COLORADO
FOOD SUMMIT
DENVER, COLORADO

Session title: Work Smarter Not Harder

Note Taker: Audrey Paugh

Main points of each panelist:

1. Facilitator: Tripp Wall, Managing Partner Trailhead Capitol (ranching background)
    a. 1) Mobility of Food Production
    b. 2) Nutrient Dense Food Access/Equity
        i. Considering: taking out intermediaries, producer's risk taken
    c. 3) Technology
        i. Trailhead seeks to change and disrupt the food system–starting with soil (ex. compaction) which is a huge health indicator of the environment.
            1. The amount of waste at the farm gate (e.g. methane) has naturally occurring remedies (e.g. microbial activity).
    d. "Voting with Your Dollars" about what goes into and on our bodies (food, textile, etc), leads to the need to act locally.
2. Speaker 1: Adam DeGroot
    a.
3. Speaker 2: Sarah Hinkely
    a. CEO of Barn OwlPrecision Ag.. Personal background La Junta, Colorado & Co Springs. Grandparents were farmers & cattle ranchers, returned to La Junta to begin farming and began noticing the challenges including costs of labor, climate, etc. Generational gap. BA Texas State University and Masters (CSU?). Barn Owl: drone system for farmers to find opportunities for management (soil moisture, pests, etc.). The maps are fantastically useful, but the action is challenging. **Imitating aerial imagery system into a task accomplishing robot–seeking to imitate no till and cover crop practices–as a service for farmers onboarding regenerative practices. Service supporting budget & time savings farmers.**
    b. Farm Robots as a Service - solution to a problem of lack of affordable labor
        i. Weather timing management
        ii. Working with growers and extension officers to incorporate collaboration that is effective and valuable
        iii. Ex of service = Weeding
    c. Operational Support & Alternative
        i. Weeding, spraying, soil sampling
        ii. Price: At the end of a day must be profitable for growers and communities
            1. Base price: $32.50 per acre per visit
            2. Ideal for small/mid-size operations

   d. Collaboration
      i. Brings in communities. *Ideal for the future is that farmers can call in Barn Owl to support and supplement operations.*
      ii. FFA & 4H learning opportunities
4. Speaker 3: Kayla Birdsong, CEO Fresh Food Connect,
   a. Experience in community food work and program implementation, including non-profit work that facilitates connection of local food to people. Studied Business Mgmt and works to incorporate in the nonprofit world. Active gardener, international internship experience. Joined Fresh Food Connect (Denver based, now scaling nationally) 1.5 years ago.
   b. There are so many different challenges to be addressed and that requires different perspectives. How in Colorado (and nation) can home grown food play a part in our national food system, specifically with food security?
      i. Focus → Food Insecurity in the US & Individual Gardeners
      ii. Fresh Food Connect:
         1. 2016 group of nonprofits working on hunger, food rescue, youth empowerment saw challenges including 1) **waste** (esp. in community gardens) 2) **vulnerable communities and food access,** including nutrition density …started as a pilot program: would people that have backyard gardens want to donate food and would food pantries accept it? Yes! 2020: ***Mobile App Technology → a tool that allows gardeners (at any level) to connect with food pantries in their neighborhoods, closing access gaps.***
         2. Work with network of partner organizations (non-profits, food pantries) to support producers in donating their fresh produce
         3. Impact: Working with 80 non-profit organizations across nation, with most in Denver and Colorado. 2500 gardeners, 67,000 lb of produce to organizations who distributed to 35,000 individuals experiencing food insecurity. Collective action has an impact.

Key points of panel discussion:

1. Technology can support challenges with labor, data and crop info gains
2. Nutrient Density and Toxicity – How do we understand the difference? Where does technology play a role?
3. Supporting the regionalization of food
   a. Local Line –Ex: Chipotle can buy from multiple local farms at a time
   b. For P Food

Question and Answer Summary:

COLORADO
FOOD SUMMIT
DENVER, COLORADO

1. How much does one robot cost? → $5,000 per robot approximately.
2. How does this work for non single crops? → requires rows
3. As gardeners sign up, do they have feedback on what recipients want/need to receive? → Yes. Ex. Denver community feedback requested tomatillos which gardeners were able to respond to.
4. Did you face any obstacles about how things are grown, where they come from, etc.? → There is a national act that protects the gardener (Good Samaritan Act) & every gardner completes a Food Safety agreement. Fresh Food Connect non-profit partners have experienced
5. Do you have a sense of the financial /economic impact/viability? Could this be a start to a regional food system collaborative? → Pantries license our technology with a sliding scale, partners determine how they want to receive and distribute food (ex. One partner uses bicycles where another does direct drop offs to the food pantry for same day meal offerings). Fresh Food Connect also supports marketing for partners.
6. Is there a tax incentive for gardeners with Fresh Food Connect? → the non-profit you donate to can give an in-kind donation form, though this is usually not much.
    a. Prepared Mind Projects (Tripp): MRV (Measure Report Verify) that look at carbon emissions and sequestration. There are starting to be opportunities for payment (payment for ecosystem services)
7. Will regional food system communities be able to own the aggregate data? → For Trailhead, it's typically up to the land steward on how they want to manage the data. For Barn Owl, some aspects of data can be open-sourced to include communities that can analyze the data and have a greater understanding of a geographical area.
8. How much does the Barn Owl technology consider mycelium? → Currently don't have the technology to get that in depth. In the future, we'd aim for opportunities to partner with organizations that have technological expertise to onboard onto our services.
9. Do you find people being open to this technology? → There's a lot of this. Timing is really important, especially with decision makers that are more open.
10. Agrotech as it applies to corporate owners and producers–do they have better tech? What's the difference you've seen? (more industrial)? → Depends on what you define as better. Some robots only specific to crops, like lettuce or crops that are less than an inch tall. Barn Owl robots are larger…more diverse approaches?
11. What is the design of the robots like? Are they adjustable for rows, for example? → have trialed with hemp, sweet corn, onions, etc. → 22 inches for 30 in larger row, and can adjust though the wheel base cannot adjust. In larger rows, there will be multiple robots. The implements do most of the work. Eventually would like to go as far to say "let's use this and apply precision watering"
12. Looking for open source inventory management systems (ex. For food pantries)? → Food Maven (Colorado based), Local Line , Provision IO (logistic compression inventory based)

COLORADO
FOOD SUMMIT
DENVER, COLORADO

13. Are you seeing demand for people wanting to save seeds and lending? → The Fresh food connect app does not yet include connection between gardernes, but in the future the hope is that they could which would facilitate these seed connections