**Organic Burial Composting Cattle Mortality**

Karl VanDevender, Biological and Agricultural Engineering, 
Jodie Pennington, Animal Science Section, 
Merle Gross, Washington County (retired), and 
Johnny Gunsaulis, Washington County,

**Summary**

- **Organic Burial Composting (OBC)** is an economically feasible, producer friendly and effective method of mortality disposal.
- On May 1st, 2004, the Arkansas Livestock and Poultry Commission approved it as an acceptable disposal method for large animals such as cattle and horses.

**Program Implications**

As a result of this demonstration, effective May 1, 2004 the Livestock and Poultry Commission amended their regulations for the disposal of Large Animal Carcasses to permit Organic Burial Composting for large animals. To provide information to the public the fact sheet “Organic Burial Composting of Cattle Mortality” (FAS 1044) was published. The information has been presented in slide set and poster presentations on a least 15 occasions.

For infrequent mortality disposal such as on cow calf operations, burial of the mortality in a carbon source such as waste hay at an appropriate site is recommended. This method allows for disposal in a legal, efficient, and economical manner. When composting is exposed to the weather, the compost material (carbon source) may be sawdust, hay, etc., but may not contain manure. When the compost is protected from the weather, compost material (carbon source) for the carcasses may be sawdust, hay, etc., and may contain manure. Composting involving manure must be done in bin(s) that has a concrete floor to provide an all-weather base, roof to withstand stresses applied by tractor loader.

There are two basic approaches that apply to the outside composting of large mortality: pilebin and windrow. Both approaches start as a pile, however, in the windrow method, new carcasses are added repeatedly to one and forming a windrow. Both approaches can be done without the use of some type of sidewall, such as fencing or wooden walls. However, the use of sidewalls will reduce the volume of carbon material required, and help to ensure the 24 inches of cover. Walls will also help to prevent pets and other animals from digging into the pile.

Additional information is provided in the fact sheet “Organic Burial Composting of Cattle Mortality” (FAS 1044).

**Recommended OBC: Pile Method**

- Select the location of the compost pile. Care should be taken to ensure that the pile will be isolated from the rest of the farming operation, on dry ground that is not in a drainage way, and accessible to equipment that will be used to move the carcasses and carbon material. Ideally the site should not be visible, or conspicuous, to neighbors and the public.
- Make a 24 inch thick pad that is large enough so that when the carcass is placed there will be at least 24 inches from the carcass to the edge of the pad. For a mature cow this results in a pad that is about 9 feet wide by 10 feet long.
- Add water to the pad as needed to ensure the pad has a moisture content of about 50%.
- Place the carcass on center of the pad.
- (Optional) Some form of retaining wall can be used. One inexpensive method is to set a Tee-Post at each corner. Then wrap a 48 inch high net wire around the four post and secure to the posts. The post will hold the wire in place until the enclosure is filled. The use of the fence will reduce the amount of carbon material needed to cover the carcass and reduce the chances of pets and wild animals digging into the pile. It will also reduce the land area required to compost.
- Cover the mortality with at least 24 inches of carbon material. Note that if a fence is not used 24 inches of cover over the center of the carcass will likely result in less than 24 inches of cover.
- Keep the windrow open on the older end of the windrow, utilizing the compost as the mortality is decomposed. Since a windrow is built over time, the original mortality will likely be decomposed and ready for the next mortality. This provides the management option of leaving the windrow alone until the last mortality is decomposed then utilizing compost. Or, starting at the older end of the windrow, utilizing the compost as the mortality is decomposed.

**Recommended OBC: Windrow Method**

- This approach uses the same dimensions for pad thickness, edge distances, and moisture requirements as the pile method above. The advantage of using windrows is a possible savings in carbon material and a reduction in the land area required to compost the mortality.
- Start the windrow with the process described for the pile approach above.
- With each new mortality the end of the pile is opened.
- If desired some carbon material from the existing windrow can be pulled down to form a pad for the new mortality. Ideally the original carcass is not disturbed, unless it is ready for mixing.
- Mix the new pad as needed.
- Place the carcass in the center of the new pad.
- (Optional) Add two new Tee-Post at the new corners of the pad then wrap additional net wire around the new length and end of the windrow.
- Cover the carcasses with the carbon material.
- Maintain the cover.
- Since a windrow is built over time, the original mortality will likely be decomposed and ready for disposal before the most recent mortality. This provides the management options of leaving the windrow alone until the last mortality is decomposed then utilizing compost. Or, starting at the older end of the windrow, utilizing the compost as the mortality is decomposed.