

Composting may be alternative in wake of horse slaughter

The American Horse Slaughter Prevention Act, making its way from the U.S. House to the Senate, could leave thousands of horses with no final resting ground. Composting may be an environmentally friendly option that fits in the "circle of life" frame of mind and may be less emotional, two area researchers said.

Recently the House approved the Act, which bans the slaughter of horses for human consumption by a vote of 263-146. The Senate has yet to schedule the issue for consideration.

Approximately 90,000 horses, or 1 percent of the U.S. horse population, is slaughtered annually, said Dr. Lance Baker, West Texas A&M University associate professor of animal science. "If they don't go to slaughter, they will have to go somewhere else," Baker said.

The options for dealing

with a carcass are burial, rendering, landfill disposal, incineration, composting or bio-digesting, he said. Many of these are costly, and a horse owner often has to pay to put the horse down and for its disposal, instead of getting money for the animal.

Large-carcass composting is a growing and accepted practice among feedyards and dairies, said Dr. Brent Auvermann, a Texas Agricultural Experiment Station agricultural engineer who has researched the process for about five years. "Since we had already done some work with dairy cattle, which weigh about 1,400 pounds, a quarter horse at 1,000 pounds wasn't much different," Auvermann said.

"The main thing is: the larger the carcass, the higher the stakes. It is critical that whoever does it, does it right."

Auvermann, Baker and West Texas A&M graduate student

Laurie Brown began conducting a composting trial on horses last winter, using dead horses that would otherwise have gone to the landfill. The horses were provided by area veterinarians.

The trial tested three different "recipes" of composting material designed by Auvermann: 100 percent stall cleanout (horse manure and bedding); 50 percent cattle manure and 50 percent waste hay; and 50 percent stall cleanout and 50 percent cattle manure. He said he prefers the two mixes to the 100 percent stall cleanout.

Large animal composting works best if pre-composting of the material has already been started before the carcass is added, Auvermann said. The carcass is laid on a bed of chopped hay and then covered completely with the composting material. From that point, moisture is a key, Auvermann and Baker said.

Auvermann said it would be better to err on the side of too dry than too wet. "Add water until a handful of the mixture squeezed hard doesn't result in droplets of water, but does leave a sheen of water on the glove," he said.

A good indication the composting process is working correctly is temperature, Auvermann said. The temperature should start rising within 12 to 24 hours and reach a level between 131 degrees Fahrenheit and 155 degrees Fahrenheit and stay in that range for several weeks to a month. The temperature should be taken with at least a 48-inch temperature probe and taken in several locations throughout the pile, he said.

In the studies, the pile was turned at three months, at which time Baker said only a few large bones were identifiable. By six months, nothing was identifiable.

The optimum time to wait before making the first turn with larger animals is five to six months, Auvermann said. A large carcass will take from seven to nine months to compost completely, at which point it can be used as a fertilizer on agricultural ground.

The phosphorous level will be about 20 to 25 pounds per dry ton. It will have some nitrogen, but might contain less than 20 pounds per dry ton or, if the recipe is right, up to 35 pounds per dry ton, he said.

"This is well suited to cotton in terms of the nitrogen-phosphorous ratio," Auvermann said, adding cotton gin trash would be an excellent ingredient to put into the composting mix.

The compost must go through three phases before it is a valuable product, he said.

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