

# Eye On Conservation

*Wood Soil and Water Conservation District*



## NEW CONCEPTS IN POND MANAGEMENT MEETING

Want to know more about managing your pond? **Come to the pond clinic on Thursday March 19, 2009 at the Ag Incubator 13737 Middleton Pike, Bowling Green, OH 43402. The session will start at 7:00 pm and end at approximately 9:00 pm.** The program is sponsored by the Wood SWCD. Come early (6:30pm) and you can see the Spot Fin Shinner bait fish research project of Shawn McWhorter of OSU.

The principal speaker for the meeting will be Bill Cody, renowned "Pond Doctor."

### ***Tentative Agenda Items***

- \* Pond weed control
  - New Safer Chemicals for Ponds
  - Proper Chemical Application
  - Green Clean
  - Barley Straw
- \* Biological controls for algae and weed control in ponds
- \* Aeration
  - Types of aeration
  - Value of aeration
- \* New: Floating Islands for biological filtration for ponds.

Bill is a widely respected pond authority and has a practical down to earth approach to pond management. He will be answering questions and helping you make pond management as easy as possible. Come with a sample of your weeds and he will

## MARK YOUR CALENDARS...

March 12, 19 & 26	Grazing Management Workshop
March 19	Pond Clinic at Ag Incubator 7:00 pm
March 27	2009 Wood SWCD Tree Sale Deadline
April 28	Wood SWCD Spring Fish Sale Deadline
April 28	Area 1 Envirothon-Camp Clay, Van Wert
April 30	Wood SWCD Spring Fish Sale Pickup
June 3-6	Northwest Ohio Conservation Camp "Psyched on Science"
June 16-18	Black Swamp Extravaganza at Toledo Botanical Garden & Kelley's Island

## SWCD SEEKING FARM

Each year, the Wood Soil and Water Conservation District presents one outstanding farm in Wood County with the Farm Beautification Award. The winning farm is chosen after considering such things as the condition of the buildings, condition of the lawn and garden, landscaping, absence of unnecessary equipment, and overall appearance.

If you have a farm in mind that you feel would be a winner, please submit your nomination by August 5, 2009 to Wood SWCD, 1616 East Wooster Street, Box 32, Bowling Green, wcdswcd@woodswcd.com or call the office at 419-354-5517. All nominations will be considered and the winner will be announced at the Wood SWCD's Annual Open House in September. To be eligible the nominated farm must belong to a working or retired farmer.

## 2009 TREE SALE GOING ON NOW!

Order forms can be obtained by calling the Wood SWCD at 419-354-5517, visiting our website at [www.woodswcd.com](http://www.woodswcd.com) or by stopping by the office at 1616 East Wooster Street. Limited quantities are available place your order early! Orders will be filled on a first come basis. Deadline for placing tree order is March 27, 2009.

## **Stormwater Erosion and Sediment Control**

**Effective and Economical  
Methods of Erosion Control  
During Construction**

Monday, March 30, 2009  
8 a.m. — 4:30 p.m.

For more information Contact:  
Kurt Erichsen at TMACOG 419-241-9155 ext. 126  
or [kurt@tmacog.org](mailto:kurt@tmacog.org)

## NORTHWEST OHIO WOODLAND & WILDLIFE WORKSHOP

Are you looking for something to do with the family? On Saturday, May 30, 2009 plan to attend the Northwest Ohio Woodland and Wildlife Workshop to be held at the Schedel Gardens and Arboretum in Elmore. We guarantee the day will be filled with helpful information and interesting sessions not only for landowners of woodlots, but their families and other interested individuals.

The workshop sponsors include the following: the Northwest Ohio Soil and Water Conservation Districts; Ohio Department of Natural Resources, Division of Forestry; Northwest Ohio Woodland Owners Association; and OSU Extension.

### AREA 1 ENVIROTHON

The Area 1 Envirothon is scheduled for Wednesday, April 29<sup>th</sup> at YMCA Camp Clay in Van Wert County. The Envirothon (an environmental knowledge competition) is for high school students. This year's theme focuses on "Biodiversity in a Changing World". Five member teams of high school students from the twenty counties wide, Area 1, will compete at five different "stations" throughout the day. Students will be tested on their knowledge of soil, aquatics, forestry, wildlife and current environmental issues. Nearly 400 students are expected to compete in the Area 1 event with the top four teams advancing to state competition to be held at Kenyon College in Gambier, Ohio in June. For more information check out the

### JOHN HIRZEL MEMORIAL SCHOLARSHIP

The Wood SWCD is pleased to again offer the John Hirzel Memorial Scholarship. Interested individuals who meet the following criteria are encouraged to apply.

- \* Applicant and parents must be Wood County residents.
- \* Applicant must be *entering their college junior or senior year*.
- \* Applicant must be maintaining a 2.5 grade point average on a 4.0 scale.
- \* Applicant must be pursuing either an *environmental or agricultural related major course of study*.

For more details as well as the downloadable application form, check our website [www.woodswcd.com](http://www.woodswcd.com) The application deadline is May 8, 2009.

### GRAZING MANAGEMENT WORKSHOPS

A three session Grazing Management Workshop will be held March 12, 19 & 26 2009, at the University of Findlay, Animal Sciences Center, 14700 St. Rt. 68, Findlay, Ohio. The event will be from 6:30-9:30 p.m. each of the three evenings.

The workshop is a hands-on grassland school that is designed for the producer and the resource manager. The school is held on consecutive Thursday evenings. Registration is limited and the registration deadline is March 6, 2009.

Topics to be covered include: Principles of M.I.G., Evaluating your Resources, Matching Plant & Animal Needs, Understanding Plant Growth, Forage Species Selection, Grazing Systems, Winter Feeding, Extended Grazing, Grazing Economics, Fencing and Watering Systems, EQIP and concludes with pasture walks during the final session.

Presenters include: Bob Hendershot, State Grazing Specialist, USDA Natural Resources Conservation Service; Gary Wilson, Extension Educator, Ohio State University Extension – Hancock County; and Megan Burgess, District Conservationist, Hardin County NRCS.

For registration form or further information you can contact the Hardin County NRCS office at 419-673-0456, Ext. 3

...save the date!  
**"Psyched on Science!"**  
 at  
**Conservation Camp**  
**JUNE 3 - 6, 2009 - CAMP PALMER**



**COST: \$110**  
**(\$99 IF PAID BY MAY 15<sup>TH</sup>)**  
**\$15 SCHOLARSHIPS OFFERED TO**  
**THE FIRST 25 WOOD COUNTY CAMPERS.**

## NITROGEN LOSSES FROM SOIL

Nitrogen (N) can be lost from the field through three principal pathways: denitrification, leaching and surface volatilization.

The form of N a farmer chooses should depend on how serious a problem he has with the above N losses. Cost of N, labor, equipment and power availability are other considerations when choosing a fertilizer source.

**Denitrification** occurs when nitrate N ( $\text{NO}_3^-$ ) is present in a soil and not enough oxygen ( $\text{O}_2$ ) is present to supply the needs of the bacteria and microorganisms in the soil. If O levels are low, microorganisms strip the oxygen from the nitrate, producing N gas ( $\text{N}_2$ ) or nitrous oxide ( $\text{N}_2\text{O}$ ), which volatilizes from the soil. Three conditions that create an environment that promotes denitrification are wet soils, compaction and warm temperatures.

**Leaching** losses of N occur when soils have more incoming water (rain or irrigation) than the soil can hold. As water moves through the soil, the nitrate ( $\text{NO}_3^-$ ) that is in soil solution moves along with the water. Ammonium ( $\text{NH}_4^+$ ) forms of N have a positive charge and are held by the negative sites on the clay in the soil; therefore,  $\text{NH}_4^+$  forms of N leach very little. In sands where there is very little clay, ammonium forms of N can leach. Coarse-textured sands and some muck soils are the only soils where ammonium leaching may be significant.

One way to minimize N leaching and denitrification is to minimize the time the N is in the soil before plant uptake. This cuts down on the time when conditions are favorable for losses. Most of the N is needed by corn after the plant is 3 to 4 weeks old (June 1).

**Surface volatilization** of N occurs when urea forms of N break down and form ammonia gases and where there is little soil water to absorb them. This condition occurs when urea forms of N are placed in the field but not in direct contact with the soil. This situation can occur when urea is spread on corn residues or 28 percent is sprayed on heavy residues of cornstalk or cover crop.

The rate of surface volatilization de-

pends on moisture level temperature and the surface pH of the soil. If the soil surface is moist, the water evaporates into the air. Ammonia released from the urea is picked up in the water vapor and lost. On dry soil surfaces, less urea N is lost. Temperatures greater than 50 degrees F and a pH greater than 6.5 significantly increase the rate of urea conversion to ammonia gases. Applying urea-type fertilizers when weather is cooler slows down N loss. If the surface of the soil has been limed within the past three months with 2 tons or more of limestone per acre, DO NOT apply urea-based fertilizers unless they can be incorporated into the soil.

To stop ammonia volatilization from urea, the urea must be tied up by the soil. To get the urea in direct contact with the soil requires enough rain to wash the urea from the residue or placement of urea-based fertilizer in direct contact with soil by tillage, banding or dribbling. If the residue is light (less than 30 percent cover), 0.25 to 0.5 inch of rain is enough to dissolve the urea and wash it into the soil. If the residue is heavy (greater than 50 percent cover), 0.5 inch or greater of rainfall is required.

Ammonia volatilization of N may also occur when ammonium forms of N--ammonium sulfate (AS), ammonium nitrate (AN), diammonium phosphate (DAP), monoammonium phosphate (MAP) and ammonium polyphosphate (APP)--are surface applied to calcareous soils (soil pH greater than 7.5). The extent of loss is related to the reaction products formed when ammonium fertilizers react with calcium carbonate. Ammonium fertilizers that form insoluble precipitates (AS, DAP, MAP and APP) are subject to greater ammonia volatilization losses than AN, which forms a soluble reaction product. To prevent ammonia volatilization, ammonium fertilizers should be knifed in or incorporated on calcareous soils.

### SELECTING FORMS OF NITROGEN FERTILIZER

The common N fertilizers are anhydrous ammonia (82 percent N), urea (46 percent N), solutions (28 to 32 percent N), ammonium sulfate (21 percent N) and

ammonium nitrate (34 percent N).

Anhydrous ammonia (82 percent) is the slowest of all N fertilizer forms to convert to nitrate N. Therefore, it would have the least chance of N loss due to leaching or denitrification. It must be injected into the soil; therefore, it would have no loss due to surface volatilization. The disadvantage of anhydrous ammonia is that it is hazardous to handle. It must be injected into the soil, and on steep slopes erosion can be a problem.

Urea (46 percent) converts to nitrate N fairly quickly, usually in less than two weeks in the spring. Denitrification on wet or compacted soils can be serious. Leaching can be a problem in coarse soils. In no-till situations, surface volatilization can be a problem if the urea is not placed in contact with the soil and the weather is dry for several days after spreading.

UAN solutions (28 to 32 percent N) are usually made up of urea and ammonium nitrate. The nitrate in this product is subject to leaching and denitrification from the time it is placed in the field. The urea components are subject to the same loss mechanisms as urea. Nitrogen solutions can be banded on the soil surface easily by dribbling. This method of application minimizes the amount that sticks to the residue and, therefore, minimizes surface volatilization but may not eliminate it.

Ammonium sulfate (21 percent) is a nitrogen source with little or no surface volatilization loss when applied to most soils. Ammonium sulfate is a good source of sulfur when it is needed. Its disadvantage is that it is the most acidifying form of N fertilizer -- it requires C approximately 2 to 3 times as much lime to neutralize the same amount of acidity as formed by other common N carriers.

Ammonium nitrate (34 percent) is 50 percent ammonium N and 50 percent nitrate N when added to the soil. The ammonium N quickly converts to nitrate N. For soils subject to leaching or denitrification, ammonium nitrate would not be preferred. Ammonium nitrate has no urea in it; therefore, it would be a good choice for surface application where ammonia volatilization is expected.

1616 East Wooster Street, Box 32  
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**An Equal Opportunity Provider and Employer**

**EQUIPMENT FOR RENT**

**GREAT PLAINS DRILL FOR "CRP PRACTICES ONLY"**

- 10' working width
- 7 1/2' row spacing
- Rental Rate is \$10.00 per acre/\$50 minimum
- Delivery Charge \$20.00
- Cleanout Charge \$25.00 (if applicable)

**TREE PLANTER**

\$25.00 First Day  
\$45.00 Each Additional Day

**For More Information contact Jim Rickenberg at 419-354-5517.**

**ITEMS FOR SALE**

Floating Pond Filter	\$245.00
Replacement Filter	\$ 53.00
Pond Safety Kit**	\$110.00
Ring Buoy	\$ 45.00
Deep Water Sign	\$ 14.00
Rope (price is per foot)	\$ .25
Tile Probes	\$ 30.00
Soil Test Probe	\$ 56.00
Tree Protectors	\$ 2.00
Flags (.10 each)	
100 4x5	\$ 8.00
100 5x8	\$ 9.00
Rat Guard Prices	
4"	\$ 4.00
6"	\$ 6.00
8"	\$ 8.00
10"	\$ 10.00
12"	\$ 12.00
15"	\$ 21.00
Wood County Soil Survey CD	\$ 10.00
Wood County Plat Books	\$ 15.00

*\*\*Must be preordered and prepaid*