Disposing of livestock carcasses

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Dead cows must be disposed of in a manner that prevents spread of disease to other livestock, preserves the environment, and safeguards the public health. The potential negative impact on neighboring residential property should also be considered. Rendering, transporting to landfills, burning, and composting are options for disposal. Each method has advantages and disadvantages. Preparations should be made to dispose of dead cattle under both normal daily conditions and catastrophic situations. With each, it will be necessary for dairy producers and veterinarians to work with local and state agencies to use the most appropriate methods. Planning ahead for the herd level or catastrophic event may also save the industry a tremendous amount of money.

Normal daily conditions

Under normal conditions the local rendering company can dispose of cows that die on dairies. Disposal by rendering avoids any environmental impact or public health issues because the carcass is removed from the premises. It also avoids breech of dairy biosecurity program if the pickup point for the carcass is on the perimeter of the dairy and permits collection of brain tissues for testing by the bovine spongiform encephalopathy surveillance program. In California, rendering capacity is between 400,000 to 500,000 carcasses per year and its infrastructure is well developed for disposal of their end products.

Composting is another way to dispose of carcasses in states where it is permitted by law. Although composting of unaltered mammalian tissues is not permitted in California, it is permitted in several other Western states. Contact your local water quality agency and agricultural commissioner for any local regulations or guidelines on composting.

Materials for composting cattle carcasses, such as silages or stacked manure, are readily available on dairies and provide an excellent media for composting. When properly done, composting produces little odor or flies and carcasses of mature cattle can be reduced to large bones in about six months. With composting a residual product remains on the dairy and must be disposed of properly. The animal may also escape detection by the BSE surveillance program. When composting is the disposal method, mature cows showing signs of a nervous disorder should be examined by the dairy veterinarian prior to dying to determine if the brain should be submitted for BSE testing. Final composting residue is not suitable for sale as compost, although it can be applied to land as fertilizer.

Burial is another option for carcass disposal, but it must be permitted by local ordinances. The immediate and long-term effects of carcass burial on soil and water are not clearly known. Various salts and bacteria may become evident in the ground water at different times following burial. Seasonal rainfall may prevent burial at some times. Long term, burial may even influence property values and limit future use of the land at the burial site.

Herd outbreaks

On some occasions many cows may die on a single dairy. Local and state agencies will quickly become involved in the disposal of the carcasses and decide on the proper method. The causes of the death will determine the appropriate method of disposal to prevent spread of disease and protect the environment and public health.

The choice between rendering, burial, burning, composting and removal to the local landfill will have to be made in a timely fashion to prevent decaying carcasses from becoming a public nuisance. The decision is based on local environmental conditions, public health issues, available facilities, and permit issues. When multiple carcasses are involved, each disposal method has certain advantages and disadvantages.

Catastrophic situations

Large numbers of cattle might die on several dairies during disease epidemics. State and Federal authorities will be immediately involved to rapidly contain the disease outbreak. With foreign animal disease events, there are diseased animals, in-contact animals, and nonexposed animal that may need disposal. Each category of dead livestock will require a different level of biosecurity. In such an event it will probably be necessary and advisable to use several disposal techniques to rapidly and safely handle the dead animals.

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Taking a closer look at culling decisions

By Julie A. Severidt, DVM
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Integrated Livestock Management

Culling and replacement decisions on dairies impact the profitability and sustainability of the industry; however, the root cause of why cows are leaving herds is poorly understood. An improved understanding of the true causes of culling will identify focus areas in management. Even with the best management practices in place producers still need an improved decision making process for culling.

Although culling decisions have an important impact on the economic performance of the herd, culls are often based partially on the intuition of the producer. Ideally, a cow would leave the herd for voluntary reasons. Right now, national culling rates are approximately 35 percent, and over half of them are involuntary or ones that the manager is forced to make either for biological reasons (death and disease), or economic reasons (poor production related to health or reproduction).

Mortality rate is rising

Culling rate has not changed much in the past 30 years; however, the reason for removal from the dairy has changed substantially. A study done in 1988 showed a mortality rate of 1.2 percent, but more recent studies have shown the rate to be much higher today. The National Animal Health Monitoring System showed a mortality rate of 4.8 percent in the 2002 Dairy Study, and National DHIA records show a mortality rate as high as 12 percent in some states. The cause for the increase is not fully understood. It may be due to increased reporting of deaths on the dairy, a decrease in the number of animals that leave for saleable purposes, or changes in management due to more intensive production.

One may ask why there is such an increase in current reported mortality rates. One reason is the NAHMS study relies on the memory of the dairy manager and the accuracy of on-farm records. Many times the manager will underestimate the rate of death and disease on the dairy. Although not every dairy in the country reports to DHIA, disease and death rates reported to DHIA are likely more accurate than those reported by the dairy manager in a survey. Another reason for the difference is due to different terminology used to describe the landfills are designed for less dense materials such as paper goods. Large sealed vaults may be used for on-site storage of carcasses prior to disposal to control spread of disease and prevent public nuisance due to flies and odor.

With each of these disposal methods there is an end product that may have to be moved at some later time to complete the disposal process.

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