



# Proper Disposal of Farm Mortalities

Guide B-123

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This publication is scheduled to be updated and reissued 3/10.

Livestock producers are concerned with the environment in which they work and live. As part of that concern, they have a goal of minimizing the potential for spread of any diseases. A reality of the industry is that livestock die on the farm for a variety of reasons, including old age, injury, calving problems, exposure, metabolic problems or disease. These situations occur in spite of all the preventative measures taken by producers. Also, the recent ban on slaughter of downer cattle may increase the likelihood that animals will have to be disposed of on the farm. There are two important considerations when handling mortalities: to eliminate the risk of spreading disease to humans or healthy cattle; to ensure there is no negative environmental impact. Several methods can be utilized for the disposal of mortalities on a dairy farm. Regardless of which practice is used, promptness is key because improperly stored mortalities may be a disease source and attract rodents, birds, predators and flies, and produce offensive odors. Ideally, mortalities should be disposed of within 24 to 48 hours of death.

## RENDERING

Rendering is the least labor-intensive method for dealing with mortalities. However, there are biosecurity concerns associated with allowing rendering trucks on your facility. Rendering pick-up should be located in an area that is away from your main animal housing to minimize the risk of disease introduction. Another factor to consider is that rendering services are not available in all locations and sometimes, where available, are not affordable or timely. Because of the discovery of Bovine Spongiform Encephalitis (BSE) and the subsequent ban on mammalian feeding of ruminant protein,

there is little market for rendered cattle carcasses. Therefore, it has become necessary to charge for rendering services. Despite the cost, rendering might be the best option for some dairy or feedlot operations. Before deciding upon rendering services, both the cost and the time between death and pick-up must be considered.

## COMPOSTING

Composting can be an extremely efficient and effective way to dispose of mortalities. It is probably the most cost effective and safest method of carcass disposal, especially in areas where the water table is too high for burial. Composting is aerobic (requires oxygen) and, because of this, tremendous heat is achieved within the composting piles. The heat generated within a properly managed compost pile is between 130 and 140° F, which is adequate to eliminate most known cattle diseases and reduce the carcass to nothing but bone fragments in a relatively short period of time. Odor from composting operations is minimal, and the site can be reused indefinitely. The disadvantage of composting mortalities is that the composting operation needs to be well managed; proper aeration, moisture, temperature, and C:N ratios of composting piles are needed for optimal speed decomposition.

## BURIAL

Burial as a method for disposing of the dead is as old as antiquity. It can be a safe and cost-effective method for dead stock disposal. In temperate climates burial can generally be performed year-round. In colder climates winter burial can be difficult or impossible. There are several considerations in using burial as a mortality disposal option:

- Insure that cattle are buried at least 300 ft. from streams/arroyos and 400 ft. from wells and houses.
- The bottom of the burial pit must be at least 3 ft. above the water table.
- If possible, choose a site where the soil is heavier and less permeable.
- Insure that heavy machinery has good access to the site.
- Flat areas are best. Avoid areas sloping toward water or arroyos.
- Ensure the pit is sized to allow soil to cover mortalities to a depth of at least 3 ft.

Adequate space for burial may be a problem for large dairies or feedlots due to lack of appropriate sites in which to locate a mortality pit. Burial actually slows decomposition by up to four times vs. air exposure. Therefore, unlike composting, areas used for burial will require a long time before reuse. The deeper the pit, the longer decomposition may take, since mortalities are preserved longer when buried deeper. In fact, some research suggests it might take up to eight years for animal carcasses to completely decompose.

In the Southwest, low rainfall and lack of surface waters and, in some areas, very deep groundwater minimizes the risk of environmental damage from disposal of mortalities. No matter what disposal technique is chosen, possibly the most important factor is location of mortality facilities. Because of climatic conditions in the Southwest, issues of public perception may be the most important consideration. Facilities used to store and handle dead stock should be located away from property lines, preferably well off public roads. When an out-of-sight location is not available, consider erecting visually obstructing fences and or landscape plantings. While all of us in the animal industry know that death happens, the sight of dead stock can be upsetting to the nonfarm public. In addition, odor from a mortality facility can draw unwanted attention to your operation. Proper location will help maintain a good relationship with neighbors and preserve the good image of the dairy industry.