

If Phosphorus-Based Nutrient Management Plan Is Adopted, What Does That Mean To Applicators?

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Editor

LEESPORT (Berks Co.) — If the Pennsylvania Nutrient Management Law, or Act 6, will be changed to a "phosphorus-based" program, dairy producers would have to place double the amount of manure down simply to meet nitrogen needs of crops.

In turn, that double-edge approach only "builds our soil

phosphorous higher and higher," said Doug Beegle, Penn State soil fertility specialist.

Beegle spoke Wednesday to about three dozen manure hauler personnel and agri-industry representatives at a Penn State-sponsored certification program at the Berks County Ag Center in Leesport.

Beegle addressed the potential impact the changes to Act 6

could bring to the manure application business.

Beegle noted that in the past, researchers believed several assumptions. One of them was that "the only way we lost phosphorus was by erosion," he noted. But there are other ways phosphorus is lost from the soil.

In Pennsylvania, a lot of phosphorus in soils is tied up in stable, inorganic compounds, such as minerals and iron, aluminum, and silicon in clay soils. Erosion can carry phosphorus into streams. So can runoff from excess rainfall.

Another challenge: the vast majority of phosphorus in the soil is tied up in the compounds in the soil, and "very unavailable," Beegle said.

Because phosphorus behaves like a "micronutrient," Beegle said, enough phosphorus has to be present to meet the needs of the crop. A real problem exists, Beegle said. "There are lots of phosphorus, but a very small amount in a form that's available."

Adjusting soil pH to the right levels of 6-7 helps the plants utilize the nutrient. The producer must do a good job of liming, Beegle said.

A problem for dairy farmers is

that they will need twice as much land to spread the manure simply to meet the crop nitrogen needs. This will increase phosphorus buildup in the soil.

For poultry manure, simply to balance for phosphorus, producers would need "four times as much land," said Beegle. "That's a big problem."

Beegle said that a crop such as corn needs available phosphorus at two-tenths part per million "all the time." Yet algae buildup in ponds and small streams can be caused by a tenth of that amount.

To manage this problem, research has come up with the "site index" system. If applicators can identify and manage 10 percent of the land that is away from streams and potential runoff, "we can manage 90 percent of the phosphorus," Beegle said.

"The challenge is, where are those areas on the farm? Let's manage those and that will give us flexibility on the other 90 percent."

The site program looks into potential transport of phosphorus through erosion, runoff, pattern drainage, and other factors, and provides a rating. Naturally, a higher rating is gained as long as the application is away from water sources. And the rating

and timing of applications are tied up in regular soil testing.

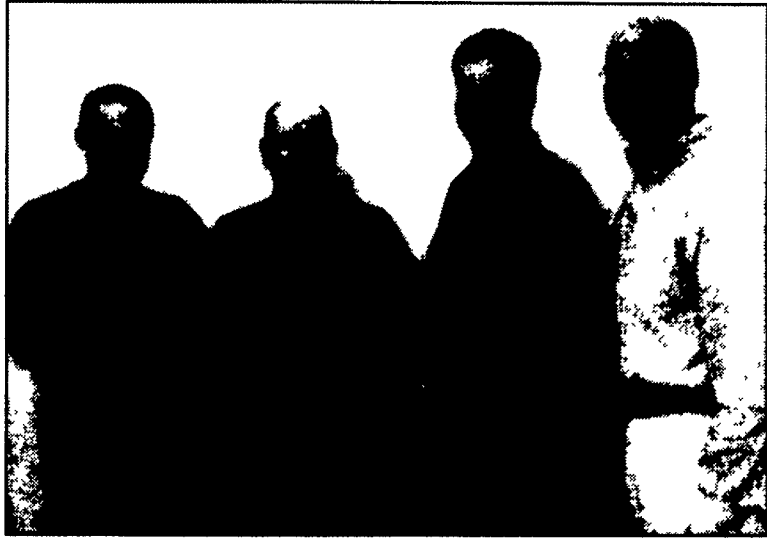
Beegle noted that Act 6 would be up for review within the next year. He's not certain that the State Conservation Commission would decide to plan on phosphorus-based changes to the Act. "But if I had to guess, I think they are," said Beegle. "I think if they go with phosphorus, they will go with the phosphorus index approach."

"I think it is a reasonable way to go in terms of addressing phosphorus," he said.

The key is to provide a review of the plan after its potential adoption to see if it is working. That will provide direction to determine "what's working and what isn't," Beegle said.

In Maryland, a phosphorus-based plan is already in place. Manure from poultry operations is collected at a site and pelletized for use as fertilizer.

Many farms in Pennsylvania receive their feed — and thus their phosphorus — from Midwest feed mills. That cycle has brought phosphorus in the area, where it stands. Experts believe the cycle of retransporting the phosphorus back, perhaps in terms of fertilizer or even fuel, could be a solution for producers in the region.



Speakers at the Manure Hauler Certification meeting in Berks County included, from left, Joel Myers, NRCS; Doug Beegle, Penn State soil fertility specialist; Robert Meinen, Penn State senior extension associate; and Ken Kephart, Penn State swine specialist. Photo by Andy Andrews, editor

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On Christmas Day, Tuesday, Dec. 25, Lancaster Farming office is closed. The office will reopen Wednesday, Dec. 26.

For the Dec. 29 issue, there are some deadline changes:
Public Sale and Mailbox ads, 5 p.m. Friday, Dec. 21.
Classified, Section D ads, 5 p.m. Wednesday, Dec. 26.
Classified, Section C, Farm Equipment ads, 9 a.m. Thursday, Dec. 27.
General News, noon, Thursday, Dec. 27.

On New Year's Day, Tuesday, Jan. 1, Lancaster Farming office is closed. The office will reopen Wednesday, Jan. 2.

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Public Sale and Mailbox ads, 5 p.m. Friday Dec. 28.
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