



# 10-Minute Supervisor Trainings

Kentucky Soil and Water Conservation Commission

March 2015

## On-Farm Composting

With recent difficulties finding companies or individuals to remove on-farm animal mortalities, the option of composting has become very beneficial to livestock owners. As conservation districts, we should encourage local landowners to research and implement this practice on their own operations in order to keep animal mortalities from becoming a pollutant to our local waterways.

### Rules and Regulations for composting:

- Under KRS 257.160, Animal carcasses may be disposed of by composting if the disposal is performed in accordance with state administrative regulations (302 KAR)
- On-farm composting facilities do not need to be registered or permitted with the state veterinarian if they are not commercially operated
- All facilities are required to meet the standards set by the Ky Ag. Water Quality Act
- Composting facilities cannot allow run-off to enter surface waters such as lakes, rivers, streams, wetlands, or sinkholes
- Landowners who compost must make every effort to prevent odor, insects, and pest by:
  - Maintaining proper moisture levels
  - Immediate placement of animals into the compost pack
  - Animals awaiting composting must be stored on concrete
  - Add finished compost or manure to the top of composted animals at the time of placing them into the compost stack
  - Clean up any run-off or outside spillage as soon as it occurs

### Where to locate the compost facility:

- Near animal housing
- Not in a flood plain
- Not within 300 ft. of a water well, stream, sinkhole, pond, property line, or public road
- Not within 1,500 ft. of a church, school, business, or public area
- Must be able to have a 30 foot filter strip on the lower side of the facility that meets NRCS specifications



### **Structures for the facility:**

- Under 100 animals – Compost can be directly on the soil
- Over 100 Animals- Compost must be on concrete, soil cement, geotextile, etc.
- Roofing is not required, but helps in preventing rain from altering the process of composting and prevents excessive run-off
- Bin System can be used—partitions into separate bins and each bin is turned with front end loader
- Vessel system is another option—Fans pull air through the compost as a motor turns the container (too expensive for private use)

### **Sizing:**

- Less than 100 head--- 60'x32' composting pad
- 100-200 head—80'x32' composting pad
- 200-300 head—110'x32' composting pad
- Each animal requires a bulking agent minimum pile of 3 cubic feet to maintain heat. 2 ft. of material on the bottom and the top of the animal is also required

### **Items needed:**

- *Bulking agent* -such as wood chips, sawdust, other wood products, and/or manure. These cause the heating process to compost and also absorb moisture and leachate
- *Front End Loader* - Used to rotate the compost between animals and to cover the animals to be composted and place animals into the facility
- *Thermometer and Moisture Probe* - Used to check the temperature of the compost and the moisture level to ensure proper deterioration of the animals. Should reach 140-160 degrees
- *Venting tool* - used to vent the rumens of any ruminant animals (knife, saw, etc.)

### **Time Frame:**

Normal breakdown is 3-6 months, depending on the size of the animal and the quality of the bulking agent to produce heat.

After the composting material no longer has the ability to heat, new material should be added and the previous bulking agent, along with the remnants of composted animals can be applied to the land to build the soil and nutrient levels.