

Re: ENGN4221 client meeting**Martin Amidy**

Fri 20/09/2019 4:40 PM

To: Derek Tan <u6391332@anu.edu.au>**Cc:** Minghui Zhang <u6065938@anu.edu.au>; Jiaying Ying <u6034298@anu.edu.au>; Andre Olivier <u5807603@anu.edu.au>

Hi all,

I can pick you up at 3:30 at Roberston.

Kind regards

Martin Amidy
Manager
Industry Engagement

M: 0477 434 932

ceat.org.au

The Australian National University
Gould Building (Building 116)
Daley Road, Acton ACT 2601

From: Derek Tan <u6391332@anu.edu.au>**Sent:** Friday, 20 September 2019 2:06:19 PM**To:** Martin Amidy <martin.amidy@anu.edu.au>; Jiefei Wang <jiefei@goterra.com.au>; Olympia Yarger <olympia@goterra.com.au>**Cc:** Minghui Zhang <u6065938@anu.edu.au>; Jiaying Ying <u6034298@anu.edu.au>; Andre Olivier <u5807603@anu.edu.au>**Subject:** Re: ENGN4221 client meeting

Hi Marty, Jiefei and Olympia,

Can we have the meeting at GoTerra at 3:45pm 24th Sep? Our group members are all free till 5pm on the day.

Marty, would you mind pick us up at 3:30pm on the day, like what we did last time? We are happy to meet you again at the car park near the Robertson Lecture Theatre.

Regards,
Insect farming team

From: Martin Amidy <martin.amidy@anu.edu.au>**Sent:** Thursday, 19 September 2019 9:35 PM**To:** Jiefei Wang <jiefei@goterra.com.au>; Andre Olivier <u5807603@anu.edu.au>

Cc: Minghui Zhang <u6065938@anu.edu.au>; Derek Tan <u6391332@anu.edu.au>; Jiaying Ying <u6034298@anu.edu.au>

Subject: Re: ENGN4221 client meeting

Hi Guys,

FYI the 24th is best for me. I can do any time before 12:30pm or after 3:30pm.

I will be at the Carwoola Smart Farm on the 25th, and on leave from the 2nd-10th of Oct, so unavailable for the other dates. Im happy to dial in or Video conference on the 3rd of Oct if that helps.

Kind regards

Martin Amidy
Manager
Industry Engagement

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From: Jiefei Wang <jiefei@goterra.com.au>
Sent: Thursday, 19 September 2019 8:23:26 PM
To: Andre Olivier <u5807603@anu.edu.au>
Cc: Martin Amidy <martin.amidy@anu.edu.au>; Minghui Zhang <u6065938@anu.edu.au>; Derek Tan <u6391332@anu.edu.au>; Jiaying Ying <u6034298@anu.edu.au>
Subject: Re: ENGN4221 client meeting

Hi guys.

How's it going? I have been off from work and start again from tomorrow.

It would be great to have a meeting in Goterra with Olympia and other stuff to demonstrate what you have achieved so far.

I have checked the availability of Olympia. She is available at the following time :

All day of 24th Sep (24/09/2019). 25th before 12pm (25/09/2019). 02/10/2019 and 03/10/2019 after 10am.

Feels free to arrange a time during these time frame and let me know in advance.

Thank you

Jiefei

On Sun, Sep 15, 2019 at 10:16 PM Andre Olivier <u5807603@anu.edu.au> wrote:
<mailto:u5807603@anu.edu.au>
Hey Martin & Jiefei

So we have booked a room for next week to discuss our progress made over the break, how it pertains to the scope of the project, and with this new information some final questions before we officially finalize the methods and process to be pursued.

[cid:16d4904f2326d31d2471]

We also think a meeting with Olympia and everyone at Goterra would be incredibly opportune to show what we've done and overall how our project is proceeding.

See you guys then

Insect Farming team

From: Martin Amidy <martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>>
Sent: Wednesday, September 11, 2019 11:25:50 PM
To: Andre Olivier <u5807603@anu.edu.au<mailto:u5807603@anu.edu.au>>; Jiefei Wang <jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>>
Cc: Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>; Jiaying Ying <u6034298@anu.edu.au<mailto:u6034298@anu.edu.au>>; Minghui Zhang <u6065938@anu.edu.au<mailto:u6065938@anu.edu.au>>
Subject: Re: ENGN4221 client meeting

Thanks for the update. Looks like you have made a lot of progress since the last team meeting I was at. Happy to discuss any proposed changes to the scope next week.

If Olympia and Jiefei are available in the next couple of weeks, it might be a good time to have another group meeting at Goterra's office space to discuss where the project is up to and proposed changes.

Kind regards

Martin Amidy
Manager
Industry Engagement

M: 0477 434 932

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From: Andre Olivier <u5807603@anu.edu.au<mailto:u5807603@anu.edu.au>>
Sent: Wednesday, 11 September 2019 11:14:16 PM
To: Jiefei Wang <jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>>; Martin Amidy <martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>>
Cc: Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>; Jiaying Ying

<u6034298@anu.edu.au<mailto:u6034298@anu.edu.au>>; Minghui Zhang
<u6065938@anu.edu.au<mailto:u6065938@anu.edu.au>>
Subject: RE: ENGN4221 client meeting

Hello Jiefei and Martin

Thanks for the feedback regarding our Audit 2 presentation, we are very glad to hear you approve of our progress so far. With regards to your questions on our preliminary process Jiefei, that is correct. The process outlined (ie breaker--continuous cooker--percolator--decanter--fat presser--separator) requires a separator at the end for removing any remaining water from the liquid tallow (natural oils) usually through a centrifugal process, before the tallow is then produced as final output. The input into the separator comes through the decanter, which contains all the raw liquid tallow extracted, and then removes any of the protein solids contained within, and the separator then finishes the job. Hope that makes it clearer. 😊

An update on our progress so far since last week, we have started drawing up detailed 2-D models of each of the major components, using dimensions and specifications obtained through contacting the manufacturers of the equipment in China, and consulting with them as to what is appropriate for our needs and goals. So far the response has been very positive, with the manufacturers being very helpful in helping us understand the processes and what options are available. Lily has been hugely helpful in getting in contact with the manufacturers, and the response in requests for details for the Continuous-Cooker equipment yielded very valuable information.

The manufacturer in question, Sensitar, (a link for their product is provided at the bottom) not only gave great advice on what processes we should use (with regards to the entire process, not just the continuous cooker) depending on what end product we seek to yield, but also requested whether or not we were interested in their mobile rendering plant, photos for which are shown below.

[cid:image003.png@01D568F6.95751720]
[cid:image005.png@01D568F6.95751720]

They are pretty sure their equipment can process the insects in question, and are happy to test it out using insect samples if we send them some. Regardless of the end result of our design, this seems very much like what Goterra had in mind and it is very encouraging that it exists, as it does provide some measure of proof of concept.

With this newfound information we are just wondering whether we need to change the scope of the project, reduce it or change (possibly) some end-goals. For the moment we will continue to refine our design, contacting manufacturers and working towards a detailed and accurate design that we can hopefully simulate, but some advice regarding these developments would be much appreciated.

Best Wishes

Insect Farming Team

Reference:

https://www.alibaba.com/product-detail/Waste-animal-organic-rendering-processing-equipment_62119898709.html?spm=a2700.7724838.2017115.1.30cc83107p8klz&s=p&fbclid=IwAR2veQEIS1FitOXAwDeloid-gFW4NrJHbYYXnWeFGe-gGypKlrlVbQnJHbU

From: Jiefei Wang <<mailto:jiefei@goterra.com.au>>
Sent: Monday, 9 September 2019 2:40 PM
To: Andre Olivier <<mailto:u5807603@anu.edu.au>>
Subject: Re: ENGN4221 client meeting

Hi, Andre.

Thank you for your email. I had a look about the PDF file, and it looks great.

Just try to keep myself up with you guys. Based on the 3D model you have, the process is insects go into breaker--continuous cooker--percolator--decanter--fat presser--separator? If it is the case, what is separator for? I guess after processing from the fat presser, the fat (oil) is already separated from the body. (if you know what I mean). Or, the separator should be between decanter and fat pressor which can use for separate dirt or something else. Just keep this in mind. Please correct me if I am wrong.

Also, would you mind send me the 3D model drawing again? I have tried a few times, the SketchUp cannot support the file you sent to me.

Thank you.

Jiefei

On Mon, Sep 2, 2019 at 3:24 PM Andre Olivier
<u5807603@anu.edu.au<<mailto:u5807603@anu.edu.au>>
<<mailto:u5807603@anu.edu.au><<mailto:u5807603@anu.edu.au>>>> wrote:
Hello Jiefei and Martin

Hope you had a nice weekend. Attached is the preliminary 3-D Design of the proposed mobile insect rendering plant that we presented to the tutors and class on Friday. We used Google Sketch-up for the preliminary design, so I've attached the actual file (if one of you has the software installed) and a pdf that contains several screenshots of the design and its different components.

The main purpose of the model was to present to the tutors and other students a more clear design of what we wanted to achieve in this project (as feedback from audit one indicated confusion as to the finer details of what the project involved), as well as to start laying the groundwork for the much more detailed model in the future. The design is based off of several schematics of dry/wet rendering processes sourced from different rendering companies and general internet resources.

Things not included or taken into account in this design were:

- * Safety Contingencies
- * Ventilation/Cooling
- * Modulation
- * Peripheral processes/components (such as conveyer belts, valves, wiring etc)
- * Physical support infrastructure (such as strengthening frame for the crate and things such as jig cranes and support for heavier equipment, such as the industrial motors attached to some of the components)

All of these processes will be now start to be thoroughly researched and added to the design, as well as confirming the dimensions of each of the key parts of the system (the breaker, cookers, percolators etc.) by contacting manufacturers querying about the costs and scalability of each component (this has already begun). One key piece of feedback received was that the TPM for this

project (Technical Performance Measures) needs to be a focus, and so we will also be adding and revising our current version over the next few weeks as a new key part of the project.

Please let us know if you have any feedback with regards to the model or any of the other comments outlined above.

Cheers

Andre

From: Jiefei Wang <jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>
<mailto:jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>>>
Sent: Wednesday, August 28, 2019 4:41:12 PM
To: Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>
<mailto:u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>>
Cc: Andre Olivier <u5807603@anu.edu.au<mailto:u5807603@anu.edu.au>
<mailto:u5807603@anu.edu.au<mailto:u5807603@anu.edu.au>>>; Jiaying Ying
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<mailto:u6065938@anu.edu.au<mailto:u6065938@anu.edu.au>>>
Subject: Re: ENGN4221 client meeting

Sure.

Good luck with exams.

On Tue, Aug 27, 2019 at 9:37 PM Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>
<mailto:u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>> wrote:
Hi Martin and Jiefei,

Two of our team members will be having exams tomorrow. Would you be okay with canceling the meeting tomorrow?

Sorry for any inconvenience caused and the late notice.

Regards,

Insect farming team

From: Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>
<mailto:u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>>
Sent: Tuesday, 27 August 2019 9:34 PM
To: Jiefei Wang <jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>
<mailto:jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>>>
Cc: Martin Amidy <martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>
<mailto:martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>>>; Andre Olivier
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<mailto:u6065938@anu.edu.au<mailto:u6065938@anu.edu.au>>>

Subject: Re: ENGN4221 client meeting

Hi Jiefei,

Thank you for letting us to visit the warehouse and to see the current processes. After discussion with the team members, we decided to go there on 2nd Sep (Monday next week) at 2 pm. Would you be happy with that time? If so, will you be willing to pick us up from the ANU campus?

One member will not be able to make it as he will not be in Canberra at that time.

Regards,
Derek

From: Jiefei Wang <jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>
<mailto:jiefei@goterra.com.au<mailto:jiefei@goterra.com.au>>>
Sent: Tuesday, 27 August 2019 4:43 PM
To: Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>
<mailto:u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>>
Cc: Martin Amidy <martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>
<mailto:martin.amidy@anu.edu.au<mailto:martin.amidy@anu.edu.au>>>; Andre Olivier
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<mailto:u6065938@anu.edu.au<mailto:u6065938@anu.edu.au>>>
Subject: Re: ENGN4221 client meeting

Hi, team.

As we discussed during the meeting on last Thursday, you guys are welcome to come to the warehouse for a visit to see how we currently process the maggots and take some sample with you. I work Monday to Friday, 9:00 to 5:00, so any time between that is good (I would suggest afternoon time, as morning is more busy for the production team), just let me know in advance, so I can organize with the production team.

Cheers.

Jiefei

On Tue, Aug 6, 2019 at 5:56 PM Derek Tan <u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>
<mailto:u6391332@anu.edu.au<mailto:u6391332@anu.edu.au>>> wrote:
Hi Jiefei and Martin,

Can we please arrange a regular weekly meeting? We are free every Wednesday 4 - 5 pm. It would be great can meet somewhere at ANU.

For this week, we need to finalise the main goal of the project and let you sign the Concept of Operations form.

Kind regards,
Inset Farming Team

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Dr Jiefei WANG

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