

Not Much Is Understood About Phosphorous And Its Movement In Soil

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OCEAN CITY, Md. — Scientists admit a lot more work needs to be done.

But if legislation is enacted in Delmarva and surrounding areas to put phosphorous, instead of nitrogen, in the forefront of nutrient management planning, ways to measure how successful management practices are will be critical.

That was the take-home message delivered last week to about 270 producers, educators, and agri-industry representatives at the National Poultry Waste Management Symposium at the Sheraton Fontainebleau Hotel in Ocean City, Md.

Ken Staver, faculty research associate with the University of Maryland, noted that the problems need to be real, and not

simply perceived. And science must come up with way to not only determine what can be changed, but whether they can solve the problem of possible phosphorous loading of the Chesapeake Bay.

Researchers are still examining exactly how much phosphorous on the soils is too much and what the "acceptable" levels of phosphorous are in ag drainage.

"We don't have a lot of specific information on phosphorous in ag drainage," said Staver, despite monitoring work.

In several areas of the Delmarva Peninsula, phosphorous levels have been measured in runoff. The ranges are from a half part per million (ppm) to 1 ppm.

According to Staver, in the Upper Choptank, there are 72,000 acres, with an annual volume measure of 0.07-0.11 ppm of

phosphorous. The German Branch measures 0.17-0.32 ppm. The Pocomoke River area, at 2,000 acres, measures about 0.3-1 ppm.

The Pocomoke River, a sub-estuary of the Chesapeake Bay, includes 4 million pounds per year of poultry production.

One thing the scientists have discovered: in water areas where organic wastes are used, phosphorous levels from runoff can increase substantially.

In the Pocomoke River watershed, farming generates 4 million pounds of poultry litter on 100,000 acres of cropland. That translates into 40 pounds of phosphorous per acre per year. Twenty pounds of phosphorous per acre per year are removed in harvested grain.

A voluntary effort began to control phosphorous levels in the

late 1980s. But since then, levels of phosphorous in the rootzone have actually increased by approximately 25 million pounds.

The questions remain: will erosion-control strategies offset increasing soil phosphorous levels? Can researchers find ways to reduce phosphorous levels in drainage?

The challenge: researchers have to provide that phosphorous levels are being reduced. "It's no longer sufficient to convince people that progress is being made," said Staver. "Progress on paper will no longer be good enough."

Phosphorous in drainage must be managed, watershed phosphorous budgets must be balanced, and phosphorous/soil loss relationships need to be revisited.

"We're in uncharted waters," said Staver, regarding where re-

search is headed.

But the following are certain:
• Pressure on agriculture to lower the nutrient levels in drainage is going to increase.

• Ways to maintain the long-term soil phosphorous levels at minimum necessary to maximize crop yields will have to be implemented.

• Agriculture, in general, may have to meet performance standards to "show we have made progress," Staver said.

To avoid regulations, producers need to know what they are doing works, there needs to be accountability, and monitoring is in place to verify effectiveness.

Staver noted that certain tillage methods, particularly no-till, can allow phosphorous levels in the soil to be problematic. Some tillage management strategies may have to be reviewed.



Capitol Region Agronomy Team Report

SOIL TESTS AND RECORDKEEPING
Mark Goodson, CCA
Extension Agent, Soils
York County

I'm here this month to talk about soil test records.

You know the value of the plant nutrients stored in your soils is worth thousands of dollars. Think about that. To replace that N-P-K and the S-Ca-

Mg plus all the micronutrients stored right now in your fields would bankrupt your operation. Despite this fact, we have a real relaxed attitude about our inventory control when it comes to these soil nutrients.

Do you know where your reports are for all the soil samples you've collected over the past three years? Are you sure? Are they organized? Do you have

written records of which fields received lime applications over the past three years? Could you go there right now, find them, and answer these questions within a couple minutes?

Based on my experience as a soils extension worker and previous positions I've held working directly with farmers, I know the answers to the questions for most farm operations. Hey, I don't fault anyone. We are all swamped in paper and information. The point is, some fields are above optimum for lime and fertilizer and some fields are below optimum for lime and fertilizer. And that fact hurts your bottom line.

Problem is, there are not many farmer-friendly, easy-to-use soil test recordkeeping tools or systems out there.

I've seen a couple of software programs that will keep your records on a computer. When someone demonstrates it, it looks great. When I get it home and on

my computer, I get two mouse "clicks" into it and I'm lost.

A farmer told me last night, the problem he saw with these programs is that they are loaded up with too many fancy "bells and whistles." That makes the basic job hard to do...unless you have a couple weeks to read the manual. Yeah.

I'm on a mission and the objective of this mission is to make a variety of simple, easy-to-use soil recordkeeping tools available to farmers and crop advisers within the next three to five years. I need your help to get this done.

I am in the initial stages of identifying and evaluating available recordkeeping systems and tools. I want to hear from you. I want to know how you manage the soil test information on your operation. What works? Have any tips? Is a consultant the way to go?

With the way prices are, farm-

ers are once again required to become even more efficient and productive. The whole region is hurting with low prices. I see better management of crop nutrients — manure, fertilizer, and lime — as a way to increase efficiency.

I'm not talking about using more fertilizer or less fertilizer, more lime or less lime. I'm talking about using the right fertilizer and the right lime in the right place at the right time, and then managing that ground to hold that mineral until the crop is ready to take it up.

I want to hear from you. Help your fellow farmer. We are all in this boat together. We can't afford to farm without this information.

Call me (717) 840-7408 or email me at mwgl@psu.edu. Or write me at York County Cooperative Extension, 112 Pleasant Acres Road, York, PA 17402. I'll come out and visit you. Thanks.

Beaver County Resident Re-Elected President Of Pa. State Grange

CARLISLE (Cumberland Co.) — The Master (President) of the Pennsylvania State Grange was re-elected to a third term by the delegate body at the recently concluded state convention here.

Bill Steel of Freedom, Beaver County, was elected to lead the rural and agricultural organization for the next two years. Steel, a 47-year member of the Grange, begins his fifth year as president of the State Grange in addition to serving as Overseer (vice president) of the National Grange in Washington, D.C.

Early in 1969, he became director of youth activities for the National Grange in Washington, D.C., where he also supervised the production and supply departments, incorporated the Farm Film Foundation into a Grange service, and became a founding director of the Arlington County Fair.

Returning to the family farm in 1985, Bill became a district representative for Aid Association for Lutherans, a fraternal benefit society, and again became active in state Grange activities. He was elected Overseer of the State Grange in 1992, and served four years before being elected to the Master's position.

Steel is an agriculture trustee for Penn State University, a

member of the board of governors for the University of Pennsylvania Veterinary School, and serves on several other statewide agricultural and educational boards. He is also a lay worship leader in the Lutheran Church and serves his home congregation on a weekly basis.

Steel and his late wife are the parents of three sons, Dr. Adam B., and William H., both of Maryland, and Charles J. of Pittsburgh.

Other officers were also elected at this year's state session.

Betsy Huber of Lincoln University, Chester County, was re-elected Overseer (vice president) for a two-year term. Huber, a 39-year member, is past Master of Goshen Grange #121, is past Master of Chester/Delaware Pomona #3, past state Pomona (1986-92), and was, with her husband Henry, the Young Couple of the Year in 1971.

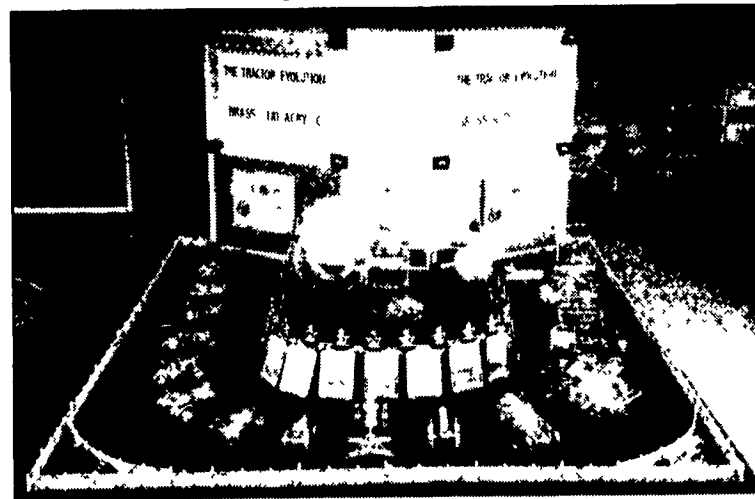
Outside the Grange, Huber is a township supervisor at Upper Oxford, and holds positions on the Board of Trustees of Avondale Presbyterian Church and the Community Advisory Committee of the Chester County Board of Health. She is also a past member of the Chester County Agricultural Development Council (1980-1985).

Huber is employed as a legislative aide to Rep. Art Hershey, R-Chester. The Hubers are the parents of two sons and a daughter and have five grandchildren.

Other officers for the next two years including their name, local Grange and county are (designates re-elected officers):

Lecturer: ~Susan Tau, Hayfield Grange #800, Crawford County; Steward: Robert Steese, London Grange #1492, Mercer County; Assistant Steward: Brian Ebersole, Community Grange #1767, Perry County; Lady Assistant Steward: ~Mary Ann Buckley, Lincoln Grange #914, Huntingdon County; Chaplain: ~Jean Hollabaugh, Watson Grange #1068, Warren County; State Treasurer: ~Anna May Nauss, Valley Grange #1360, York County; Secretary: ~Sandy Witmer, Elizabethtown Grange #2076, Lancaster County; Gatekeeper: ~Robert Moore, Buffalo Grange #1523, Washington County; Ceres: ~Linda Strong, Plumcreek Valley Grange #1702, Indiana County; Pomona: ~Debra Campbell, Perry Valley #1804, Perry County; Flora: ~Janet Fishovitz, Big Knob Grange #2008, Beaver County; Executive Committee Member: ~Nettie Kauffman, Ontelaunee Grange #1617, Berks County.

Tractor Evolution Display Coming To Lancaster



Ev Weber, a retired professional engineer, has been building custom-made farm toys, especially harvesters, for more than 10 years. His models are hand-built in the popular 1/16th-inch scale and reflect hundreds of hours of craftsmanship and historical research.

LANCASTER (Lancaster Co.) — On Saturday, Nov. 11 at Lancaster's Farm and Home Center, visitors can see the first and only showing in the East of Ev Weber's award-winning, scale-model farm tractor display.

A week earlier in Dyersville, Iowa, at the National Farm Toy Show (noted for drawing 15,000-plus toy collectors), the same display will be set up for the first time.

The Lancaster show on Nov. 11 is the longest running annual Farm Toy Show east of Ohio and is the only show east of Ohio that

Weber of Lima, Ohio, attends.

Also on display for the first time will be prototypes of the licensed collectibles to be offered for the 85th Pennsylvania State Farm Show in January 2001. Included are an Allis Chalmers G show tractor, a collectible truck with a load of hay, a '51 Ford F-100 pickup bank, and "Pete" the Perchant bean bag style 85th Farm Show horse.

The Lancaster show is open from 9 a.m. until 2 p.m. There is a nominal admission charge for adults. Anyone wearing a FFA or 4-H jacket gets in free.