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Livestock Producers Can Keep Bad Smells At Bay

Modern open free stall barns, large outdoor yards, stored manure and manure spread on field surfaces over large areas - all contribute to odor problems in livestock operations. A growing non-farm rural population doesn't like the smell.

Brian Holmes, University of Wisconsin-Madison professor and UW-Extension agricultural engineer, says livestock farms don't have to smell so bad.

"Odors can be reduced by 50 to 90 percent by using some different management practices," Holmes said.

Holmes cited an Iowa study that found the "odor detection threshold" for swine manure was reduced from 2,820 to 32 when farmers stopped spreading manure on the surface of a field and started injecting it into the soil. When they disked after putting manure on the surface, the threshold fell to 130.

The Odor Detection Threshold is a measure of how much clean air has to mix with smelly air to make the odor "non-detectable" by the human nose. A lower number is more desirable.

Manure is the chief cause of bad odors, but odors may also come from feed storages, feed that is going bad, dead animals, trash burning and wet and dirty animals, Holmes explained.

Holmes said farmers should adopt specific management practices to reduce odors that could annoy neighbors and cause complaints.

"Farmers can reduce the source of odors by changing animals' diets to reduce the odor-causing compounds in manure," he said. "They also can clean manure frequently from alleys and yards." Other strategies for reducing the sources of bad smells are preserving feed properly, disposing of waste feed, removing dead animals from the farm as quickly as possible and halting trash burning.

Holmes also recommends covering stored manure, incorporating manure into the soil during application, reducing the size of the animal lot, constructing lots that drain runoff water, and treating manure to make it more biologically stable by composting, anaerobic digestion, or aeration.

Spraying oil onto surfaces in swine barns suppresses dust and odors in the air. So does blowing exhaust air through a bio-filter, using air scrubbers and treating facilities with ozone.

You can learn more about options for reducing odors and how to conduct a management assessment in Outdoor Air Quality, MWPS-18, Section 3. Order this publication from MWPS, 112 Davidson Hall, Iowa State University, Ames, IA 50011-3080, Phone: (800) 562- 3618, E-Mail: MWPS@IASTATE.EDU or on the web at URL: <http://www.mwpsdq.org/>

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