

Produce Safety ALLIANCE

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Cornell University




Produce Safety Alliance

- Cooperative agreement between Cornell University, FDA, and USDA
- Established in 2010
- Focused on outreach and education
- Assist growers with meeting regulatory requirements



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The PSA Website

<http://producesafetyalliance.cornell.edu>



- You can even friend us on Facebook!



- Join the listserv!



- Contact us!

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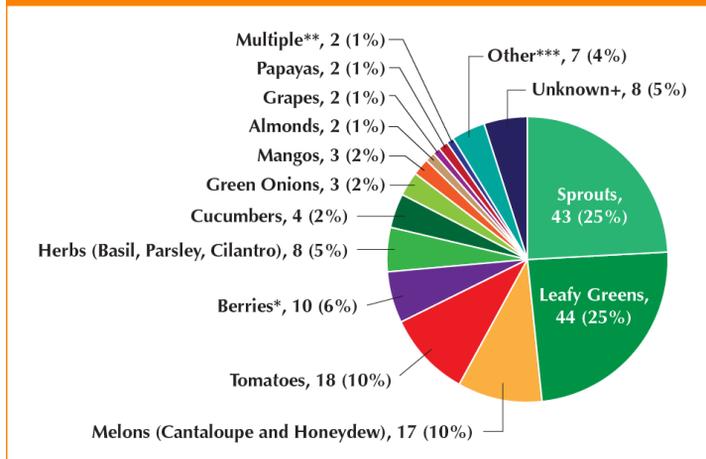


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Outbreaks Associated with Produce

FDA Outbreaks Linked to Produce Contamination Likely Prior to Retail: 1996–2014



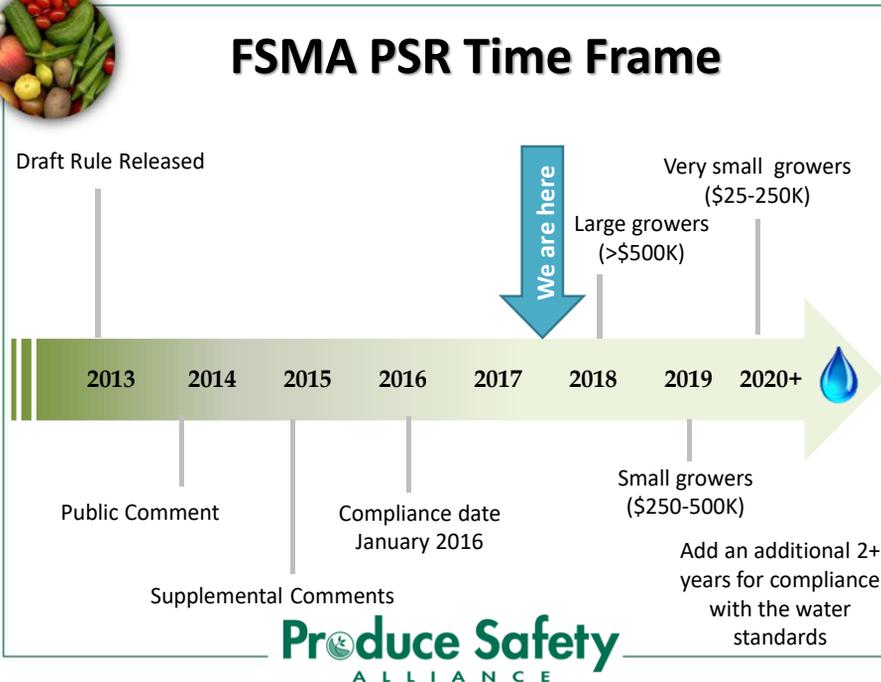
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FSMA PSR Time Frame



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Exclusions & Exemptions

- Some growers may be **excluded** based on:
 - Produce sales <\$25,000
 - Commodities grown are rarely consumed raw
- Some growers may be **exempt** based on:
 - Processing activities that include a ‘kill step’
 - Average annual food sales and to ‘qualified end users’

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Qualified Exemption

1. The average annual value of all **food** the farm sold during the 3-year period preceding the applicable calendar year was less than \$500,000

AND

2. During the previous 3-year period, more than half of the average annual value of the **food** the farm sold was directly to qualified end-users

- A qualified end user is: a consumer, or a restaurant or retail food establishment that is located in the same state or the same Indian reservation as the farm or not more than 275 miles from the farm

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The PSR Subparts

- | | |
|---|---|
| A – General Provisions | K – Growing, Harvesting, Packing, and Holding Activities |
| B – General Requirements | L – Equipment, Buildings, Tools, and Sanitation |
| C – Personnel Qualifications and Training | M – Sprouts |
| D – Health and Hygiene | N – Analytical Methods |
| E – Agricultural Water | O – Records |
| F – Biological Soil Amendments of Animal Origin and Human Waste | P, Q, R – Variances, Compliance, and Withdrawal of Qualified Exemptions |
| I – Domesticated and Wild Animals | |

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Highlights

- **Worker Training**
- **Animals & Soil Amendments**
- **Water**
- **Postharvest Sanitation**



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Training Requirements: Farm Workers



- All personnel who handle produce or food contact surfaces, or who are supervisors of said personnel, **must receive adequate training per person's duties**, upon hiring and periodically thereafter, at least once annually
- Training must be conducted in a manner that is **easily understood** by personnel being trained

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Workers

Proper Use of Toilets and Sinks



Clothing, jewelry, & footwear



Harvest



Break Areas



Illness or Injury

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Worker Training Log

Name of operation: _____ Date: _____
 Trainer: _____ Training Time: _____
 Location: _____
 Training material (Please attach any written materials to this log with a staple): _____

Employee Name (please print)	Employee Signature
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____
11. _____	_____
12. _____	_____
13. _____	_____
14. _____	_____
15. _____	_____

Reviewed by: _____ Title: _____ Date: _____

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Animals & Soil Amendments

- Soil amendments of animal origin are considered highest risk
 - Raw manure
 - ‘Aged’ or ‘stacked’ manure
 - Untreated manure slurries
 - Untreated manure teas
 - Agricultural teas with supplemental microbial nutrients
 - Any soil amendment mixed with raw manure



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Reducing Soil Amendment Risks

- Selection
- Treatment
- Application Timing
- Application Methods
- Handling and Storage
- Recordkeeping



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Recordkeeping: On-Farm Composting

Key factors in the composting process must be documented. These may include the following steps depending on the process used:

- Time
- Temperatures
- Turnings
- Other processing steps



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What Water Must Meet Requirements?

Agricultural water means water that is intended to, or is likely to, contact covered produce or food contact surfaces.



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Production Water Uses Include:

- Irrigation
- Fertiligation
- Crop sprays
- Cooling
- Frost protection
- Dust abatement
- Other uses where water directly contacts produce



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Water Quality Criteria for Water Used During Growing Activities

- Geometric mean of **126 or fewer** CFU generic *E. coli* per 100 mL water

AND

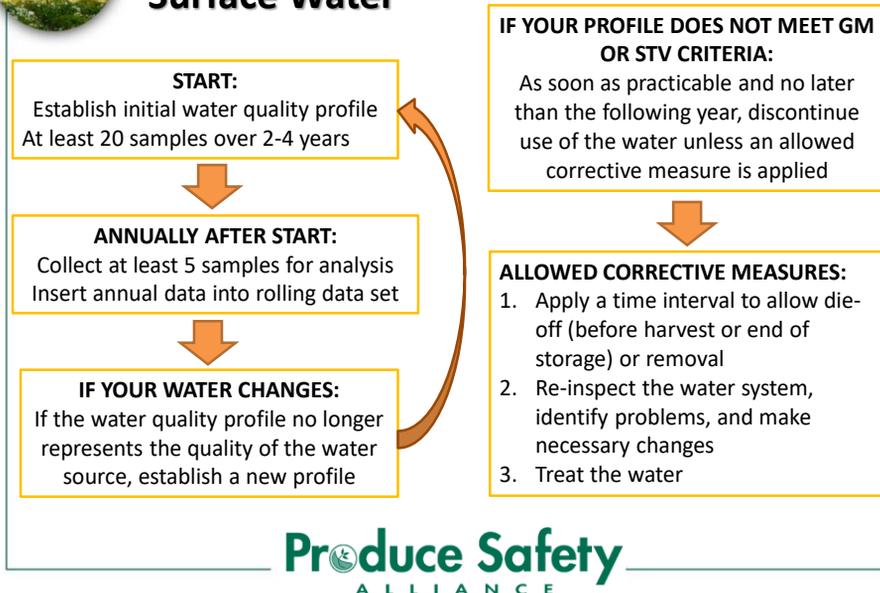
- Statistical threshold value of **410 or fewer** CFU generic *E. coli* per 100 mL water

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Microbial Water Quality Profile: Surface Water



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Water Quality Criterion for Harvest and Postharvest Activities

- Water must have no detectable generic *E. coli* per 100 mL sample
 - Direct contact with covered produce during or after harvest
 - Direct contact with food contact surfaces
 - To make ice
 - For handwashing
- Untreated surface water may not be used for these purposes



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Agricultural Water Quality

Agricultural water must be safe and of adequate sanitary quality for its intended use



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Packing Areas

Open



Fully Enclosed



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Produce Safety Curriculum

~ Seven hours of instruction

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training
- Soil Amendments
- Wildlife, Domestic Animals, & Land Use
- Water: Production and Postharvest Water
- Postharvest Handling and Sanitation
- How to Develop a Farm Food Safety Plan

Completion of course results in certificate from Association of Food and Drug Officials (AFDO) to meet regulatory requirement for training

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Course Manuals

- Full modules with extensive notes
- Table aligns modules with Produce Safety Rule
- Resources for developing written farm food safety plans, SOPs, recordkeeping
- Resources from FDA and USDA (AMS & NRCS)

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Draft example of slide containing grower training notes.

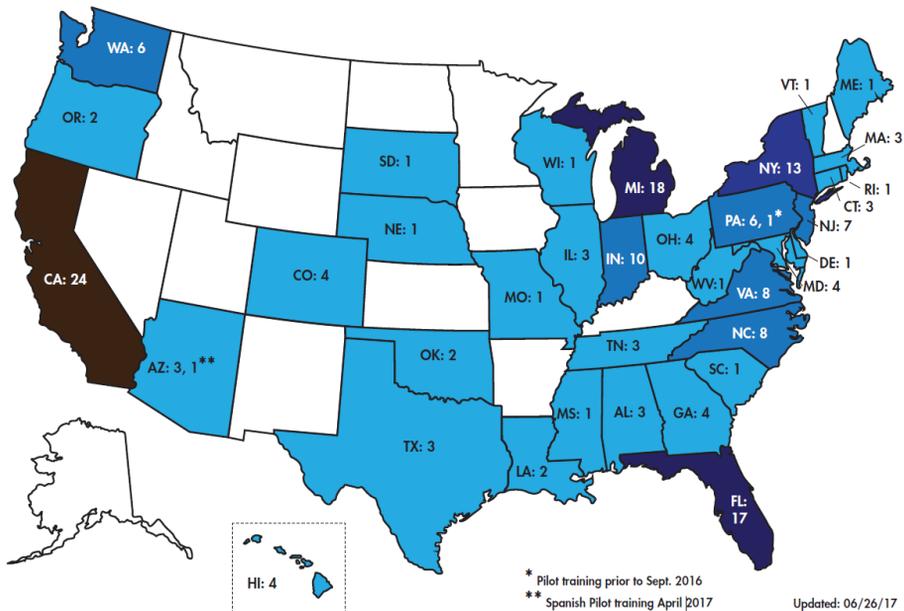
Soil Amendments & Food Safety Risks

- Biological soil amendments, especially those that include untreated (raw) manure, pose significant microbial risks
- Synthetic (chemical) soil amendments can also impact food safety, if not prepared and applied properly
- Risks should be assessed when selecting and applying all soil amendments on produce fields

- It is important to consider the types of soil amendments being used on the farm (if any) and understand the risks they may pose to produce.
- In general, the biggest risk is from soil amendments that contain manure or other biological components of animal origin that have not been treated to reduce microbial risks.
- Biological soil amendments may contain biological components of animal origin that are not manure-based (e.g., blood meal, bone meal). Risks associated with these types of amendments will be discussed later in the module.
- § 112.51(a) defines a treated soil amendment as having been processed to completion to reduce microorganisms of concern in accordance with §§ 112.54(a) and (b) (which references section § 112.55 microbial criteria, or in the case of agricultural tea, the biological materials used to make the tea have been processed and the water has no detectable generic *E. coli*/100ml water.
- § 112.51(b) defines a biological soil amendment of animal origin to be untreated if it:
 - 1) Has not been processed in accordance with § 112.54, or in the case of agricultural tea, the biological materials have not been processed or the water used to make the tea has detectable generic *E. coli*/100ml.
 - 2) Has become contaminated after treatment
 - 3) Has been recombined with an untreated biological soil amendment of animal origin
 - 4) Is or contains a component of untreated waste that you have reason to believe is contaminated
 - 5) Is an agricultural tea made with biological materials of animal origin that



Nationwide Produce Safety Alliance Grower Training Courses Sept. 2016 Through June 2017





PSA Train-the-Trainer Course

Mayaguéz

August 29 & 30, 2017



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Summary

- The PSR is similar to GAPs, in most cases
- A few records are required
- Water standard implementation is delayed
- Training is key – see you in Mayaguéz!



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