

Sanitation and Food Safety Issues for Tree Fruit Growers in 30 mins!



Lindsay Werner
Inspection Process Analyst Coordinator
Manage Federal Produce Safety Rule
Contract Work
207-592-2687

Outline

- Minimize risks during:
 - Growing
 - Refresher cleaning & sanitizing
 - Harvesting, Storage, Packing
- Selling Produce and Value Added products:
 - Licensing
 - Minimize risks for cider production specifically



Minimize Risk During **GROWING**

1. **Biological** Hazards

- Use safe water if it contacts the produce, especially when close to harvest
- Use treated soil amendments
- Deter (not prevent) animal entry to growing area

2. **Chemical** Hazards

- Use pesticides properly

3. **Physical** Hazards

- Keep kids with BB guns away from orchard



Cleaning & Sanitizing Refresher

Cleaning

- Cleaning = removes visible debris
- Cleaners = chemicals used to loosen residues
- Rinsed away with food debris.

Sanitizing

- Sanitizing = removes microorganisms
- Sanitizers = EPA registered pesticides that kill microorganisms.
- No rinse required. No residue if correct concentration.



The sanitation program OPTIONS:

- Clean (no detergent) – no rinse
 - Wiping with sanitizer?
 - Dry cleaning?
 - Power wash?
- Clean (detergent) – rinse
- Clean (detergent) – rinse – **sanitize**
 - No chemical residue, no rinse needed



Sanitizers

- Must be used per label directions for specific use
 - Sanitizing food contact surfaces
 - Produce wash water treatment
- Are supposed to be registered with Maine Board of Pesticides Control
- Working to develop a list of sanitizers and suppliers



When is sanitizing food contact surfaces required?

- When a farm is subject to the Produce Safety Rule and a food contact surface becomes contaminated, or as necessary to prevent contamination (micro load).
- When you are processing produce into value added products.
- Otherwise not required in laws/regulations.
- GAP audits (depends on the standard)



When is sanitizing difficult?

- When you are working with pretty much any produce harvesting/handling equipment.
- Surfaces must be smooth and non-porous.
 - Foam or brush rollers
 - Crevices in equipment
 - Rubber, foam, or wood materials
- Technically, for a surface to be “sanitized”, the surface must be cleaned with detergent first.



Minimize Risk During **HARVESTING**

- Wash hands before handling produce and any time hands become contaminated.
- Don't harvest contaminated produce.
- Use harvest containers/equipment that are **clean** and in good condition.
- Store harvest containers/equipment to minimize contamination
- Avoid placing hands on ladder rungs.



More on employees...

- Monitor employees for public health risk symptoms:
 - Sore throat w/fever
 - Open or infected wounds
 - Vomiting
 - Diarrhea
 - Jaundice (yellow skin or eyes)
- Got a sick employee? Discard or **disinfect/sanitize** what they touched, send them home or assign non-food task.
- Disinfecting = higher concentration than sanitizing, must be rinsed from food contact surfaces.



Minimize Risk During **STORAGE**

- Store dry, undamaged apples
- Cold holding below 40F ASAP after harvest
- Patulin (fungal toxin), blue mold = indicator
- Listeria (likes cold/wet like condensers and floors)
- Beware of apple contact with condensate, door flaps, uncleanable surfaces (walls).
- What contacts the floor? Bins that will be submerged in a dunk tank?



Sanitizers for Produce Wash Water

- These are intended to prevent contamination that comes in on one piece of fruit from contaminating all of the other fruit in the wash water.
- These do not kill everything.
- These do not address chemical contamination.
- Produce washing is generally a 1 log reduction vs 5 log reduction (kill step).
- These are not required unless GAP audited (recirculated water standard)



Minimize Risk During **PACKING**

- Sort damaged and decomposing apples before the dunk tank.
- Monitor dunk tank water clarity and/or sanitizer concentration.
- Keep grading/packing equipment clean.
- Dunk tank water 10F warmer than apples to prevent infiltration
- Think about what goes in the dunk tank.



What are the food safety expectations?

- Be aware of the hazards/risks.
- Train your employees so they are aware.
- Make handwashing readily available.
- Do the best you can.
- Make food safety improvement, not perfection, your goal.



Hygienic Equipment Design Workshop

- April 5th for ~24 apple growers
- Chris Callahan, Ag Engineer from UVM teaming up with Robson Machado from UMCE
- Hands-on equipment assessment and introduction to creating picture SOPs
- Bring pictures of your own equipment and pick Chris Callahan's brain.
- Good resource for equipment modifications.
- I have \$ for education, tell me what you want



Selling RAW PRODUCE

- No license required for sale of raw, intact produce.
- Can I sell drops?
 - YES unless you are subject to the Produce Safety Rule
 - Subject to the Produce Safety Rule? You can sell drops to customers that will process them in a way that kills E.coli (canning, cooking, fermenting, etc.). Animal food?



Food Licensing for **VALUE ADDED PRODUCTS**

- No license required for sale of raw, intact produce.
- Wholesale of food products requires home or commercial kitchen license depending.
- Retail requires an additional retail license if selling products in addition to your own.
- Mobile vendor if selling off-site
- Cider...



FDA Jurisdiction for Wholesale Cider

- Normally FDA jurisdiction requires interstate commerce but not for cider.
- Food Facility Registration if <50% sales retail.
- A wholesale cider processor could be exempt from Food Facility Registration w/FDA but still subject to 21 CFR 120 (Juice HACCP).



Cider = Juice (FDA definition)

*Maine gave cider a branding def.

Retail license (raw or treated)

- Raw cider is:
 - Processed under a cider license
 - Sold under a retail license
- Raw = no kill step (less than 5 log reduction)
- Raw must have warning statement

Wholesale (treated)

- Cider license allows wholesale
- Maine Regulation = Chapter 342
- Federal Regulation = 21 CFR 120 (refrigerated juices)
- HACCP plan required



Cider Safety Considerations

- **Common to treated and raw cider:**
 - Patulin contamination
 - Refrigerate ASAP
 - Tubing installed to self-drain
 - Drops ok if apples washed/brushed (potable or treated water), no manure or livestock in orchard.
 - Drops NOT ok if operating with a State of ME approved HACCP plan. DACF does not have a HACCP plan approval process.



Cider Safety Considerations

- **Raw cider:**
- Sanitation through the entire process
 - Grinders with screws are not smooth and easily cleanable
- Blend in some tart apples to lower pH
- pH rises during storage
- **Treated cider:**
- Sanitation pre-treatment
 - to prevent micro load in excess of what kill step designed to manage
- Sanitation post-treatment
 - Clean disposable gloves for handling caps
 - Don't contaminate tank filters



Resources for Farms:

- Growing, Harvesting, Packing, Holding
 - PSA Grower Training (UMCE)
 - On-Farm Readiness Review (DACF and UMCE)
 - Technical Assistance (DACF and UMCE)
- Cider:
 - FDA Guidance for Industry: Juice HACCP Hazards and Controls Guidance
 - UMCE Bulletin #4191, Food Safety Facts: Safe Home Made Cider
 - DACF food inspector and Chapter 342



Gross Annual Sales

Total Food Sales

\$500K

*Includes all food for human or animal such as hay or value-added products

Produce Sales

\$25K

*Includes covered and not covered produce and produce purchased for resale



% Sales to Qualified End Users (QEU)

*QEU is direct to consumer or retail store/restaurant within 275 miles of the farm
*Above or below 50%?

THANK YOU



www.maine.gov/agriculture

207-287-3841