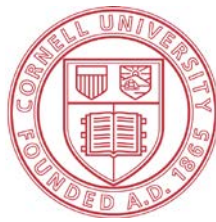




Institute for Food Safety
at Cornell University



Produce Safety
ALLIANCE

Soil Summit 2017

Location: New York State Agricultural Experiment Station - Geneva, NY

Date: March 28-29, 2016

Hosted by: Produce Safety Alliance & Institute for Food Safety at Cornell University

Summary:

There are many types of soil amendments used on fruit and vegetable farms across the country. Soil amendments such as compost and raw manure benefit crop growth, soil fertility and tilth, but also help manage waste from animal agriculture. Though there are many benefits to their use, there can also be environmental and food safety risks presented. Raw manure, in particular, has a higher potential to contain foodborne pathogens that can cause illness, especially if fruits and vegetables become contaminated, either directly (e.g., improper application or processing of compost) or indirectly (e.g., through contaminated irrigation water from runoff).

The United States Food and Drug Administration (FDA) has addressed food safety risks associated with the use of soil amendments through the Food Safety Modernization Act (FSMA) Produce Safety Rule that was published in the Federal Register on November 27, 2015. During the initial proposal and comment period for the FSMA Produce Safety Rule, concerns were raised about a proposed nine-month interval between the application of raw manure and the harvest of produce crops covered by the rule, and a proposed 45-day interval after the application of composted manure. Many commenters felt the provisions would be too burdensome for produce growers and may be more restrictive than necessary to achieve the intended benefit to public health. As a result, the FDA decided to reserve a decision on the minimum application interval and to conduct additional research and a risk assessment. This additional work is designed to quantify the risk of human illness associated with the consumption of produce grown in fields amended with untreated biological soil amendments of animal origin and to evaluate the impact of interventions that include the use of an application interval (or intervals).

Both the FDA and agricultural educators recognize the need to support produce growers in the evaluation of management options that preserve the benefits of manure use in their production systems, while also addressing the environmental and food safety risks associated with raw manure. The summit will begin by setting the stage to discuss current FDA efforts to conduct additional research and a risk assessment and the FSMA Produce Safety Rule standards included in Subpart F - Biological Soil Amendments of Animal Origin and Human Waste. However, the primary focus of the summit will be to outline the benefits and challenges of raw manure use, transitioning to use of compost when possible, and identifying management strategies to minimize food safety risks associated with the use of all soil amendments.

Goals of the Soil Summit

- Provide clarification on the FSMA Produce Safety Rule standards included in Subpart F - Biological Soil Amendments of Animal Origin and Human Waste
- Inform educators, produce growers, and researchers of current FDA risk assessment and research initiatives that are currently under way such as:
 - Data collection for risk assessment to inform polices regarding use of raw manure on produce farms that grow commodities covered by the FSMA Produce Safety Rule
 - Discuss other research or initiatives that FDA knows about or is supporting
- Provide the opportunity for small break-out sessions to discuss and brainstorm on the following topics that can help inform what resources and support might be necessary to assist produce growers. Discussion topics may include:
 - Current uses of raw manure on fruit and vegetable farms, including decision-making processes for their management and application
 - Barriers and benefits to the adoption of composting practices on produce farms
 - Discussion should include barriers and benefits including costs, availability, lack of information and/or infrastructure and any other relevant details
 - How to address situations where compost practices may not be feasible for the farm, including risk management strategies for the use of raw manure
 - Accessibility and other challenges of procuring compost, including costs, availability, and infrastructure needs
 - Development of key educational resources and protocols for composting or management of raw manure to reduce food safety risks that may be needed
 - Identify research gaps/needs to (1) better understand risks and practices to reduce risks, and (2) improve the quality of compost (e.g. nutrient profile).

Expected Outcomes of the Summit

1. Gain a better understanding of FSMA Produce Safety Rule standards related to the use of soil amendments, as well as current FDA research and risk assessment initiatives.
2. Increase knowledge about the diversity of biological soil amendments and production systems used on fruit and vegetable farms.
3. Develop a framework including a list of critical components necessary to develop a soil amendment management strategy that small farm owners could use to assess risks and minimize food safety risks while using raw manure.
4. Create an action item list that would encourage and support the use of compost, when possible, or other soil amendments that reduce risks associated with raw manure use.
5. Develop a list of research needs to address identified gaps in knowledge.
6. Publish a document (e.g., white paper) that summarizes the Soil Summit discussion topics, outcomes, and priority action items so that any future meetings can benefit from progress that was made during the summit.

Soil Summit 2017 – Draft Agenda

Day 1 – March 28, 2017

- 8:00 am *Refreshments & Registration*
- 8:30 am Welcome & Introductions
Betsy Bihn/Gretchen Wall
- 9:00 am Goals and Objectives for the Summit
- 9:45 am FSMA Produce Safety Rule Standards for Soil Amendments: Clarification on Requirements and Future Guidance
FDA Division of Produce Safety – Fresh Produce Branch/Dave Ingram
- 10:30 am *Break*
- 10:45 am Current FDA Efforts on Risk Assessment & Research
BSAAO Risk Assessment Team
- 11:15 am Summary of “Technical Forum on Produce Safety” – field trials and laboratory experiments conducted by FDA funded researchers associated with the persistence, fate, and transport of foodborne pathogens in soil amendments
Invited speaker/Dave Ingram
- 11:45 pm Challenges Regarding Compliance with the FSMA Produce Safety Rule: Subpart F & other Legal Requirements (Federal, State and Local) Associated with Soil Amendments
Discussion facilitated by PSA Team
- 12:30 pm *Lunch*
- 1:30 pm Introduction of Topic Areas for Break-Out Discussions
PSA Team
- 1:45 pm Break-Out Discussion #1: Identifying and Clarifying Current Raw Manure Use Practices
Small Groups, randomly assigned
- 2:15 pm Small Groups Present Key Findings/Challenges/Opportunities
- 3:00 pm *Break*
- 3:15 pm Break-Out Discussion #2: Reasons Why Growers Use Raw Manure & Challenges to Transitioning to Compost
Small Groups, randomly assigned
- 3:45 pm Small Groups Present Key Findings/Challenges/Opportunities
- 4:30 pm Summary of Day 1 & Ideas to Carry into Day 2
Dave Ingram/Betsy Bihn
- 5:00 pm *Adjourn*

Soil Summit 2017 – Draft Agenda

Day 2 – March 29, 2017

- 8:15 am Refreshments
- 8:30 am Recap of Day 1
Betsy Bihn/Gretchen Wall
- 9:00 am Currently Available Educational Materials & Resources
Jean Bonathal, Cornell Waste Management Institute (proposed)
- 9:30 am Break-Out Discussion #3: Grower Needs for Education, Resources, and Funding to Reduce Risks Associated with Raw Manure and Compost Use
Small Groups, randomly assigned
- 10:00 am *Break*
- 10:15 am Groups Present Key Findings/Challenges/Opportunities
- 11:00 am Soil Summit Reflections: What We've Learn & Educational Opportunities
Discussion facilitated by PSA Team
- 11:45 am Wrap Up & Evaluations
- 12:00 pm *Adjourn*