29L653

## OPERATION and MAINTENANCE

### OPERATION

A management program shall be established by the operator to maintain the structural integrity of the facility and to operate it in an environmentally sound manner. Proper management is imperative to achieve the optimal compost action.

The proper carbon to nitrogen ratio shall be maintained by using a mix of 100 cubic feet of sawdust per 1000 pounds of carcass or other mix as specified to maintain a carbon to nitrogen ratio of 20–30 to 1. Ammonium nitrate may be added as needed to reach the optimum CN ratio.

The proper moisture content shall be maintained at 50–60 percent by:
1 – Using damp (but not wet) sawdust.
2 – Adding extra water as needed to reach the optimal moisture content.
3 – Allowing green (wet) sawdust to dry before using in compost mix.

The temperature of the compost shall be monitored and shall reach a minimum of 135 degrees F. The temperature probe must penetrate one third of the distance from the outside of the pile to the center of mass. Compost that does not reach this temperature shall be dismantled, corrected, and rebuilt in order to reach optimal temperature. When the temperature of the compost falls below 105 degrees F, compost shall be turned to a secondary storage bin.

The following items shall be followed during the loading of the facility:

1 – One foot of sawdust shall be placed on the bottom of the bin.

2 – Carcasses shall be placed in layers with at least one foot of sawdust in between each layer.

3 – Carcasses shall be completely covered with at least one foot of sawdust.

4 – Large carcasses shall have one foot of sawdust in between carcasses within a layer.

5 – A minimum of 6 inches of sawdust shall be maintained between the carcasses and the sides of the bins.

Compost shall be loaded in bins in the following manner:

1 – The first bin shall be filled over a two month period.

2 – The second bin shall be filled over the second two month period.

3 – After the second two month period, compost from the first bin shall be turned into the third bin for secondary composting.

4 – Bin #1 shall now be filled again for two months.

5 – After the two month period, compost from Bin #3 shall be removed for final disposal and Bin #2 shall be turned to Bin #3.

6 – Bin #2 shall now be filled again.

This method shall be used for the number of bins as specified in this plan.

The completed compost shall be land applied in accordance with the Nutrient Management Plan. When conditions are not suitable for application, the completed compost shall be stored until conditions are adequate.

### MAINTENANCE

1 – Nuts must be kept snug throughout the life of the structure or serious damage could result.

2 – Facility shall be cleaned out at least once per year.

3 – Corrugated sheetmetal shall be kept securely fastened to purlins.

4 – Damaged wooden structural members shall be repaired or replaced.

DRAFT

NOT FOR CONSTRUCTION

Date
Designed
Drawn
Checked
Approved

SWINE COMPOSTING FACILITY
4' REINFORCED
CONCRETE STRUCTURE
OPERATION AND MAINTENANCE

United States Department of Agriculture
NRCS Natural Resources Conservation Service

File Name

Drawing Name
29–L–653

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Sheet 6 of 6

Adapted from Indiana
Standard Drawing IN–ENG–60

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