the PHD in between Spain and and Japan K University and then in 2013 I got a European Fellowship for my post dog at UC Davis this is how I got here I really like the the science uh and the system the UC system so I decided to stay a few more years in in Bclaim and I have been working basically more than 15 years in other crops always in genetics genomics um and two two two years ago with with my my best friend who is still in in Spain is a business guy we were talking about the real need of bringing the the DNA technologies that we are applying in Academia to the to the real industry to the industry in general and we find out that cannabis is an amazing crop and very challenging actually and unfortunately didn't have the enough resources and then enough scientific knowledge uh as other crops so that's why we decided to to start this this business which the main goal is to bring all the knowledge and the science that we have into the Cannabis industry and now you're CEO of my floral DNA that's correct right on Dr Anan why don't you go ahead and introduce yourself thank you Brandon so my name is Ajit anant I am the VP of R&D research and development at my flora DNA before my tenure with uh my flora DNA I was working on the raw crops I had uh 15 years of experience working on multiple raw crops corn soybean V tries and you name it I am

a molecular biologist and a genomics person by training and my expertise in the area of Ro crops was bringing the science and data together to drive a big organization which is CA AG sciences and Lead that into some of the translation r& which was then commercialized the reason I decided I know I have a significant amount of experience in the corporate world so bring this knowledge to a new crop which is the fifth largest crop now which is cannabis apply these science and data to a craft which needs more dedicated breeding genomics and as well as the knowledge of how to go Diagnostics in terms of applying these things to integrate and apply it into a cop that needs some real work to be done and that my excitement brought me to the world of cannabis my pleasure of working with in the a field starts with Professor Ms Swami Natan who is also considered as a father of Green Revolution in India he was one of the first person to come with this coin of I mean terminology called sustainable agriculture I see there is a lot of value for sustainable agriculture to many crops including Cannabis so we in the Forefront of advancing a crop that needs something that needs to be done at the community base at the education level and applying some of the knowledge that we have gained in other crops which have been sort of integrated into our agriculture system Dr Fernandez can you explain what my floral DNA is as a company and what it does so we have two different areas or divisions the first one is we provide ER genomic direct genomic services or fast services to our clients which are basically tis culture Labs Growers and breeders um we think that the fast service division our strength is uh pathogen detection uh we provide a a wide range of uh analysis including hlb and then we have another R&D division so we are always trying to improve the protocols we are trying to add new new testing services into our portfolio and develop new genomic tools that they can be uh useful and efficient uh to our clients are there other viruses other than hotl and virid that you're that you're testing for yeah we are adding well we have uh uh a package of six seven different viruses including bit Carly including lus closis and so on six7 different viruses and are all these viruses prevalent in in cannabis that you're saying yes yes so some of these viruses have been reported and people have talked about this viruses in cannabis know the beat curly uh virus that is and then they have the luse early virus so it's called beat curly uh bctv okay bctv uhhuh bctv I haven't heard of it yet no then there is a Le lus kosis virus then there is a cannabis um uh what is it CCV that is that is another virus that's very much known in and then we have also the uh AMV the alpha alpha M virus so these have been reported in cannabis can what's what's interesting is a lot of cultivators in the commercial field of cannabis production and cultivation many of them don't know about hopl and vroid which it sounds you're saying that hey this is very common bctv virus and and you know it's very known but I I don't think possibly it is really known in in as far as scale commercial cannabis production and cultivation um and knowing that hoplight and vir hoplight virid which for for me it's really well known um going into some commercial facilities surprisingly I see that a lot of these cultivators don't don't know what hopl virate is or how it's affecting their crop right how does bctv affect crops on a visual basis or what what have you what reports have you got en on on other viruses and how they affect the crop that's a very interesting question so many of the Cannabis uh cultivators and breeders do not see a huge economic loss with other known viruses but viruses by itself when they in the plant you know it's an it's a pathogen right it it does bring a lot of metabolic influx in the plant the plant has to uh sort of put its resources to fight these pathogens so obviously some of these pathogens have visual symptoms um like the be beat cly uh top virus which is a bctv it can show closis uh Leaf deformation and other symptoms but it's like more often reported in other crops than and the the fact that cannabis grows with other crops vegetables and um you know which is in the growing area the the viruses can move around and some of these virus have been reported and uh we are trying to learn about these things as we start figuring out what actually happens and how it interplays with other pathogens because remember plants are always exposed to a lot of microna there's a lot of microbial things that are happening and in cannabis nobody has really looked at the

resistance pathway like disease resistance that I've been working on in other crops uh or managing known resistance that we can breed into the crops so it's only a matter of time when we start seeing uh the the the you know negative effects of these pathogens in cannabis our Focus has been purely on hlvd because people know it causes the dutting or the dead disease right and there is an known um fact that if the plants are infected and we know that the resistance or cultiv severity goes back to the fact that it depends on these cultivos that we using so when we start thinking about hlvd everybody is concerned about how much it results in the plants being DED stuned in growth brittle stems Leaf deformation chlorosis reduced wiger in the growth flow and as well as the Turpin and cannaboids that are produced so I mean you can see people reporting as much as like 50 to 70% reduction in DHC for example that's sort of a real you know uh sustained study on some of the other viruses hasn't been done and I think it's the matter of time people will unra L that and that's where the science comes into play and that's that's what you're hearing from hopl and vroid hlv as far as the the main syndroms yeah the main syndroms that significantly impacting um yield Turpin THC growth yeah and this all in scientific literature I mean uh if you follow these things I mean they have been documented there are a few Labs which have actively been trying to educate the scientific community and the Cannabis Growers and breeders that you know what are the common I mean common symptoms you see with these white Arts why do you think it's important for commercial cultivations to detect it early there a few things that we need to know about hlvd so hlvd is caused by a woid and woid are the smallest RNA molecules within without a protein which is infectious on only plants so I mentioned previous that this hlvd the severity of the disease or the disease symptoms varies by cultiv and so but first time it was detected in hop right that's the way we call as hop Latin ooids in hop also that's the same thing happens not all cultiv or not all germ plasms show the symptoms symptoms varies with the germ plasm and the disease symptoms also vary with that the other thing to know about hlvd is many time an very interesting fact about hlb is that it is latent and it's dominant in the plant and the plants May grow without any symptoms and once it expresses the wiid that's when you start seeing all the other phenotypes that I mentioned and by that it's too late so the earliest deduction is the only way to manage and mitigate that virus and we therefore feel that that's what we want to provide us as a service to our clients figure out the way the most efficient reliable molecular diagnostic method that can detect hlvd pretty early so that you can curb the you know uh spread of the disease and C those plants before it really matures and spreads in the grow facility yeah I've seen I've heard of a lot of different cultivars or phenos that don't really show any expression of hlvd but in other fenos it's it's pretty prevalent visually um and then in and a lot of fenos we're hearing that you know once you start to bring that plant into flower or stress the plant at all then it really starts to come out and you start to see it why do you think that that is and I'm not a plan pathologist or molecular pathologist to tell you about the epidemiology of the disease but you have we have seen that when plants are infected and they they go through some sort of stress which is uh a nutrient stress ora drought stress or heat stress the amplification of these uh pathogens is presented so the plants then start showing it because it's fighting now two winds one is the presence of the viroid and other is the stress that is uh that plant is to overcome right in order to be able to grow and mature and flour so I think it's a cumulative uh expression of the phenotype for the presence of the vroid and the plants are trying to defend itself against uh the viroid and as well as the stress that is going through so you become susceptible and we know that in humans that happens right when you get a a a common cold you become uh more or less prone to any any secondary infection uh common cold is called by virus and and often people come with a common cold and then go into a hospital and land up with a bronchitis or with a mean with another infection so secondary infections do happen very Co so I think from my understanding is that plants are compromised at that point and that's why you see the Amplified phenotype being expressed with the vroid yeah when when you're you know when you get really

stressed at work or you got a lot going on then you know you start to get sick obviously same thing for plants what are some of the most common testing um protocols for viruses and HL viroid when you look about diseases I mean this is an interesting question because I mean the the area is really still developing um biological indexing is a very common thing to look for pathogens including viruses and viroid one has to be a little cautious about paral indexing because of the fact that hlvd is very narrow host and it goes Dom I said it remains latent so the common use of biological indexing doesn't work the other interesting thing that to keep in mind is the wirro when infected in the plants it's not universally or it's not universally spread in the plant there is a variegation there are certain tissues which have higher amounts of the virus and certain tissues which do not uh show the virus so we need something which is very very sensitive and as well as reliable while also the robust way of looking at so when you look at the different methods that have been used in uh detection of viruses and viroid you have the qpc based methods the PCI based methods which is a polymerized chain reaction then you have a qrt based method which is a reverse transcript tape because this is an RNA virus I told you right and then there are these lamp which is a loop mediated amplification so these are the very commonly used platforms and people have used it even for SAS 2 COA I mean very commonly used right um so you you can decide based on what you want to spend from your pocket you know which technology you want to apply from our perspective what we want to give our clients is something as I said is Affordable cost effective but equally sensitive and reliable which is high throughput so that I we can throw go into our labs and to few thousands on a daily basis some of the other Technologies you can only handle few hundred and it comes with a cost associated with it uh it needs much more extensive work which obviously the labor comes into picture and needs a clean facility to do it so and there are also PE uh companies which are selling kits you know you can buy those kits uh I mean you'll need to get a little training and use it but again they're not highr put and that's a limitation and its sensitivity is also limited how what about the accuracy on on the on the kids at home kids I wouldn't comment on that because again I have not used myself uh when you look at uh you know what has been disclosed by the companies they say it's highly sensitive but we know as a technologist that the sensitivity is limited and the fact that you can only handle you know six to eight samples doesn't make it easy for anybody who wants to do it in the lab or in the field so the sensitivity um may be good I I I won't comment on that but the question is how throughput is that for any lab and is it cost effective does it pay for the labor that's been put into the lab and what are the controls that you have that you're running to make sure that your reaction were all perfect right so you know it's it depends on how much training is is given to the person or the personel who actually optimizes and standardizes the protocol you're saying your guys's method is is high throughput and affordable how how much does an average hot PL and viroid testing cost on a cannabis plant depends on the volume depends on the frequency of the testing but can be easily 15 bucks \$15 \$15 for sample results there are the client get normally the results in in two days but again depends on on the volume of the samples it's not the same home grower that wants to analyze three samples every every month or a newer or a growing facility that analyze several thousand of samples every every week right but I would say that the very is might be that usually how does hot blat and vroid make it into the tissue of the plant and how does it spread to other plants around the facility very interesting question and this is something I think people need to understand um um often there is this question about is it seed or pollen bone there is very low evidence to show that it's seed or pollen bone these woids the most common way of the woid spreading in the facility in a grow facility or in in a Breeder's hand is veget cutting cutting so I say basically there are multiple ways that the woids can move vegetative cutting are most commonly uh see um method for transmission of the viroid so mother plants can be infected and you're cutting the mother plants so that's one way of doing it there are other ways of um the virid spread which is more mechanical mechanical where you could have a and it comes to the cultivation

practices in the facility too it could be your tools instruments and equipments that you used for cutting and if they are not cleaned and uh I know hygiene practices around in place obviously that becomes easy for the wi artist to stick around and then there is also this uh U so plants are like you know growing right so there are injuries or cuttings that um aberrations that happen wirs can easily get through that too so that's very common like these mechanical and the cultural practices as I said the vegetative cuttings there are reports also about Vector transmission Vector is a vector is basically which carries uh the viroid and there are reports like there are root aits and root aits are shown to I mean at least people have reported it that they carry the viroid there there is possibility of ifits also which is also known to be Vector for many other viruses so these are the common ways the wir you know moves in a facility or in a croia you guys um did a lot of research on pathogen Diagnostics what what technologies um did you did you do the research with so we just um release a new or develop a new a new technology that is actually a hybrid of the two most common Technologies H which are the the lamp technology and the real time PCR so we just internally we just develop a new a new hybrid um that is called a my flora detect that it's a it's a high throw put technology so that means that allow us to analyze several thousand of samples every day H is very accurate actually we got saying sensibility that the famous qpcr technology and so that makes that that means that it's very affordable so that's why we can provide those those competitive prices to our clients probably we are the the lowest cost you know most efficient uh to our client so um we just develop also a a a research project that includes 5,000 samp 5,000 plants probably is the largest research study on hlb so far and the results have been published in a scientific journal U so it's available to any any any any reader and we are very happy we are very happy with the technology we are very happy with the the sensibility and accuracy of the data H the price that we can that we can provide to our clients and the number of samples that we can analyze in a daily basis I want to jump in uh just to sort of elaborate on the fact that we have a very unique technology which is as Angel mention is an hybrid between the lamp and a quantity PCR method so I mentioned to you the quantity PCR is a very sensitive method um what we have done is we combined the ease of lamp and the sensitivity of the PCR qpcr based approach approach to be able to provide a highly sensitive and liable process of being able to detect the WOD pretty early and this study where we actually did were probably the the first group ever to do this in an R&D is to see the progression of the vroid starting from young age to almost like 12 weeks old plan this are mother plants like that's been cut right to watch the virus grow yes yes Evolution how the virus when can you earliest detect it whereas the W the woid actually amplifies the tighter goes up in the uh tissue and is is that wart present in the whole plant systematically or is it localized into specific tissues or Tiss tissue types right and here I want to probably put a little thought on how these warts actually get into the plant as I was mentioning to you earlier that you know wots normally is this mechanical or veget cutting so which basically tells the aial parts become prone to the infection and most likely the aial parts are the ones which come in contact with the woid and I also mentioned that woid is not very systematic in the sense it's not evenly distributed in the plants so knowing how to sample these tissues you know you need to basically take tissues from multiple uh parts of the plant and then analyze that through this process of what we call as MF detect and another thing that we have come across is that obviously we have seen in our studies that the tighter of the WOD increases it doubles and triples over a weekly basis and we have to understand how the wods also move in the plant so it's a source to sink we say woids normally get infected in the aial tissue which is probably a Le wherever it makes the entry and then it uh amplifies because it sort of um hijacks the plant DNA replication Machinery to get to amplify itself and then it gets transported into the flum and from the flum it moves down so that's a source to sink and that's how it reaches the lower parts from the upper to the lower parts of the plant and one of the things I also want to make people understand about the wart is so as I said there are multiple steps here right the



wart infects a particular tissue then it enters into the nucleus that tissue uh I mean of the tissue that it infects in the nucleus it starts its own replication by using the plants uh replication Machinery from there it moves out of the nucleus it then gets transported into other tissues and then it gets pumped into the flum and from the flum it goes down and again the life cycle starts again so there are so many different steps and that's why I think it's very interesting to think about this fire just not from a disease point point but also there are only few wi outs people have really studied about so this is making it's more interesting to understand how they have evolved to be able to infect uh you know crops when you're saying that you're saying that it doubles strength every week that's what you've guys I wouldn't say doubles the strength but we so like any um Maman cell or anything which is infected with viruses over a course of the life cycle the virus amplify like they increase the that's how we start showing disease like for example if you take a person who's infected with you know SAS coova the early stage they may have a few number of molecules or in the uh human cell but when they really multiply that's how they do Invasion right we have high titers so in leaf tissue we have seen over the life cycle of what of the experiment I was talking about the amount of the WOD increases and so what happens now is it becomes easier like if you have few molecules of the WOD versus you have 100 it's easier to detect with any of the even less sensitive systems yeah you talked about a little bit about taking plant tissue from certain parts of the the plant initially where where are you guys seen or where have you learned the best locations of taking tissue from the plant for testing so I'll go back to Angel um you know mentioning about that study where we did this huge experiment which of the one of the largest public uh work that I've heard about in uh in terms of studying hlvd in cannabis so we started off with 5,000 uh plant samples and uh we did analyze them with our MF detect method and then we narrowed down down to 600 samples which came from 50 different plants which we identified as infected or non- detected and then we did a Time Cod study like for different weekly intervals in this study we actually included three different tissue types we took the leaves again sampled from the different parts the plant then we took pitol then also we took roots and we did a careful study using our MF detect which is the lamp QPS hybrid uh technology and the more sensitive tman qrtPCR method based on that study we can tell you that all three tissues are even in terms of detection but what is interesting in that is we when we initially screen the 5,000 plants we screen the leaf because that was a recommended uh I mean sop or recommended protocol for our uh big Growers and this was this was a very interesting study with uh which we did with one of the biggest cannabis growers in California so the sensitivity of the essay is is here in in the play because again those were 5,000 plans pretty early in their growth stages identifying potentially those who are which are infected and undetected and then doing a Time course tells you that sensitivity of Thea because we are basically trying to show that yes we are were able to detect 98% 95% confidence that these plants are infected and then showing that yes it can uh in the on the weekly basis hey they really are truly infected right so that's the power of that technology now going to the tissue type as you said one thing I mentioned is in the leaves we tend to see the increase in the titter but in the p and the root we didn't see the same thing uh and again which tells that again Leaf is an ideal a suitable tissue if you want to do it pretty early in the deduction but we also recommend now that you know we have seen this source to sink I told you the flow and transport and it's in the root any of these tissues can be um can be used for detection but the question that comes into mind is as I said it moves from the upper part to the lower part to the right by the time you pick the root maybe it's already infected it's too late yeah that detection has to be directly from the Le an early detection so that that brings to a solution right I mean a solution would be I mean or to test regularly what you say every week yeah so that's one of the things that I would say is in a recommendation for anybody who's trying to look at hlvd right you have to have a management practice and we are now really interested in finding those partners and collaborators whether it's in the tissue culture plant or in the mother plants can

we get those uh samples and we can tell them uh we can come up with a protocol at our CP on how early should the early detection be and how early can our diagnostic molecular tools uh be able to detect it right I mean so we can actually improve our sensitivity too so as you asked me this question right the cultivation management practice or the best management practices would be is routinely on a constant basis on a weekly basis sample your material get through it test and reduce the amount of infected plants in your facility that's only way to reduce the amount of viroid load in the plants and also to remove plants which are infected with your guys's research and and you guys found that hopl enviro start starts at the top and moves down through the plant did you kind of find how long it takes for the for it to move through the plant or obviously does it depend on size I mean what what did you guys learn it's too early for us to make a conclusive comment on that um and again what we have seen is we were the first people to really do this systematic sort of study to be able to take young plants identify if they are infected and then go and do this um tissue I mean sampling from different parts of the plant with it P leaf and The Roots I think there is more um more amount of work needs to be done to be able to take it even earlier uh by the time we took it like five six weeks we could even see in The Roots so it's already moved yeah but what we are seeing is by the 56 we doubled and tripled the amount of aoid yeah right that hasn't happened in the rout and PTO so I I mean I don't I I can't comment on uh whether we have a solution but have started taking more of a systematic approach to unravel what's happening in the plant and how the viroid and the plant are interacting with each other would knowing how the virus travels through the plant would you say for cultivators it's you know not maybe maybe not the best practice but a better practice would be to take new cutting from the bottom of their mothers rather than the top I mean is that I mean how what what I'm trying to get that is is there a solution to kind of getting ahead of the virus once it's detected right I don't know whether the answer is that simple um my concern would be is if you happen to know that your mother plant is infected don't even try to use that mother plant for your cuttings because it's probably too late that you can get anything to eradicate from that mother plant uh normally they say that the topper parts of the like the meristems and meristemoids meristems are normally um free of viruses but viroids are different uh you can reduce the tighter of the plant um people have used meristem cultures or noal epical nodes for trying to avoid the amount of you know viroid content but the effect is more of a dilution effect you know if you do really take the meristems and you have to do meristem a few times yeah you can reduce the Titus significantly um but coming back to the question of whether they can use the aerial parts or the lower parts if I'm going to give you a scientific advice would be uh if you know the mother plants is are infected avoid it inil yes I would say the same thing I would then use it you might be lucky you might not be lucky yeah and have an accident anyways I just wanted to corroborate what the Dr Anan is is talking and as a summary I would probably say because it's been a open debate about which tissue is the is the most accurate for pathogen testin based on our study again the largest one uh so far initial samples 5,000 plants um rud is not best than Lea that is a major one of the main conclusion of this study you want to really detect the infection at a very early stage start with Lea H it doesn't mean that you can add to the same pool a few petol or even root but don't discard Lea because um the data showing the opposite so that is one of the the main of the main goals of this this study to was to to to demonstrate that there is not a better tissue than than than the other what advice would you give a new cultivator that wants to start doing regular hotl viroid Android testing what what is some advice you would you would give some cultivators ER testing very frequently that is something that they should they should start start doing it can be with one technology with another technology with our company with another company H kit uh Outsourcing to another lab but uh want to prevent the the rate and the the infation level they need to start testing and basically we have a very recent example which is co at one point every every individual was testing uh every week every month right and that was the only the only way to make sure that you are you are healthy and so the same thing happens

with with plants uh regular testing is the is the point and is the the foundation if you want to have a a good IPM program yeah so I'll just add on that that's basically what I was telling you creating an effective disease management practice and which is very periodic very systematic and people invest on that so it's an effective way to reduce the amount of rate of infection and also reduce the road of the other thing that I think obviously is going to be an great opportunity is finding host resistance or resist mechanisms or breeding for resistance for H lvd it's in a whole area that you know people can spend time and years but that's going to be the long-term fix for it breeding to yeah to identify genes uh that are offering yeah resistant to C which are resistant as we talked about the sensitivity and the uh degree of severity of the disease really varies and H the same thing is probably true in cannabis too that's the main difference when we were talking about uh cannabis versus the the rest of other crops the other crops they have been uh they have been doing research for many many many years decads and breathing and molecular biology and so on so at the end obviously they got the resistant varieties with breathing with cannabis the breathing history is very limited very very limited there is not a real foundation so it will it will it will it will be there in the next few years hopefully and I think this is also an opportunity we are like openly saying you know we are looking for collaborators we are looking for partners who want to work with us because as I said I mean we are a science-based company we have got such a talent in our inhouse and smart Brains Brains which have put 50 plus years on the molecular biology molecular Diagnostics genomics we really can be a big players because for us it's learning all that I told you is my last year and a half of exposure to cannabis right uh if I had the same 12 13 years of experience working like what we worked in R crafts it's it's a lot of immense knowledge that we have which we can sort of provide this community but we need Partners we need people who want to work like the work we did with a um huge cannabis grower on the disease progression hlv deduction we're allow to hear from people who can work with us because end of the day we want to make it feasible in terms of giving more I mean creating more business value and as well as understanding the disease this is one disease there going to be more disease that are going to come in cannabus are you you guys currently working with any breeders right now that are yeah we have several collaborators uh now are are they um doing fingerprint ID with you guys that's correct are do you guys feel comfortable talking about what you guys are doing fingerprint yeah yeah this is another technology that we just uh well a few months ago we we released we have a patent pending application it's something very novel and hasn't been applied hasn't been actually discovered actually in any other crop the technology itself but the way that we represent the data is very unique and novel um why do you say it's novel oh because actually not any other University or neries or even major agriculture companies applying this this digital visualization so this is a way to protect and to authentify the the Purity and the uniqueness of a of a new strain or or a new cult it can be cannabis it can be soybean it can be Almo it can be Cherry so the the main idea is to to to provide that differentiation to the breeder and to the Breather actually it's a long and a very difficult job and they are artist and every time that they develop a new strain they need a protection they need to protect their their art so with this technology we help them to protect that that wonderful thing that they have created and this is based on molecular Market on DNA molecular markers so as I was saying earlier this is a we are generating the social security number for each plant and that's the way to demonstrate to the public or to the to the to the industry that what they have created is unique no one else has the same thing and uh it's also useful to the identify fraudulent activities so if you as a breeder have created something and your neighbor has gotten that strain and has made a new cross we can identify or even he has just renamed the J Trin we can identify that is the same thing and that belongs to you so it's a proof of authentication and you also kind of pick out traits like resist to no no at this level not so this this I mean we could but this is not the main goal of this technology the main goal the main the main purpose of this technology is to

certificate the authentic the the the uniqueness of your cultivar if you want to identify new genes or you want to breed for resistant jeans or for Quality jeans or for drug the stress whatever we can Target those genes and we can create a a new strain that has those those threats but just for protection authentication this is like an IO ISO what we are trying to provide to the clients that quality control yeah again Angel mentioned it's a providing them a social security or digital ID we are not into identifying trade genes we're not going to work on that until I mean this information is owned by the breeder or the cultivator we don't own it okay and our ideas enrich them enable them to make the decision of how to keep the germ plasm or the their cultivar unique so say I'm a a breeder and I come out with a genetic let's say it's Lemon Cherry gelato and I have my lemon Char aato that I crossed um and I want to get a fingerprint DNA walk me through what that looks like as a breeder where do they start how does it all flow through and what do they get at the end the process is very simple so they just need to send us one leaf of the plant basically as with hlb they're sending us a pool of um plant tissue with fingerprinting we just need one leaf the DNA is going to be the same in the root in the leaf in the P we are not talking here about the um pathogen distribution DNA is the same so they just need to send us a Le the process takes uh 3 to five days and by the end of the day they will get a certificate with the social security number based on DNA uh markers as you can see here in this image uh and this is going to be unique to any other uh breathing line or or any other cultivar that you might have done in the past even if you cross even if you cross the same strain H the DNA profile is going to be different cross the same strain with another strain it's a new DNA profile yes it's like basically you B they have to exactly you have sister your DNA information is different to your sister right so it's it's the same concept so I'm a I'm a pheno hunter or I'm a breeder and I sent you my plant that I either pheno hunt or I bred and pheno hunted that and I have my certificate okay my certificate's in digital or in hand and then it's a digital a digit digit that you can even upload that on blockchain so that means that no one can modify and so now I'm a I'm a breeder that wants to sell my cultivar and it's called lemon charela and I sell my cultivar out and to an exclusive set of individuals and those individuals how would they verify that that's the real lemon Cher gelato so they have an option to validate um the validate the same cuttings let's say and if they get the matching 100% matching by using the same technology that means that they are using the real one the real culture so those those those individuals will send you a leaf and then my DN my floral DNA will come back and say 100% match what is something like that cost for those those users that that get that cultivar how much it cost yeah about yeah how much so it depends on the volume but it can be for around \$150 okay even even less depends depends on the volume again everything comes down to the volume right the more we can actually provide we have more sampling that less we can make it I mean the Lesser is the cost of that so the input to Output cost VAR UN based on but it's actually a very uh cost efficient way way to protect and to demonstrate to the industry for \$150 or even less again that you have something unique and what you have is different to what the others they have mhm so and another thing is when the people who are growing this breeders line of either know is it a new cultivar or a new pheno hunt what you call uh all that they need is pull the leaf um if they have this questionable about hey did I get the right one just pull a few samples together put in a little tube and send it over what kind of information do you usually give out you know do you tell the breeder cultivar that is starting his library with you like is the clant virus free do you give it do you give them any information on growth characteristics or what to expect or or anything like that we are not Growers and the the istics they need to be provided by the client we are just molecular scientists we are experts in that field and this is what we what we do so if they want the certificate they will have to to provide the agronomical information including a picture but this is more for Aesthetics for them but the real value here is the is the the DNA information the genetic profile do you guys mind me asking how on on a breeder side of things how who's what's your largest library with one breeder of of CC what do you call it

CCIS certificate of cultiv identification so we have breeders that they have probably 300 400 samples and 400 cultivars ctiv with one breeder yeah yes yeah yes I mean that includes also their gy bank so those are breeders that they have their own germop plas on and they just wanted to also to to to to to know the the genetic distance the genetic relationship between one strain and and other strain so by the end also they can request a phog gentic three so we are we are basically uh offering customized uh outputs so if you are a breeder with 500 samples and you want to know the genetic the relationship between all your cultivar we can develop a a phog gentic tree and and they can find out the distance the genetic distance between one and the other so that information is really relevant because based on that they can design the the new uh experimental designs for the breathing projects so you know once we generate the data ER how we provide that to the client is really depends we are very open this is B informatics we have a group of B informatician in the in the team so this is a matter of couple of hours so we are very flexible to to that and what's really cool is um you don't have access to the cultivar because you're testing Leaf you can't you can't you you don't have that cultivar that's we don't have we cannot to multiply we cannot to grow a plant a new plant from a that is very very important to to mention we cannot do magic right so no you can't you can't tissue culture a leaf and and pull a new plant out of so I think that's really important because you know being a breeder your business revolves around exclusivity of your your cultivars and you don't want anybody to to own those of course but you still want the fingerprint of the cultivar and you want to be able to you know have an organiz organized foundation and a list of all your certificate of cultivars um but without giving anybody your cultivar so that's that's really really cool that you guys are doing that that's really neat as far as do you think that this program and the CCI will help brands do licensing deals with other facilities to grow their cultivars do you think that would be something that's integrated I think so we see a lot of potential with this technology for Branding companies too and even for the for the consumers the consumers they want to to get a specific strain that works with their physiology and and they spend money in one strain and they want to get that strain and they don't want to get another strain so again this is like a like a it's going to be like a certificate level for for Branding products and The Branding industry me imagine a scenario where the customer says I really need gelato I really need uh this particular cult but they come and want to have it you basically have like a QR code in the packaging that they can have the absolute confidence this is the real stuff right because I have and B code here that tells me hey this is a certification of this unique culti but that I'm looking for and that's what I have in this product so you're saying even on the end user M the end user wants Lemon Cherry gelato right you as a cultivator say you know you're doing a licensing deal with a brand and you're cultivating in the state of Missouri and um um the end user can then you can as a cultivator put the my floral DNA uh QR code on the packaging and the end user can scan that QR code and verify 100% that they're smoking the real Lemon Cherry gelato from the real brand that's really neat that's really cool is that is that the I mean that that's that's the scope of this whole thing as this evolves and everybody likes to have an authentication of what they are consuming right whether as a consumer we go into the stores and out branded and stuff and we know whether it's a certified X material certified um material without uh say hormones right in milk products or in your eggs this is the same level of you want to know the origin also what it's coming from so you can get all that information yeah who is the grover who where did it come from I this information all can go into a blockchain to as well I mean I see a potential opportunity to really um have a tractable way of finding where the product came and how it landed into my store that's really neat that changes the game across the board as far as for the Breeders the end users the lenses right this is big yeah it's really big and I would also add on to some of the things that right now we were saying that we're giving this fingerprints for our customers right I mean our all ideas is nothing thing is going to be with us and I told you in the beginning that the owner is going to be the

client who gave the material he's going to be the owner of all the information we give it comes into our hands we do the fingerprinting it goes into the cloud it's up to them to decide what they want to do it we are not into the discovery path right now we're not going to go into looking at what's the different things that are unique about it but that is a potential area for us to open with our partner who wants to now spend time saying hey can I expand this work uh I'm interested in uh water I mean uh drought resistance or I want to have herbicide resistance I've seen this culiver which this phenotype is very resistant or this genotype is very resistant tolv can we work together we have to expand our capabilities right with this we are limited but that's a a partnership a collaboration comes in picture right and that expands the capabilities of using this technology this technology has been used for many crops I going to tell you that they talk about pan genomes and other crops like raw crops that's you know the whole thing is open here cannabis that's really really neat it's really neat that you know the future is to work next to cultivators and figuring out traits that they see in their plants and then working closely with you to kind of see where those traits are coming up from on a DNA perspective so they can then use those traits for other crops that would be really neat what on an intellectual property basis I mean are you seeing people protect their cultivars um being with the federal law of where it is are you seeing um Growers protect their genetics and protecting their intellectual property um I mean now this is the new tendency and this is more for this is a question for a patent attorney and but that is going to be the way to go exactly as they are doing in in tomato they are doing that in in cherries soybean or rice they are doing it they are protecting basically every new Kar every new variety they should they should so so again is if you are a you are an artist you want to protect your your your art you're um your son as a musician you want to protect your son right so it's the same thing you are creating something unique they have to are they are they mostly protecting traits or are they protecting the actual fingerprint something like I mean could you use the your fingerprint DNA possibly I'm not saying right now but in the future to add some intellectual property so PVP is a very common thing in many of the crops that people say plant variety production right it's it's a legitimate reason to say hey I have this inbred or I have this hybrid I own this and that's how big seed Industries work around it that applies to anything so you don't protect actually the DNA what you do what you protect is the plant and the plant so you are creating something new and something means with with new agronomical incorporations so you have to include in the in the patent application you need to include all those phenotypic and morphological uh traits but now you have the possibility to add an extra layer which is the molecular or the DNA ER information because when imagine two breeders they want to protect the imagine the same the same VAR variety that they have resistant to poweru High um um throughout the stress so in the in the description to it can be very very very similar even identical right however the molecular level is going to be different or identical so if it's identical that means that one stole this from the other right yeah yeah so that's the only way to to protect any kind of organism what do you guys see as being your biggest challenges with fingerprint DNA in the Cannabis industry because it's it's quite a bit different than than other crops right you've got a lot of limitations at what level on just just challenges in general do you see any challenges being a part of the Cannabis industry yes we've seen series that they provide a wrong tissue wrong plants to their clients or the clients they just wanted to verify that they got the wrong material but the ner itself didn't even know that they were growing the grown material so that happens a lot why because they don't have they don't have a um protocol what technology to identify the material that they are growing that's why this as a inventory tool for those series or even this cure Labs is extremely useful because first of all you need to identify what you have at home yeah and be 200% sure that what you are claiming to have is what it what is what it is once you have that confirmation is when you can start selling growing multiplying to your clients so sometimes they don't know what they have at home yeah and this is a big challenge for them

actually for for pheno hunters and and breeders what what advice would you guys give to get them started in building their their book their library with fingerprint ID my thought again from my perspective I like to see breeders and Growers catalog their cultiv create an inventory that they know and they can you know provide evidence to say hey this is what I have have in my grow facility and there is a huge benefit on doing that is the fact that we have always come in the world of other crops we have gone back to the uh the genetic databases that are created by this to look for something novel that eventually gets Incorporated so having inventory getting a certification of that knowing what the different types and pools of GM plasm you have is the first and the foremost thing you want to do both protecting your GM plasm and also making sure that people are using the right material which is true to type right yeah uh from my perspective that's a big thing and then you can expand it to it hopefully there is a time when there won't be too many cultivos that people are growing based on you know the information that's been exchanged from the education point of view you start getting the I mean obviously there's something the patter lawyers can expand on you're getting planned varietal protection that you know you own it you designed it you developed it and nobody can reproduce it so you know you want that as well as another added layer of safety if you are a true breeder with this technology let me add that with this technology you can track back also if somebody has been using your variety as a as a par material or as a model whatever so you can actually Trace ER in the new proen in the new culas they have been using your material as a foundation of the breeding program so if they are supposed to pay you royalties or whatever business you have with them H you can find out that very easily yeah and also even the the fact that we talking about in the final product all that you need is a little d yeah it's neat what you guys are doing is really neat I think it's going to help out a lot of breeders and and guys that are feno hunting and want to build a library um Dr Fernandez you're you're writing a book right now that's correct I'm the Editor in Chief of the Cannabis you is going to be a very very interesting book and I'm super proud um all the co-authors and and all scientists that they are participating in this book is going to include very interesting topics from taxonomy to business to classical breeding molecular breeding genomics and all around around cannabis genome just cannabis exactly that's really neat yes so it's going to be a very completed uh book and and what I like is that there are many many scientists and also players in the industry participating in the book so it's not just written by me ER so that is going to be a very a very powerful book very renowned scientists worldly known figures breeders you know people who are in the industry we're trying to get everybody involved and I said cannabis is the fifth largest Club it needs attention it needs yeah I wanted to I wrote that down so cannabis is is the fifth largest crop right now had yep it's it's uh getting to that point yeah is that in revenue or square footage I mean it would probably be Revenue it probably is revenue yeah Revenue I mean square footage we are very localized I think so yeah we're pretty small I think as far as sare footage yeah yeah but in Revenue it's the fifth largest crop yeah and it's it's going to double to Triple right maybe oh we hope so yeah yeah that's really interesting do you have a what's the book you have a name for the book yet or cannabis genom it's called the Cannabis genome the can will be released by the end of the year uh the Francis and Taylor is the the publishing the publisher you're going to send me a copy right of course you sign it I expect to sign copy appreciate you guys uh thanks for making the trip out from Sacramento and making it down to uh to talk about what you guys are doing it's exciting and and uh I'm excited to share it thank you very much thanks for taking your time taking making your time for us to you know give you a little bit of what we have acquired in this area knowledge and it's been a absolute uh I mean opportunity for us to come here and share with you some of our stories appreciate it thank you thank you very much yeah

oh did you see your new round I did I saw my new round I'm pumped yeah Jay was excited I think we're back on that I I think it's seasonal I think you guys because

you had the same issue last year no we did some new Sops with Garden clean okay and um what do we I mean 90% pass on that last one it was 11 11 out of 99 that's 11 11 failed faed 11 samp 95 okay oh 95 I thought it was 99 thought it was 95 okay but either way 90% right yeah that's that's great we were we were really hurting there for a while yeah um so no pumped on that and yeah I called Jay immediately after the micro came out called me first yeah so I was excited yeah no it's great I mean um yeah it's a big deal it's a Make It or Break It Right yeah so um why don't why don't we just kick it off by you guys introducing yourself and giving us your background I'm part Parker I am currently the uh scientific director for NV can labs I'm Garber tuy I am Director of Business Development for envan labs and been in the Cannabis industry for seven years in Nevada right on Parker what's your what's your background so I actually have been working here at this lab for seven years now um and I pretty much started this job right out of college kind of started at the very bottom as a lab technician and then worked my way up what's your what's your current role at at in vcan Labs currently I'm the scientific director I just uh just got promoted actually like he just recently got promoted and welld deserved because Parker is one of the most intelligent individuals within the entire lab space because I used to own a magazine I've worked with all the labs he's been on since day one and he's seen more than most Labs because turnover within our industry in Nevada has been crazy mhm he is seven years with the lab so he's seen things that no one else has seen in the labs nice man no I appreciate you guys making the trip out from from uh Nevada I know it's a a jaunt to get out here that was a fun trip I never heard of Ontario yeah um I want to go into like why I think this this podcast is important to do when you're coming into cannabis State Testing uh it's a Make It or Break It For A lot of these businesses I mean you guys are the end all be all you know know uh sometimes I mean I know there's remediation you that that could happen or you know extraction but for a good quality flower and figuring out how these cultivators are going to pass these testing and Sops and um strategies on cleanliness and cleaning strategies I think it's a really big deal to talk about you know kind of what you guys do your machinery and you know kind of feedback or or advice that you have for the cultivators out there um that have to deal with these State regulated you know Cannabis Testing so much respect but can you just go over a quick overview of Envy can labs um what you guys do in Nevada and and go over some of the testing stuff and yeah yeah absolutely so uh we basically act as the quality control department for the entire industry of Nevada really um so obviously every grows their products produces their Edibles their distillates their shatters batters whatever and then eventually it comes through either our door or one of the other lab's doors and then that's before it makes it to dispensary shelves so we're testing for the thing that is the most important in my opinion is all the safety testing we test for microbials heavy metals pesticides um any residual solvents things like that things that could be dangerous to an individual who consumes a product um and then we also are testing for the potency and Turpin which is more like the flavor and the actually whether or not it gets you high uh that the consumers more maybe care about dayto day what's what's like the the regulation for the state of Nevada when it comes to like batch sizing and um pathogens that you're testing for so we have in Nevada a 5 lb lot so every 5 lb we take a 10 G sample of that for flour and we will run all of our entire Suite of tests on those 10 G for every 5 pounds so Harvest is what like well you're figuring that five PBS represents 7 to 10 plants right so every seven to 10 plants we are taking a sample and we are doing all of those tests on it and then if it passes then obviously you can sell it if those if it fails then those five pounds you either have to remediate extract or retest retest Nevada has the strictest when Nevada released uh regulations and Sops for testing a cannabis they wanted to be the leader in the entire us they we are significantly more strict which is not a bad thing it's a good thing but we're significantly stricter than a lot of other states um which is we want to make sure it's safe going out you know the microbials is a big big big part of uh the testing that is a like you said it's a make or break for the clients do you think that's really I mean practical okay I'm going to



be honest on both ends I've been a consumer for longer than I'd like to admit I'm in my late 40s uh was never tested for most of my life and I'm still okay do I understand people that have respiratory illnesses and that could have some issues with with that yeast and mold yes I absolutely get it but we are making that choice to consume it in the way we want to consume it uh do I believe that testing should happen yeah because the pesticides the heavy metals um aspir well all I completely understand the pesticides and heavy metals aspect you know but I I mean just on a basis how does the testing of you know mold yeast and aspila compared to a lot of the other the states so a lot of states have very similar regulations California actually has some of the least most lenient yeah most lenient um the least intensive micro testing of California only requires Semel ecoli and ASP Gillis testing whereas in Nevada we do those three plus total yeast and Mold Plus enactor and coliforms um and that's for flour we test total aerobic on Edibles as well well and then that's I wouldn't say common but there are other states that also have that same amount of different types of organisms that are being tested for most of microbial testing is more dangerous for the imuno compromis people for the medical Market than anything else but that being said it's not that it is not dangerous at all for a regular consumer the the safety testing a lot of the times is going to be to catch that one odd sample out that does actually have something very dangerous on it um and so it's kind of an abundance of caution more so than what is fully required for safety now when you're talking about cfu counts do you understand the difference between the cfu do you know the difference between the cfu counts compared to California so from what I could find California doesn't even use cfu counts in their regulatory testing the only according to the regulations that I was able to find from California they only test for a pass fail yes no is it there or not for those three for salmon coli and for um aspergillis asilis yeah and yeast and mold I didn't see yeast and mold oh so they don't even test even test forast really common yeah we have a lot of clients that come from California that think it's that easy to pass we're working actually with another larger Greenhouse that's in Las Vegas that they have Consultants that are in from California and they don't understand why they couldn't pass but because yeast and mold is prevalent within Nevada that they had a lot more difficulty getting that bell curve right to start passing yeah so they're they're in for a rude wakeup call when they when they go to test their cannabis in Nevada yeah what what about on the pesticide side so for pesticides I did pull I pulled the numbers and everything California has a tests for way more pesticides and has much I wouldn't say much has lower limits on across the board pretty much uh California tests for I believe 66 different pesticides something like 15 of them are completely banned if you find it at all it's just failed trashed you can't even do anything with it um Nevada we only test for 23 okay so and of those 23 there are five that we have on that list of just like if you see it it's over everything else has a limit of what is potentially safe to consume cuz to be completely honest some p Ides are not that dangerous in some of the quantities that you'll find them at but then obviously if you then concentrate that and turn it into a distillate it's going to be and you're concentrating the THC and the pesticides which is going to potentially cause issues for a consumer at the end now I'm I'm All About The pesticide testing you know I think it's really really important in um having good clean cabis that's pesticide free is vital you know for the for the community and I will say in the two years I've been been at the lab and you've been there for 6 seven have we seen many failures for pesticides most of the time pesticide failures are either somebody in the grow made a mistake where like somebody who was spraying sprayed the wrong room type thing where they sprayed way too late into the process or um people sometimes don't read the labels of like the bug bombs that they throw into their rooms and so they'll shock find that there was something in the bug bomb that they didn't know was there and then they'll fail for that and that's the only one I've seen in the two years like the bug bombs the B fenin if I'm correct yeah what do you see on a most common common failures what are you seeing be the for the I mean micro is by far the most common thing that fails uh it's yeast and mold and aspergillis would be the top two uh

it's probably neck and neck between those two East mold aspergillus cuz ASP jilllis is a type of mold obviously um but it is a oneandone so if it's if it's there it fails I mean is it isn't ASP jilllis on everything essentially generally speaking Yeah asper gillus is pretty ubiquitous um there's a lot of kind of back and forth on whether or not aspara testing should be required whether it's actually really dangerous the bottom line is that asilis is dangerous as an organism if it's allowed to like actually take root in a person um aspergillosis is a very very serious medical condition it's mostly going to be affecting people who are already immunocompromised we're probably breathing in aspar jilllis right now having this conversation across from each other I don't know if it's as necessary to test for aspergillus outside of the medical Market as it is for medical patients um that being said the most common thing that asparagus makes uh that is actually dangerous is the mot toxins that they produce um which we also test for separately so I don't know if aspergillus is something that should always be required what do you mean you test for microt toxins microt toxins are a specific type of it's a chemical that is basically a it's a poison really it's a byproduct of ASP regillus and other types of mold their life cycle basically as they eat certain things that's one of the things that they produce is mot toxins Myco so you test for the load on mot toxins we do that's one of that's part of our our pesticide testing because it's just a chemical it's not a living organism it's just a it's a separate chemical that shows up very similarly similarly to how pesticides show up so it's basically tested very similarly to how pesticides are tested for nice it's good to know it's interesting and we understand why CCB wants to test aspar jilllis but a majority of the industry including us and most Labs wouldn't mind removing ASP jillas from the test list CU when you look at something like garlic that's in the grocery stores it is covered from head to toe and I eat a lot of garlic being an Italian American so I eat tons of aspara every day so I understand why our CCB and state of Nevada does it but we're also for removing it as well yeah so completely removing it off the list yeah not even testing cfu count because I know cfu count what is like 10,000 cfu for E mold it's 10,000 okay I I personally I would be more comfortable with a a cfu count for aspergillus um but then to do that we would be well I mean we'd have to run it on on by the same way we do now it would just be a slightly different method so then instead of a like one andone as soon as you see it it's over there's you would have a a CF you count a Level under which it would be safe for consumers yeah I mean you'd think you know if you made Regular agriculture do that for food crops I mean I don't think there'd be much food in the on the shelves yeah there wouldn't you know so having cannabis uh cultivators do it I think it's just a little little much maybe it it's strict and but the state of Nevada did want to be that gold standard which was very important but we're learning as we go as well because it was a new industry seven years ago when we legalized MH you know so they're listening and I think they will make changes as we grow and they already have yeah they have made some changes yeah what what changes have they made um one of the one of the ones that immediately comes to mind is there were a couple pesticides that we were testing for that we no longer test for They removed them from the list because apparently they had never seen them even a single time in the I believe it was now it was like 3 4 years ago but in the 3 4 years leading up to that point they had never seen them before and they also that was something that they reduced they also added on we in Nevada we used to not test concentrates or um well concentrates for pesticides or metals they were basically using the limits on the flower side to say that if you concentrate this it's still going to be safe when you make it into a concentrate but but then they went back on that and changed it to where now we tested on everything which I think is a better practice anyway y are there any talks of more changes oh yeah um so we actually relatively recently end of like it was what like two months ago we got um September yeah yeah we had uh the state put out a list of new lab testing Rags that they basically asked all the labs to kind of give their thoughts on and try to move forward with um and the labs pretty much came together for the first time in the industry's history which was really nice and collectively we like talked about all of them and basically replied

to the state and said like these are the ones that we think are good these are the ones that we think are not good um and we're still right now waiting to hear back on from that but they're constantly and that's just the most recent thing that has to do with Labs the regulations are changing I mean they just put out a new set of RS for like a couple minor changes especially with the consumption lounges coming out like last week two weeks ago yeah so and it it was comforting though that the CCB is trying to work with the labs on changing those regulations and they're working hand in hand versus just creating the regulations like how it started and saying figured out yeah 100% I mean it's um it's not practical if you're running the business yeah you know it's it's putting guys out of business well being sales with it there's three things that I lose to price potency or micro those are the only three things that clients truly truly want to see end results on yeah you know and right now our potency is we're the most accurate potency I believe within our state but Micro is hit and miss it's scary sometimes it's just the nature of micro because it could cost a client millions of dollars in one Harvest yeah yeah with potency I mean what do you what what are you hearing out there I mean I heard guys kind of doing some some shady stuff you know he's sprinkling ke on Flow and how do you guys prevent that from happening well I will tell you is sales I have probably the most the staff with the most Integrity which sometimes I'm not going to say is easy for me on the S side we we can't say what labs have done we've heard rumors and I wouldn't call anyone specifically out but yeah we've heard that they sprinkle Keith before they test they turn the bag upside down before we test I have never physically seen any of it developing better methods which he could speak more to of getting better potency or accurate potency I don't want to say better but more accurate potency but what we've heard other people doing we've never seen it to be honest with you what do you what what are some methods that that you know of to get higher potency levels so honestly the thing is is that it's it's if you're just dishonest it's really easy to fudge the numbers um it's really easy to for example our basic basic extraction process is we weigh some of the sample out into a vial and then we'll add some solvent to it and then dilute it from there and then it goes on the instrument if at any one of those steps you put in more so if I'm weighing out for example 500 milligram of something if I instead weigh out 550 and then I just write down 500 there's no way for anybody to know is the reality which it's just dishonesty and like he said I don't think anybody really is doing that on purpose but that is a really really easy way for somebody to just fudge numbers results that way but that would be on the lab side like the lab would have to be dishonest but on the cultivator side what are you know what are some practices that you've you've heard of that guys are kind of using to trick the test really it's just a couple that he already mentioned um the like the big one that I have heard about all the time is just I mean you keep them in those big garbage bags basically the burping bags and if you just like flip the whole thing over and then sample from the bottom of it then everything all the Kei that's gathered up on the bottom is now on the top and that's where samples get pulled from I mean I don't think that one's that terrible I mean if you want to take it's not that I mean if you're going in there sprinkling ke on your [Â \_\_Â ] that that's a bit of a problem right but if you flip the bag upside down put it in another bag I don't know I mean realistically if we don't see anything happen it's not really like anything that happens before we get there is outside of our purview yeah so as long as it's not causing any failures from anything else it's it is what it is see the problem is the consumer is dictating the THC levels the Nevada consumer wants 25% Delta 9 THC at the cheapest rate possible how what is it 20 25 2 minimum yeah is what they're looking for yeah and if you go back seven years ago the highest on record was 27.4 and you'll seeing these 32s these 35s these 40s but everybody wants that 3540 but if they understand if they're actually really getting I mean that's a that's a oops little too much ke on that one yeah we've never seen a 40 I don't think no definitely not a 40 um but if people know how to read the labels I will say I learned more working for the lab the last two years I could get a 18% Delta 9 THC with a great tur profile and it's getting me higher than that 32% 100% And and

it's I think it's just comes down to education to the market are you kind of seeing anything start to change on on that in the state of Nevada or not really unfortunately THC THC it is really still THC THC THC because I think a big portion of that is because we get good amount of tourist we get so many tourists that people come in from places that they really they don't have any idea they're just coming here and they're like oh weed it's legal here let's go get some and then they're like oh give me the the highest you got and then the bun tenders kind of lean that way and everything leans that way and all of a sudden that's what's in demand the butt tenders do get educations from The Growers from the production they talk about it but when that you take one dispensary that's like completely torist driven they don't have time to educate we as a lab were putting a plan together to go to dispensaries and educate people on turps and Cat Canan aboid and everything like that it's just getting some of the scientists out in the field at the expens to educate it's been difficult because we're pretty busy you going back to failures and and failures in testing and and passing with with yeast mold and ASP jillis what are you seeing on indoor facilities compared to like Greenhouse compared to like outdoor like are you seeing a higher fa rate come from indoors versus Greenhouse or so it's I would I would say it's pretty even it's really just different problems so the outdoor and Greenhouse grows we also don't have a lot of those I will say that as a c the last about we've had three or four green houses we test versus everybody else probably about four or five dozen indoors yeah cuz outdoor and Greenhouse are not common in in Las Vegas or Nevada in general but it's 120Â° right exactly so it's a terrible place to put a greenhouse with that caveat the the past failure rates are are relatively they're very similar to be honest um the green houses and outdoor grows have the benefit of being of having the sun which is an anti a natural antimicrobial agent UV light kills microbes that's like you know that when you think about it but if you don't connect that with the sun is putting off I didn't know that um that's pretty interesting so indoor lights don't kill micro no really not necessarily um so then but the sun does the sun does because the sun is putting off UV I mean that's why you have to put on sunscreen right that's like the UV light that kills bacteria mold anything else as well but it's only on the surface okay so anything that's inside is obviously not being Rod or something like that would cause a mic microbial right but then on the on the flip side of that the indoor grows you end up with you create these little microclimates um I mean I know you've walked through several of them and I'm sure anybody listening probably has their own idea but you've got fans everywhere you've got to make sure that the canopy is clean you've got to make sure you're getting light penetration all of that fun stuff anywhere that you're not getting all of those things you have microclimates that can potentially just cause yeast and mold growth like wildfire if you miss even just like one little corner of your room then it takes root there and it has the potential to spread from there much more easily once it starts so you're not seeing a big difference between I mean I know you only have three Greenhouse Growers that's including my my location and I will say your past failure rate is honestly one of the best green houses we have yeah oh really minus the minus my last yeah I mean we had a we had a rough three months see I I know what he's saying that it's similar but when you're similar in comparing client to client we have a large client that gives us 100 samples that's indoor and a large client that's 100 samples that gives us greenhouse and they fail 80% of it so when it's Apples to Apples yeah but when you look at two or three of our green out of The four greenhouse clients that we've had two of them probably had 80 90% failure rate wow consistently through the year 90% yeah why why do you think that is I mean if if the Sun is is uh helping kill I'll tell you my opinion and I'm not the scientist I'm the sales guy but it's cleanliness it's most of them they're understaffed with the market being down right now everybody's under staff they don't have enough people to keep up on their day-to-day cleaning and that becomes an issue it's carrying I learned cardboard carries tons of aspila in it putting cardboard so if you're in your testing room and you have no storage and there's all cardboard in that testing room and our sample dechs are picking it up there's a

Chance aspergillus is going to jump on it so yeah that's why I kind of say that they're they're very similar because I don't necessarily think that it is the grow method that is causing the issues I do think it's more on the operator on the operator on the cleanliness side because like he said we have several clients that are incredibly clean Greenhouse Growers and then we have some that are very dirty Greenhouse Growers and then we have some very clean indoor grows and then some very dirty indoor grows I do think it's much more on the actual processes being followed by the followed by the individuals inside the facilities and I don't think it's the operator's faults per se it's the understaff it's just not and the attention to detail Sops maybe products that they're using you know it it you don't need more staff necessarily but you need the right I don't know Sops to make sure you well like some of these green houses were 100% passing rate two years ago yeah and then they get under staffed yep okay or they have like the other thing is that it's sometimes really easy for like the people above for like a master grower to come in and say like these are the policies and proced procedures we need to follow and then getting that level of care and buy in from the lower employees is is sometimes where the the issue arises it's not that they don't know what they're doing it's just that it's really easy to sit there and be like oh I don't need to change my gloves because I I just touched this one thing it's probably fine when it's not yeah I think a big reason why we are sitting at this table right now having a conversation is because we kind of built a relationship over the challenges that I had right you know I have a almost 90,000 square foot facility and that we op operate you know mix light greenhouse I'm a big mix light greenhouse guy HPS and you guys came out I didn't know you offered this service which is really cool you guys came out to my facility and you did a bunch of tests I wasn't there but can you go over Parker did you go yeah okay so yeah I just hold the clipboard he does all the work so what did what what did you do when you came out to my facility in Nevada so really it we did what we call an environmental test so we walk around we offer the service to walk around and actually kind of go through the facility go through the process and basically take swabs and water samples of various things throughout the facility with a special eye of what are things like the things that I'm looking for are what are things that the people who are working here every day may not notice because it's just kind of faded into the background so there's like several examples of things like that like one of the easy ones is we had a client who who started failing everything coming out of one of their one of their indoor flower rooms it turned out that they had they had just open air from Outdoors coming straight in there was no filter on it nothing because the person who was supposed to replace it just forgot to and so it's the little things like that where it's like hey where does that Vent go oops where why is that not covered or like why is there a puddle of water here what is this dripping from the ceiling whatever things like that so I kind of follow the process through I try to go from the very beginning from propagations from cloning from mothers all the way down through um because if there's a contamination in the facility somewhere it could start as early as that I wouldn't say it's common could start from the Clone it could or mother room yeah that's I remember it he he's being humble he plays Sherlock Holmes when he does it he starts from the beginning to the end of the entire process from the mom the Clone straight through US testing but one of the things that we noticed were the trays that you had that were pre-oiled already had yeast mold traces the ihort trace yeah you you can be fully transparent on what what you found at my facility you know I think I think you know it's important to go over why don't you start from you know start to finish what did you swab like how do you do it what did you find um where could we use improvements what were we doing well and what what were what were we not doing well I think just go for it yeah so um I mean I followed the process all the way through um and so like the first thing we start in is like the propagation where the Clones start cuz I also never want to go backwards um because if there's a problem if you don't have a problem early and there is a problem later you don't want to carry it back so we follow through the actual direction that we're going right in propagation you the they the swabs that

we use they're they come in just this buffer uh we pretty much just swipe them across like a couple times whatever we're swabbing um and then we keep the buffer and then we end up testing it later we played it and run asilis on it our for our normal testing but the the stting propagation the trays were really the big one the pre the pre-oiled trays I didn't really expect to find anything in those that was just kind of a a thing where any outside things that you purchase pre-made prepackaged is always a good place to check because we have seen soils have been a big thing before we had one other person who had a cocoa that was riddled with microbes that they had to completely switch manufacturers but from there veg and what what did you find on my trays out there it was I believe it was a lot of yeast and mold in the soil in the soil so the actual cubes the actual cubes yeah and that that's one thing that's interesting because um we were we were passing pretty much 98% yeah right remember actually almost 100% like we were like we were we were never failing yeah but something that we did change is for leaning down operation and saving money we went from the gro in one and a half inch cubes to the ihort prefab um blocks trays right and so you're saying that you found a substantial amount of yeast and mold right on that and now can that can that from those trays can it just start growing from there and and really become a bigger bigger issue from such a small cube you would think right you think that hey this little small cube is really not going to cause me any problem right so two two answers the answer that the short answer is yes um the two kind of edges of that are number one it's not necessarily the actual Cube itself it's that if you have a person who touches it maybe they put a clone into that one Cube and then all of a sudden it's on this hand and then they go touch something else well now it's wherever they touch the second time and then somebody else comes over and touches that same thing that the person touched and then it carries it further away it's kind of following that chain that can really that's why the the whole facility cleanliness is so important is that it's not necessarily the cubes themselves it is that that's where it starts and then from there it gets carried everywhere else and it starts growing right and then the other side of that is that the cube can if you're keeping that same Cube all the way through the process because a lot of times you keep you have that Cube the Clones root and then you basically transfer that into some other media like a rock wall and then from there you transfer that into the big flower plant pots whatever that is however you're making those transitions if that especially if that's same cube is sticking around through the entire process then yes you will have the same you will have that same little tiny thing of microbes as as every time you're transferring it to a bigger location with more food for it to eat which that's all your nutrients are as food for them too so as it transfers through you get more and more growth and bacteria and mold grows exponentially so it can become a very big problem now I know we were uh working on cuz I'd really like to keep using those those ihor trays and I know we're talking about doing some testing with using hyper chloris acid like cleanse our cleanse product at Athena has Jay started those those testing with you yet not that I know of no uh we just he ran some R&D on other stuff but not that yet okay I guess that's something that we wanted want to test see what how many mls of cleans you know I guess we can go over that what what kind of products would kill yeast and mold would hyper do you are you familiar with Hyper chloris acid do you know yeah I mean any really any type of any type of uh M product like that is going yeah some sort of oxidizer any sort of like ISO is going to work too um bleach will work it's really like your normal household cleaner uh hydrogen peroxide so an oxidizer really anything that can get inside the biggest key with your your cleaners is something that they didn't know at your facility and that I've just had the conversation at the other facility we went to yesterday don't use 99% ISO don't use like fully concentrated bleach make sure that you are diluting them you want to use like 70% ISO would be is the best you want to use uh like 10 to 15% bleach but why is that um so microbes will if they actually detect a hostile environment which is what effectively you're making for them they will lock up and not let anything inside them so if you put 99% ISO on them it won't necessarily kill the microbes that are present it won't

allow it to penetrate but if you give it water basically if you dilute the 99% ISO with water down to 70% same thing with bleach from whatever the concentrated bleach is down to like 10 15% then you basically trick them into drinking the poison and then it gets inside the cell and then it will kill it that's really interesting I had no idea yeah exactly a lot of people really don't know that um that's one of the things that I've been making sure to mention at everywhere that I go is because that's a big thing they're like oh we're using 99% it's got to be good enough um and it's worse actually than using 70% wow and I will tell you our former CSO uh great great great scientist swore by your cleanse that's how I learned about Athena and your products Nikki yeah Nikki she swore by your cleanse like all of our clients she would always recommend it right up to harvest yeah I remember when I called you and uh I thought I thought you were kind of pulling my chain or something she thought you were like Walt Disney if you're were a Mickey Mouse fan yeah she was a big fan no that was cool that was super cool so let's keep going so we test the they test the Clone trays find some yeast and mold that's a concern right you know I think moving forward let's let's work on a uh let's do some cleanse tests maybe we'll try it at 10 20 MLS per gallon we'll dunk them and then maybe will send in send in a tray to you do you want the whole tray or just a cube uh probably a couple cubes okay um cuz the other thing is that this sometimes what'll happen is that for other uses that those cubes are for they don't care as much about microbes so they don't it's not necessarily that they'll always be bad but maybe the particular palette that you got this time was not as clean as other ones I've seen that happen before where it was just like a single pallet of whatever new material it was was bad okay but if it's as easy as just adding a like a quick cleans yeah then that would be okay I'll I'll uh make sure that Jay gets that over to you and maybe we'll do like 10 MLS 20 MLS and 30 MLS I like hyper chloris acid because it's not harsh on the plant right if you like use like a parasitic acid like a zero tall or something it's just a little harsher on the plant so I'd really like to see if we can get it done with a hyper chlorus yeah for sure okay so let let's move on where where are we going next where did you test next so after that was veg straight into veg which I'm trying to remember I think was the first Greenhouse area so in there we grabbed I also like to take water samples throughout because one really common thing that happens is you get you get a water like a bofilm in your water supply somewhere it's not necessarily like at your Ro tank but if it is then that's where everything is coming from so we got a test from there and that was good we got a test from the water coming out of the emitters for the feeding and that I believe had some growth in it as well which is pretty common especially you had the cubes that you were using if they were I mean if the emitters are sitting there right next to those cubes then it could very easily have transferred from there but cleaning the um the emitters when you use them the feeding lines whatever uh I honestly I would say not even cleaning them replacing them would be the best option but barring that uh definitely making sure that you clean them thoroughly between each usage we also got your water wall the wet wall yeah was going to ask you we all thought that was going to fail and it didn't it didn't it didn't fail it did not which surprised the heck out of me you know what we do is we use four MLS of reset so 4 MLS of uh reset which is parasitic acid we dump uh 4 MLS per gallon in our in our res tanks uh probably about once a week so you you found no microbes no aspergillis wall dude that's interesting we all thought it was going to pop I absolutely thought it was going to cuz I've seen water walls like that and I've swabbed them and they've come back hor um and it really it was clean that one we're we're pretty uh sticklers on it and we got a lot of reset so um using it in the wet wall You Know It uh that air is blowing right through your garden exactly and we we just we keep it super clean so that's interesting okay good to know your drippers I know you were talking with the drippers but it was right over the leak as well you guys had a minor leak in your roof you know I think it was condensation oh was whatever it was cuz that was one of of the big things there was just there was a puddle on the floor and then you look up and there was like it was dripping from from the ceiling of the where the

like the greenhouse meets um and that did have Aspirus and ye mold in it okay which makes perfect sense to me that's one of those things that like anytime if you have a a an enclosed environment if you're not fully growing Outdoors anytime you have something from outside coming in unhindered or through a channel that you're not that it's not supposed to you're almost certainly going to be seeing failures because of that so that did pop we made it all the way down I mean we went through veg I don't believe there was anything crazy in veg or in the flower rooms um what did you find in my in the drip emitters you found uh houon mold H mold yeah did you find anything in the cocoa was the Coco okay did you test it we did I don't think there was anything in the cocoa that's great the laptop yeah I was going to say I don't have the uh I don't I could get the results I could pull up myp laptop while you guys talk yeah while we talk yeah throw it up um cuz then I could tell you for sure what everything what everything was we had I don't I we did test the Coco I remember doing it I don't remember specifically finding anything I'm trying to remember exactly what the excuse me what the problem points of of everything were I remember the water the water drip from the ceiling was a big deal your outside your outsides didn't fail cuz we were doing the outside water samples as well no those did oh those did yeah those were the two there were those were the last things we did there were the two like INR water tanks um and when he took us out there he was like I know these are going to fail um and then they both did one of them actually didn't have aspar jillis though which I thought was interesting the other one did mhm none of the none of the area around your construction really had anything which surprised me as well um because that's also usually a major source of of problems but there wasn't really anything around the door or the walkway there or like just on the other side it didn't there wasn't really anything too crazy did you did you test my drains yes the drains pretty much consistently have all sorts of growth which is not necessarily an indicator of failing samples because what you get in your drains is the culmination of everything coming through your facility ends up in those drains yeah so if it's in the drains that does not necessarily mean that it would have come from the plants it could have come from I mean the floor that you're standing on if somebody kicked it into there and then it just grows because there's now a steady stream of nutrient water coming at it m so what what did you have you seen drains kind of be a problem with failures in indoor and Greenhouse facilities not really okay um because like I said it's kind of it's kind of the culmination of everything um and it's not just the culmination of the stuff that you're actively trying to keep clean it's also like I said when you just walk over it and you kicking stuff into it any of that could also be failing uh but the actual drains themselves I would say that it's a point of Interest I wouldn't say it's a point of concern okay um because it's possible to have perfectly clean drains obviously but it's not it's not necessarily going to ca like it's not going to be an indicator that you are failing it's more we could be doing a little bit better what' you find in the flower room I don't remember okay we'll be there in a second yeah but I will say I love your facility I will take a ride out with the sample teex uh cuz it's about a two and a half hour ride yeah it's a two yeah love the little town and everything but you guys are for an outdoor Greenhouse or Greenhouse you guys are really clean even with having difficulty getting staff because you're so far away from the major cities you guys are spotless and I love your Growers and I love your team thanks n appreciate that yeah and your flowers fire thanks absolutely fire I think my favorites are Florida Sunrise oh that's the jungle boy cross is it yeah I love that strain nice no that's awesome you know what was interesting is um what you guys found in the in the post production yeah that that was surprising and eye opening I I you know it's h it was a big deal cuz you could you know you did all the work you've you've grown it your grow room's clean and then you get into post production and that's where you pick up your yeast mold in aspil that's really common actually the uh the post- production is almost certainly where like the vast majority of failures come from in my experience because it's kind of a scenario of you can be super clean through your entire facility but if you mess up one time then everything before post- production you



just have one failing samp but then as soon as you make it to post production you make it to your trim room your dry room things like that where you're not necessarily keeping everything as separated as you otherwise would all it takes is that one failure if you run that at the beginning of the day and then it blows out dust spreads all over spreads all over the entire room and then everything from that entire day could potentially fail so that's why I definitely pay extra attention to like trim rooms and uh really anywhere that we will come into contact with for testing um so like the rooms that we do testing in as well a lot of times they're not necessarily as clean as they could be or as they're keeping the rest of the facility CU they're like oh all we're doing in there is testing but if everything was clean up until that point and then it falls on it right before we grab it to test it then it's still there like we can't tell when it got there so I'll tell you a fun story while he pulls that up though we actually had a client that was failing for yeast mold and we did their entire facility we were testing we swabbed everything um we even did the laundry machine and we realized one of their employees was bringing the laundry home yeah to the washer dryer she was getting paid extra to be able to wash it at home was cleaning it but nobody washed the laundry bag so every time they put all the clean clothes back in the laundry bag all the lab coats and everything were getting covered in yeast and mold um it was just so such a unique situation that no one's thinking of the laundry bag when everything else is being done correctly you know I thought that was fascinating it is and it's uh it's eye opening yeah you know something just as minor as that yeah you really got to look at everything yeah it's uh and but the microbials the yeast mold the aspergillis it's we live or die by it because clients are like oh if I go to another lab we'll pass it doesn't work that way but it is also luck of the grow because like he said for 5B we're taking 10 G mhm so so two of those plans could be dirty seven of the other plant could be clean it's that 10 G that we're grabbing is the luck of the draw yeah yeah it's definitely one of those things that like people will say to us a lot of the time that oh when I retested those samples it passed at the other lab and I can tell them that happens to us too like if somebody tests at another lab and then we get the retest from them most of the time like 95% of the time we pass those samples too so it's really it is just kind of the nature of micro because it's not like a homogeneous mixture that you're talking about you're talking about individual organisms that you're looking for and if so if we grab the bad Bud where there's I mean we're grabbing 10 gr like he said so out of 5 lbs if we grab the 10 G that are dirty and there's 10 G on the other side of the bag that we're clean and the other lab grabs those then you're not going to fail yeah um so it's an imperfect system but there's also not really a better way to do it that is cost effective because if you test per plant which would be really the only accurate way to do it then all of a sudden you're talking about like 50 samples per wouldn't be Harvest yeah it wouldn't work um so I do have your your results here it's a little wonky because I don't understand his laptop but a back you're PC guy I am um yeah so the emitters like I said did have growth um they failed actually for bacteria as well because that most likely that was coming from the the trays the soil trays so so you're thinking that that's that initially started with our clone cubes yeah that would be my assumption is because I believe he said that you guys are are you replacing your emitters or were you no we clean them you clean them yeah um well we just we we we dip them in a uh you know Big Tub of uh parasitic acid right um cuz he mentioned that the ones I believe that I had just gotten were no they did come out of a plant it was later that I grabbed some that were not tied into anything um and then you had let's see these entire chunk here had yeast and mold and bacteria so that's 18 19 the filters so yeah your filters and then your so like the filters that were under your water wall where the water was actually coming out of you did have some yeast and mold in there and then your drains all had lots of growth but like we just talked about what about um you scissors any equipment tables you did do some laptop and stuff and some some of the employees gloves I believe as well I apologize I should have printed out no we we didn't plan for this it's good to go over it though it's really important because

just like you said the uh the laundry bag right the the the laundry bag just cost you 100 Grand yeah it's exactly it's like it's always the things and that's what I what I try to do when I go into these facilities is like yeah there's some stuff that I'm always looking for like the trim machine is always a hot bed um but but it's also the things that you're not thinking of like the laundry bag where it's like how could it have been the laundry bag that this person was taking back and forth that's now causing all these issues yeah like we were recently at a client's uh cultivation and the same tray that you have to sign in on is the same tray that they put all the Cannabis on to move it out for uh trimming all that I'm like you're he's like oh we clean it down I'm like but how well are you cleaning it before you move it into a room with yeah like are you sure it's perfect CU if it's not you're going to be causing issues um so the rest of your like your table and the racks and everything were pretty clean as far as swabs go I do remember mentioning there was the whole room that had a bunch of cardboard boxes in it that wasn't like a big um it wasn't a place that people go regularly but it was definitely like a make sure to so keep card separ away from any flower yeah cardboard is just bad news yeah cardboard is bad news um because I mean whatever so cardboard obviously isn't like spawning aspergillis but if there if it ever came into contact with aspergillis it's still there um so if you then take whatever cardboard which shipped from who knows where into your facility then whatever was on it is now in your facility and it is definitely still there living thriving but then there was that room and then the uh for a while you guys I believe had been keeping your failed test slots in the same room that we were doing testing in yeah um so that was one of those thing I actually I did grab swabs of that but I didn't find anything on the swab but that is that's still a red flag so if you if you're doing if you have fail dots ideally you should have two storage rooms one for clean flour and then one for failed flow right and and keep them separated yeah separate the failed Lots like basically as soon as possible because if you know that they're a problem well while it's testing you should keep it separate anyway until you have in the past fail keep it away from everything else while it's in the testing process oh so have a quarantine for New Harvest right so quarantine from New Harvest then once it's approved then have two other rooms for pass and fail yeah that would be ideal if if you can't do that CU not everybody has the space to have like three rooms just for this that's I mean three rooms for storage right um definitely at least keep some sort of barrier between them don't keep them just like on the rack next to each other because then it's like I said anytime somebody touches something it's like with cubes anytime something gets touched wherever that person touches the second time now it's now it's wherever that was and then if somebody else comes over touches there now it's in the third place um and that's kind of just how it propagates throughout what do you have any you know standard operating procedures or guidance that that you guys offer at nvan for cultivators to use I mean like a sheet where it goes over so originally Parker's just getting into his role of scientific director or former Chief scientific officer uh Nikki she did work on people give them their ipms or Sops everything that they were doing and she would create new ipms Sops and everything for the client and help develop it that am I explaining that right how she yeah I mean it was pretty much just what is your IPM program and then do you have one at all first of all um and then beyond that it's here's the places that we think that you could probably step this up a little bit do a little bit better um so as of right now we don't have anything like that not currently but we work we have not we have advice I'll put it that way we have do you have like at least a few page where it goes over hey if you're not looking here you should yeah it that would be cool like cuz it really like we're talking about this and and you can give like hey if you're go back to the laundry bag if you're washing clothes and you have a laundry bag you need to clean the laundry bag with the clothes or whatever and that's where we're at more at the advice like we'll see clients that have their broom their dust pan and everything in the room with the flower no don't do that like you're just carrying all the dirt back in yeah we'll tell people to create a separate storage

room for those supplies we will help you know but based on their square footage there's only so much of advice we could give where people could move around things um we do a lot more program on the production side we have reversed engineered um I'll let you talk yeah I mean we we help people with uh like formulation and stuff like that when their Edibles are not working the way that they should be not working but when they're not coming out at the levels that they're expecting them or um we get some questions about we had somebody who was going to try and start making like a 4 to one distillate mixture and they wanted to make sure that they were doing their math right um so that's the type of stuff that we can also help with okay advice over I mean if you if you could just do a general overview of advice for for cultivators on uh passing testing what what advice would you give I mean the biggest couple things are uh like the biggest onstop simple thing to do is get HEPA filters um install HEPA filters throughout your entire facility that's like the simplest thing it's a little costly but you will most likely immediately see an improvement in failure rates due to that just right off the bat and that's like a fire and forget like just install them and then you replace them every whatever 3 6 months HEPA filters in what rooms in your in your post production I would put them as much pretty much anywhere the flower is or the product is coming into contact with I would have HEPA filters in those rooms okay um and like I said Dry Room Post production all the way through not uh cultivation if you can I still would okay um it is really like that's a simp simple expensive way to resolve a lot of issues beyond that it is really just keeping up with cleanliness it is really getting every person to follow through with the entire IPM program that you have with the entire cleanliness procedures that you have if somebody ever has to ask the question of should they change their gloves the answer is always yes also I've seen people working in facilities that don't even use gloves at all so it's it's like I said with the bringing things from from outside inside if people are coming out from their car they just arrived to work for the day and they're walking in wearing street clothes and not changing into something else that's a problem if they're not wearing like wearing booties and gloves and everything like that is something that you want to make sure that you're enforcing and then following that through all the way through to the end of the entire process because it really could be anywhere could be the source of where your failures are coming from and then obviously it all kind of culminates in the trim room and then it exacerbates it there and fires across everything but most likely the fail failures are not coming from the trim room they're coming from somewhere earlier in the process yeah and we we will not walk into anyone's cultivation without PP on yeah like we wear the full-fledged bodysuits the booties the masks and we advise your clients to do that as well I know it's a pain but you want to be as clean as possible especially when you're touching the plant every day I think there's a balance to it you know that's that's kind of the thing is like it's there's what perfect practices would be and then there's what's feasible and realistic for a normal like cultivator to actually Implement um and so everything that I'm saying is like oh yeah you should wear a full bunny suit glove up mask up like get your freaking goggles on just like don't even have any sort of contact with the outside world um but that's definitely not something that most people are going to implement because it's it's not feasible it's not realistic yeah if all else fails I believe in remediation I know that could be somewhat controversial but if all that fails and you need to get better results I'm on the controversial side I know you know CU I mean I I guess we could go into it like what like what what a remediation you know what what does a cultivator have options when it comes to fail Houston mold and aspergillus so in Nevada there's right off that you can go you can request a retest so what that is is they will petition the state and basically say hey effectively what they're saying is I think the lab made a mistake then a different the state will assign a different lab and that other lab will come sample the same sample nothing's changed about it and they will run the test again and then the new test results will be used and that's when I was mentioning earlier where most of the ones that we get like that we also end up passing so that's kind of just a luck of

the draw thing beyond that remediation is an option um I believe there are a number of different methods of remediation there's like you can UV it you can ozone it you can x-ray it you can radsorce it there's several different options um and then once you remediate it you can send it back to the same lab for testing and hope it passes that time yeah our state if you do a retest they pick the lab that you utilize if you remediate you could pick the lab you utilize yeah okay what's what's the rad Source machine so it's effectively a machine that works on a type of radiation um it is most commonly used in the medical field actually they use it for like operating rooms and things like that so it does work as a sterilizer we're actually I'm a big believer in it personally because we've done we've done a pretty good amount of tests on like before and after and we have not found there to be any difference in the before and after before and after what like uh us THC tps potency like what about what you can't test for I mean I mean you're putting cannab you're putting your flower in this big radiation machine you know I'm just not a fan of it so I understand the the basically what I think is that the fear a lot of it comes from basically the word radiation it's like it's a very big like negative connotation word the ways that I kind of sidestep that a little bit is really just to say that that's also what most of our food on the grocery store shelves is having happened to it as well the food goes in some kind of machine like that and a trade machine almost everything we're eating goes through similar process pretty much across the board and so a lot of um I know one of the biggest reasons that people don't like machines like that will twofold one it's that it allows it people think that it allows cultivators to be just grow dirty weed and get away with it and to that I would say I don't know know very many cultivators who are trying to grow dirty weed it's really what they should be looking at the remediation format as is really a additional step in order to continue to verify that there are still no microbes in it because that's basically what food is when you're talking about all of the food that's in the grocery store they have to have a clean process all the way through making of the food it's not like they're just spitting on it when they're making it and then at the end of all those processes it still goes through that radiation step to make sure that they didn't miss anything that nothing made it all the way through and that's the way that I I think that it is the most beneficial is to kind of like solidify the shelf life and the longevity of the product and it's controversial within Vegas right now we have clients that believe in it fully and believes everything should be remediated before it even hits shells that it should just be part of the Sops and then we have clients that are purists and I absolutely understand that me on the sales side I don't want to tell people they have to fail so I like the remediation part yeah no I I you know I disagree I just I I I can't put my my weed in a machine and and let it get blasted by radiation I maybe it's just my and we respect that maybe it's my lack of Education or just my background or whatever but it's just you know I'd rather work harder on dipping my clone cubes in some hyper chlorous acid so I don't get molding yeast on my you know work work on it before you have to get there right you know I think really focus in and hone in on good cultivation practices good post-production practices right with your trim room I mean that's that's really eye opening and just do things so you don't have to use that machine you know but TW eaches own I know you like that thing but I like it for customer service I don't get as many angry calls from the clients that are using the remediate like and I will tell you there's a the radsorce is what I've seen work I've seen ozone machines that do not work at all dude ozone is garbage bro I mean you want to grow some boofy you know tpless yeah it destroys the shitty weed I mean just use an ozone machine it's going to pull all the smell everything out of it it's like why even why even how are you going to even like sell that [Â \_\_Â ] yeah like oh no we look we uh met right when I started we met with a group that ozoned um and I wanted to work with them because the person was they were selling ozone machines for remediation yeah I don't want to mention their name but uh yeah but I kind of wanted to work with the girl cuz she was cute uh but then I learned about ozone machines and then I'm like oh I can't push this on my clients this doesn't work it would ruin my reputation yeah no

for sure all right moving into like tpin and THC do you know a lot about tpin uh amount yeah how many tpin are you guys testing for right now so right now we're testing for 20 Nevada requires 10 for us to test for only on flour um the other types of samples are optional most people still opt to get them on like distillates because you have flavored distillates shatters things like that but flow is the only place that it is required to test for Turin so we test for 20 okay so you test for more than than what's regulated yeah is that including the that is not including we're trying to add four more um to the list we just got four to six more four to six more we just got new uh instruments and so we're basically using this time to kind of add to our list because we've had a couple requests for some specific tpin because they're they were finding them at a different lab and they're really interested to see if they can kind of maximize these individual specific tpin so we're going to add them to our list it becomes a sales point for that client the cultivation that has the Farine or the eucalyptol because people are still buying high THC low price but there are connoisseurs out there that are looking to expand their portfolio of flour knowing the different strains so farcing was something that we learned about it has similar properties is mercing I believe sort of yeah do you know you know anything about that um I know that I know where it kind of tests at sort of um I don't know anything about the effects I know that the effects of tpin on any cannabis are all very anecdotal it's all based on what individuals have come forward in said because there's just no research about it yet yeah which is what I'm really excited for in the future but that's kind of a lack of scientific knowledge as of right now yeah I've been uh hunting for the right guy to do a a podcast on turpins I think you know there's a guy uh big book he wrote The Big Book of turps it's a interesting guy well we'll see uh if we could do something with him maybe in Span or something nice be cool we're adding which is interesting eucalyptol is a turp and everybody knows eucalyptus so I'm excited to add that because the common the non-common consumer is going to know what eucalyptol is is there a certain certain tping that you get a lot of demand for in the market that you that you know of I wouldn't say demand it's really just so there's I mean there's the like five or six Super common ones like caropine terpinolene IM mercine line are probably like the big four most common ones but then you also have like Pine and LOL things like that that are the really big ones and those are the ones that sometimes we'll get our clients basically saying that they know that this particular strain is really high in one or the other of these what I'm more interested in is that the smaller tpin and also the smaller cannabinoids that we're not necessarily testing for right now we have no idea what the effects of those are and when you start talking about like those tpin that I just mentioned are going to be in you know like the 5 to 10 milligrams per gram range um I'm talking about the ones that are going to be much lower than that in like the much more like PPM range parts per million um because obviously most of the medicine that we're working with and things like that like Pharmaceuticals you work with really really small amounts of actual chemicals and so I'm very curious to see what cuz if you end up having like just 10 migs of one of these other turbines can avoids what is that actually going to do to you and in the early stages though when we went recreational there was a demand for mering especially from the senior demographic yeah so there was that demand where you saw mostly Indica strains being grown by growers in the first few years of uh Nevada going legal and you kind of said that it's kind of come off now or yeah it's more varied it's a right when we went from medical direct there was a giant senior market I believe 65 % of our consumers at the time were 55 plus oh okay you know so and tourist tourism wasn't kicking in we were actually very sustainable on local buys at the time which was really encouraging but once tourism kind of kicked off in Planet 13 and the ones that are catering it kind of skews the numbers in the sense that the bigger picture is a lot more varied okay what what's I know they had some new changes with an lounges in Nevada what what is that about and are they active now uh they should be opening up any week now Planet 13 is opening up their Lounge on property it's supposed to be amazing and then Thrive is opening theirs which is

right now next to El Dorado Cantina behind Resorts World they've both been approved um I believe County's just finishing signing off and they should be open in the next week or two and nothing's happening in any casinos no these um yeah Federal has to go the original laws when they did uh applications for cannabis you had to be a th000 ft away from a school 1,000 ft away from a casino but some of that's relaxed based on because we're city or county uh they have relaxed some of those rules because the Thrive dispensary is right across from Resorts World and it's convenient and it should be convenient for the tourists they don't need to go to the suburbs to be able to buy and consume so it should be convenient for them yeah I think that's going to what whatever that changes it's going to completely change the neba market I I think it's going to be unique I think they have to have an angle though I think just going to go smoke and sit at a bar I think you need live entertainment I think you need to have that Vegas vibe to keep people there to buy cuz I believe it's only single servings you can't go and buy an eighth you can't go and buy a half ounce you could go buy a pre-roll you could go buy a dab oh really single servings yeah that's going to be difficult yeah and then there's no uh alcohol is allowed yeah so which I understand but it you have to find other areas of Revenue to make them successful something like Planet 13 is a site to be seen yeah you know but to have old video games or to have a comedian or something that live entertainment to bring them in as well and keep them there yeah I think the mar the Marcus is being held back because not every you don't want to go off the STP or go out of the casino to go buy cannabis and you know so just like this Market that's just being held back by not access to casinos so it'll just take time I think with Federal it'll go and that'll completely change the landscape in Nevada for sure oh absolutely like we all our goal that's why even with the testing being the gold standard all our goal was to be the Amsterdam of North America you know cuz we are based on tourism everybody could come in go to the shops and that's our goal and we you've done a good job of trying to get there yeah no I appreciate you guys uh making it on and making the trip out I know it's uh I know it was a long journey so it was a fun morning yeah yeah you got held up it was fog or something they just delayed the whole thing yeah Ontario is below minimums so yeah they're like visibility so we sat on the tarback for a while yeah he was sleeping I was I slept the whole time oh good for you man I was talking to clients yeah you're always working so much respect guys um appreciate all the knowledge and I think uh the industry and and cultivation hopefully gained some knowledge to to really I mean we did this to help them pass PASS testing you know in whatever state they are in um so I really hope that uh that this helps them and you know what maybe uh let's go and talk about kind of working on maybe not an sop but just maybe like a one or two few page kind of guidance and recommendations of what to look for when when you're trying to pass State regulated testing I think it'd be good to have something on on paper that we could share with some of our cultivators like hey you know what take a look at this you know be conscious of this like really focus on your trim trim room or post- production area you're going to want to look at you know your AC filters it's recommended to use HEPA filters I think all this stuff is is really important and you know these businesses rely on this information so they can drive success and pay their bills and you know keep the lights on so I think anything that we can do to kind of open their eyes and and help guide them to success and and passing testing without using alternative machines you know is is is super beneficial because it puts better quality flour and good clean quality flower into the market so and that's what we're all about yeah no 100% And we could definitely work on that and kind of a dos and don'ts yeah what to look for yeah I'd love to work on it with you guys yeah definitely like a like a quick bullet point checklist of just like here's the things that you might not be thinking about yes exactly that's exactly it here's the things you're probably not thinking about you know and and it doesn't have to be an sop just some things to look at yeah I love that so all right yeah thank for having us yeah Ser thank you so much it was exciting no this was this was informative I learned a lot so we appreciate it thanks guys thanks see

