



Monterey County Sustainability Work Group Reimagining Organic Waste

April 25, 2019

Presenters

- Nikki Rodoni**, CEO and Founder Measure to Improve, LLC
- Hank Brady**, SB 1383 Manager, CalRecycle
- Melissa Kendrick**, Executive Director, Food Bank Monterey County
- Patrick Matthews**, General Manager, Salinas Valley Recycles
- Tim Flanagan**, General Manager, MRWMD
- Keith Day**, Owner, Gabilan Ag Services
- Dr. Sara Pace**, Postdoctoral Scholar, UC Davis Department of Food Science and Technology
- Brian Curtis**, CEO, Concentric Power
- Dan Morash**, Founder, California Safe Soil

Participants



MCSWG's work on culls was highlighted in a [recent article by the Californian](#).

Looking for the slides? They are available [online here](#).

Nikki Rodoni, Founder and CEO, [Measure to Improve, LLC](#)

Welcome and Introductions

Contact: nikki@measuretoimprovelc.com

Problem Background

- Culls (also known as organic waste) are byproducts from the production of pre-chopped or ready-to-eat products by produce packers and processors. This includes materials like stems, peels, and skins.
- This material was previously sold as cattle feed, but many feedlots have closed or moved away, while production of pre-chopped and ready-to-eat products has increased.
- Other disposal options, like compost and anaerobic digestion, are at capacity in Monterey County, and this material cannot be sent to landfill.
- Regulations on disposal are becoming more stringent.
- Consequently, disposal costs continue to rise, making this a costly problem for many processors.

Opportunities

- The produce industry still has time to define its own solutions, before inappropriate or expensive solutions are mandated.
- To maximize new opportunities, the produce industry should start by focusing on three areas:
 - **Rename this material** – calling the material “organic” creates confusion, as it has nothing to do with organic certification. Calling it “waste” suggests the material isn't valuable and that it should be the purview of commercial waste haulers.
 - **Remove contamination** – Monterey County prohibits private haulers from accepting cull loads that are contaminated with solid waste. Facilities need to invest in signage, collection containers, and training for their employees to emphasize the importance of keeping this material stream clean and free of contamination.
 - **Measure and characterize this material** – before alternative solutions can be identified, the industry needs to better understand what commodities this material is comprised of and the volume being generated, as well as the seasonality of production.

Hank Brady, SB 1383 Manager, [CalRecycle](#)

SB 1383 – the Short-Lived Climate Pollutant Strategy

Contact: Hank.Brady@CalRecycle.ca.gov

Video: <https://www.youtube.com/watch?v=-enW7SgSt1U>

- **Policy Drivers & Context**
 - California has a goal to reduce greenhouse gas emissions to 40% below 1990 levels by 2030; organic waste reduction is part of this goal.
 - Food represented about 18% of the material disposed of in California in 2014; this is a significant source of greenhouse gas emissions.
- **Targets and Timeline**
 - California has mandated several reduction targets:
 - **2020** – 50% reduction in landfilled organic waste
 - **2025** – 75% reduction in landfilled organic waste
 - **2025** – 20% increase in recovery of currently disposed edible food
 - In 2022, California residents and businesses will be required to recycle their organic waste; Local government enforcement will start in 2024.
 - Meeting the targets will require 50-100 new or expanded waste recycling facilities.

- **Collection Cleanliness Standards**
 - Cities/counties must monitor and issue penalties for non-compliance.
 - Processors (like composters) are limited to 10% contamination by weight. If higher, they need to find other ways to reduce contamination to below 10%.
- **Edible Food Recovery Requirements for Commercial Generators**
 - Tier One generators (including processors for foodservice and retail) must arrange for edible food that would otherwise have been disposed of to be recovered for human consumption by 2022.
 - They must also keep records demonstrating they have made these arrangements and are using them.
- **Additional State Efforts (Outside Monitoring and Enforcement)**
 - Education and outreach
 - Reduction of regulatory barriers that restrict opportunities to recover and recycle organic waste
 - Grants and funding, though these opportunities are limited.

Melissa Kendrick, Executive Director, [Food Bank Monterey County](#)

Produce Diversion Opportunities

Contact: Mike Santos, Operations Manager, msantos@food4hungry.org

- Food Bank Monterey will distribute more than 12 million pounds of produce this year. It serves 1 in 5 adults, and 1 in 4 children in Monterey County.
- Reducing food waste increases food system efficiency, avoids negative impacts of wasting food, helps us meet our climate goals, and supports access to healthy food for all.
- Companies that donate are protected by the [Emerson Good Samaritan Food Donation Act](#).
 - The ag producer is released of all liability once Food Bank takes possession of the food.
 - Food Bank uses the same inventory system as ag producers and can participate in any recalls that might occur.
 - Food Bank also maintains food safety certifications.
- Partnering with Food Bank can help companies meet S.B. 1383's diversion requirements.
 - The new building has excess capacity and can accept more donations.
 - "We can take a lot of things you don't think we can take"
 - Food Bank works with companies to pick up food quickly, and at short notice. "When you call, Food Bank comes."
- Food Bank would like to put an advisory board in place to help maximize produce recovery

Patrick Mathews, General Manager, [Salinas Valley Recycles](#)

De-Bagging Equipment at Johnson Canyon Landfill

Contact: patrickm@svswa.org

- If food cannot be recovered to feed those in need, SVR can help ensure that the material is disposed of in a way that limits negative impacts.
 - As a rule, cleaner material is more cost-effective to process. "The level of cleanliness will drive the cost"
 - SVR will send staff, free of charge, to your facility to help educate your workers.
- SVR is installing a new composting facility at Johnson Canyon Landfill
 - The facility will use an air floor, which helps accelerate the process and increases the volume that can be composted.

- This was the first facility in Monterey County to get all the permits now required; existing facilities have a few years to comply.
- A de-bagging system is being installed to support the ag and produce industry.
 - This system takes master packs, bagged lettuce, and other packaged product and separates the organic material from the packaging. It also works on metal containers.
 - Boxed produce can also be separated using the system, but this should be avoided as the cardboard is rendered unrecyclable by the process.
 - The de-bagger is currently being tested with several produce companies.
 - Clean loads work best! Bag trails and plastic strapping can result in downtime and equipment damage.
- SVR would like to provide additional, cost-effective cull disposal options, but needs more information on the characteristics and seasonality.

Tim Flanagan, General Manager, [MRWMD](#)
Dry Anaerobic Digester

Contact: tflanagan@mrwmd.org

- The district installed the first anaerobic digester in California to help diversify their revenue base after recognizing that landfills could not be the only solution. "Our need is to move to zero waste."
 - Anaerobic digestion works well for post-consumer material, such as the material that comes out of restaurants, and is fairly tolerant of contamination.
 - The material decomposes over approximately 90 days.
 - The CNG produced is carbon-negative and can be used to power trucks which are now parked on-site.
 - *"CNG is a much lower intensity [than diesel fuel]. that's one of the reasons why we believe anaerobic digestion is part of the puzzle for managing organics in the future."*
 - The facility, however, would need to be 7-10 times larger to manage the residual food waste that comes off the Monterey peninsula. This would cost more than \$30 million.
- "As rate payers, you should expect and demand that local government works together, that we keep costs down, that we partner with the private sector, that we plan responsibly, and that we develop sustainable programs--environmental, fiscally, and socially responsible.
- Contamination is challenging across material streams. Monterey County has also developed the [What Goes Where](#)" app, to help customers understand how to dispose of materials.

Keith Day, Owner, [Gabilan Ag Services](#)
Opportunities and Limitations to Composting Culls

Contact: kday@keithdaycompany.com

- Gabilan Ag takes a variety of agricultural products, including green waste and manure
- New challenges are on the horizon. "The industry changed before, and the industry is changing again today."
 - Regulations are more challenging.
 - Feedlots and dairies are closing.
 - Contamination with non-compostable materials means loads require more processing.
 - The moisture content of culls limits how much material composters can accept.
 - The volume and timing of loads also has an impact.

- Working together is the only way to manage these challenges, but they'll still take time. "We all know it doesn't happen overnight."

Dr. Sara Pace, Postdoctoral Scholar, [UC Davis Department of Food Science and Technology](#)

Contact: sspace@ucdavis.edu

- Dr. Pace's project addresses the feasibility of treating food waste through a decentralized approach
 - The project features anaerobic digesters, which are self-contained in a modular system.
 - The decentralized approach helps reduce energy needs and GHG emissions from hauling the material to a centralized location.
 - They can be rapidly deployed, allowing them to be used as an alternative or compliment to large-scale, centralized systems.
 - The system will collect biogas to convert into electricity; digestate will be used as a soil amendment.
- This fall, one of the systems will be installed in Oxnard at a cold-storage facility and will treat food waste from local restaurants and food processors.

Brian Curtis, Founder & CEO, [Concentric Power](#)

Contact: bcurtis@concentricpower.com

- Concentric Power focuses on sustainable electric power and infrastructure, to help enable the creation of a renewable energy grid.
 - Concentric Power builds mostly cogeneration and microgrid facilities
 - Through special software controls and monitoring multiple renewable energy sources, the Concentric Power system optimizes energy production in real time.
 - The company is co-located in Salinas and Silicon Valley – they see the ag industry as long-term partners.

Dan Morash, Founder, [California Safe Soil](#)

Contact: Dan.Morash@calsafesoil.com

- California Safe Soil uses enzymatic digestion to break down food waste into a liquid fertilizer in three hours.
 - A pasteurization step eliminates pathogens, including e coli, salmonella, and listeria.
 - This process helps keep GHG out of the atmosphere and sequester carbon.
- The first commercial-scale plant was built in Sacramento; it currently serves 70 grocery store customers and processes about 5,000 tons of material per year.
 - Double-walled, insulated, pallet-sized totes in the refrigerated section of grocery stores are filled approximately every two days.
 - Each ton produces about 200 gallons of liquid fertilizer and 10% byproduct.
 - The byproduct is screened off and used as animal feed (either wet or dried).
 - Fats are sold as yellow grease, either for food additives or biodiesel production.

Poll Results: **What's in a Name?**

The audience was asked to participate in a poll to help identify an alternative name for "organic waste" or "culls" that is positive and implies real value.

The results from the poll are included in the chart below:

What's in a name?		
Ag byproduct	Upcycled Organics	Food for Thought
Fuel Grade Produce	Upcycled Produce	Organic Feedstock
Organic Matter	Produce Byproduct	Produce Energy
Redirected Greens	Refuel	Residual Organics
Reusable organics	Secondary Ag Commodity	Secondary Ag Product
Sustainable Supply Chain	Upcycled Harvest	