Protection Grants Protection Grants

Educational Conferences

Farmers Improving Soil Health and Water Quality Throughout Wisconsin's Watersheds

April 2017

On January 30, 2017 the Farmers of the Barron County Watersheds hosted their second conference at the Ridgeland Community Center in Ridgeland, WI. The event brought in 80 farmers, crop consultants, agribusiness employees and agency staff.

The Farmers of the Barron County Watersheds group is one of 15 watershed projects funded by the Department of Agriculture, Trade and Consumer Protection's (DATCP) **Producer-Led Watershed Protection** Grant Program, partnering with the **Barron County Land Conservation** Department, Barron County UW-Extension, Barron County Farm Bureau and Barron County Farm Technology Days. Four local agribusinesses who support the efforts of the watershed group and also helped sponsor the program were United Ag Coop, Lakeland Coop, Pioneer Seed and Ag Risk Managers.

The day kicked off with a welcome by DATCP Deputy Secretary Jeff Lyon

About the program

- Began in Spring 2016
- \$250,000 available each fiscal year
- \$20,000 maximum grant award per group per year



Don Reicosky, USDA Soil Scientist Emeritus, explains the importance of preserving carbon.

who spoke to the value of producerled groups and what they can accomplish:

"Over the last few years I noticed more stories and accusations that farmers are not adequately caring for our soil and water resources, but, I know that is not true. I know too many farmers doing the right thing. The farmer-led concept embodies what I believe *in – a voluntary effort with the* government partnering with private citizens. Farmers learning from other farmers will lead to success. I encourage all of you here today to reach out to your neighbors to get them involved in improving their conservation efforts."

Leading the producer-led group is Craig Hamernik, Karyn Schauf, Andy Bensend and Clayton Wohlk. Karyn addressed the crowd, "There are a lot of good things happening in agriculture but, there's also a lot that needs to be done in our watershed. We have an important role to play in improving water quality. The goal of our group is to educate ourselves and learn from each other."

The event's focus was on the importance of soil health, bringing in experts Don Reicosky, USDA Soil Scientist Emeritus, and Francisco Arriaga, Assistant Professor and Extension Specialist of Soil and Water Management for the University

Continued on page 2



Photo credit: Farmers of the Barron County Watersheds

Educational Conferences continued

of Wisconsin Madison and UW-Extension. Don emphasized the importance of preserving carbon in the soil and maintaining soil biology and crop diversity, as well as the subsequent impacts of utilizing tillage and conservation agriculture. His take home message was to save carbon by reducing disturbance to the soil as much as possible. A myriad of benefits come with good soil health: increased water holding capacity and use efficiency, reduced soil erosion, improved air and water guality and reduced fertilizer inputs, just to name a few.

Francisco added to Don's message by discussing the three elements of soil health that are key for productivity in Wisconsin soil: maintain proper soil fertility, increase or maintain soil organic carbon and improve soil aggregation. He suggested that if you do need to use tillage due to compaction, strip tillage is a good compromise to avoid disturbing too much soil and organic matter.

The day closed with an interactive question and answer session and great discussion.

More about the group

The Farmers of the Barron County Watersheds focus on reducing nutrient and sediment loss from farm fields in the Yellow River Watershed, a sub-watershed of the impaired Red Cedar watershed.

The group provides education and outreach on how soil erosion and nutrient runoff can negatively impact a farmer's bottom line and water quality. To accomplish this, they offer \$6.00/acre in cost-share for farmers to try cover crops within the Yellow River Watershed, host



educational conferences on soil health, are establishing baseline data for land use and target areas, and are participating in on-farm research and demonstration trials.

Goals of the project

- Keeping phosphorus and soil in place
- Convincing farmers that soil erosion and excessive use of phosphorus is not good for their bottom line or for water quality
- Learning about what factors impact nutrient and sediment loss such as weather events, timing, application methods and rates, etc.
- Developing an accurate inventory of current farming systems implemented in the Yellow River Watershed
- Identifying through visual and modeled (SnapPlus analysis) evaluations where changes in tillage, nutrient management and runoff control could reduce sediment and phosphorus loss
- Providing education and outreach to farmers, agribusiness personnel and

agency staff on practices that are proven to reduce sediment and/or nutrient loss and are being successfully implemented in the area

- Conducting field days, tours and meetings focusing on practices that can reduce the sources of nonpoint phosphorus loss
- Establishing a strong education and outreach program, an onfarm demonstration program, on-farm research projects and a method to show reductions in phosphorus loss by farmers working with the "Farmers of the Barron County Watersheds" organization.

If you are interested in learning more about or participating in the work of the watershed group contact:

Clayton Wohlk: (715) 641-0942 Andy Bensend: (715) 296-7628 Karyn Schauf: (715) 790-7202 Craig Hamernik: (715) 418-0053

Horse Creek Farmer-Led Watershed Council

Collaborator: Polk County Land and Water Resources



Photos provided by Horse Creek Farmer-Led Watershed Council

Improving water quality and building soil health in the Horse Creek Watershed

Collaborating with Polk County Land and Water Resources Department, the group is using funding for soil sampling, phosphorus indexing, cover crop planting, manure spreader calibration, corn stalk nitrate testing and stream sampling. The group is also providing outreach regarding these practices to other local farmers through field days and conferences. The council will be using the Spreadsheet Tool for Estimating Pollutant Load (STEPL) model to estimate phosphorus runoff reductions resulting from the installation of cover crops throughout their watershed. A focus of the group in 2017 is to recruit more producers in their efforts through outreach, events and the incentives offered through their cost-share program.

Collaborator role

Eric Wojchik and Dane Christenson with Polk County provide many services to the watershed council. Currently, they coordinate and facilitate meetings, administer grant money for incentives, perform inventory, draft grant reports, perform monitoring and modeling activities to measure progress, and provide conservation practice guidance to the group.

For more information on the group: blogs.ces.uwex.edu/wflcp/

PLWPG Requirements

- Groups must be led by at least 5 eligible producers
- Groups must partner formally with either DATCP, DNR, County, UW-Extension or nonprofit conservation organization
- Groups must provide 50% matching funds to their grant request
- Groups must assist other agricultural producers in a watershed to voluntarily conduct water quality improvement efforts

For additional eligibility criteria, please view the Request for Proposals on DATCP's <u>producer-led webpage:</u> <u>https://datcp.wi.gov/Pages/Programs_Services/ProducerLedProjects.aspx</u>

Horse Creek Farmer-Led Watershed Council Accomplishments

- 875 acres of cover crops planted within the Horse Creek Watershed leading to an estimated phosphorus load reduction of 650lbs
- 24 acre demonstration field of cover crops for display at fall field day
- Held one large field day event to increase awareness of the council and conservation practices which foster soil health - lead presenter was conservation farmer Gabe Brown from North Dakota
- Maintained positive working relationships with local lake protection groups and rehabilitation districts



Nutrient Management Basics

Implementing a nutrient management (NM) plan that meets the Natural Resources Conservation Service (NRCS) 590 Standard is one of the best practices farmers can do to protect their soil and water resources and farm profitability. A NM plan accounts for all N-P-K nutrients applied, and planned to be applied, to fields over the entire crop rotation. This includes manure and fertilizer so every type of operation should have a NM plan regardless of whether or not they have animals on the farm. A NM plan is unique to each farm and includes special considerations for when farmers may need to adjust nutrient application timing, rates, or application methods on fields. For instance, fields with soils that are most susceptible to erosion, that contain in-field waterways or are within close proximity to wells or that have shallow depth to bedrock should be managed differently to ensure that the risk of nutrient runoff to surface and groundwater is minimized.

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) tracks farms that develop and update their 590 NM plans when NM Plan Checklist forms are submitted to DATCP by farmers, agronomists, and public agency staff. In 2016 Wisconsin farmers reported 7,125 NM plans on about 2,960,872 acres, covering 32% of Wisconsin's 9 million cropland acres.

A NM plan is a cropping practice record that is annually reviewed, and updated when changes in crop management are made that deviate from the plan. NM plans help farmers know where nutrients are needed and where they are not. This way, farmers apply nutrients economically while also helping to ensure they are not over-applying



nutrients, which could cause negative water quality impacts. A NM plan is considered compliant when it follows the NRCS 590 Nutrient Management Standard and is prepared by a qualified planner, which may be a certified crop adviser or the farmer, if they take a DATCP-certified training course.

Core NM principles

- Manure and fertilizer applications must not run off intended application site
- Fields receiving nutrients must have sheet and rill soil erosion controlled to tolerable soil loss rates ("T") over the crop rotation
- Areas of concentrated flow, resulting in reoccurring gullies, must be protected with vegetation year round

What's in a NM Plan?

A NM plan follows the requirements of the NRCS NM 590 Standard and UWEX Pub. A2809 Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin to protect farm profitability, water, and soil.

 Describes ALL N-P-K nutrient applications planned for the crop rotation, showing adequate acreage exists for manure applications

- Nutrients shall not run off the field during or immediately after application
- NM plans are annually updated when things change with crops, nutrients, and tillage used
- Soil test samples are collected every 5 acres every 4 years and analyzed using a DATCPcertified lab
- Recommends setbacks and special considerations for nutrient applications near water bodies and conduits to groundwater

WI Agricultural Water Quality Performance Standards

WI Agricultural Water Quality Performance Standards follow Wisconsin Administrative Codes NR151 & ATCP 50. The codes require farmers to:

- Meet tolerable soil loss (T) on fields and pastures
- Follow 590 NM plan over the years of a crop rotation
- Maintain a minimum 5' tillage setback from surface water
- Prevent direct runoff from feedlots, feed storage, waste water, or manure storage to waters of the state

Nutrient Management Basics continued

- Limit livestock access along surface waters to maintain vegetative cover on stream banks
- Maintain manure storage structures to prevent leaking and overflow
- Follow manure storage technical standards for constructing and abandoning
- Near surface water or areas susceptible to groundwater contamination:
 - Do not stack manure in an unconfined pile
 - Divert clean water away from barnyards, feedlots, and manure storage

WI Nutrient Management 2016 Overview

- 1,728 farmers wrote their own plans on 496,319 acres, 61,658 more acres than last year. In 2016 farmer-written plans accounted for 24% of all NM plans on 5% of Wisconsin's cropland acres
- 5,397 farmers hired 130 agronomists to assist them with NM planning on 2,464,553 acres, 23,434 more acres than last year. In 2016 agronomists produced 76% of all NMPs on 27% of Wisconsin's cropland acres

Percent of County Cropland with 2016 NM Plans

Calculated from county reported acres and the National Ag Statistics Service county cropland 2012



Why have a NMP?

- Enable participation in the Farmland Preservation Program to claim annual tax credit
- Meet regulations under a county ordinance for manure storage or livestock siting
- Meet regulations if under a DNR WPDES permit
- Increase farm profitability
 - By soil sampling, to know what crops actually need, avoiding over-application
 - By using on-farm nutrients such as legume nitrogen and manure before purchasing commercial fertilizers
- Improve soil stability, structure, and water holding capacity
- Improve surface and groundwater water quality for family, livestock and community

For more information on nutrient management in Wisconsin, visit:

<u>https://datcp.wi.gov/</u> <u>Pages/Programs_Services/</u> <u>NutrientManagement.aspx</u>

Most Acreage with NMPs

Fond du Lac (179K)	Manitowoc (135K)	Rock (110K)
Marathon (166K)	Dane (133K)	Kewaunee (108K)
Brown (146K))	Outagamie (125K)	Clark (97K)
Jefferson (137K)	Dodge (124K)	Door (80K)

Save the Date: Annual Producer-Led Watershed Protection Grants Workshop

For producer-led groups and collaborators December 13, 2017 The Wilderness, Wisconsin Dells

Nutrient Management Farmer Education (NMFE) Grants

Interested in hosting a nutrient management training?

DATCP awards grants for organizations to perform nutrient management training and assist producers with nutrient management plan development and implementation through the NMFE grant program. Producer-led groups that are interested in incorporating nutrient management into their projects are encouraged to apply to this program.

For more information on this funding, visit the NMFE webpage.

For more information:

Visit our producer-led webpage: https://datcp.wi.gov/Pages/Programs_Services/ProducerLed-Projects.aspx

Questions?

Contact: 608-224-4622 Rachel.Rushmann@wi.gov

