**1st and 2nd Slide:** We as a global population have a growing problem when it comes to food. One, we have a problem in the way we grow food. Two, the problem is increasing in size and severity. I will be focusing first on what is wrong with growing methods, and then on why the problem is getting bigger. Before I continue, I want to clarify something. From where I was raised and where I received my education, my perspective is from the viewpoint of a member of an industrialized, affluent nation, in a privileged community. Realistically, I will never experience true hunger. Thus, everything I say here is entirely open to discussion, critique, and change, because the systemic changes I believe are necessary for creating more connected food systems are not going to be universally applicable to all communities. As such, I am presenting my first solution before I get started: that is, to increase global cooperation and education. In food production, there are three C’s of sustainable agriculture: Cover crop, compost, and crop rotation. For me, there are three C’s for effective global change: collaboration, cooperation, and communication. No country—no global entity—can rightfully impose laws, operations, or any other major infrastructural change on another nation without first consulting the citizens, or without understanding the historical, political, and environmental situations. We have no way of knowing what communities need without intensive conversations, which can result in *effective, sustainable* solutions. This forum is a great start, and I hope if any of you have questions or want to extend the conversation you come talk to me later, because if we are going to continue living in a global society, we need to recognize each other as one human population and treat each other as such. I am going to have to stop and limit myself in what I talk about because with everything wrong in the food system alone we would have to extend this forum for another week. So, I begin with growing practices.

**3rd Slide:** I am sure many of you are aware of some problems I am going to discuss, but it is important to hear before I talk about solutions. The Green Revolution accomplished something amazing: facing a growing population and limited arable land, humans were able to create technologies that allowed our agricultural systems to be more efficient, productive, and those who possessed the technologies were able to continue sustaining their populations. The technologies were not available to all humans, and there were still famines, but t he point is: by creating machines such as tractors, columbines, and other tools that do the work of fifty men but only require one for operation; by mixing pesticides, herbicides, and synthetically produced nitrogen fertilizers; and by genetically modifying or engineering crops for greater growing efficiency; humans defied the odds. But, we also created some major problems for the Earth. Perhaps these technologies make the farmer’s work easier, but they also make agriculture responsible for between 10 and 20% of greenhouse gas emissions. Consider the fact that climate change as a result of greenhouse gas emissions is a serious threat to the sustainability of human life. Now think about how food is fairly important to sustaining human life. Isn’t it a bit contradictory: something we need, i.e. food production, is a major contributor to the decline of our home planet? Shouldn’t our food system work in harmony with our planet? It seems like this should be a common thought by now, and yet in the U.S. the tractors are burning and nothing is being done on a large scale for change.

Additionally, there are “staple crops” that have been subsidized and commoditized to where, at least in the United States, they have taken over the agricultural land and become the base of essentially all the food consumed and exported. For us, they are corn, wheat, and soy primarily. These grains use up the resources on the prime arable land in the U.S, and the majority of it—around half, to be exact—goes to feed livestock. On a global scale, 40% of grain feeds livestock. Researchers in the field of food and agricultural ecology have said 800 million people could be fed off what we feed to our livestock. 800 million people could not be fed from the livestock itself. Part of the problem is our land is inefficiently used, not necessarily that the product is inefficiently grown. The reason this has not changed is purely based on profit—large companies benefit from cheap cash crops that will give them economic benefits, and will keep them in control of the market. It’s not about who gets fed and what they are eating; it is about how much money can be made.

Wait, there’s more: monocrops require the use of pesticides, herbicides, and fertilizers that are toxic to our ecosystems, and to human communities. The Earth is a living system that regulates environments itself, without human manipulation. When we apply a chemical or outside input to a crop, we throw off that balance and force ecosystems to become distressed. Also to note: applying something designed to destroy life to the food supposed to give us life is completely backwards and bound to have negative health effects in the long run. Instead of manipulating nature to create what we think should be growing, why don’t we see what foods will grow in that system, what foods grow best together, and what will reduce our footprint the most, then incorporate it into our diet? The same applies for inputs on massive animal farming lots, or Confined Animal Feeding Operations. We preemptively feed animals antibiotics to prevent them from dying, and then we ingest antibiotic stuffed meat. As a result, two million people in America alone contract an antibiotic resistant infection, due to the constant exposure to drugs meant for humans.

The argument can be made that these practices are in place because we need them. In our current system, we couldn’t survive if we didn’t use these products. But that is because our system does not support change. What if we subsidized small farmers, organic farmers, and local cooperative initiatives to create a more sustainable system? Once again I’ll say this is from the perspective of a resident of a developed country, the solutions may not be the same for a different nation, but the ideas behind what determines progress, success, and human relationship with ecosystems are universally determinant of how food production is approached. Perhaps someday the green revolution will be renamed the gross revolution, because though it was intended to save people from starvation, it has created a gross system of consumption that has impacted humans in a negative way.

**4th Slide:** What are some options, at least that I have discovered, for changing how we grow food? What are viable systems we as humans can adopt to extend our species’ lifespan?

At my university specifically, there have been multiple projects centered on different food production methods. I have been a part of the student farm, the UW Farm, for two years. The farm exists to give students the opportunity to learn what it takes to grow food, how individuals can be connected to food in an urban setting, and why farming in a way that intentionally uses fewer resources is important. The farm follows organic practices, and though we still use fossil fuels, we use significantly less than the average farm and we try our best to work around fossil fuels if possible. We teach people that food started as a part of the Earth (including meat, by extension). By not using synthetic fertilizers, pesticides, or herbicides, and by treating our soils and our system as living, we are doing our best to show students at UW how possible it is to grow food in a more ethical manner. Students at UW have also experimented with alternative growing methods. For example, some students have experimented with aquaponics—a system where fish are raised in a tank connected to a vegetable bed so the fish waste fertilizes the plants—the roots filter the water, and it is returned to the fish tank. It is a closed system that presents an interesting solution to urban environments with limited space. More in line with living systems approaches are agroecology, permaculture, and restoration agriculture. These systems are low maintenance, low input, and ecologically sound. They work in harmony with nature—whatever grows, grows, and the human manipulates the system only to the extent it is kept living, healthy, and harvestable.

Each solution is viable for different environments—rural, urban, tropical, temperate, etc. There is no system that will work for everyone. This is why collaboration at a global level is necessary: what do individual communities need in order to create a food system that works for the space? Information? Technology? Assistance with labor? These are the questions that need to be asked before implementation.

And, perhaps most importantly, we need to give value and voice to indigenous communities and their knowledge. They were on our homelands long before the colonial powers, and they have the answers. Only this time, instead of forcing them to do things, let’s work in collaboration. As a non-indigenous person, I see great value in learning from the oldest, most successful cultures.

**5th Slide:** Now for the growth in severity. The rising global population has led to an increased demand for food, which has led to an increased demand for efficient shortcuts. The rising population is essentially the reason why all the problems I outlined before exist. What I did not discuss before however is the increase in processed goods controlled by a few mass corporations. Part of the reason why corporate influence in the commodity crops is so high is because the crops go towards manufacturing processed foods, of which few companies hold massive power over. I will not name names, but it stands there are huge companies that exploit communities’ world wide for the sake of continued production of processed foods and economic benefit.

There are more humans on this planet than ever. The population is supposed to hit around 9 billion in 2050, and continue rising beyond. This is where my knowledge wears thin: I cannot say what should happen to stop population growth beyond what has already been said. As far as feeding the population goes, however, I want to say these words as to how we can create a system that works for a large numbers.

How do we do this? Where do we start? It’s a huge question, one I couldn’t even hope to answer even with years more schooling. Hdo we fix our food system?

We need to find the tipping point: the intersection of events that will lead us into a bright, more sustainable future. In my opinion, that tipping point is the next generation. Really, it includes everyone. It is never too late to learn something new, but most importantly, we should focus on educating younger generations—the people who will be making decisions in future years. Our job, as the people who make mistakes, is to teach them how to avoid those mistakes. And, to teach them what is important.

Is it more important for every human have access to adequate food supply that is nutritionally valuable, or for the massive food related corporations to have power over markets? And, for that matter, for the executives have a high salary and a life of luxury?

Is it more important for the laborers on farms, for the farmers themselves, to be able to make a living, have representation, and be valued by their communities, or is it more important for the middle class to have cheap food?

These questions are from my own experience as an American. My values may be different from many of you in this room. I have the privilege of worrying about who is growing my food and their rights; how my food is being grown; how it would be best if my food were ethically produced over cheap. That is not the case for everyone in the world, perhaps not even for everyone in this room.

As much as I hate to admit it, these are things I learned in college. And, I am ashamed to admit, things people where I come from don’t think about. This is why education is the most important solution for our environmental problems. It is not a quick fix. It will take a long time. But, if people come together and start sharing between generations, ethnic groups, and so on, we can thereby create cooperative and hopeful communities. I know many of you are thinking this sounds too idealistic. Sometimes, I agree. Sometimes, it sounds too romantic. The world is harsh, institutions don’t always allow for this kind of system. But this is what needs to change. Humans can do a lot when they put their minds to it; if we are intentional and focused in our efforts to create these communities, we can.

Not only should education on how to create communities with people be a focus, but also specifically *environmental education* should be the focus. We are so disconnected from the world we live in. Our sense of wonder, and our sense of play—the things that got us to where we are in the world, now, is being lost. I don’t mean to stray too far from the topic of food systems, but this is so important. We, or rather, Americans, are taught from a young age success is measured in how much money you make and how “good” a job you have. It’s the main reason why we have the problems we do. We are concerned with feeding our immediate families and ourselves. We donate things to food banks, but it’s stuff we don’t want or things we don’t want to eat. I’m not trying to speak for everyone, but in general we don’t care about the people we don’t immediately see or know. Stronger community ties would change that, and open us up to embracing humanity as a whole by being connected to our local communities. It’s all about empathy.

I realize what I am saying is more related to changing cultural norms and societal structure, rather than saying we need to change to cleaner forms of energy or create new technologies to recycle waste. It’s not that we don’t need those things. But they are talked about more, because it is still seen as “progressive.” I think most people fear what I am talking about because it is seen as “regressive.” Going back to more primitive ways of interaction, whatever that means. We need to rethink the way we see the world.

**6th Slide:** I’ve seen these things start to happen. Slowly, in the United States, as social issues come to be more prominent, issues in unequal food access becomes more important, along with issues in agricultural methods. We are learning how we can make our system more efficient. The organizations listed on the slide are some that I know are working towards making our food system a priority for their home communities, Seattle and otherwise. Whether it is a community garden, or an education facility, the primary goal is to decrease the disconnection between human food system and planet.

These organizations work in the United States. Our solutions are intentional community building, transforming urban space, and shifting perceptions of what food is and how it should be grown. But those are not the solutions for everyone, which is where global community cooperation comes into play. Instead of marching into a country and telling people how to do things, industrial powers need to listen, learn, and then assist fellow humans in a way that works for the local people. In that way I think education, as a solution, is universal. Any community can work on programs that connect children with their ecosystems, create systems of intergenerational learning, and foster an appreciation for food and farmers. The way in which it occurs depends on the location, but it is what we, as humans, need to support. A global economy is necessary, with the system we have created. We can’t just stop trading, but doing it in a way that supports all humans and all communities is possible. It will be hard, but it needs to be done.

**6th Slide:** I know you all have heard some of this before. I know you all are probably wondering why I talked more about community and humans as opposed to ideas for new agricultural systems. This is because I can’t talk about the end all, be all solution for the whole world. It does not exist. Yes, I think things like Agro ecology, permaculture, and restorative agriculture are important methods of food production that need to be adopted more. But before that happens, we need to create communities that can foster the shift to those systems. I think we forget we are a part of this. We see ourselves as separate from the environment, which is what got us into this mess in the first place. And by continuing to ignore the power of the human community connected to nature, we will stay in this mess. Creating more integrated communities, both in terms of humans and ecosystems, will start creating a new global atmosphere, so to speak. Starting conversations, creating conversations, foster community support for local food systems and a just global food system—these are the things we need, arguably more so than clean energy and new technologies. Instead of talking at you all, I want to talk with you. Please, find me later and let’s have a conversation about what we think needs to happen to fix these systems, or ask me now. Talking at other people will not accomplish anything; we should be talking with people.

Thank you for your time, and thank you to all the people who have helped me get here, this has been an incredible experience and I am so thankful the people here view collaboration and conversation as important environmental solutions. Thank you.