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# 8 Jul 2024 (Mon)

## Jeremy Guest – ISEE and the inter-disciplinary approach toward ag. Research

* Each faculty/ is organised in a way that forces faculty(/students?) to mix (like NUS CDE/CHS)
* Hold contentious dialogues to discuss (eg: Nuclear) — Chatham Hosue rules
* Sustainability fee paid by students that go to the committee that disburses the amount to student groups/projects that are sustainable (funds are up to $1.2 million)
* Area around lake Michigan won’t see major climate changes ⇒ Climate Refuge
  + Does this mean that more crops will be grown here in the future? Become a pure agriculture sector?
* Trying to change fuel used in agriculture to “aviation fuel” (??)
* Agrivoltaics (Dual use land for Solar + Agri)
  + SCAPES (
* Able to change the orientation/position of Solar Panels (Vertical/Horizontal High/Horizontal Low) to allow certain machinery to pass
  + Can’t put too high because of cleaning (?)
* CABBI (Center for Advanced Bioenergy and Bioproducts Innovation): cabbi.bio
* Irrigation is used West of 100th Meridian (?) and Rain is used East of that (IL, IO, etc.)
* Machine Learning??
* ICOVER & I-FARM
  + Uses robots to help automate fieldwork!
    - Has Solar Panels?
    - More information about it/specs?
* Precision Fermentation in Singapore (CREATE, UIUC, NUS, NTU, SIT, A\*STAR, PreFerS)
* Techno-Economic Analysis (TEA) and Life-Cycle Assessment (LCA)

# 9 Jul 2024 (Tue)

## RIPE – Farm Tour

Spidercamera

using LDAR

* Any issues mapping areas south bodies of water?
* Community through Optic Fibre/ HTTP/Internet and Radio for backup? Why not other industrial protocols?
* Lidar day takes 5 hours, some GPS, 40GB/day
* Hyperspectral data from hyper spectral camera takes a lot more data
* 128 bands/channels instead of a singular band?
  + Singular band would l have to move much slower
* Will normalise the position using GPS, sticks…?
  + GPS not super accurate, cannot use for exact normalisation. Brand: Septentrio
* Lidar-like sensor… Probably customised

## Shadi Atallah – Agriculture economics: tech and carbon credits

* Negative externalities from having two farms next two each other
* Adoption of technology can be affected by neighbours’ adoption
* Effect of tribal forest property rights on Bengal tiger population
  + There was a spiritual connection between tigers and indigenous tribe
  + Putting a value to the wildlife spiritual services
* Income/Education inequality leads to environmental impacts too
  + Better educated communities chase toxic-waste companies to move out and they move into lower-income households

# 10 Jul 2024 (Wed)

## Brian Jacobson – IBRL Intro

* 2 Pilot plan facilities
  + Integrated Bioprocessing Research Laboratory
  + Food Science & Human Nutrition Pilot Plant
* Meant to serve companies to help to build their ideas
  + From Seed Funding to Fortune 50, but Series A is the “best”
    - Series A: Could see from ~5 staff to 20+ staff when they leave
* Very open to new ideas

## Marissa Nyland – What is Fermentation?

* Three types of fermentation
  + Traditional
    - Process other products like dairy or soybeans under typically aerobic conditions
    - Yoghurt, Cheese, Alcohol
  + Biomass
    - Rapid-growth microbes
    - Animal Feed
  + Precision
    - Engineered microbes
* Usually 4 steps
  + Input
  + Production
  + Processing
  + Food/Ingredients

## Tom McKenna – Downstream Processing

## Jedi Brown – Food Science

Stephen Moose — CROPPS

# 11 Jul 2024 (Thurs)

## Gerald Wilson – EnterpriseWorks Incubator

* Figure out how they can make more companies as a university (like NOC but within themselves)

### Andy Miller – TellTail

### Josh and Jacob – Zite AI

### Amolia(?) – Cashe Energy

# 16 Jul 2024 (Tues)

## Cory Davis – Agriculture and the emergence of Chicago

* Used to be full of native American tribes (Tribe Illinois, Tribe Shigugu…?)
* French wanted beaver fur
* French came here by Mississippi River
* Perfect position for trading outpost (Like Singapore)
  + Chicago River
  + Harbour
* Even when officially established, it was still just a village
* City in a garden
* Although initially explored by the French, the war/colonisation caused French to be booted out and British to take over Illinois. Possibly unrelated to Louisiana Purchase.

## Al-Kodmany – Vertical farms and green spaces in Chicago