



**Challenges Regarding
Compliance with the FSMA
Produce Safety Rule: Subpart F
& Other Legal Requirements
Associated with Soil
Amendments**



Objectives

- Share concerns that have been expressed
- Encourage consideration and assessment
 - Do you have the same questions?
 - Do you think you already know the answers?
- Engage to expand understanding



Feedback

- Good data source for understanding challenges
- Questions and comments from growers
 - From trainings and the TAN
- Provide insight into where there is confusion
- Very complex topic, complex materials
- Not enough science to answer all the questions



FSMA Definitions

- Raw versus treated soil amendments
 - Biological soil amendments of animal origin
 - Chemical soil amendments
- Agricultural tea & agricultural tea additives
- Pre-consumer vegetative waste
- Non-fecal animal by-product
- Sewage sludge biosolids
- Growth media

FDA FOOD SAFETY
MODERNIZATION ACT



FSMA & Composting

- What is composting?
 - Validation process for composting procedures
- What is curing?
- Does ‘aged’ compost meet the compost requirements?
 - It is not raw, but how different is it?





FSMA Composting Definition

- *Composting* means a process to produce stabilized compost in which organic material is decomposed by the actions of microorganisms under thermophilic conditions for a designated period of time (for example, 3 days) at a designated temperature (for example, 131 °F (55 °C)), followed by a **curing stage** under cooler conditions.



FSMA Curing Definition

- *Curing* means the final stage of composting, which is conducted after much of the readily metabolized biological material has been decomposed, at cooler temperatures than those in the thermophilic phase of composting, to further reduce pathogens, promote further decomposition of cellulose and lignin, and stabilize composition. Curing may or may not involve insulation, depending on environmental conditions.



Composting Protocols and Validated Methods

- **Growers:**

- Where do I find approved composting protocols?
- Am I required to test each lot of compost for pathogens?
- How do I know if my compost supplier is treated properly?
- What documentation do I need if I buy compost?



Compost Producers and Suppliers

- **Compost manufacturers:**
 - Where do I find validated composting methods and the science to support it?
 - Proprietary method sharing concerns
 - Need clarification on testing requirements to validate methods
 - What documentation do I need to provide?



National Organic Program Considerations

- NOP application intervals not specifically established for food safety purposes
- 90/120 day intervals depending on crop
- Recordkeeping requirements





FSMA & Recordkeeping

- **What is required?**
 - Treated BSAAOs? Raw BSAAOs?
 - Treatment method
 - How it is handled and stored
 - Documentation from suppliers





FSMA & Application Intervals

- Lack of current application intervals
- Confusion about 0 day application intervals for untreated manure
 - “In a manner that does not contact covered produce during or after application”





Unique Waste Types

- Vermicompost & byproducts – worm castings, are worms animals?
 - Other types of insect feces
- Paunch waste – manure removed during slaughtering process
- HuManure & Composting Toilets
- Mortality composting
- Beer mash





Alternatives & Variances

Many questions about the difference between these two options and what is required to use them

- What other composting methods can be used?
- Does the industry, state or individual growers apply?
- What documentation do I need for variances and alternatives?





How do FSMA requirements integrate into current buyer requirements and industry standards?

OR

What do you mean the audit does not align with FSMA requirements?!?!



Third Party Audits

- Audit requirements
 - May not allow raw manure
 - May have specific distances for compost and manure storage
 - Variability in buyer requirements
 - Traceability for agricultural inputs
- Intersection with FSMA
 - FSMA practices are not an audit requirements....yet
 - Alignment of audit metrics with FSMA PSR





Industry Standards

- Industry standards
 - LGMA
 - TGAPs
 - Cantaloupe
 - May have specific application timelines



NATIONAL
Commodity-Specific Food Safety Guidelines for
Cantaloupes and Netted Melons





Local & State Nutrient Management Conflicts

- Challenges of finding and sharing local, regional, and state requirements
- Enforcement
 - Neighbor relations can be impacted
- Beyond farm nutrient management
 - Septic system issues





Educational Needs

- Course participants tell us the following resources are needed for soil amendment use:
 - Risk assessment tools
 - SOPs
 - Resources to clarify FDA terminology
 - Composting classes for small scale growers, with an emphasis on the food safety aspect
 - Infrastructure – how do I get this done and what's it going to take?