

FACT SHEET:

Carcass Disposal Procedures For Small-Holder Farmers



The Ministry of Agriculture advises livestock farmers to take responsibility of their dead stock. Depending on farmers' resource capabilities, they could either burn or bury (sufficient depth of at least one metre of soil on top of the carcass) their dead stock. The site of burial must be well away from the waterways.

Farmers are urged to minimise direct contact with the carcass and if there was a need to - wear personal protective clothing. Immediately wash hands with clean water and disinfectant in an event where you have handled a carcass.

The Food and Agriculture Organisation have provided guidance on simple procedures that can be practiced to properly dispose of individual animal carcasses.

Above-ground burial

Advantage: safe, on-farm, readily available, fast to implement, high public acceptance, efficient.

Disadvantage: scavengers may unearth carcasses

Time/cost: fast, low cost

Consideration: Proper top coverage to prevent access of scavenging mongoose and stray dogs.

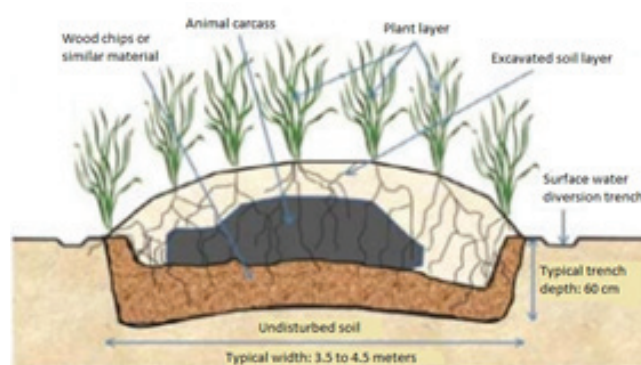
Procedure: Above-ground burial involves the disposal of animal carcasses within a shallow trench to a depth of 60 cm excavated on the farm or field. The base is then lined with grass straw or wood chips (carbonaceous material) of at least 30 cm thick at the bottom before placing the animal carcass on top.

Excavated soils are placed back in the trench, forming a mound on which the vegetative cap is established. Resilient and on-season plants should be selected to be planted to form a natural cover over the mound.

Finally, the perimeter of the mound is trenched to prevent the intrusion of surface water into the system.

The trenches are designed to increase microbial

Schematic of an above-ground burial



Source: FAO

activity and minimize the potential for groundwater contamination from carcass leachate.

Decomposition will take between 9 and 12 months. Once the carcasses have decomposed, the disposal site can be leveled and returned to its previous use.

Carcass composting

Advantage: safe, sustainable, on-farm, easy to implement

Disadvantage: time to complete and manage

Time/cost: slow, volume of wood chip needed may be expensive.

Consideration: requires knowledgeable operator to ensure proper setting up and management.

Procedure: Carcass composting is a process that involves constructing a porous base layer of carbon material (example wood chips), mixing or layering the animal carcass with carbon material for the core of the windrow, and capping the mixture with a blanket of carbon material to promote decomposition of carcasses at elevated temperatures.

Carcass composting consists of two phases:

The active phase is characterized by aerobic reactions at relatively high temperatures resulting in a large reduction in the volume of biodegradable solids. This phase has the potential to produce significant odors which are

controlled by the carbon cap (thick covering of wood chips). Core pile temperature should rise to 57-60°C within 15 days and then be maintained for several days. Intervention, such as turning the pile, may be required to maintain the desired temperature.

For intact large-animal carcasses, turning is not recommended, and elevated-temperature with aerobic conditions should be maintained for weeks. Larger animals should not be turned before 30 days.

Carcass composting for mass culling of birds



Source: FAO

In the curing phase, which occurs after the active phase, aeration is not as critical. During this period, a series of slow-rate reactions occur at temperatures below 41°C. At the end of the curing phase, internal temperatures within the compost pile range from 25-30°C. The carcass density is reduced by 25 percent and the finished product appears dark brown to black and is free of unpleasant odors. For composting poultry carcasses, turning the pile can speed decomposition. However, if the pile is constructed correctly, turning is not necessary and is not recommended within the first 14 days for infected carcasses.

Burning

Advantage: on-farm, inactivates pathogens, reduces volume

Disadvantage: public opposition, need to control smoke and

fire, volume of input for wood and fuel.

Time/cost: fast, fuel cost may be expensive.

Considerations: risk of creating wildfires, air quality, smell

Procedure: Open burning is a process which involves constructing a bed of combustible materials such as wooden timbers, placing the carcasses on the bed, adding more combustible material over the carcasses, and igniting the pile. There is no containment of materials in this process.

Care should be taken to monitor and regulate the fire that are unassisted by incineration equipment. It is easy for the fuel and smoke to be uncontrolled. Carcasses can be burned in open fields, on combustible heaps called pyres, or with other burning techniques.

Because of the significant air emissions and fire safety concerns, consult with your locality Health Inspectors prior to performing open-burning.

Conclusion

Composting, above-ground burial and burning are suitable options for carcass management when there is limited access to engineered landfills, rendering plants or controlled incinerators and when small numbers of animals are needed to be dealt with. In general, composting and above-ground burial, can be easily done at the field than deep burial and much safer to manage than burning.

For preparation of deep burial pits for management of mass number of livestock carcasses (above 10 heads), please contact your nearest Agriculture office.

For further public health safety, appropriate personal protective equipment will be necessary for individuals involved in handling and management of animal carcasses.