Crops

Consider P management options

By KIP STUDER, MARK ADELSPERGER, JANE PETZOLDT and THOMAS GREEN

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 filter strips and buffers to capture nutrients before they enter streams. Blind inlet

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 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 laying 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 Kinnet 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, a cover cropper from Carey, stands in a field of well-established red clover.

CLOVER-COVERED: Art Feck, a cover cropper from 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 fixates nitrogen for my upcoming corn crop.”

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.

Make a plan!
Drewes Farm Partnership, which owns farms across the Western Lake Erie Basin, is taking a proactive, research-based approach 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.”

NutriSource, an independent nonprofit working to identify solutions to ag resource management problems, a joint program of the Great Lakes Protection Fund and the National Fish and Wildlife Foundation.