

Air Emissions — More Than Odor

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Air quality, especially as it relates to odors and nearby surroundings is of great interest in many communities. Many equate air pollution and air quality with our nose. We see it as an aesthetic or nuisance problem, a "quality of life" issue. "If it doesn't smell, we are OK."

A quick review of a recent publication from the National Research Council of the National Academies "Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs" (www.nap.edu) helps one realize that air emission from animal agriculture are much more than just what our neighbor can smell. The committee has classified the issue into 13 major findings with accompanying recommendations.

Of interest to me is a table in the executive summary "Committee's Scientific Evaluation of the Potential Importance of AFO Emissions at Different Spatial Scales." The table lists nine emissions from animal feedings operations (AFO) and rates them by potential importance in two categories: Global, National, and Regional; and Local-Property Line or

Nearest Dwelling. These nine emissions include chemical forms of nitrogen, hydrogen sulfide, methane, particulates, and odors. Odor is rated the major "local" concern but is considered insignificant on a "global" basis. It is a quality of human life issue for those living nearby the source. However, ammonia is considered of minor "local" concern but is rated as major on a "global" basis. This explains why scientists at Penn State and many other institutions are working to quantify the amount of ammonia released to the atmosphere from animal housing units.

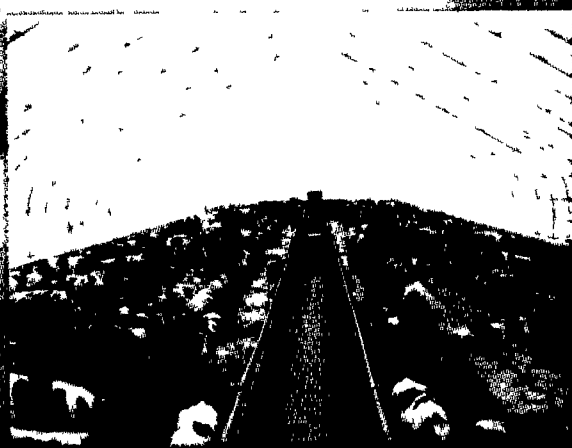
Manure and how it is managed is the primary source of ammonia from most animal units. In the future it may not be acceptable to just turn up the fans and blow away ammonia that results from, wet, manure soaked bedding, sloppy freestall alleys, or manure storages. It may be necessary to manage moisture levels, cleaning schedules, pH, or other conditions to minimize loss of ammonia to the atmosphere in the barn, in storage, and during land application.

Let's hope that answers to some of the questions that have been raised by this report concerning these nine different emissions areas will be helpful.

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