

Crops

Consider P management options

Key Points

- Farmers in the WLEB will be under close scrutiny when applying fertilizer.
- Consider all practical options to keep phosphorus in place.
- Use CAP 104 for in-depth assessment of nutrient management options.

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IN the aftermath of the Toledo water crisis, farmers in the Western Lake Erie Basin will be under close scrutiny when applying fertilizer this fall. While phosphorus reaches Lake Erie from multiple sources, nutrient loss from cropland is an important factor. Here are several options to keep P in place.

Know at-risk areas in your fields

The Ohio State University Extension and USDA Agricultural Research Service recommend using the Ohio Phosphorus Risk Index, which considers runoff potential, proximity to water, soil test levels, and P application rate and method. This score can be used to identify fields with high risk of phosphorus loss that should be targeted for extra efforts.

Erosion hot spots can be a costly issue even on fields with relatively low P-risk index ratings. Where soil is being lost through gullies, collapsing stream banks or drainage tile washouts, nutrients are sure to follow. Ask your ag retailer if they have noticed any issues during their visits for fertilizer applications, pest scouting or other services. It never hurts to have a second pair of eyes looking for opportunities to keep soil and nutrients in place.

Opportunities can include installing filter strips and buffers to capture nutrients before they enter streams. Blind inlet and controlled drainage structures filter water before runoff leaves a farm. Financial and technical assistance are often available from the USDA Natural Resources Conservation Service's Environmental Quality Incentives Program, as well as from state and local conservation districts and watershed groups. It's worth contacting your local NRCS office to find out.

Soil tests, precision application

Sampling soil in multiple grids and zones within a field will improve accuracy of nutrient applications and crop use efficiency. With soil test information, you can work with your agronomist to develop a nutrient plan, ensuring nutrients are sufficient in high-yielding parts of the field and reduced where they won't generate a return on investment.

If your retailer applies nutrients in fall, ask them to notify you after application so you can lightly incorporate the fertilizer for safekeeping over the winter without losing protective residue.

No-till? No problem

In most cases, starter fertilizers applied at planting can adequately supply a field with phosphorus. Applying fertilizer to a growing cover crop is another option in a



FALL PLANTING: Travis Harrison makes final adjustments on his 12-row strip-till unit before hitting the field this fall. He is a farmer and co-owner of Green Field Ag.

no-till management system.

Strip tillage can be used to apply fertilizer below the soil surface in the crop row with minimal soil disturbance. Travis Harrison, a farmer and co-owner of Green Field Ag, has used strip till for several years.

"Our primary goal is to reduce the amount of nutrients we put on for the crop because they are banded right there for the plant," says Harrison. He avoids broadcasting fertilizer. "We use strip tillage to get the benefits of tillage and to get phosphorus and potassium into the rooting zone and not lying on top of the soil where it can wash off."

Cover crops improve soil health

Cover crops can increase soil organic matter content. As organic matter increases, so does the ability for that soil to hold water and resist compaction. As Seneca County farmer Joe Kimmert puts

it, "I began using cover crops four years ago. I started small and simple with cereal rye, and then, as I grew more confident, I moved into blends specific to my goals for each field. In the fields where I have used cover crops the longest, I notice a difference in the top 2 to 3 inches of soil. The drill doesn't take as much pressure to get it into the ground."

Art Feck, who farms in Carey, has used cover crops for nearly 10 years. "I have had good success with adding red clover seed to my spring nitrogen application into wheat, and this gives me the ability to make a cutting for cattle forage. The red clover typically overwinters well and fixes nitrogen for my upcoming corn crop."

Make a plan!

Drewes Farm Partnership, which owns farms across the Western Lake Erie Basin, is taking a proactive, research-based ap-

CLOVER-COVERED: Art Feck, a cover cropper from Carey, stands in a field of well-established red clover.

proach to reduce P losses under an NRCS-approved nutrient management plan.

"We are doing many practices to help reduce phosphorus loss," says Tyler Drewes, a farmer with the partnership. "A nutrient management plan reassures us that we are doing what is right environmentally and economically."

NRCS also offers a nutrient management Conservation Activity Plan, or CAP 104, which provides farmers with an in-depth assessment of their nutrient management opportunities suited to their needs. With a completed CAP 104, a farmer is better positioned to receive additional EQIP funds to implement resource management structures and improvements.

Farmers can submit EQIP applications to their local NRCS office anytime. However, farmers in Ohio must submit an application by Nov. 15 to be considered for funds in early 2015. Your ag retailer may have an agronomist who is a certified technical service provider, or TSP, for NRCS programs. If so, you can work with him or her to develop a plan, and NRCS may reimburse at least a portion of the cost. If not, NRCS can help you locate a qualified TSP in your area.

For more information on NRCS programs and other resources for nutrient management, visit the Partnership for Ag Resource Management website, www.partnershipfarm.org.

Studer, Adelsperger, Petzoldt and Green write for the IPM Institute of North America, an independent nonprofit working to identify solutions to ag resource management problems. They are currently working under grants from the Great Lakes Protection Fund and the National Fish and Wildlife Foundation.