Resources from Webinar

Emerging Issue: Analysis of Agricultural Water and Spent Sprout Irrigation Water

Webinar with APHL
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Kaiping Deng, Sprout Safety Alliance
kdeng3@iit.edu

Don Stoeckel, Produce Safety Alliance
dstoeckel@cornell.edu

The PSA team members

General information

- Electronic Code of Federal Regulations Produce Safety Rule
- PSA, SSA, and MSU article in APHL Bridges publication Agricultural Water Testing and the FSMA Produce Safety Rule (Summer 2018, page 5 link here)
- PSA article in Comprehensive Reviews in Food Science and Food Safety journal Meeting Report: Key Outcomes from a Collaborative Summit on Agricultural Water Standards for Fresh Produce (02/2019 link here)

Slide 23: Testing Methods

FDA reference methods for testing E. coli O157:H7 and Salmonella in spent sprout irrigation water or sprouts link here
Draft Sprout Guidance link here

Slide 26 and 27: Equivalent Testing Methods
Equivalent methods for testing *E. coli* O157:H7 and *Salmonella* in spent sprout irrigation water or sprouts [link here]

**Slide 35: SSA TAN**

Sprout Safety Alliance Technical Assistance Network [link here]

**Slide 39: Labs are one source of information**

Other sources of information for farms:

- FDA FSMA Technical Assistance Network (regulatory TAN) (04/2017 [link here])
- FDA Produce Safety Network (not dated [link here])
- FDA State Produce Implementation Cooperative Agreement Program (CAP) (09/2017 [link here])
- North Central Region Center for FSMA Training, Extension, and Technical Assistance ([link here])
- Northeast Center to Advance Food Safety ([link here])
- Western Regional Center to Enhance Food Safety ([link here])
- Southern Center for Training, Education, Extension, Outreach, and Technical Assistance to Enhance Produce Safety ([link here])
- Native Food Safety Food Safety Training for Indian Country (launched 2018 [link here])
- University of Arkansas Indigenous Food and Agriculture Initiative (not dated [link here])
- Local Food Safety Collaborative (2017 [link here])
- National Farmers Union ([link here])
- National Young Farmers Coalition ([link here])
- JIFSAN Produce International Partnership for Education and Outreach (PIP) (2018 [link here])

**Slide 40: Compliance Timeframe**

Compliance date extension

- FDA Stakeholder Update *FDA Considering Simplifying Agricultural Water Standards* (03/2017 [link here])
- FDA Final Rule *Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption; Extension of Compliance Dates for Subpart E* (03/18/19 [link here])
  - See in particular additional guidance provided in response to Comment 6, Comment 9 at the end of the rulemaking document.

**Slide 46: Other information about production water criteria**

MWQP calculations

- Western Center for Food Safety *Tools to calculate Geometric Mean and Statistical Threshold Value* (UC Davis and University of Arizona [link here])
  - Western Center for Food Safety at UC Davis calculator for MWQP calculations (surface water [link here], ground water [link here])
  - University of Arizona calculator for MWQP calculations (App [link here], online calculator [link here])
- FDA Question and Answer Sheet *FSMA Final Rule for Produce Safety: How Did FDA Establish Requirements for Water Quality and Testing of Irrigation Water?* (November 2015: [link here])
- PSA Fact Sheet *Geometric Means, Statistical Threshold Values, and Microbial Die-Off Rates (longhand calculations)* (02/17/2017 [link here])

**Slide 47: Test methods**
Equivalent methods

- FDA Fact Sheet *Equivalent Testing Methodologies for Agricultural Water* (9/11/17; updated 7/3/2018 [link here](#))
- PSA Fact Sheet *The Water Analysis Method Requirement in the FSMA Produce Safety Rule* (Updated 04/2019 [link here](#))

*Slide 55: Lab mapping effort*

- MSU and PSA Standard Operating Procedure *Creating a Database of Water Quality Testing Labs* (07/2018 [link here](#))

*Existing Maps (list may not be complete; provided with organization and point of contact)*

- Northeastern consolidated [lab map](#), POC Hannah Doyle, Chris Callahan, Elizabeth Newbold
- Michigan State University Extension [fact sheet](#) including embedded lab map POC Phil Tocco, Marissa Schuh, Ben Phillips
- University of Wisconsin and DATCP [lab map](#) POC UWEx Kristin Krokowski
- University of Minnesota [lab map](#) POC UMN Annalisa Hultberg
- Iowa State University [lab map](#), lab list POC Joe Hannan
- Missouri by K-State [lab map](#), POC K-State Josh Maher
- Kansas State University [lab map](#), POC K-State Josh Maher
- Kentucky [lab map](#) POC Paul Priyesh Vijayakumar or Badrinath Jagannathon click Features button to turn off non-water labels for easier viewing
- Virginia Department of Agriculture and Consumer Services [lab map](#) and [lab list](#) POC Erik Bungo
- North Carolina State University fact sheet and [lab list](#)
- Washington State University fact sheet and [lab map](#) POC Faith Critzer
- Colorado [fact sheet](#) and laboratory selection guidance, [lab map](#) POC Martha Sullins
- Hawaii list of laboratories no map