

A HOW-TO ON LIVESTOCK COMPOSTING



Use proper methods
to compost livestock

Properly composting dead livestock can get rid of most pathogens and odors. Here's how to do it.

By Jean Bonhotal, Ed Stahr and Mary Schwarz

Composting mortalities is fast, easy, environmentally sound and depending on circumstances, relatively economical. But if you are afraid to open your piles of composted livestock mortalities and spread them, you may be doing something wrong. You need a few tips or adjustments.

When animals die on a farm, a producer has only a few options for handling the remains:

- Getting a rendering service to remove dead stock, which may be unavailable or cost prohibitive. It can cost \$35 to \$125 per animal.
- Burying animals, which takes time, equipment and cooperative weather conditions and puts the carcass six feet closer to

groundwater. Including equipment, labor and fuel, it will cost about \$62 and not provide any pathogen control. In some states burial has been limited to specific situations or outlawed altogether.

- Leaving mortality open to the elements, which jeopardizes the health of domestic livestock, wildlife and pets, and can affect farm biosecurity.

That leaves composting. When done prop-

erly, composting mortality greatly reduces pathogens and is relatively odor-free.

Animals of all sizes can be composted year-round at a low cost to the producer. Nutrient management and concentrated animal feeding operation (CAFO) plans require farms to account for the disposal of their dead stock. Proper composting can help meet those requirements relatively economically.

The location for composting mortality should be carefully thought out. The site should have a 1 to 2% slope, be well drained, convenient and at least 200 feet from any watercourse, seasonal or nonseasonal. Properly composted carcasses will not have much runoff but any generated should be directed through a grass filter strip. The plants in the grass filter strip take up nutrients that would otherwise run off. Without a filter strip, excess nutrients could cause a pollution problem.

Proper compost methods:

1. Make a layer 24 inches deep of bulky absorbent material such as municipal wood chips. Make sure the layer allows for 2 feet of clearance around the carcass.

2. Lay the carcass in the center of the pile or windrow. Lance the rumen to avoid bloating and possible explosion.

3. Cover the carcass with 2 feet of woodchips, bedded pack or old silage. It is important to use chunky carbon sources. If material is too dense the process will shut down.

Temperatures should range between 120 and 150 degrees within 24 hours. Composting large animals typically takes from 4 to 6 months. In the Northeast, it is best to leave piles for 6 to 12 months so there will be good pathogen reduction and to further process the material.

The composting process is the opposite of the silage process, in which the air is pressed out of the pile. The more air you incorporate in composting, the faster and more complete the process. The compost should be left alone until the carcass is fully decomposed; it doesn't require turning or agitation.

The composted material can be reused as the base to compost another carcass or applied to land after removing the large bones. Remember to keep the composting area neat without ruts or low areas to collect water. Make sure all animal parts are well covered to keep odors to a minimum and deter scavengers.

Composting costs vary. If you need to buy a carbon source like woodchips it will cost about \$51. Some areas have

woodchip shortages but generally you can get woodchips for little or no cost from road crews, utility and cable companies that maintain roads. Free chips bring the cost down to \$26 including labor, fuel and equipment.

Other on-farm carbon sources can be used in the process. But it is best to use a chunky material like municipal woodchips for the base and chopped cornstalk, bedded pack, feed refusal, old silage or other like materials in the layers or as the cover material. Costs for these options vary. Assess your local conditions to realize the costs and choose the best option for your operation. □

FYI

■ Jean Bonhotal is senior Extension associate with Cornell Waste Management Institute. Mary Schwarz is a research support specialist with the institute. Ed Stahr is communications director for the NY FarmNet and NY FarmLink Programs.

■ Cornell Waste Management Institute has instructional materials on mortality composting. *Natural Rendering: Composting Livestock Mortality and Butcher Waste* materials consist of a 12-page fact sheet, three posters and a 20-minute video available free online. The video can also be purchased from: <http://nraes.org>.

■ For more information on composting visit: <http://cwmi.css.cornell.edu/composting.htm>

THIS EPISODE

Man, I'm just so bummed about the economy, and fuel prices are outrageous! It's so depressing, I've lost my appetite.

Hmmm. Sounds like they've taken cottonseed out of your feed.

Put Cottonseed back in the feed. Rx

I feel so much better.

The grass is looking greener!

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