

Introduction to Part 1 – Disposal Technologies

Whether at the hand of accidental disease entry, typical animal-production mortality, natural disaster, or an act of terrorism, livestock deaths pose daunting carcass-disposal challenges. Effective means of carcass disposal are essential regardless of the cause of mortality but are perhaps most crucial for disease eradication efforts. Rapid slaughter and disposal of livestock are integral parts of effective disease eradication strategies.

Realization of a rapid response requires emergency management plans that are rooted in a thorough understanding of disposal alternatives. Strategies for carcass disposal—especially large-scale carcass disposal—require preparation well in advance of an emergency in order to maximize the efficiency of response.

The most effective disposal strategies will be those that exploit every available and suitable disposal option to the fullest extent possible, regardless of what those options might be. It may seem straightforward—or even tempting—to suggest a step-wise, disposal-option hierarchy outlining the most and least preferred methods of disposal. However, for a multi-dimensional enterprise such as carcass disposal, hierarchies may be of limited value as they are incapable of fully capturing and systematizing the relevant dimensions at stake (e.g., environmental considerations, disease agent considerations, availability of the technology, cost, etc.). Even with a disposal-option hierarchy that, for example, ranks the most environmentally preferred disposal technologies for a particular disease, difficulties arise when the most preferred methods are not available or when capacity has been exhausted. In these situations, decision-makers may have to consider the least preferred means. In such a scenario (one that is likely to occur in the midst of an emergency), there are tremendous benefits of being armed with a comprehensive understanding of an array of carcass disposal technologies. It is on this basis that Part 1 considers, in no particular order, eight separate carcass disposal technologies (see Figure 1).

Decision-makers should come to understand each disposal technology available to them, thereby equipping themselves with a comprehensive toolkit of knowledge. Such awareness implies an understanding of an array of factors for each technology, including the principles of operation, logistical details, personnel requirements, likely costs, environmental considerations, disease agent considerations, advantages and disadvantages, and lessons learned for each technology. The eight chapters comprising Part 1 of this report discuss, technology-by-technology, these very issues. For policymakers interested in technology-specific research and educational needs, these are also provided within each chapter.

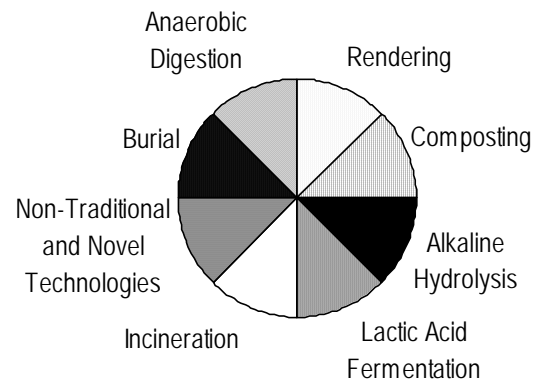


FIGURE 1. Equal consideration given to each of several carcass disposal technologies.