

# Carcass Disposal:

## Composting



Composting is a relatively safe and simple method of carcass disposal that uses naturally occurring microbes (bacteria and fungi) to decompose carcasses. The process generates elevated temperatures which destroys disease-causing organisms.

### Compost Components

- **Carbon: Nitrogen ratio** - 25:1 to 40:1 ideal
- **Nitrogen:** Carcasses, manure
- **Carbon**
  - Plant co-compost: sawdust, ground cornstalks, peanut hulls, mulch, poultry litter, leaves
  - May require 3-5 cubic yards of cover materials per 1000# carcass.
- **Moisture** - 40-60%
- **Oxygen:** Aeration by forced air/fans, mechanical turning, or passive air exchange/diffusion
- **Temperature**
  - Inconsistent throughout pile
  - "Cool zone" on surface
  - Air temperature can influence decomposition

### Basic Design

- **Indoors or Outdoors**
- **Base layer**
  - 18-24 inches
  - Porous, but absorbent material (e.g., sawdust)
- **Carcasses**
  - Whole or ground
  - Caution if zoonotic disease involved
- **Co-compost layer**
  - 4-6 inches deep
  - 12 inches on sides
  - 5-7 feet high total
- **Biofilter layer on top**
  - Absorbs moisture and odors
  - Deters scavengers, drying
- **Recordkeeping**
  - Start date of each compost batch
  - Date and quantity of dead animal(s) or additions
  - Internal temperature of each active batch
  - Date compost material aerated

### Composting Process

- **1st phase – active, aerobic**
  - Oxygen dependent
  - High temperature (135-140°F)
  - 3-12 weeks
  - ~50% reduction in biodegradable solids
- **2nd phase – curing**
  - Lower temperature (77-86°F)
  - 10-240 days
  - Aeration less critical
  - Bulk density reduced 25%

### Considerations

- On-site process reduces biosecurity risks associated with transport
- Affected by weather and ambient temperature
- States may have regulations on use of method

### Management

- Monitor frequently - Desired initial core temperature should be between 135-140°F
- Monitor for cracks in cover material; add extra co-compost when necessary
- Protect from wind, rain, drying and scavengers

### Additional Resources

USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Disposal

[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/nahems\\_guidelines/disposal\\_nahems.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/nahems_guidelines/disposal_nahems.pdf)

Carcass Disposal: A Comprehensive Review. National Agricultural Biosecurity Center Consortium. <http://fss.k-state.edu/FeaturedContent/CarcassDisposal/CarcassDisposal.htm>

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