



Applying knowledge to improve water quality

National Water Program

A Partnership of USDA CSREES & Land Grant Colleges and Universities

Spring 2006

Environmental Management For Nutrient Applicators



GREAT LAKES
REGION

National Themes:

Watershed Management, Nutrient and Pesticide Management

Project Description

Nutrient application is an important aspect of whole farm management and provides needed nutrients for crop production. However, these same nutrients, often applied in the form of animal manure, may become an environmental concern when managed improperly.

Manure nutrients are valuable, but require special consideration to minimize impacts to lakes and streams in the Midwest. Manure and other pollutants entering surface water resources can have a drastic impact on ammonia nitrogen, a leading cause of fish kills, as well as total nitrogen and biological oxygen demand (BOD5). Each of these is a known indicator of water quality and its ability to sustain aquatic life. Misapplication of animal manure resulting in surface water contamination has increased 72% in Ohio over the past 30 years, resulting in 356 fish kill episodes (1997-2002) and approximately 560,000 fish killed. This project will develop a professional association in conjunction with environmental education assist producers, brokers and applicators to navigate the complex set of rules and regulations that impact them.

APPLYING LIQUID MANURE



Surface application



Subsurface application by injection via dragline

Project Goals

- Develop and implement Environmental Management Training courses in Manure Nutrient Applicator training, Environmental Managers Training and Emergency Response Training
- Organize Nutrient Applicators by forming a Professional Applicator Association and developing certification processes and requirements

PROJECT CONTACTS

Jonathan N. Rausch

Ohio State University,
590 Woody Hayes Drive,
Columbus, Ohio, 43210,
Phone: (614) 292-4504
Email: rausch.7@osu.edu

James J. Hoorman

Ohio State University Extension
1219 W. Main Cross
Findlay Ohio 45840
Phone: (419) 422-6106
Email: hoorman.1@osu.edu

PROJECT PARTNERS

Ohio Agricultural Commodity Groups

Ohio Corn Growers

Ohio Dairy Producers

Ohio Livestock Coalition

Ohio Poultry Producers

Ohio Pork Producers

Ohio Soybean Producers

For more information about the Great Lakes Regional Water Program, please contact:

Rebecca Power
University of Wisconsin
Regional Water Liaison
Phone: (608) 263-3425
rebecca.power@uwex.edu

Actions

Some of the trainings and workshop held to date include:

- A Manure Applicator Training Program for custom manure applicators was hosted June 18, 2004. This workshop presented best management practices for manure application and demonstrated these practices to over 100 participants.
- A Building A Business for the Future workshop in February, 2005 trained 54 custom applicators, consultants and animal producers in Best Management Practices for manure application, and provided a better understanding of business management, opportunities and regulations. In addition, participants developed an Emergency Action Plan that could be used to reduce their environmental risk and thus environmental insurance liability premiums.
- The Ohio Department of Agriculture sponsored a Certified Livestock Manager Training Session for any farmer or custom applicator needing to get licensed by ODA or wishing to learn more about best management practices concerning manure management. This three-day training session provided nutrient management training, manure storage and handling training, emergency management planning, insect and rodent control practices, and a review of the rule and regulations concerning manure handling.
- Fifty manure professionals attended Planning for An Emergency: Manure Applicator Spill Response Training in June 2005. This training demonstrated how to minimize environmental impacts of a manure spill.



Manure hose breach simulation



Actual manure spill showing snow dams created to slow flow

Outcomes/Impacts

In addition to training many producers, manure haulers and other agricultural professionals in best management practices in manure handling, these project efforts resulted in the creation of the Midwest Professional Nutrient Applicators Association (MPNAA), which is comprised of +60 applicators from Ohio and Indiana.



www.uwex.edu/ces/regionalwaterquality

This publication on the web at:

www.lco.edu/public/ext/water/waterquality.htm