

Producer-Led Watershed Protection Grant Program

2020-2021 Impact Report



Wisconsin Department of Agriculture,
Trade & Consumer Protection

Front cover: Farmers gather for a Peninsula Pride Farms field day. Photo credit: Anne Moore, Farmers for Sustainable Food

Table of Contents

Introduction	p. 2
2020-2021 Groups	p. 3
Funding	p. 4
Producer-led Conservation Outreach	p. 5
Collaboration & Partnerships	p. 6
On- Farm Demonstrations	p. 7
Farmer- Driven Research	p. 8
Incentive Programs	p. 9
Conservation Practices on the Rise	p. 10
Environmental Outcomes: Water Quality and Soil Health	p. 11
Environmental Outcomes: Carbon and Climate	p. 12
Notes of Success	p. 13- 17
Looking ahead	p. 18



Rye residue underneath a growing corn crop in a field as part of a producer-led group's demonstration project.

Photo credit: Chelsea Zegler, University of Wisconsin-Extension

Wisconsin's Unique Watershed Protection Program

The Wisconsin Department of Agriculture, Trade & Consumer Protection (DATCP) provides funding to producer-led groups that focus on non-point source pollution abatement activities through the Producer-Led Watershed Protection Grant Program (PLWPG).

This program supports producer-led conservation solutions by **encouraging innovation** through partnerships, on-farm demonstrations, and flexible cost-share programs while emphasizing **farmer-to-farmer learning and outreach** to improve Wisconsin's soil health and water quality.

Program Goal: To improve Wisconsin's soil and water quality by supporting and advancing producer-led conservation solutions that increase on-the-ground practices and farmer participation in local watershed efforts.

“ The producer-led program has been successful in promoting local, farmer-driven solutions to address pressing water quality and soil health issues. Farmers participants are in an excellent position to understand their local resource concerns, and to engage their peers on the economic and ecological benefits of conservation practices and systems. ”

MARK WITECHA

Soil and Watershed Management Section Manager, DATCP



Lafayette Ag Stewardship Alliance farmers check out a fall-seeded cover crop after corn silage with their local Extension Agent Josh Kamps.

*Photo credit: Dan Smith,
University of Wisconsin-Extension*

Producer-Led Groups 2020-2021

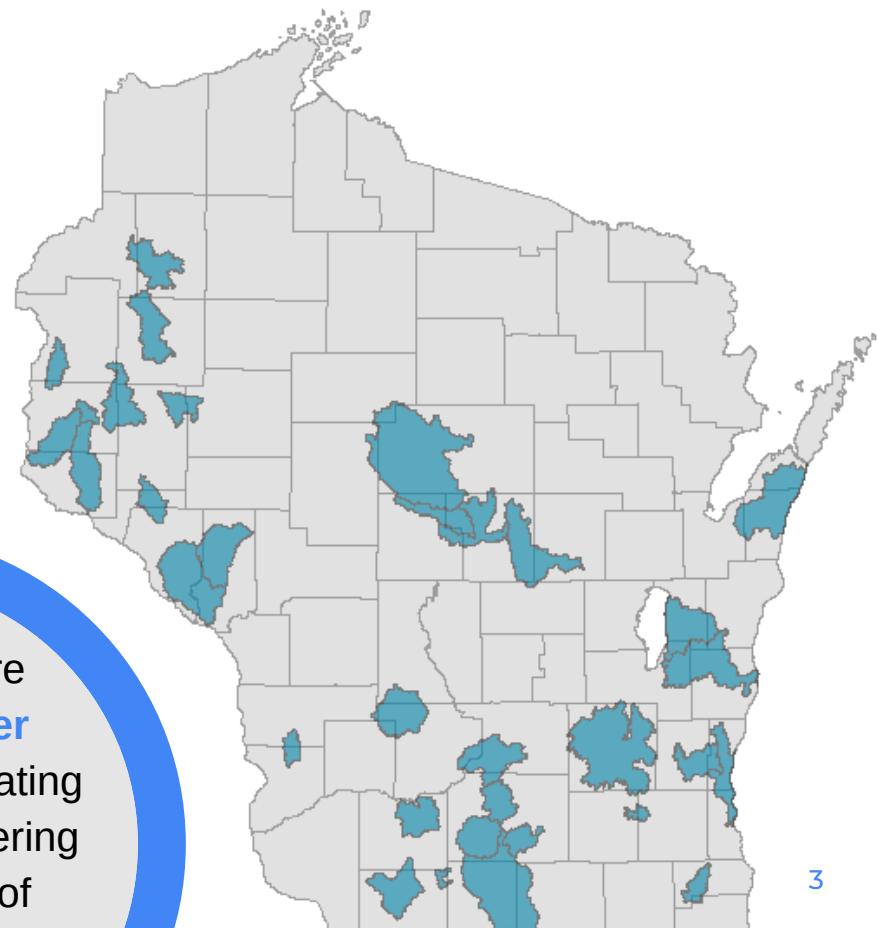
2020-2021 Funded Groups

Existing Groups	Existing Groups
Buffalo County Conservation Farmers	Iowa County Uplands Watershed Group
Buffalo-Trempealeau Farmer Network	Lafayette Ag Stewardship Alliance
Cedar Creek Farmers	Ozaukee County Clean Farm Families (CFF)
Dodge County Farmers for Healthy Soil & Healthy Water	Peninsula Pride Farms (PPF)
Farmers for Lake Country	Producers of Lake Redstone
Farmers for the Upper Sugar River	Red Cedar Conservation Farmers
Farmers for Tomorrow	Sheboygan River Progressive Farmers
Farmers of Barron County	South Kinni Farmer-Led Watershed Council
Farmers of Mill Creek	Tainter Creek Farmer-Led Watershed Council
Farmers of the Sugar River	The Shell Lake - Yellow River Farmer-Led Watershed Council
Hay River Farmer-Led Watershed Council	Watershed Protection Committee of Racine County
Horse Creek Farmer-Led Watershed Council	Western Wisconsin Conservation Council Yahara Pride Farms

New Groups
Bear Creek/Chippewa Farmer Groundwater Group
Biological Farming Friends
Calumet County Agricultural Stewardship Alliance
Central Wisconsin Farmers' Collaborative
Eau Pleine Partnership for Integrated Conservation
Lake Wisconsin Farmer Watershed Council
Sauk Soil and Water Improvement Group

As of 2021, there are **34 producer-led groups (PL groups)** that have been funded since the program started in 2016. In the **2020-2021 biennium, a total of 32 groups were funded**, seven of which received DATCP funding for the first time.

MAP OF 34 PRODUCER-LED GROUPS FUNDED BY DATCP FROM 2016-2021



As of 2021, there were **807 farmer members** participating in PL groups, covering **526,846 acres** of Wisconsin cropland.

Funding

Total grant requests continue to surpass the budget.

Grant requests are capped at \$40,000 per group. Annual program funding for both 2020 and 2021 grant cycles was \$750,000, compared to \$250,000 in the first grant cycle in 2016.

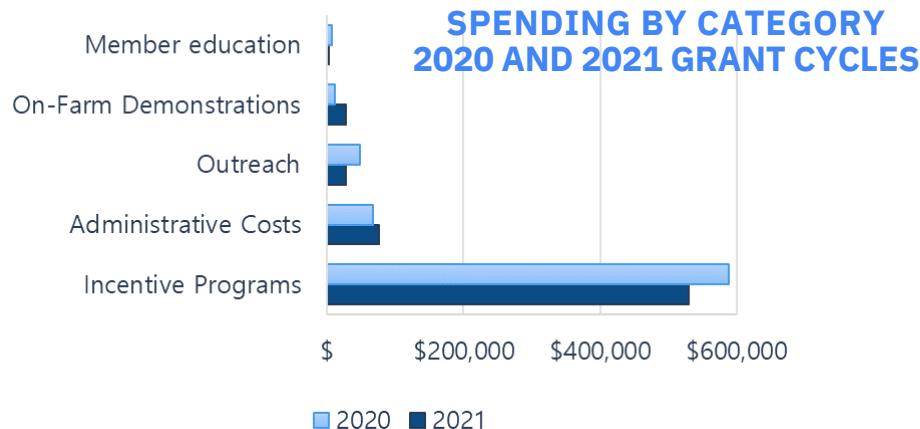
Fiscal Year	Total Requests	Total Awarded	Number of requests	Number of groups awarded
2016	\$262,550	\$242,550	15	14
2017	\$197,065	\$197,065	11	11
2018	\$619,721	\$558,246	21	17
2019	\$869,815	\$750,000	27	24
2020	\$1,051,871	\$750,000	27	24
2021	\$1,043,910	\$750,000	33	30

PLWPG spending in 2020-2021 was heavy on Incentive Programs.

Incentive Programs offer payments for a variety of conservation practices.

Administrative Costs cover staff time, meetings, and marketing costs.

Outreach includes field days, scholarships, workshops, and other events. **On-Farm Demonstration** includes costs for materials, supplies and stipends for those projects. **Member Education** covers conference fees and costs for attending educational events.



80% of funding in 2020 & 2021 went toward **incentive payments for conservation practices and conservation systems.**

10% of funding was spent on **administrative costs.**

Collaborator for PL group Biological Farming Friends, Marie Raboin, standing in corn interseeded with a multi-species cover crop mix in a farmer member's demonstration plot.

Photo credit: Chelsea Zegler, University of Wisconsin-Extension

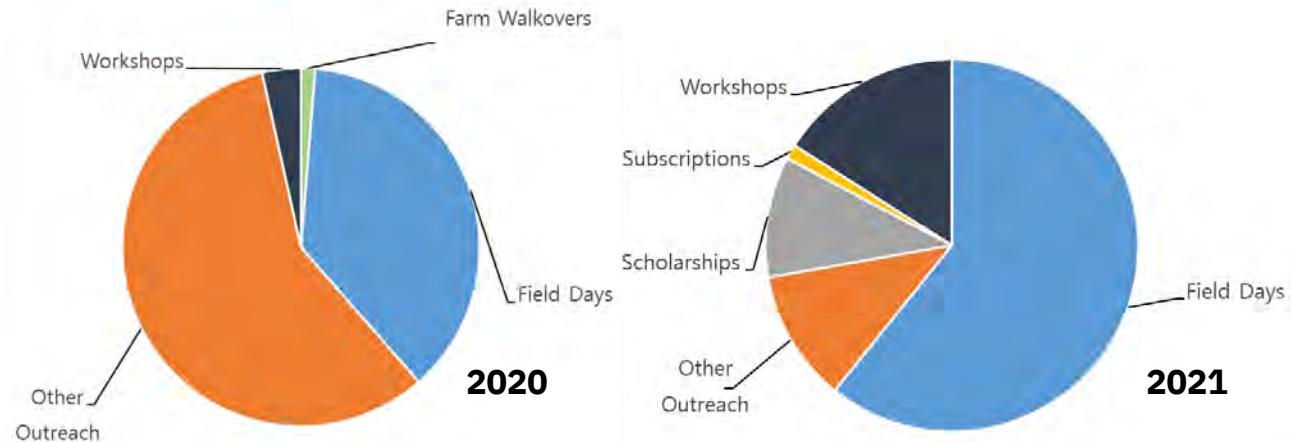


Producer-led Conservation Outreach

Outreach is an important component of the PLWPG. Farmers are faced with persistent and new challenges every day, and having a **reliable place to turn to for assistance and support is key to expanding conservation** and soil health systems in Wisconsin. Producer-led groups put **consistent time, effort, and passion into delivering effective outreach events** that foster farmer-to-farmer networking, learning, and relationship building.

The majority of funds spent on outreach in 2020-2021 went towards field days. **Field days are an effective way to show farmers practices and systems in action.** 2020-2021 experienced a shift to more "on-the-fly" events, including **pop-up field walks and farm visits**, due to planning challenges posed by the pandemic. There was also an increase in **collaborative meetings with other PL groups**.

PROPORTION OF OUTREACH SPENDING 2020-2021



“I took an interest in SRPF a few years ago, and was intrigued with the thought of networking with other farmers that are trying similar practices. The ideas, encouragements, and friendships I've already netted have been well worth the investment of my time.”

BRODY STAPEL

President, Sheboygan River Progressive Farmers (SRPF)



In 2021 Producer-Led watershed groups held:
48 Conferences/Workshops
28 Farm Tours/Farm Meetings
53 Field Days

Collectively, the groups reached
5,124 attendees at outreach events and
3,380 farmers and partners via mailing and email lists

Farmers of Mill Creek members stand in front of a group of local elementary school students teaching them about conservation farming as part of their Youth Conservation Education programming.

*Photo credit: Rachael Whitehair,
University of Wisconsin-Extension*



Collaboration & Partnerships

Each producer-led group is required to identify a collaborating entity in their grant applications. Collaborators played **important roles in PL groups in 2020-2021**, assisting with **strategic planning, annual work planning, delivering outreach events, organizing meetings, helping groups track practices and incentive programs**, and the list goes on.

2020-2021 Producer-Led Collaborators and Partnerships		
County Land Conservation Departments	Non-profit Conservation and Farming Organizations	University of Wisconsin-Extension
Buffalo	The Nature Conservancy	Natural Resources Institute
Columbia	Tall Pines Conservancy	Agriculture Institute
Dunn	Farmers For Sustainable Food	Other Partners and Collaborators
Green County	Valley Stewardship Network	Upper Fox- Wolf Demonstration Farm Network
Juneau	Sand County Foundation	
Marathon	Wallace Center	Madison Metropolitan Sewerage District
Ozaukee County	Pheasants Forever	
Pepin County	Wisconsin Farmers Union	Seed Companies
Pierce	Research Groups	Agronomists and Crop Consultants
Portage County	Grassland 2.0	Lake Protection Groups
Racine County	UW-Plateville	Department of Natural Resources
Sauk County	UW- Madison	Natural Resources Conservation Service
Vernon	UW- River Falls	Watershed Associations
Washburn	Maandamin Institute	
Wood County	Michael Fields Institute	AND MANY OTHERS!

PL groups continued to work with multiple other partners to **bring projects and ideas to fruition in 2020-2021**. Partnerships with other organizations helped groups: **conduct on-farm research and demos, strengthen outreach through marketing and promotional assistance, bring in additional funds, and coordinate other important community programming** with the groups.

In 2021, collaborators spent a total of **10,460 hours** assisting producer-led groups.

59 partnerships were created and maintained.

On-Farm Demonstration

On-farm demonstrations continued to be powerful tools for producer-led groups to investigate, learn, and share a new conservation practice or new way of managing a conservation practice in 2020 and 2021.

2020-2021 PRODUCER-LED DEMONSTRATION PROJECTS

Group	Purpose of Demonstration Plots
Bear Creek Chippewa River - Farmers 4 Health	Trialing nitrogen-fixing corn varieties: Are varieties suitable to Pepin County? Can they help reduce nitrogen fertilizer inputs?
Biological Farming Friends	Interseeding: Does interseeding cover crops impact corn yield? How much biomass is produced? What is the most effective seed mix and method?
	Annual alternative forage rotations: Can annual forage production along with cover crops compete with corn silage yields and quality?
	Relay cropping: Can relay cropping produce enough soybean yield and rye seed yield to be economically advantageous to farmers growing their own seed or feeding rye to livestock?
	Grazing cover crops: Can you integrate cover crops into a sweet corn rotation to feed cattle while providing soil benefits to cash crop?
	Alternative nitrogen rates: Can nitrogen rates be altered in certain crop rotations ? Can we increase nitrogen use efficiency based on conservation practices?
Central Wisconsin Farmers' Collaborative	Nitrogen trials: N rates and timing in potato production in the Central Sands.
	Water management: Evaluating a Flux Tower Evapotranspiration measurement tool to determine evapotranspiration in the field.
Eau Pleine Partnership for Integrated Conservation	Silage trial: Changing row width and reducing populations to identify impact to yield.
Farmers for Lake Country	Cover crops: Assessing above ground biomass and of cover crops and the nutrient content of the biomass at various growth stages.
Farmers of Mill Creek Watershed Council	Interseeding cover crops: What species of cover crops survive in corn system when interseeded in headlands of corn fields?
Farmers of the Sugar River	No-till cover crops: Planting green and roller crimping to terminate multi species cover crops.
Horse Creek Area Farmer Led Watershed Council	Cover crops: Assessing feasibility of cover crops in NW Wisconsin.
Ozaukee Clean Farm Families	Soil health: What are the differences in yield, profitability, and soil condition under soil health management and conventional management?
Red Cedar Conservation Farmers	Roller crimping rye: Planting no till soybeans into 6 inch standing rye.
Shell Lake, Yellow River Watershed Council	Cover crops: Integrating cover crops and small grains into northern WI using no-till and reduced tillage methods.

11 groups started
or maintained 16
on-farm
demonstrations



*Lead farmer of Biological Farming Friends Karl Sime checks his field after planting cover crops.
Photo credit: Chelsea Zegler, University of Wisconsin-Extension*

A Western Wisconsin Conservation Council field day provides opportunity for attendees to learn about new technologies.

Photo credit: Jamie Fisher, Farmers for Sustainable Food



6 groups participated in 10 research studies in 2020-2021

Farmer-Driven Research

Producer-led groups engage in on-farm research with university and other partners to find answers to agronomic, conservation, and water quality questions on varying soils and in farming systems that are representative of different regions of the state.

2020-2021 PRODUCER-LED RESEARCH PROJECTS

Group	Research Project
Eau Pleine Partnership for Integrated Conservation	Soil health sampling: Exploring the usefulness of market-available soil health assessments.
	Forage grass trials: Determining the potential of annual and perennial forage grasses for yield and quality in livestock and dairy rotations.
	60 inch row corn: Measuring success of interseeded companion crops by assessing biomass and quality/yield of corn grain and silage.
Farmers for the Upper Sugar River	Nitrogen rate trials: The use of zero-N test strips and yield data to identify optimal nitrogen rates on multiple farmer's fields.
Lafayette Ag Stewardship Alliance	Cover crop trial: Assessing impact of cover crops on surface-water quality in regards to fields with surface manure application.
	Cover crop trial: How does placement on varying slope positions impact cover crop establishment?
	Corn nitrogen rates: What is the available nutrient credit from manure application? What is the level of soil nitrate available with strip-tilled applied N? What is the optimal MRTN N rate for corn production in Lafayette County based on profitable corn grain yield and N price? How much N uptake does winter cereal rye provide following corn harvest?
Peninsula Pride Farms	Cover crop trial: Performance of cover crops following winter wheat.
Producers of Lake Redstone	Edge of field monitoring: Establishing sites in partnership with UW Discovery Farms.
Sauk Soil & Water Improvement Group	Cover crop trial: What is the optimum seeding rate to obtain maximum benefit for nitrogen cycling and impact on following corn crop?

“ The Wisconsin producer-led program has led to an incredible growth in capacity and collaboration across Wisconsin’s agriculture and conservation industries. The heavy farmer involvement has built the next generation of agriculture leaders who have the skills and confidence to advocate, organize and educate around conservation agriculture. ”

CHELSEA ZEGLER

Ag & Water Quality Outreach Specialist, University of Wisconsin-Extension

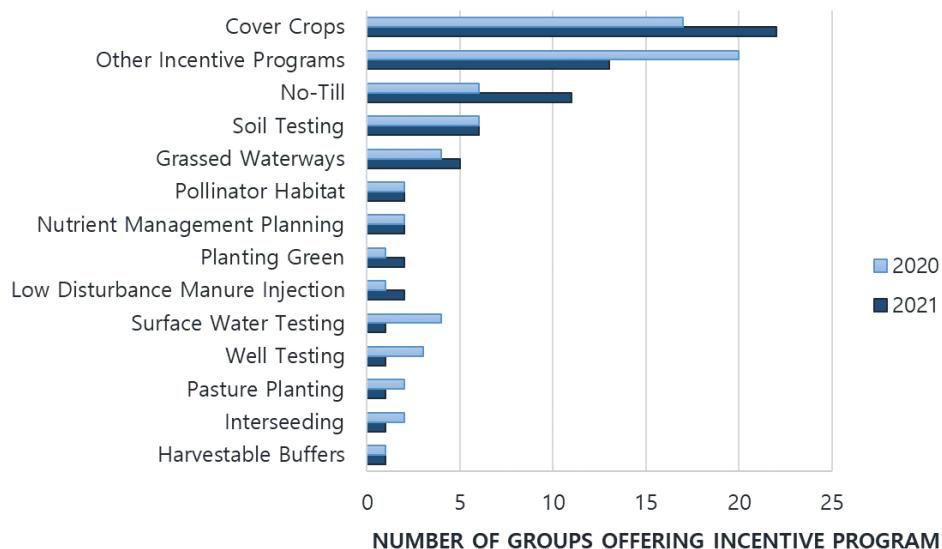


Incentive Programs

Implementing conservation practices that build soil health and improve water quality is part of the goals set forth by all funded producer-led groups in 2020-2021. One way groups achieve conservation practice goals is through incentive programs that fit the needs of the farmers and resources in their watershed.

Groups in the program offered **142 incentive programs** in 2020-2021

2020-2021 PRODUCER-LED INCENTIVE PROGRAMS



In 2020, groups began to focus on how they could **measure the success of their efforts in the watershed** by offering well water and surface water testing incentives. In 2021, there was an **increase in no-till incentives** and increased focus on perennial plantings like **pollinator habitat, harvestable buffers**, and more.

Groups also broadened their practice offerings to a variety of "Other Incentive Programs" including **planting green, nitrogen use efficiency trials, manure testing, phosphorus indexing, aerial seeding, and many others.**

Conservation Practices on the Rise

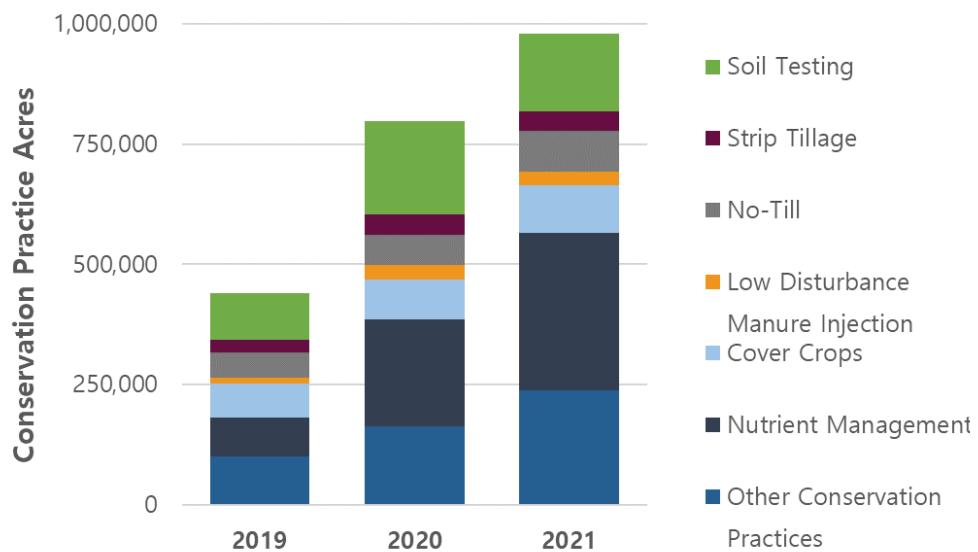
In 2019, DATCP launched a tracking initiative to track the conservation practices implemented by producer-led groups through their incentive programs and various outreach efforts. Each year, funded PL groups report conservation activity to DATCP to analyze potential conservation impact. **The acres of conservation practices implemented by producer-led groups continued to increase in 2020-2021.**

Total reported conservation practice acres:

2019: 439,237
2020: 798,221
2021: 978,881

In 2021, there was a **46% increase in "Other Conservation Practices"** adopted on farms, which includes: **pasture management, perennial habitat, diversified rotations, interseeding, split nitrogen applications, frost seeding, and more.**

REPORTED* CONSERVATION PRACTICES IMPLEMENTED BY PRODUCER-LED GROUPS 2019-2021



*Actual acres of practices implemented by PL groups may be higher. DATCP calculates summary based off reported acres. Also note some acres may be counted more than once for multiple practices.



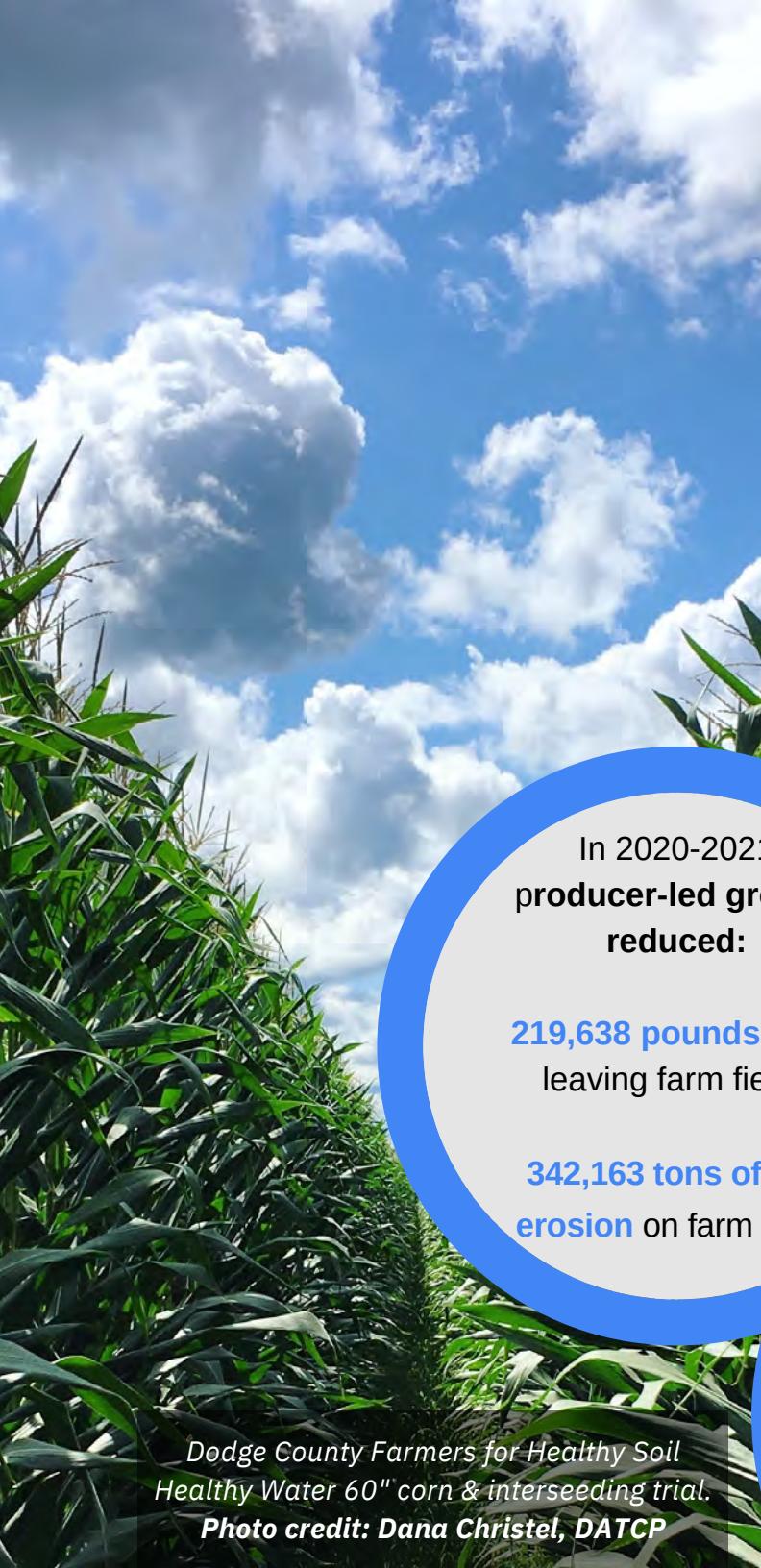
From 2020 to 2021
there was a:

23% increase in total conservation practices

20% increase in cover crops

34% increase in no-till

**Photo credit: Anne Moore,
Farmers for Sustainable Food**



Environmental Outcomes: Water Quality & Soil Health

DATCP evaluates the **potential environmental outcomes from the practices** implemented by producer-led groups.

Using Wisconsin's nutrient management planning software, SnapPlus, potential reductions in **phosphorus loss and soil erosion** were estimated for reported cover crop and no-till acres in 2020 and 2021.

In 2020-2021
producer-led groups
reduced:

219,638 pounds of P
leaving farm fields

342,163 tons of soil erosion on farm fields

DATCP continues to
expand the evaluation of outcomes to include more conservation practices and systems implemented by PL groups in the program.

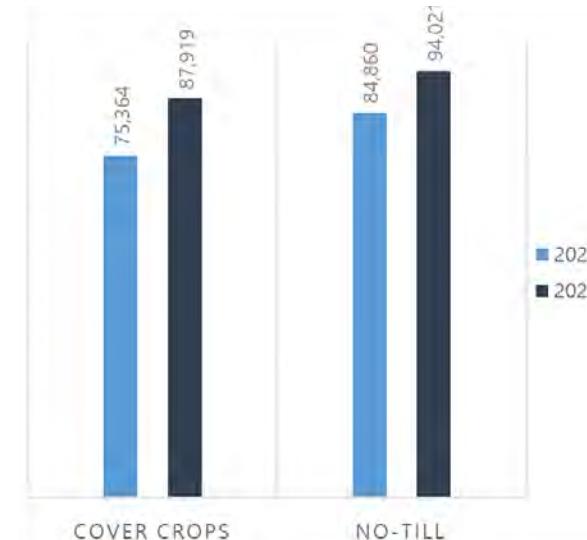
Did you know?

One pound of P that reaches a water body can feed **500 pounds of algae**.

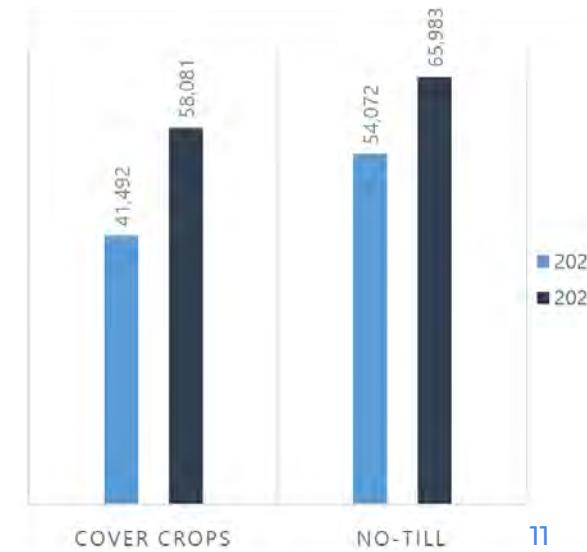
One dumptruck can carry about **10 tons of soil**.

Dodge County Farmers for Healthy Soil
Healthy Water 60" corn & interseeding trial.
Photo credit: Dana Christel, DATCP

POUNDS OF PHOSPHORUS REDUCED BY PL GROUPS



TONS OF SEDIMENT REDUCED BY PL GROUPS



Environmental Outcomes: Carbon & Climate

DATCP began evaluating the **potential soil-based greenhouse gas emissions reductions** of conservation practices implemented by PL groups in 2020 using a tool called COMET-Planner.

Soil-based greenhouse gas emissions refers to those emissions related to the interaction of fertilizer or manure applications, disturbance to the soil, crop rotation, and roots from crops (i.e carbon sequestration) with the soil. This does not account for any fuel usage or impacts related to the manufacture of farm products or transport of harvested goods off the farm.

Through cover cropping and no-till practices producer-led groups reduced soil-based greenhouse gas emissions by:

**39,971 tons of carbon dioxide equivalent
(CO₂e) in 2020**

and

45,834 tons CO₂e in 2021

for a total of

85,805 tons CO₂e!

Note: Carbon dioxide equivalent, or CO₂e, means the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas. For example, 1 kg of N₂O into the atmosphere is about equivalent to releasing about 298 kg of CO₂. As a reference, 1 CO₂e is equivalent to 113 gallons of gasoline consumed.

Community members gather at an Iowa County Uplands Silvopasture field day.
Photo credit: Dana Christel, DATCP



This is equivalent
to **greenhouse gas
emissions of 18,488
gas-powered
passenger vehicles
driven for one year***



*according to EPA's Greenhouse Gas Equivalencies Calculator

Notes of Success: Regional Collaboration



Field day planning
words of wisdom
*Start planning events
early.*
Have a back up plan.
*Make changes as
necessary.*

Together, the groups were able to bring in a nationally recognized farmer soil health speaker to their community and organize an equipment demonstration, soil pit discussion, and walk-through of a rotational grazing experiment.

By pooling their resources they were able to have a broader reach to **expand their networks and increase awareness about their groups.**

*UW-Extension Outreach Specialist,
Jamie Patton describes a soil pit to
farmers and others the Conservation
Day by the Lake field day.
Photo credits: Dana Christel, DATCP*

Notes of Success: Getting Started as a New Group

There were seven new groups funded in the 2020-2021 funding cycle. One of those was the **Central Wisconsin Farmers Collaborative** which started up in 2021. This group is located in the Central Sands area of Wisconsin where potato and vegetable production takes place and **water management is crucial**. They work closely with the Wisconsin Potato and Vegetable Growers Association and focused their first year on **conducting outreach events to grow their membership and a strategic planning process to clarify their goals and future work**.

“

DATCP's producer-led program provides the opportunity to work with other growers sharing ideas and practices to further public education on what we currently do and where we can progress as a community.

”

RANDY FLEISHAUER, PLOVER RIVER FARMS

Lead farmer for Central Wisconsin Farmers Collaborative

They hosted a very successful **Farmer-to-Farmer Irrigation Technology Field Day** in the summer to highlight different irrigation technology that three of their members already had installed and were testing on their fields. They were able to provide some **information about service providers and costs** during an on-farm demonstration and discussion.

WPVGA worked with the farms and other members to recruit vendors to present at the event. They used email communication to collect baseline information on the extent of the irrigation technologies currently in use. The event itself attracted two vendors, staff and owners of seven farms, and other collaborators for a total of 24 participants.



This successful outreach event **helped promote the CWFC** and will **help with member recruitment** in following years.

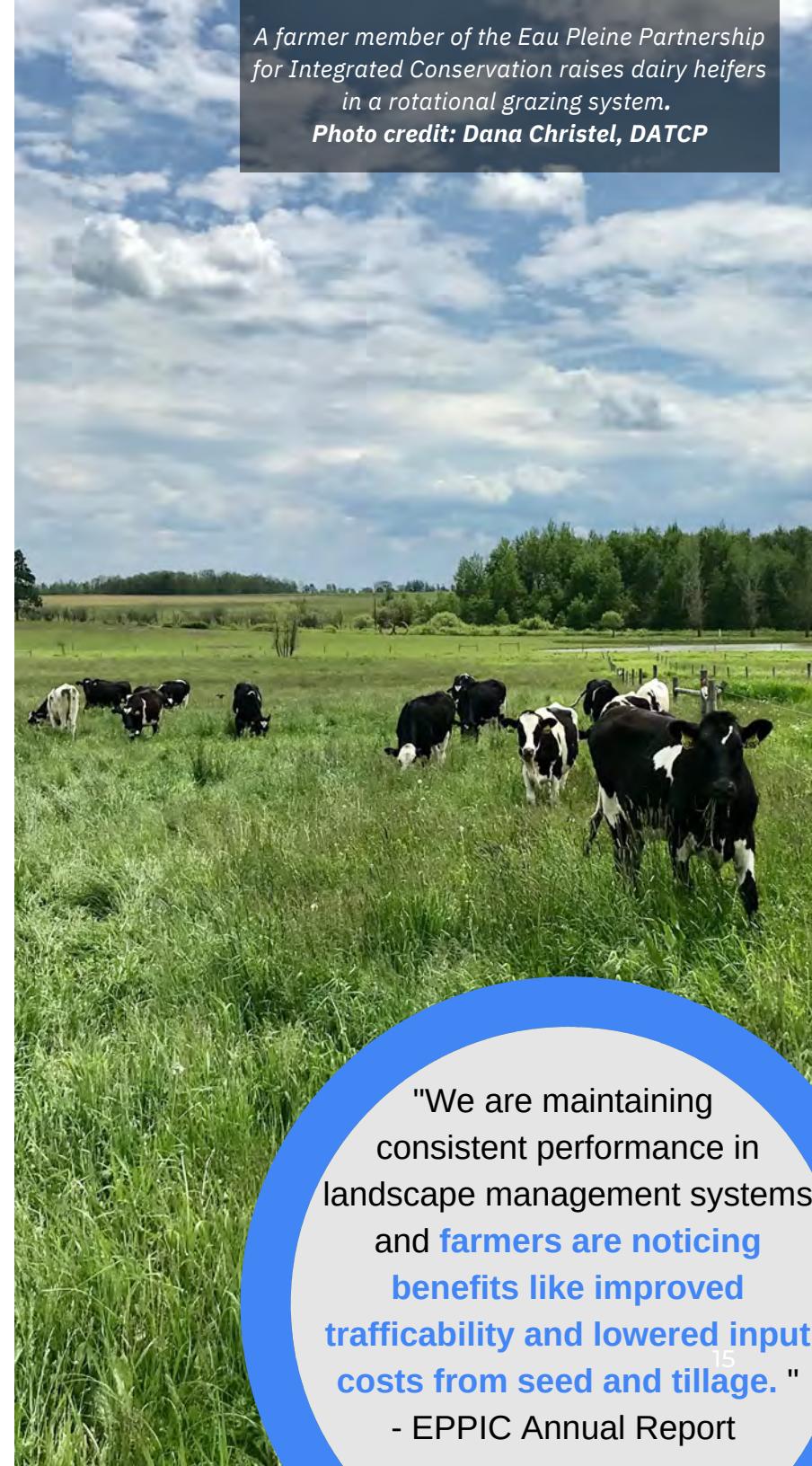
Attendees at the Central Wisconsin Farmers Collaborative Farmer-to-Farmer Irrigation Technology Field Day held at Okray Family Farms in Plover, WI.
Photo credits: Tamas Houlihan, WI Potato and Vegetable Grower Association

Notes of Success: Learning from Farmer-Driven Research to Promote Continuous Cover in the Watershed

The [Eau Pleine Partnership for Integrated Conservation](#) leads a number of on-farm research and demonstration projects. Goals of their projects include increasing continuous cover on soil with different cover crop management systems like interseeding, incorporating grazing into row crop systems, and evaluating a variety of forage grasses for yield and quality in dairy and livestock rotations.

Farmers in the watershed have been learning from the results of their projects. So far, they have learned that selecting the right hybrid for 60" corn systems interseeded with cover crops can **minimize any decrease in corn grain yield** by 20% while **improving cover crop biomass production** by 130%. Grass trials showed that perennial grasses can rival **or exceed alfalfa in dry matter production and quality** when managed in a high quality system. Perennial grasses averaged approximately six tons of dry matter per acre while Italian ryegrass average 4.5 tons dry matter per acre. The group found that grass quality declines more slowly than alfalfa as cutting intervals get stretched so grasses are more flexible in terms of quality.

The group partners with the Marshfield Ag Research Station, University of Wisconsin-Madison, and Discovery Farms to conduct their projects. After sharing their results from the projects over the winter at events and personal communications with farmers, the group noted that **there are numerous farmers who indicated they intend on moving toward a grass-based forage rotation.**



A farmer member of the Eau Pleine Partnership for Integrated Conservation raises dairy heifers in a rotational grazing system.

Photo credit: Dana Christel, DATCP

"We are maintaining consistent performance in landscape management systems and **farmers are noticing benefits like improved trafficability and lowered input costs from seed and tillage.**"

- EPPIC Annual Report

Notes of Success: New Practices

In 2020-2021, groups experimented with "planting green," the practice of planting a cash crop into a living or recently terminated cover crop. In 2021, the **Red Cedar Conservation Farmers** decided to include planting green in their incentive program for the first time and saw some success.

The group also did a demonstration project this year with a roller-crimper on standing rye in soybeans. Three producers implemented the demonstration with mixed results. All plots were seeded at different times with different rates, but they observed that "the early planted soybeans took a hard yield hit while later planted soybeans had similar yields to the conventional managed crop."



Every producer that planted green in 2021 had success and said they would do it again on a larger scale.

The roller-crimper was not properly adjusted for weight, so they speculated this impacted the rye termination. They plan to host a field day during the summer of 2022 **to show farmers the roller-crimper in action and the previous year yield and return-on-investment will be shared.**

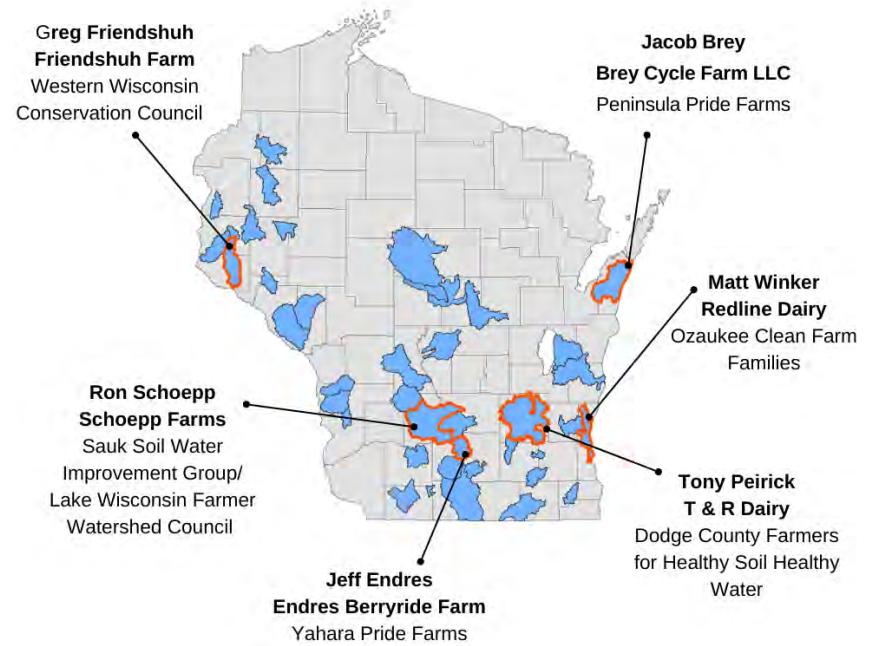
Roller crimper in action for the RCCF demonstrations.



Notes of Success: Expanding Farmer-to-Farmer Mentorship

At the end of 2021, DATCP received a grant from the National Wildlife Federation to formalize a **Conservation Farmer Mentor Service** as part of the PLWPG network. This funding provides support to **six Conservation Farmer Mentors in PL groups across the state** to advise other farmers and farmer-led groups on conservation and soil health questions. All mentors meet the following criteria:

- Actively involved in a DATCP producer-led group for at least three years
- Has experience trialing, demonstrating, and implementing a diverse set of conservation practices on their own farm
- Recognized within the WI PLWPG community as a leader in conservation innovation
- Proven experience and skills giving presentations at conservation outreach events, troubleshooting one-on-one with farmers in need of conservation technical assistance, and a demonstrated passion for promoting conservation and soil health to farmers in their community



They will be a resource for farmers in the PLWPG network and others statewide to turn to when challenges arise on the farm and can serve as a sounding board for an idea or approach a farmer is thinking through.

Looking Ahead

As the program grows, DATCP will continue to look for ways to best support the development and success of producer-led groups. Specifically, the program will:

- Continue to encourage flexibility and farmer innovation in conservation practice offerings
- Strengthen the program's existing Regional Teams to foster continued collaboration and idea sharing across groups in different regions of the state
- Encourage PL groups to continue refining and promoting perennial-based systems and practices that help provide continuous living cover
- Continue to build partnerships vital to the program's success as well as success and growth of individual groups
- Provide outreach and assistance on topics including: developing farmer leaders, organizational development strategies and other topics key to addressing challenges such as farmer burnout, stifled growth, and limited administrative capacity
- Continue to provide learning and relationship-building opportunities for PL groups in the network including the annual workshop and more regional trainings



Summaries of all **DATCP-funded producer-led groups** including their goals, activities, and contact information can be found on [DATCP's website.](#)

Contact:

Questions about this report may be directed to:

Dana Christel

Producer-led Watershed Protection

Grant Program Manager

dana.christel@wisconsin.gov

(608) 640-7270

Photo: Loading cover crop seed for the Dodge County Farmers for Healthy Soil Healthy Water aerial seeding project in the Rock River Watershed.

Photo credit: Mike Sorge, DNR

