Wyoming County Soil & Water Conservation District

wcswcd@frontiernet.net

Spring 2010

Inside this issue:			
Ag Phosphorus 101	2-3		
SWCD Awards	4		
Organic Pest Control	5		
Recycling Ag Plas- tics Project	6		
Ag District Tour	7		



SWCD Calendar

- May 31- Memorial Day Office Closed
- June 4 Wyoming County Dairy Fest
- June 21 SWCD Board Meeting
- July 5 Independence Day observed - Office Closed
- July 15 WRCC & RC&D Meeting
- July 19 SWCD Board Meeting

On April 28th, 95 High School students competed at the 2010 Trailside Envirothon held at Letchworth State Park. Participating schools from Wyoming County were Warsaw, Perry, and the Catholic Home School Group. Cuba-Rushford, Fillmore, and Canaseraga also attended representing Allegany County. Students competed in teams and were tested in subjects such as Soils, Forestry, Wildlife, Aquatics and the Current Issue: "Protection of Groundwater through Urban, Agricultural, and Environmental Planning". This year, the Wyoming County winner was Warsaw High School with a score of 366.5 out of a possible 500 and for Allegany County, the winner was Cuba Rushford High School with a score of 355. Winning teams have the opportunity to go on and compete at the New York State Envirothon at Keuka College in Keuka, NY.

In observance of New York State Water Week, the Wyoming County Health **Department and Wyoming County** SWCD conducted the water taste test at the 2010 Trailside Envirothon. Activities held during water week, such as the taste test, are designed to help citizens understand the importance of protecting and conserving our valuable water supplies. Samples from 6 municipal water systems throughout Wyoming County, including Warsaw, Castile, Wyoming, Arcade, Attica, and Perry, were taste tested and ranked. The 2010 best tasting water, earning the most votes was the Village of Castile; second place went to the Village of Arcade. The Village of Castile now has

www.wcswcd.org Phone: 585-786-5070 Fax: 585-786-0381

2010 Trailside Envirothon

the honor of being the best tasting water in Wyoming County and is eligible to compete for the title of the best tasting water in New York State.

The Wyoming County SWCD Board of Directors and Staff sincerely thank the Letchworth State Park staff, Wyoming County Health Department, sponsors, and volunteers that made the 2010 Trailside Envirothon and Water Taste Test a success.



Warsaw High School: Tyler Crandall, Diana Burley, Jeannette Gebel, Ashley Simmons and Ben Colopy



Water Taste Test at the Trailside Envirothon

Ag-Phosphorus 101 Mia M. Halter / Soil Conservationist

USDA - Natural Resources Conservation Service

This last year I've continually encountered the debate of phosphorus loading of water bodies from agricultural operations. That being mentioned, a look at 'how' and 'why' we concern ourselves with phosphorus seems important still for a continued pro-active stance to insure that agriculture is doing the best job possible to protect water quality.

Several years have passed since I graduated with my BS in Soil Science, so I dug out my text books and re-educated myself on the subject of phosphorus as well as perused the many documents and websites found on the internet. Right away I realized that generalizations are very typical for webfound material. My textbooks proved rich with the organic and non-organic chemistry involved with the nutrient phosphorus, but far more complicated. Nomenclature aside I did manage to relate the relationships between water, fertilizer, and soil particles.

Plant Provisions

The plant uptake of soluble phosphate (P) is in two (2) ortho-phosphate forms. The uptake of one over the other is dependent upon pH with the most rapidly utilized form abundant at pH values below 7.2, typically found in Wyoming County. The absolute quantity of these two (2) ions present in the soil and available for uptake at any one time is very small. The amount that is dissolved and accessible in the soil solution is in equilibrium with solid phase phosphorus. The solid phase consists of both the organic and inorganic forms in the soil. Crops need more phosphorus than is dissolved in the soil solution to grow economically; therefore phosphorus must be replenished many times during the growing season. The ability of a soil to maintain adequate levels of P in the solution phase [its buffering capacity] is directly related to the crop uptake level. The buffering occurs when the immobilized P is released from a soil particle into the soil solution and is then ready for plant uptake [as soluble P]. This is a continuous cycle of capture and release of the P ions, so as P is removed from the soil solution by the crops, it is slowly replaced by the bound P. The bound P is generally made up of the excess P

delivered by fertilizer/manure and secondary minerals to a lesser degree.

Phosphorus is not mobile within the soil; therefore placement of phosphate fertilizers is a major management decision in crop production systems. Initial movement of P away from a fertilizer application site seldom exceeds 3 to 5 cm. No ideal special placement exists for all crops and should depend on the intended crop, soil test P level, and environmental considerations that contribute to soil loss or water run-off.

Contamination of groundwater is seldom a problem. Phosphorus in soil is tightly bound to soil particles, is immobile, and not able to leach to a significant quantity. Many human activities can contribute phosphorus to surface waters. Agricultural land enriched with P by fertilization or manure can contribute substantial amounts of P to surface waters as the result of runoff and/or erosion processes.

Why did it leave?

So, how is it lost? The soluble phosphorus is carried in runoff water from agricultural fields into streams, wetlands and lakes during rain events and snow melt. Phosphorus can travel attached to particles of soil or manure eroded by water into a stream or waterbody. Phosphorous also can dissolve into runoff water as it passes over the surface of the field. Fortunately there are some management measures to address this loss. Conservation Practices associated with modern agriculture can significantly decrease soil erosion, water runoff, and transport of sediment into surface waters. Conservation practices such as:

No Till/Strip Till Cover Crops Conservation Crop Rotation Contour Strip Cropping Riparian Herbaceous Buffers Till across the slope

Ag-Phosphorus 101 continued from pg.2

Manure and fertilizer have vastly higher concentrations of soluble phosphorus than soil. If a rainfall event causing runoff occurs soon after a surface application, the concentration of soluble phosphorus in the runoff can be more than 100 times higher than normal. That's both money [capitol investment] lost and a potential water quality degradation factor.

Over time, highly soluble manure and fertilizer phosphorus on the soil surface will react with the soil and reduce soluble phosphorus in runoff back to initial levels. Normal levels return over the course of a month in warm soils, but this process takes longer in cold soils. Manure and fertilizer application is not recommended on frozen or snow-covered soils because phosphorus never has a chance to react with the soil before runoff occurs, this is important to remember next time you spread manure during the winter months.

Erosion losses

When runoff water gains sufficient energy to cause soil erosion, the amount of phosphorus lost from the field increases dramatically. Reducing erosion losses through reduced or no-till on corn and other crops can reduce total phosphorus losses significantly.

In soil, the total amount of phosphorus is much higher than the soluble phosphorus content. Soil particles have a tremendous capacity to fix [bind] soluble phosphorus allowing only a small proportion of the total and plant-available phosphorus to exist in the soluble form. The natural sorting of soil particles during erosion causes those with the highest phosphorus concentration to be carried with runoff. Soils with higher soil test phosphorus levels will have higher phosphorus content in eroded particles.

To minimize erosion losses of phosphorus adopt soil conservation practices to minimize soil erosion. Contact the Wyoming County Soil & Water Conservation District or the USDA - Natural Resources Conservation Service [NRCS] for information.

Once a stream or lake has excess phosphorus, it takes time to improve water quality. Excess phosphorus cycles between the bottom sediments and the water long after the source of excess phosphorus has been eliminated. Consequently water quality efforts must focus on prevention.

Encouragement

An effort to protect water quality is everyone's job. I encourage farmers to continue taking the initiative in adopting practices that minimize the loss of phosphorus from their fields into streams, wetlands and lakes. This is the best way to both build and continue the trust of their neighbors.

Phosphorus is a critical element for crop production. Proper management can limit the amount of phosphorus reaching streams, wetlands and lakes from agricultural fields. The successful farm manager will use crop rotation, soil conservation practices, nutrient management planning, knowledge of weather patterns and common sense to limit phosphorus loss from agricultural fields.

Common Sense Management Rules	Why
1. Don't spread fertilizer/manure during or before a rain event	1. Prevents loss of capitol investment from loss of nutrients (\$!)
2. Don't spread on snow covered or frozen ground	2. Phosphorus must come in contact with unfrozen soil to be bound and not loss to run-off/thaw
3. Initiate Conservation Practices to control soil loss	3. When you loose soil you're loosing your bound phosphorus and contributing to water quality degradation

Wyoming County SWCD in the News

On April 13, 2010 the Wyoming County Board of Supervisors honored two members of the Wyoming County Soil and Water Conservation District. Daryl Heiby, Member At-Large and Chairman of the Wyoming County SWCD Board of Directors was presented with a certificate in honor of being the recent recipient of the New York State SWCD Director of the Year award. This award was presented to him at the Conservation District Employee Association banquet which was held in Binghamton, NY. Daryl has been a member of the SWCD Board of Directors since 1990 and has been the Chairman for the last 6 years.



Attention Contractors & Developers!

DIRTBAG® Pumped Sediment Removal System

Whenever accumulated water must be pumped, Dirtbag effectively and economically collects sand, silt and sediment. It could also prevent costly fines. As more and more emphasis is put on saving our environment, water courses and wetlands, regulations are becoming more stringent regarding the removal of dirty water from construction sites.

Dirtbag is made from a porous material allowing water to pass through, but sediments and debris remain trapped inside. Water can be either pumped into the Dirtbag or installed on a slope so that incoming water flows downhill through Dirtbag without creating more erosion. Once the Dirtbag is filled and the water has filtered out, the residual collection can be properly disposed of or used as fill or for seeded areas. Greg McKurth, District Manager, was also recognized by the Board of Supervisors for 30 years of dedicated service. Greg has received several awards and recognitions from the state through out his years of service and continues to provide technical assistance to landowners and municipalities along with securing countless dollars in grant funding for Wyoming County.

The Wyoming County SWCD staff would like to thank the following Board Members for their on going commitment and support.

Chairman, At Large Member -Daryl Heiby Grange Representative - Richard Youngers County Supervisor - Joseph Gozelski County Supervisor - Sally Meeder Farm Bureau Representative - Walt Faryna

Pictured Left to Right District Chairman, Member at Large - Daryl Heiby District Manager, Greg McKurth & District Director, Castile Town Supervisor, Joe Gozelski

Picture by Lorraine Sturm, Perry Herald

The Wyoming County Soil & Water Conservation District still has a few of these in the 15' x 15' size available at no cost to local contractors of site developers. This product was purchased by the District through the Finger Lakes/Lake Ontario Watershed Protection Alliance (FL/LOWPA) funding for use as an erosion and sediment control demonstration on construction sites in the county. If you are interested in trying out this system, please contact the District office at 585-786-5070.



Conservation Corner

By: Bethany Klein, Water Quality Technician

Spring time means it's time once again to ready your garden and start planting your vegetable crops. All too often, it is no sooner your crops start sprouting than pests and insects show up to reap the benefits of your hard work. While chemicals and pesticides do the trick to ward off the pesky invaders, not everyone likes to use them on their produce. There are several different ways to get rid common garden of pests without using pesticides or chemicals.

<u>Ants</u>

Ants are a common garden pest that can be relentless and extremely difficult to deter. Borax can be used and a natural ant poison. Simply mix it with a sweet substance (i.e. peanut butter, honey, etc.). The ants will then take the particles back to the nest, share with the rest of the group, and hopefully end your pest problem. Borax, although it is a natural poison, can be harmful or irritating if ingested or inhaled. Another, less harmful approach, you can take to deter ants are cucumber peels. Placing cucumber peels on ant routes will keep them away, but not permanently. Spices also do the trick if you have located an ant nest. Placing black pepper, cayenne pepper, cinnamon, chili powder, or salt in or around the nest will make the ants disappear.

<u>Slugs</u>

Slugs can also be menacing when they decide to make your garden their home. They can be hand collected and relocated to a different, more appropriate location. Salt will kill slugs instantly. If you go out at night, when slugs are most active, take a flash light, your salt, and sprinkle away. For a more preventative approach spread crushed egg shells around the plants that are most vulnerable. Slugs will not want to cross the sharp, jagged edges of the shells and will not be able to reach your plants. The shells are not only a slug barrier, but a soil conditioner. The shells, when decomposed, will add more calcium and enrich the soil. Like egg shells, sand also acts as a barrier. Slugs do not like to cross the sand so spreading a layer around vulnerable plants will deter the slugs from intruding.

<u>Cats</u>

Insects are not the only critters that like to invade and disrupt your garden. Cats seem to enjoy a good garden patch as well as slugs or ants. They love to roll, dig, and do OTHER things in loose soil and this can disturb your seedlings, other garden plants, and cause a down right mess. A way to attempt to keep cats out of your vegetable patch, is by using citrus. Cats sincerely dislike citrus and will shy away from it. You can save the peels from your oranges and roughly grind them up. Spread the ground orange peel around the edges of the garden and reapply as necessary. The smell of the orange citrus will keep the kitties at bay. If this method does not prove successful, a simple squirt of the garden hose should do the trick temporarily.

<u>Birds</u>

Birds are pests that attack gardens from the sky. They can easily be warded off by stringing shiny objects up along the garden perimeter. When the objects reflect light this startles and scares the birds away. Placing rubber snake toys in your garden will also frighten the birds away. The birds will not know that it is a fake snake and will not want to come close to find out. If you have a fence or border around your garden, harmless sticky oils can be applied to keep birds out. You can use a variety of types from petroleum jelly, to used engine oil. Unfortunately, this method is messy, but very effective since birds hate the oil on their feet.

For more ideas on pest control visit the No Dig Vegetable Garden website at: <u>http://www.no-dig-</u> vegetablegarden.com/organic-garden-pest-control.html



Recycling Ag Plastics Project

The recycling of agriculture plastics is not an easy goal to achieve because ag plastics are typically dirtier than other used plastics. They are also bulky and widely dispersed across the rural landscape, adding complexity and cost to collection.

To jump start these hurdles, the Recycling Ag Plastics Project is:

- promoting farmer adoption of best management Practices to keep ag plastics in condition to be recycled
- Acquiring mobile baling equipment to compact used plastic for cost– efficient transport from farms to recyclers
- Cultivating manufacturing markets to process used plastic into new products (e.g., plastic lumber, roof tiles, sweet crude oil)

- Promoting consumer purchase of products made from recycled ag plastics
- Facilitating a national dialog about product stewardship of agricultural plastics.

Ag Plastic recycling is still in an experimental phase, but recycling projects are being implemented in several regions of NYS and elsewhere.

At this time, the District is actively pursuing Ag Plastic baling equipment through a NYS DEC grant to Cornell University and Cooperative Extension of Wyoming County. Stay tuned for more details.

For more information, visit http:/environmentalrisk.cornell.edu/AgPlastics



Ag District 3 Tour

The final report on Agricultural District 3, located within the Towns of Covington, Perry, Warsaw, Castile, Genesee Falls, and Pike was reviewed by the Wyoming County Farmland Protection Board and the Planning Board. After approval by these Boards, it was forwarded to the Wyoming County Board of Supervisors for final approval. The final report was then submitted to the New York State Department of Agriculture & Markets.

On May 12, Ron Mead from New York State Department of Ag & Markets toured the Ag District and saw first hand the challenges facing today's agricultural community. Changes in land use such as areas that were used for agriculture and have been converted to residential were brought to his attention. There were two farm visits on the tour, Swede Farms, Inc. in Covington and Silver Meadows Farm in the Town of Castile.



Left to Right: Ron Mead, New York State Dept. of Ag & Markets, Nancy Herman, Wyo. Co. SWCD, Russ Klein and Stan Klein, Silver Meadows Farm



	Bet	hany		a	ation er Qua	K C I C		cian	
0	K	J	Ι	В	S	В	F	М	W
R	Е	Н	Т	А	Е	W	J	0	U
S	L	Р	F	F	Р	F	S	S	М
S	R	E	W	0	L	F	J	E	D
Е	R	Ν	F	K	Н	J	K	D	Е
R	Ι	S	S	С	Y	Q	М	Ι	R
А	Р	Т	U	S	D	М	Z	М	0
Ι	R	R	Ν	Ι	R	J	Ι	E	S
Ν	А	Е	L	G	0	S	Ν	N	Ι
Т	Р	А	W	А	S	S	S	Т	0
Т	Y	М	Р	В	Е	F	E	Т	Ν
Т	Ι	В	Т	Ι	Е	Х	С	Н	Y
G	М	А	В	0	D	М	Т	D	М
Ζ	S	Ν	J	Ν	U	Y	S	U	G
U	S	K	D	Е	Е	S	М	А	А
	FLOW INSE RAI SEDIM SEE SU	CTS IN IENT ED					RJ HYD GA ER	ATHE IPRAP ROSE ABION OSIOI AMBA	ED J N

This publication is the quarterly newsletter of the Wyoming County Soil and Water Conservation District and is available at no cost to all District cooperators, all interested landowners and land users, and to the general public. To receive this newsletter, simply send your complete mailing address to our office.

DISTRICT DIRECTORS

Chairman, At-Large Member	Daryl Heiby
County Supervisor	Joseph Gozelski
County Supervisor	Sally Meeder
Farm Bureau Representative	Walt Faryna
Grange Representative	Richard Youngers

DISTRICT STAFF

District Manager	Gregory A. McKurth
Secretary/Treasurer	Sharon Boyd
Conservation Aide	Nancy Herman
Water Quality Technician	Bethany Klein
Engineering Technician	Timothy Terry

NATURAL RESOURCES CONSERVATION SERVICE

District Conservationist	Mia Halter
Soil Conservation Technician	Mike Shaw

Helping People Help the Land

An Equal Opportunity Provider and Employer

Wyoming County Soil & Water Conservation District 31 Duncan Street Extension Warsaw, NY 14569 NON-PROFIT ORGANIZATION U.S. POSTAGE PAID WARSAW, NY 14569 PERMIT NO. 64