REVISED:
Mushroom Farm Environmental Practices Manual

Producer’s Meeting:
March 1, 2012
Contents

• Introduction
• Miscellaneous Highlights
• Temporary Storage of Mushroom Compost (MC)
• Passive Composting
• Mushroom Compost Responsibility
• Mushroom Farm Environmental Management Plan (MFEMP)
• Certifications
• Land Application
• QUESTIONS
Introduction

- Last revision was published on April 14, 2003
- Committee began meeting in 2008
  - Waiting for Pennsylvania Department of Environmental (PA DEP) approval
  - Revisions are NOT finalized yet
Miscellaneous Highlights

- Vocabulary Changes
- Non-Agaricus Mushroom Farmers
- Storage of Straw & Hay
- Aeration
- Mushroom Stumps
**Miscellaneous Highlights**

- **Odor Site Index (OSI):**
  - New or expanding Mushroom Substrate Production Farms must complete an OSI (included in the MFEMP)
  - OSI Plan will first be reviewed by the State Conservation Commission (SCC) before MFEMP is approved by the Conservation District or DEP

- **Factors in OSI**
  - Odor Source
  - Site Land Use Factors
  - Surrounding Land Use Factors

- **Odor BMPs**
  - Level I
  - Level II
Temporary Storage of Mushroom Compost (MC)

- **Isolation Distances**
  - 300’ from a drinking water source and occupied dwelling (unless owner agrees to a reduced distance)
  - 100’ from a stream, wetland, sinkhole, and spring

- **Situations**
  1) < 120 Days of Storage
  2) Storage for Land Application
  3) Storage for > 120 Days and < 1 Year
  4) Transfer Facility

*NOTE: Storage of a Given Load of MC Cannot Exceed 1 Year*
Passive Composting

• Definition
  – Creation of shallow piles of MC and allowing it to decompose naturally

• Rotational System

• Impervious Pad

• Isolation Distances
  – 100’ from wetland, sinkhole, stream, lake, and pond
  – 300’ from drinking water source
  – 100’ from property boundary
  – Seasonal high water table must be more than 20” from surface
Mushroom Compost Responsibility

Flow Chart for Mushroom Compost Responsibility

Mushroom Compost
(also called fresh SMS as removed from growing)

Transport by mushroom farmer's truck
(farmer retains responsibility)

Field applied
(field owner and crop manager have responsibility)

Delivered to Active or Passive Composting
(site owner has responsibility)

Transport by commercial truck
(trucking company or broker has responsibility)

Field applied
(field owner and crop manager have responsibility)
(may require MC Application Sheet)
(limit: less than 180 days temporary windrow)

Unloaded at transfer station
(transfer station owner has responsibility)

Active Composting
(specialized site for turning, maintaining aeration)
(site owner has responsibility)

Passive Composting
(may involve temporary windrow)
(site guidelines must be followed, site owner responsible)
Mushroom Farm Environmental Management Plan (MFEMP)

- When a mushroom grower leases facilities, **both the grower and the property owner** are responsible for having a plan.

  - Plan Update Required When:
    - New construction is planned
    - Government regulations change
    - Potential to cause pollution changes
    - Farmer incorporates new technologies into the operation

- Integrated Pest Management (IPM) plans must be developed and submitted to the Conservation District.
Certifications

- It is likely there will be new requirements for Manure Haulers and Brokers
  - Certifications
  - Recordkeeping
- Hauler
  - Person employed to haul and/or land apply MC
  - Not taking ownership of the material
- Broker
  - For any party taking temporary ownership of MC from the mushroom farm for application to someone else’s agricultural operation
Land Application

• Mushroom Compost
  • In accordance with a MC Field Crop Application Sheet

Setbacks:
• 100’ of a drinking water source, springs, sinkholes, streams, or lakes
• 35’ from water courses if there is a permanent vegetative buffer
Land Application

- **Mushroom Wastewater**
  - Nutrient Balance Sheet (NBS)
  - Hydraulic Loading Calculations

*Setbacks:*
- 100’ of a drinking water source, springs, sinkholes, streams, or lakes
- 35’ from water courses if there is a permanent vegetative buffer
QUESTIONS?
Adam Mowery
amowery@chesco.org
610-925-4920 x 116
OTHER

- Wharf Management
  - Phase I
    - Cleaning Wharf after Filling
  - Phase II
    - More Sweeping and Less Wash-down
- Sprayfield
  - Size & Maintenance
- Constructed Wetlands
  - Part of an Ag Waste System
- Stacking Pads
  - Peat Moss and Excess MC
- Rock Apron
  - Clean Water Outlets
- Biomass Trader
  - http://www.biomasstrader.org/
WEB SOIL SURVEY:
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
**Warning:** Soil Ratings Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:24,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale. Enlargement of maps beyond the scale of mapping can cause a misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

<table>
<thead>
<tr>
<th>Map unit symbol</th>
<th>Map unit name</th>
<th>Rating (centimeters)</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaB</td>
<td>Calhoun loam, 3 to 8 percent slopes</td>
<td>46</td>
<td>4.0</td>
<td>15.0%</td>
</tr>
<tr>
<td>CgA</td>
<td>Cokesbury silt loam, 0 to 3 percent slopes</td>
<td>15</td>
<td>1.0</td>
<td>4.1%</td>
</tr>
<tr>
<td>GdB</td>
<td>Gladstone gravelly loam, 3 to 8 percent slopes</td>
<td>&gt;100</td>
<td>3.1</td>
<td>12.2%</td>
</tr>
<tr>
<td>GdC</td>
<td>Gladstone gravelly loam, 8 to 15 percent slopes</td>
<td>&gt;100</td>
<td>0.4</td>
<td>1.5%</td>
</tr>
<tr>
<td>Ha</td>
<td>Hotton silt loam</td>
<td>8</td>
<td>2.7</td>
<td>14.5%</td>
</tr>
<tr>
<td>PaB</td>
<td>Parker gravelly loam, 3 to 8 percent slopes</td>
<td>&gt;100</td>
<td>1.0</td>
<td>7.1%</td>
</tr>
</tbody>
</table>