



Food Safety Basics for Small Farms

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Outline of Talk

- What are GAPs & why they are important.
- What steps do I need to take to develop a GAPs plan for my farm?
- What are key areas of concern related to food safety risks?
- How do I develop a food safety plan for my farm?
- What documentation do I need?

What are GAPs?

- Good Agricultural Practices: A set of methods that produce growers can follow to prevent or minimize the risk of on-farm contamination of fruits and vegetables.
- The use of Good Agricultural Practices (GAPs) during growing, harvesting, sorting, packaging, storage and transportation of fresh fruits and vegetables is key to preventing pathogen contamination.

Why are GAPs important?

- Outbreaks: Over the past 20 years, there has been an increase in the number of outbreaks associated with fresh produce.
- Market Demand: Many buyers have begun requesting guarantees that growers are implementing GAPs. Some are requiring third party audits.
- Food Safety Modernization Act.

What steps do I need to take?

- Assess food safety risks on your farm (see USDA QuickGaps Audit checklist online).
- Develop a Food Safety Plan for your farm (Outlines policies and procedures that your farm adheres to with respect to food safety standards).
- Provide training to all workers in food safety protocols.
- Establish traceback/recall program
- Record Keeping/Documentation

Assess your risks: Key Areas of Concern

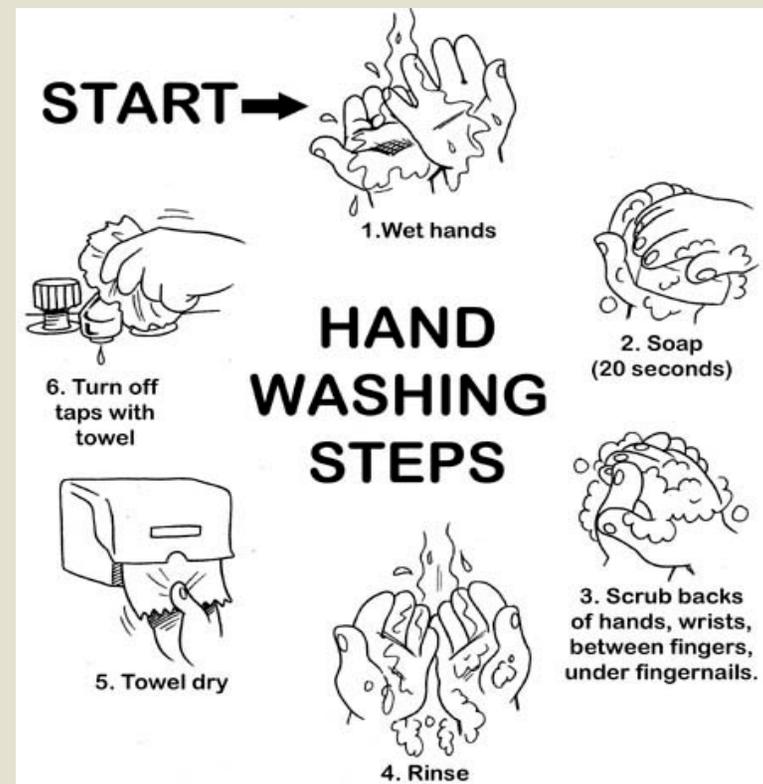
- Worker hygiene and sanitary facilities
- water quality risks
- prior land use,
- adjacent land use,
- soil fertility management,
- wildlife, pest, and vermin control,
- harvesting and cooling practices.

Food Safety Manual

- Outlines policies and procedures for GAPs implementation on the farm
- Identifies who is responsible for food safety oversight on farm.
- Describes standard operating procedures for cleaning, sanitizing, wildlife & pest monitoring, soil fertility management.
- Outlines content and timing of worker training in food safety.
- Includes all record keeping sheets to verify GAPs.

Worker Health and Hygiene

- Clean drinking water is always available with single use cups and water source documented.
- Signs posted instructing workers when and how to wash hands
- Training in proper sanitation and hygiene is provided to all staff
- All toilet facilities and handwashing stations are clean and properly supplied.



General Sanitation

- SOP for clean restroom facilities
 - Cleaned
 - Toilet paper
- SOP for clean handwashing facilities
 - Potable water
 - Soap
 - Single use towels
 - Garbage with lid



Record all Injuries

- If injured (including cut/nosebleed, etc), workers must treat wound immediately.
- Any contaminated product is discarded.
- Clean contaminated containers
- Record all accidents and responses.
- Everyone on farm knows location of 1st aid kit.



Water source, quality & usage

- Document your water source for irrigation and fertigation, and foliar application. It should be known to be safe and measures taken to protect it.
- All water sources are tested for pathogens and water analysis available.
- If necessary, mitigate any problems (sanitize well, establish backflow prevention system).
- Sewage treatment (document proper functioning).

Animals, Livestock

Prevent runoff to your farm



Not allowed during growing and harvest



Animals/Wildlife

- Fencing is in good condition and strategies are taken to minimize entrance of wildlife. Fields are monitored and recorded for wildlife entry.



Manure & Municipal Biosolids

- If raw manure: must apply 120 days (4 mo.) before harvest.
- Composted Manure & biosolids: must have documentation of proper treatment.
- Need records of source of manure.
- Store manure safely (no runoff)
- Must record manure application



Land and Soil

- No known risks of prior contamination
 - Dumpsite
 - Old home or barn
 - Old livestock pens
 - Sewage or toilet spill
 - Flooding from creeks or rivers
 - Septic tank spill on field
 - IF RISK, test soil.

3 YEAR BUFFER no flooding from creeks/rivers or septic tank or other sewage



Field Sanitation & Hygiene

- Number, condition and placements of field sanitation units comply with laws.
- Field sanitation units are accessible for servicing
- A response plan is in place in the event of a major spill or leak.



Flickr: Sister72

Clean Fields During Harvest



SOP: Cleaning Harvest Equipment

- All harvest buckets and wash tanks must be cleaned and sanitized daily.
- 1: Rinse with clean (drinking) water; use brush if necessary
- 2: Scrub with dish soap and rinse.
- 3: Sanitize with chlorine & water
 - 1 Tablespoon bleach (5.25%) to 1 gallon water
 - Test water with chlorine strips to make sure = 150ppm
- 4: Air Dry or wipe with clean gloves and clean paper towel



House Packing Facility

- Receiving: All product is properly handled, stored, and moved to protect and minimize contamination.
- Packing house and area around it is cleaned on scheduled basis; garbage is dumped regularly; food handling spaces are clean & sanitized
- Pests: measures are taken to exclude animals or pests from packing and storage areas with an established pest control program.



SOP Washing/Packing line

- Wash water is tested and is safe to drink.
- Wash tank is cleaned and sanitized with 150 ppm solution on scheduled basis
- Processing water is sufficiently treated to reduce microbial contamination.
- Put ½ teaspoon 5.25% bleach in 6 gallons of water = 5ppm
- Use pH strips to make sure pH is between 6 and 7.5
- Water is changed when water appears soiled or when pH or chlorine is not correct.
- Rinse with water that is safe to drink just before packing.
- Food contact surfaces are clean and in good condition.



Storage and Transportation

- Packing containers stored in a clean manner
- SOP for cleaning the packing & storage area
- Chemicals stored separate from product.
- Vehicles used for transport are cleaned regularly & documented.
- Produce is kept clean, cool, covered during transport



Ice & Refrigeration

- Water used for cooling/ice is potable.
- Facilities used to make, store and transport ice are clean and have been sanitized.
- Refrigeration condensation not in contact with produce.
- Temperature control logs are maintained.
- Iced product does not drip on pallets below



Traceback System



- Documented Traceback System with IRQ Label and invoice:
 - Identity of Product
 - Responsible Party
 - Quantity
 - Date of harvest/packing
- Records are kept recording source of incoming product and destination of outgoing product.

Documentation/Record Keeping Forms

- Input use records (fertilizer & pesticides)
- Toilet & Handwashing Maintenance Record
- Farm Cleaning Record (harvest container, wash bin, packing shed, truck)
- Worker Training Record
- Traceback Records
- Pest/wildlife Control Records
- Injury Report Form
- Contamination Response Record

Concluding remarks

- Developing a food safety plan for your farm is important.
- Knowing what to include can be hard to discern, depending on particular risks.
- Food safety landscape is constantly shifting so specifics may change.
- Be prepared—get a head start now.

Resources

- USDA GAPs/GHPs QuickGaps Audit Verification Check List:
[http://www.ams.usda.gov/AMSV1.0/getfile?
dDocName=STELPRDC5050869](http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5050869)
- Cornell University: : <http://www.gaps.cornell.edu>
- University of Vermont:
<http://www.uvm.edu/vtvegandberry/foodlinks.html>
- Penn State University: [http:// www.foodsafety.psu.edu/GAPs/](http://www.foodsafety.psu.edu/GAPs/).
- http://www.oregon.gov/ODA/ADMD/gap_ghp.shtml.
- For updates about the implementation of FSMA: [http://
www.fda.gov/fsma](http://www.fda.gov/fsma).