United States Department of Agriculture
NRCS Natural Resources Conservation Service

Composting Game Carcasses

Alabama Guide Sheet No. AL317C

Definition

The composting process is proving to be an acceptable method to environmentally dispose of game carcasses or their remains (entrails, hide, and bone from deer, feral hogs, etc.). The composting process uses a simple mixture of sawdust and fertilizer (or poultry litter), game carcasses, and water. After a complete composting process when the carcasses have decomposed to a stable material, the compost can be recycled to substitute for sawdust for later composting processes or it can be land applied as a fertilizer and soil amendment.

General Information

The composting facility must have a roof to exclude rainfall and should have individual composting bins for efficient use of space. Bins should be constructed of pressure treated lumber to a manageable dimension (generally 5 ft. deep, 10 ft. wide, and 5 ft. high). One bin this size can dispose of 30 to 50 medium size (50 to 100 lbs.) carcasses per year. The width of the bin can be varied according to the equipment that will be used to move the compost. An additional bin for secondary composting will be helpful to complete the composting process. Additional storage space will also be needed for sawdust or poultry litter used in the composting process. The floor of the facility should be either concrete or firmly packed clay.

Once euthanized, feral hogs may be moved to another site for composting unless prohibited by biosecurity restrictions or local regulations.

Operation and Maintenance:

1. The proper moisture content of the compost mix will be easier to maintain if the sawdust, poultry litter, or recycled game compost has the proper moisture content when added to the mix. It is difficult to uniformly add water to the mix after the composter is full.

2. The moisture content of the sawdust, poultry litter, or recycled game compost added to the mix should be about 60 percent, which is the point where a handful of the material will just begin to stay together when squeezed. If the material falls apart after being squeezed, it is too dry. Water should be sprinkled and mixed into the sawdust, poultry litter, or recycled compost slowly. If free water drips from the squeezed material, or if a film of free water is left on the hand, the material is too wet. The material should be spread to air dry or mixed with drier material to lower the moisture content before adding to the compost mix.

3. If space is available, the composting process can be improved by turning a filled bin and restacking into an empty bin after a few weeks. This will allow the mixture to reheat for another composting cycle.

4. The boards on one side of the bins should be removable to make loading and unloading the bins easier.

5. The nitrogen (N) content of poultry litter and recycled game compost is high enough that additional N will not need to be added. If sawdust alone is used, a small amount of high-N fertilizer (e.g., 34-0-0, 21-0-0) should be added to each carcass.

6. Antlers should not be placed in the compost bin. They could puncture tractor tires when the compost is spread on food plots.

<u>Basic Operating Procedures</u>:

1. Prepare a foundation layer of sawdust, poultry litter, or recycled game compost in the bottom of the bin before adding carcasses. This initial layer should be about 12 in. deep.

2. Place game carcasses side by side in a single layer on the foundation leaving at least 6 in. between the carcass layer and the bin walls. Uniformly sprinkle about 1 pint of high-N fertilizer on each 50 pounds of carcass if composting with sawdust only. Completely surround and cover the carcasses with at least 6 in. of damp sawdust, poultry litter, or recycled compost. If there are not sufficient carcasses for a full layer, cover the edges of the available carcasses with at least 6 in. of sawdust, poultry litter, or recycled compost and begin adding carcasses at that point as they become available. Never leave any part of a carcass exposed even if extra sawdust, poultry litter, or recycled compost must be added.

3. Continue this layering procedure until a bin is full. The last layer used to cap the bin should be 12 in. thick of sawdust, poultry litter, or recycled game compost. Do not build the pile over 5 feet high. A temperature rise in the compost pile to 125°F or higher indicates that the process is working. NOTE: If a bin does not properly heat, it is probably too wet or too dry or was filled improperly. If the cause is dryness, this can be corrected by turning the mixture into an adjacent bin and spraying on water as it is turned. Mixtures that are too wet can attract and produce excessive numbers of flies, have a strong odor, produce black leachate, and appear rotten. This can be corrected by turning into an empty bin and combining with drier sawdust, poultry litter, or recycled game compost.

4. After a few weeks the compost should be checked for suitability of use. If the carcasses have not completely composted, the contents should be turned into another bin and allowed to go through another composting cycle. Special attention may be required to cover partially composted animal parts that become exposed after turning and may require additional sawdust, poultry litter, or recycled compost to provide 6 in. of cover. Water will usually need to be added in the turning process to moisten the compost and help it go through another heating cycle.

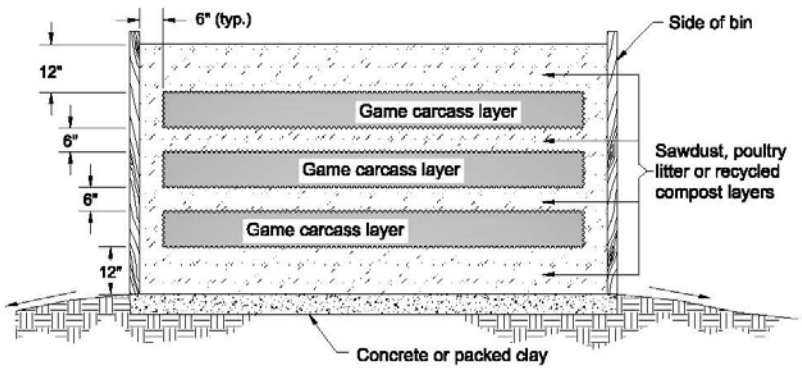
5. The turning and recomposting process can take another few weeks, and then the material should be ready for land application. Even after composting some of the larger bones may not be completely decomposed and may require more composting in subsequent batches or disposal by another method.

Cautions

Game carcass composting is still an experimental process, and careful monitoring is needed to ensure success. Bins used to compost carcasses should be kept covered to ensure animals do not dig into the pile.

References

NRCS AL Conservation Practice Standard Code
317 - Composting Facility
NRCS AL Job Sheet
AL645G – Feral Hog Trapping



Game Carcass Composting Bin Showing Layers

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