

Lafayette Ag Stewardship Alliance, The Nature Conservancy: Lafayette County farms make progress on conservation

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DARLINGTON, Wis. — The increasing use of non-traditional farming practices in Lafayette County is making important progress toward reducing the potential for harmful runoff into streams and lakes, a new analysis shows.

Using data about farming practices among members of the [Lafayette Ag Stewardship Alliance](#) (LASA), the analysis calculated an estimate of the potential impact of three innovative practices — cover crops, strip-tillage and no-tillage — compared to more conventional methods typical to that area.

The findings show that the livestock and crop farmers using strip-tillage and no-tillage practices as compared to conventional practices potentially reduce phosphorous runoff from farm fields by 53 percent and soil erosion by 59 percent.

Not all the phosphorus leaving a farm field will reach a stream or lake. But when it does, it can cause algae to grow and degrade waterways. For every pound of phosphorus that reaches a waterway, it feeds almost 500 pounds of algae. So, stopping phosphorus and soil sediment from leaving the fields as much as possible improves water quality.



“We have many dedicated farmers in this area who work hard to safeguard our water and soil, so to see these sorts of results is rewarding,” Jim Winn, a dairy farmer who leads LASA, said. “We push ourselves to get better every day at protecting the environment. Measuring progress is critical.”

The three-year-old nonprofit farmer-led watershed conservation group in southwestern Wisconsin has grown to 27 members who represent 47,000 acres and 23,000 dairy animals, beef cattle and pigs. The alliance collaborates with university researchers, environmental groups and community leaders. They hold field days to demonstrate various practices and they participate in scientific studies, notably contributing thousands of dollars to an ongoing groundwater study.

[The Nature Conservancy](#), a key supporter of LASA, helped fund the phosphorous and soil loss analysis, which is based on surveys from the farms.

“We’re excited to work with these innovative LASA farmer members who are not only making changes in how they farm and manage their soil but sharing their data so we can better measure outcomes,” said Steve Richter, director of agriculture strategies for The Nature Conservancy. “There is a lot of interest among farmers in practices that improve soil health and increase productivity, and LASA farmers are making these practices more accessible to others by sharing lessons learned.”



In addition to the cover crops, strip-tillage and no-tillage, LASA members are

regularly practicing conservation techniques like basic soil sampling, plant tissue sampling, nitrogen stabilization, nutrient management plans and planting harvestable buffer strips. They are also figuring out how to make these practices financially sustainable through increased productivity.

“Trial and error are part of this, but we keep moving forward,” Winn said. “We recognize we can do better, we can learn from one another and we can stand out as community leaders on environmental sustainability. That’s what drives our group.”

CONSERVATION PRACTICES

LASA farmers have made noticeable changes to their practices. The most recent numbers (2019):

- 23,500 acres of conservation tillage practices (either strip-till or no-till planting in spring)
- 22,300 acres covered by nutrient management plans
- 5,305 acres of cover crops
- 4,000 acres of low-disturbance manure injection

MORE ABOUT THE ANALYSIS

The analysis was completed as part of a conservation benefits tracking project initiated by the Wisconsin Department of Agriculture, Trade and Consumer Protection to evaluate impacts of the state’s Producer-Led Watershed Protection Grants Program. The tracking initiative was developed in collaboration with the University of Wisconsin-Madison Department of Soil Science and The Nature Conservancy. Wisconsin’s SnapPlus nutrient management planning software was used to calculate the potential annual phosphorous loss and soil erosion on fields when farms include cover crops and reduce tillage operations.

While not every conservation practice provided significant reductions for each scenario, below are examples of the amount of phosphorus loss and soil erosion that can be avoided with the adoption of conservation practices on agricultural landscapes in Lafayette County. Acreages of practices are based on the average number of acres implemented on LASA member farms in 2019.

It is important to note that the calculations below are based on comparisons of generalized systems, not actual farms, and do not take into account the other

watershed variables that impact how sediment and phosphorus make their way into a stream or lake.

For comparison, a mid-size dump truck can carry 10 tons of sediment, and 1 pound of phosphorous in a lake or stream has the potential to cause the growth of up to 500 pounds of algae.

Dairy farm adopting 312 acres of cover crops following corn silage

Phosphorous loss reduction: 752 pounds

Soil erosion reduction: 577 tons

Beef farm adopting 704 acres of strip-tillage

Phosphorous loss reduction: 1,570 pounds

Soil erosion reduction: 891 tons

Grain farm adopting 794 acres of no-tillage

Phosphorous loss reduction: 3,727 pounds

Soil erosion reduction: 4,827 tons