Produce Safety Educators
Call #40
September 30, 2019
2 pm ET
Instructions

- All participants are muted.
- There will be time for questions and answers throughout the meeting.
  - We may not get around to all comments/questions, BUT you may leave additional comments in the comment box to be compiled after the session.
- This session will be recorded and notes will be shared via the listserv and on our website after the call.
Agenda

- Introductions
- Module 3 – Soil Amendments Discussion
- Questions
Introductions

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Tucker Diego  
Agricultural Production Specialist  
Vermont Agency of Agriculture,  
Food & Markets

(sorry Sara, couldn’t find a fun shot)  
(sorry Tucker, couldn’t find a professional shot)
Steps Towards Produce Safety

1. Assess Produce Safety Risks
2. Implement Practices
3. Monitor Practices
4. Use Corrective Actions
5. Keep Records
Structure of Module 3

• Assess – slides 4 – 13
• Implement – slides 14 – 21
• Monitor/ records – slides 22-24
• Corrective actions – slide 25
NCR BSAAO Workshop

• Sept 11 and 12, Altoona and Ames, IA
• FDA SMEs, PSN, Extension, state regulators, industry reps, and compost suppliers
• A big thank you to all the organizers and presenters!
Concepts and approaches for engagement

- Use GMP mini handbook during training.
- Identify what soil amendments the audience uses.
- Use some humor.
- Use real word examples (or examples from the draft guidance).

What Is A Soil Amendment?
- Soil amendments are any chemical, biological, or physical materials intentionally added to the soil to improve and support plant growth and development.
- May reduce soil erosion and sediment runoff.
- Many different types of soil amendments are available.
- Soil amendments can present produce safety risks.
- Assessing risks and implementing GAPs can reduce risks.
Three key questions for participants to understand about their soil amendments

• Is the amendment a BSAAO?
• Is the amendment treated?
• How likely is the amendment to touch the harvestable portion of the crop?
Know your definitions

• Slides 7-15
• Have participants read PSR definitions
• Progression of risk with different types of soil amendments
• Note about pre-consumer vegetative waste
Less common soil amendments

• Agricultural teas
  – Specific definition (treated vs. untreated)
  – Foliar application vs. soil drench
• Use of amendments in potting mix
Inspectional Approach

• Inspectional approach may differ slightly from Draft Guidance:

This chapter will help you:

1. Determine whether your soil amendment is a BSAAO;
2. Determine whether your BSAAO is “treated” or “untreated;”
3. Determine the appropriate treatment process and associated microbial standard for your treated BSAAO;
4. Determine how to apply your BSAAO;
5. Determine the requirements for handling, conveying, and storing your BSAAO; and
6. Determine what records to keep related to your treated BSAAO.

- Draft Guidance pg 57
Inspectional Approach (cont.)

• Inspectional approach typically assesses treatment categories later on in the discussion:
  1. Does the farm use BSAAOs (check definitions)?
  2. When, where, how, and on what crops are BSAAOs applied?
  3. What PSR restrictions might apply to the farm’s uses of BSAAOs?
     • Manner of application restrictions
       – Direct contact, minimizes contact, or no contact?
     • Minimum application interval
       – Reserved, or 0 days
4. Based on the farm’s uses, including the intended manner of application, **should BSAAOs be treated?**
   - If yes, with what treatment method?
   - If treatment methods are not feasible or practicable, should alternative application methods or types of amendments be considered instead?

5. Are storage and handling practices being followed per 112.52?
## Inspectional Approach (cont.)

<table>
<thead>
<tr>
<th>If the biological soil amendment of animal origin is—</th>
<th>Then the biological soil amendment of animal origin must be applied—</th>
<th>And then the minimum application interval is —</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)(i) Untreated</td>
<td>In a manner that does not contact covered produce during application and minimizes the potential for contact with covered produce after application</td>
<td>[Reserved].</td>
</tr>
<tr>
<td>(ii) Untreated</td>
<td>In a manner that does not contact covered produce during or after application</td>
<td>0 days.</td>
</tr>
<tr>
<td>(2) Treated by a scientifically valid controlled physical, chemical, or biological process, or combination of scientifically valid controlled physical, chemical, and/or biological processes, in accordance with the requirements of §112.54(b) to meet the microbial standard in §112.55(b)</td>
<td>In a manner that minimizes the potential for contact with covered produce during and after application</td>
<td>0 days.</td>
</tr>
<tr>
<td>(3) Treated by a scientifically valid controlled physical, chemical, or biological process, or combination of scientifically valid controlled physical, chemical, or biological processes, in accordance with the requirements of §112.54(a) to meet the microbial standard in §112.55(a)</td>
<td>In any manner (i.e., no restrictions)</td>
<td>0 days.</td>
</tr>
</tbody>
</table>
Highlights from Iowa compost facility
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• Even commercial composting facilities may struggle to meet 112.54(b) standards.
• Composting facilities are not regulated by the PSR.
• But... composting is still a good agricultural practice!
• Many farms that compost their own manure may choose to consider it untreated even if they document turning and temperature records.
Highlights from Iowa compost facility

- Remember: BSAAOs that do not meet the 112.54(a) standard cannot be used to grow covered root crops.

Example 4e: If a farm incorporates an untreated BSAAO into the soil immediately prior to planting for the production of a root crop, this would cause the untreated BSAAO to contact the root crop after application (e.g., during growing). In this example, contact between the covered produce and the untreated BSAAO after application is both intentional and likely to occur and its application does not meet the requirements for untreated BSAAO under 21 CFR 112.56(a).

- Draft Guidance pg 68
Worker training & reducing risk

- Worker training addressed on slide 21
- Worker training requirements for anyone who handles covered produce 112.21 (a)
- 112.52 – handling, conveyance, and storage requirements
Application, handling, and storage

• Slides 17-20 address implementation requirements that relate to worker training

• Essential that workers working with BSAAOs understand how to assess risk.

Assessing Your Risks

• What type of soil amendments do you use?
  – Raw manure, composted manure, chemical, etc.

• What crops receive soil amendments?
  – Fresh produce or agronomic crops

• When do you apply them?
  – Days to harvest, time of year

• How do you apply them?
  – Incorporated, injected, surface applied

• How much and how often do you apply them?
  – Excessive application can lead to environmental impacts
Where to go with questions?

• Know who your state’s inspection agency is
  – FDA commissioned/credentialed or the state’s authority?
• Produce Safety Alliance
• Local Food Safety Collaborative
• Native Food Safety
• Regional food safety centers
• FDA PSN
Where to go with questions? (cont.)

• Use FDA Draft Guidance as a resource

• E.g. “Determining how to apply your BSAAO: a. Untreated BSAAOs”
  – “Minimize the potential for contact” means there is no intended contact between the BSAAO and covered produce during the relevant time period, but some unintentional contact is likely due to incidental or environmental action.
  – pg 68
Where to go with questions? (cont.)

• Ask around for resources on specific topics
  – Validation studies for composted mushroom substrate?
  – Fish hydrolysate/emulsion
  – Validation of vermicomposting (might be coming soon?)

• Connect with your regional commercial BSAAO suppliers
Questions & Discussion
Native American Tribes Series

November 4, 2019 - 2-3:30 PM Eastern
• Topic: Tribal Culture
• Speaker: Roylene Comes-At-Night, Washington State Conservationist and Deputy Equal Opportunity Officer

November 25, 2019 – 2-3:30 PM Eastern
• Topic: Eight Fascinating Cases Impacting Indians and Tribes
• Speaker: Stephen Pevar, Senior Staff Counsel - American Civil Liberties Union

Zoom URLs will be available on the PSA website shortly and shared via the meeting notes.
The PSA Website

http://producesafetyalliance.cornell.edu/

En español: es.producesafetyalliance.cornell.edu

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