

The Scoop

Vol. 2 No. 2
May 2008

On Animal Agriculture and the Environment

It's Up to Farmers to Be Good Neighbors

By Roberta Osborne

The Scoop is produced every other month by the MSU Extension Animal Agriculture and the Environment Team.

Want to make sure you're notified when the next issue of *The Scoop* hits the Internet? Send an e-mail to stuever@msu.edu, and write "Subscribe to The Scoop" in the subject line.

Learn more about MSUE's focus on animal agriculture and the environment at www.animalagteam.msu.edu.

310 Agriculture Hall
Michigan State University
East Lansing, MI 48824
(517) 432-1555, ext. 177

"Some people still think farms should look like a Fisher Price toy—complete with a red barn, one cow, one chicken and lots of green pastures. That's just not our reality."

That's the assessment of Bill Flinn, director of the Social Responsibility Initiative at The Ohio State University, a group that believes that socially responsible food and agricultural production must strike a delicate balance between people, profit and the planet. Flinn told the more than 180 people gathered for the conference Balancing Animal Agriculture and the Environment that rural residents respond to expanding livestock farms in a variety of ways.

"There are more and more conflicts in this area as residents are further removed from agriculture," he said. "Almost no one in the general public has a parent or even a grandparent involved in farming anymore."

Flinn's assessment is based on Ohio, a state that he said holds agricultural ideals similar to Michigan's. The conflicts are particularly lethal with "mega-farms"—a name typically reserved for large livestock operations that are perceived to have a corporate influence. In Ohio, the state Department of Agriculture determines whether these farms need a national pollutant discharge elimination system (NPDES) permit. That is a major sticking point for those who think local officials should control the growth of animal agriculture.

"Permitted farms in Ohio are, on average, at least 23 miles from major urban centers," Flinn explained. "But public action groups continue to press for documentation of environmental stresses when new large farms come into operation."

Flinn's message was that agriculture is being held accountable for how it will fit into communities.

"The burden of proof is on the farmers to fit into the community and prove themselves good neighbors," he said. ■

Roberta Osborne is the MSU Extension director in Branch County. You can reach her at rosborne@msu.edu.

Welcome to the **The Scoop**, a bimonthly newsletter designed to keep you informed about the exciting new changes in animal agriculture as it relates to the environment. Every other month you'll get a healthy dose of timely information you can use on your farm, in your job or around the countryside. All this and more, brought to you by the MSU Extension Animal Agriculture and the Environment Team.

MICHIGAN STATE
UNIVERSITY
EXTENSION

Phosphorus Workshop Focuses On Protecting Michigan Waters

By Lois Wolfson

That old adage “too much of a good thing” applies especially well to phosphorus and its impact on lakes and streams. That’s why strategies for reducing phosphorus in watersheds will take the main stage during Collaborative Solutions for Reducing Phosphorus in Agricultural and Urban Watersheds, a workshop hosted by Michigan State University Extension July 10 at the Kellogg Hotel and Conference Center in East Lansing.

The workshop will highlight best management practices for phosphorus reduction, address recommendations from a recent Phosphorus Policy Advisory Committee report and initiate plans for implementation of several of the report recommendations. The agenda is designed to attract both public and private sector representatives as well as individuals interested in reducing phosphorus in lakes, streams and groundwater.

Phosphorus is an essential element needed in humans, plants and animals for a host of chemical reactions. It is also required for plant growth and used as a cleaning agent, and it’s an important component in a variety of other products. But in too large amounts, phosphorus can be a huge environmental problem. It is often what’s referred to as the limiting nutrient in lakes. In these systems, as long as it’s not available or in low amounts, plant growth will stay in check. Once it’s added, plants can grow to excessive levels. This increase in growth by both algae and rooted plants is often associated with a condition known as cultural eutrophication, which eventually leads to declining water quality. Major sources of phosphorus include fertilizers used in agriculture and on lawns, animal wastes, storm water runoff, and sewage and septic treatment systems.

In 2006, the Phosphorus Policy Advisory Committee was formed by the Michigan Department of Environmental Quality (MDEQ) to identify major sources of phosphorus, review voluntary and regulatory management approaches, and develop findings and recommendations. The final report, including 32 recommen-

dations to address the problem, was released in 2007. In addition to regulatory changes, many of the recommendations dealt with the formation and implementation of incentive and voluntary programs, education and technical assistance, community education and monitoring.

The July 10 workshop will address some of these recommendations and initiate action plans for implementation. Hosted by the MSU Extension Water Team, the session is aimed at individuals, organizations and agencies interested in collaborating to address the priority recommendations from the final

“Phosphorus is an essential element needed in humans, plants and animals for a host of chemical reactions.”

report. Objectives are understanding phosphorus cycling and its impact on Michigan’s water resources, current and future trends in agricultural and lawn/turf phosphorus fertilizer management, collaboration to implement priority recommendations from the MDEQ phosphorus advisory committee and prioritizing implementation practices through facilitated work groups.

Several members of the advisory committee will make presentations. Sen. Patty Birkholz and MSU Extension Director Tom Coon will provide introductory remarks. Experts on technical and policy issues concerning phosphorus will also be available throughout the event. Jody Pollok-Newsom, host of “Michigan Farm and Garden” and executive director of the Corn Marketing Program of Michigan and the Michigan Corn Growers Association, will moderate the meeting.

Registration is \$50 (\$35 for students) and includes lunch. An agenda and information on registration is available on the Web at: www.iwr.msu.edu/events/PConference. For further information or a copy of the brochure, contact the conference coordinator, Allen Krizek at 517-373-9813 or krizek@msu.edu. Sponsors of the meeting are the MSU Water Area of Expertise, MSU Extension, the Department of Biosystems and Agricultural Engineering, the Institute of Water Research, the Michigan Agriculture Environmental Assurance Program, and the CSREES Great Lakes Regional Water Program. ■

Lois Wolfson is a member of the MSU Extension Water Team. You can reach her at wolfson1@msu.edu.

The Air We Breathe

Does animal agriculture affect air quality? Here's what the former CEO of the Institute of Toxicology and Safety says.

By Wendy Powers



Wendy Powers is the director of environmental stewardship for animal agriculture at MSU. You can reach her at wpowers@msu.edu.

According to Roger McClellan, science alone cannot set standards. Judgment is required to determine how low is low enough for air emissions and their effect on human and environmental health.

McClellan is the former CEO for the Institute of Toxicology and Safety, and his data show that aggregate air emissions have decreased by 49 percent since 1980, despite a 32 percent increase in the U.S. population.

But where does animal agriculture fit in?

McClellan said that animal agriculture will play an important role in meeting future air emission regulations, pointing out recent and increasing interest in greenhouse gas emissions and the implication of animal agriculture in worldwide methane production. At the recent conference on Balancing Animal Agriculture and Communities, McClellan shared data showing how aggregate emissions have decreased in the past two decades, despite an increasing gross domestic product (GDP).

"Remarkable progress has been made in improving air quality," he said. "While the GDP increased 121 percent since 1980, vehicle miles traveled increased by 101 percent and energy consumption is up by 29 percent."

Further improvements in air quality remain an important topic, however, and talk continues about setting more regulations, particularly for the livestock industry.

Policy choices can be informed by science, McLellan said. Ideally, standards are based on epidemiological studies. In the absence of such studies, inhalation chamber studies are used. When these, too, are unavailable, mice are used as surrogates for a human response. The challenge in using such studies as the basis for policy is that it is difficult to draw relation-

ships between factors when factors are variable.

McClellan gave examples such as the daily variation that occurs in pollutant concentrations in the environment and variation in mortality rates. As a result, policies are based on relative risk, typically set to accommodate sensitive populations. The EPA is not required to eliminate risk when setting standards, he noted.

"Rather, a judgment must be made in a 'comparative health' context when deciding what risks are acceptable in the world in which we live," McClellan said.

McClellan discussed other challenges in drawing the link between an activity and human health impacts. No unique disease is caused by air pollution—air pollution changes what already exists by increasing the prevalence of a disease, for example. Data collected under a specific scenario are not applicable to other areas. An example that McClellan provided is the use of air monitoring data collected in Detroit to represent air quality throughout the rest of Michigan.

Michigan faces challenges in making progress toward meeting the ozone standard, despite the progress made between 2004 and 2007, McClellan observed. Under a proposed change in the ozone standard, many counties throughout Michigan would be out of compliance. As standards become more stringent, the incremental cost of compliance becomes greater.

The presentation concluded with McClellan pointing out that "science and policy make awkward bedfellows, and it's going to get more contentious in the bedroom." ■



Keeping Records Now Makes Complying Less Painful

If you operate a large CAFO, you have almost a full year before your annual report is due to the Michigan Department of Environmental Quality. But come April 1, 2009, you don't want to have to rely on your memory. Record all your spring manure applications as they go on the field.

Your National Pollutant Discharge Elimination Systems (NPDES) permit refers to necessary record-keeping items as the "land application log". Each permit has a summary of the items that need to be tracked on the back. If you move any manure off site—either by selling it or giving it away—you must maintain the "manifest" document on this manure. A copy of the manifest form can be found at the DEQ Web site: http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3713-96774--,00.html. ■

Don't miss the 2008 Great Lakes Manure Handling Expo

If you're a livestock producer or crop farmer, you won't want to miss the 2008 Great Lakes Manure Handling Expo July 9 at the Molly Caren Agricultural Center in London, Ohio. Experts from throughout the Midwest will discuss multiple facets of this year's theme. "The Economics of Recycling."

The one-day event will include commercial field demonstrations, educational demonstrations, educational sessions and commercial vendor displays. Participants can look forward

to learning about calculating the value of manure nutrients; the benefits of proper equipment calibration; the importance of accurate record keeping; how communication among applicator, producer and regulatory agency can improve application and the bottom line; safety precautions in manure application and storage; and case studies of farmers who will share their stories about manure management. Demonstrations will focus on solid manure application rates, liquid manure application rates, preferential flow, calibration of manure application equipment, stockpiling best management practices, compaction, slurry seeding and equipment safety.

To learn more, visit ohio-environmental.org, or contact Tami Combs at (614) 292-6625 or combs.155@osu.edu; Jon Rausch at (614) 292-4504; or Mary Wicks at (330) 202-3533. ■



MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Thomas G. Coon, Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.