Produce Safety Rule and Agricultural Water Reuse

Sandra Menasha
Vegetable/Potato Specialist
Cornell Cooperative Extension – Suffolk County
srm45@cornell.edu
Food Safety Modernization Act (FSMA)

- FSMA was signed into law January 4, 2011
  - Most sweeping reform of US food safety laws in over 70 years
  - Published in Federal Register November 27, 2015
  - Regulation became effective January 26, 2016

- Focus on prevention of food safety issues
  - Microbial contamination/human pathogens

- Seven Primary Rules within FSMA
  - Produce Safety Rule
  - Preventative Controls for Human Food
  - Preventative Controls for Animal Food
  - Foreign Supplier Verification Programs
  - Accreditation of Third Party Auditors/Certification Bodies
  - Sanitary Transportation of Human and Animal Food
  - Prevention of Intentional Contamination/Adulteration
FSMA Produce Safety Rule

• Mandatory Federal Standard for the growing, harvesting, packing and holding of produce for human consumption

• Some growers may be eligible for an exemption based on:
  • Commodities grown
  • Processing activities
  • Average annual produce sales
  • Average annual food sales to “qualified end user”

• All growers should be mindful and take action to reduce food safety risks on the farm
Key Requirements of the Produce Safety Rule

- Worker Health, Hygiene, and Training
- Biological Soil Amendments
- Wildlife, Domesticated Animals, and Land Use
- Agricultural Water – Production Water
- Agricultural Water – Postharvest Water
- Post Harvest Handling and Sanitation
- Equipment, Tools and Sanitation
## Compliance Dates

<table>
<thead>
<tr>
<th>Business Size</th>
<th>Years to comply after 1-26-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>All other businesses (&lt;$500K)</td>
<td>2</td>
</tr>
<tr>
<td>Small Businesses (&lt;$250K - $500K)</td>
<td>3</td>
</tr>
<tr>
<td>Very small businesses (&lt;$25K - $250K)</td>
<td>4</td>
</tr>
</tbody>
</table>

*Compliance dates for certain aspects of the ag water requirements allow an additional 2 years beyond each of these compliance dates*
Agricultural Water

• Production Water
  • Water used in contact with produce during growth
  • Irrigation, fertigation, foliar sprays, frost protection

• Postharvest Water
  • Water used during or after harvest

Subpart E – General Requirement:

“All agricultural water must be safe and of adequate sanitary quality for its intended use (§112.41)
Specifics in Produce Safety Rule

- Agricultural Water – Subpart E

  - §112.42(b) – You must adequately maintain all agricultural water distribution systems to the extent they are under your control as necessary and appropriate to prevent the water distribution system from being a source of contamination to covered produce, food contact surfaces, areas used for covered activities.

  - §112.44 (b) – When ag water is used during growing activities for covered produce using a direct water application method, following criteria apply:
    - A geometric mean of water samples of 126 or less colony forming units of generic E. coli per 100 mL of water
    - Statistical threshold value of ag water sample of 410 or less CFU of generic E. coli per 100 mL of water
Specifics in Produce Safety Rule

- Post Harvest Water – Subpart E
  - Post harvest water has the potential to spread contamination widely
  - §112.43 discusses water treatment requirements
    - Treatment method must be effective to make the water safe and of adequate sanitary quality for its intended use and/or meet the relevant microbial quality criteria
    - You must deliver the treatment in a manner to ensure that the treated water is consistently safe and of adequate sanitary quality for its intended use and/or meet the relevant microbial quality criteria

- §112.132 and 112.133 – Used water from washing and cooling produce must be properly disposed of so that it does not serve as a source of contamination to food contact surfaces and other areas used for covered activities (including production and packing areas)

- Waste water should be discharged away from production and packing areas, preferably down a drain or into a catch basin - GAPs
Hand Washing

• §112.130 (c)
  • You must provide for appropriate disposal of waste water associated with hand-washing facility and take appropriate measures to prevent waste from a hand-washing facility from contaminating
    • covered produce
    • food contact surfaces
    • areas used for covered activities
    • ag water sources
    • ag water distribution systems
FDA has not yet issued guidance about how a farm should avoid contamination of covered produce with waste water....just that it has to happen
Concerns with Ag Water Discharge

- FSMA Produce Safety rule
  - Microbial contamination

- Local, State and Federal
  - Sediments
  - BOD levels
  - Water treatment products

- Little to no Nitrogen is Vegetable wash/rinse water
Check Local and EPA regulations for water discharge

• What we know but where can it be found?
  • No discharge into a ditch because it could end up in waterways
  • Cannot go into a waterway directly
  • Cannot go into septic systems?
  • Discharge shouldn’t exceed 1000gals per day
  • Levels of things like chlorine should not be over 800ppm
  • Discharge into vegetative strips or into a French drain that seeps into a vegetative area ok

• NYS Dept Ag and Markets AEM Information Sheet – Process Wash Water
Where do we go from here?

- State, local and EPA regulations need to be accessible to growers
  - And what are they

- Factsheets and other resources should be developed for ag water discharge

- We can make growers aware of them at grower trainings, newsletters and through other outreach activities and print materials