

Nitrogen Optimization Pilot Program Orientation Meeting

Megan Blauwet
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Monica Schauer



Extension
UNIVERSITY OF WISCONSIN-MADISON



**DEPARTMENT OF
SOIL SCIENCE**
University of Wisconsin-Madison



Agenda



Program Goals & NOPP Team



Grant Management



Surveys, Reporting, & Data



Community, Outreach, & Resources



Questions

Program Goals



ANSWER PRODUCER-
SPECIFIC NITROGEN
RESEARCH
QUESTIONS



IMPROVE PRODUCER
PROFITABILITY



IMPROVE COMMERCIAL
NITROGEN MANAGEMENT
EFFICIENCY ACROSS
WISCONSIN



REDUCE NITRATES
IN SURFACE- AND
GROUNDWATER

NOPP Team



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ADMINISTRATION OF GRANT

- Program rules
- Contracts
- Financial Management and Reimbursements
- Reporting



- Grants are mostly for **two years**. If the application was for 3+ years, the contract has been adjusted to incorporate subsequent years.
- You can request to **extend** a contract for one additional year. To do so, contact DATCP by December 1 with a budget and work plan to be extended. An email reminder will be sent out.



PROGRAM RULES



CONTRACTS

- Full contracts were sent via DocuSign the week of March 9, 2026 and are due to DATCP by March 28, 2026.



TIPS FOR FINANCIAL MANAGEMENT AND REIMBURSEMENTS

Things You Purchase

- Keep invoices and receipts
- Bulk purchases of inputs – keep invoice/receipt and make note on the document of acres / amount used
- Inputs, rentals, equipment, field day items
- Cannot reimburse for alcohol, so itemized receipts from restaurants required

Time if budgeted

- Field work, administrative work
- Spreadsheet with time / activity
- Travel is reimbursed as mileage at the state rate of **\$0.51/mile**, not an hourly rate or the federal rate.
- Recommend on-going tracking



TIPS FOR FINANCIAL MANAGEMENT AND REIMBURSEMENTS

How to pull together a reimbursement request

- Organize receipts / invoices by expense category (sampling/analysis, equipment, miscellaneous)
- Note on bulk item receipts how much was used on the study area
- Time tracking spreadsheet – indicate expense category
- Webpage – reimbursement form. You can either request by expense category or use the form to itemize the costs. Supporting documents should walk through all expenses
- Submit to DATCP: 1. reimbursement form 2. PDF of receipts/invoices 3. tracking documentation
- NOTE: all required surveys are required prior to reimbursements being mailed



REPORTING

Annual Reports

- Progress report due March 1 after Year 1 of your grant cycle. Template / form will be provided.
- Final report due March 1 after Final Year of your grant cycle. Final reimbursements will be held until the final report is completed, and the UW surveys are completed. Form will be provided.

On-going Reports

- Farm History survey from UW is required prior to first reimbursement.
- Management survey required prior to final reimbursement.



Data collection: Surveys

- Farm & Field History Surveys
 - **Link to survey queue sent out later this week**
- Trial management survey
 - Will be sent out in July

Monica Schauer: Evaluating optimal nitrogen rates in sweet corn in the Driftless

Start Year: 2025

Status	Survey Title
Begin survey	Field History – #2: 2025: TEST2
Begin survey	Field Management - Cover Crop – #1: TEST CC
Begin survey	Field Management - Cover Crop – #2: TEST NO CC
Begin survey	Field Management - Tillage – #1: TEST
Begin survey	Field Management - Planting – #1: TEST
Begin survey	Field Management - Nutrient Applications & Other Products – #1: TEST
Begin survey	Field Management - Manure – #1: TEST

Field data reporting

24_DataTemplate_Chippewa

File Home Insert Share Page Layout Formulas Data Review View A

Calibri (Body) 11 B

B9

	A	B	C
1	Result reporting		
2	Manure	Send manure nutrient lab analysis straight to Monica.	
3	Soil	Forward lab report straight to Monica along with this spreadsheet with grower and sample ID columns filled.	
4	Yield	Fill in highlighted columns (if applicable).	
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Instructions Soil Yield Sheet1 +

	A	B	C
1	Result reporting		
2	Manure	Send manure nutrient lab analysis straight to Monica.	
3	Soil	Forward lab report straight to Monica along with this spreadsheet with grower and sample ID columns filled.	
4	Yield	Fill in highlighted columns (if applicable).	
5			

Soil Analysis

Submitted By: **SF16462-000**
UW-Madison Extension NOPP
711 N Bridge St Rm 13
Chippewa Falls, WI 54729-1845

Submitted For:
Dornacker Prairie Acres



Laboratory Sample #
CW07131 - CW07138

Date Received:
05/15/2024

Date Processed:
05/16/2024

Information Sheet #
120765

Pre-Plant Nitrate & Ammonium Report

Field Id	Sample Id	First Foot (0 - 12 inches)		Second Foot (12 - 24 inches)	
		Nitrate Nitrogen (ppm)	Ammonium (ppm)	Nitrate Nitrogen (ppm)	Ammonium (ppm)
No Manure - PPNT	Block 4-0-1	4.6	5.0		
No Manure - PPNT	Block 4-1-2			2.5	4.8
No Manure - PPNT	Block 5-0-1	5.5	4.9		
No Manure - PPNT	Block 5-1-2			3.1	4.5
Manure- PPNT	Block 6-0-1	4.6	4.3		
Manure- PPNT	Block 6-1-2			2.2	4.9
Manure- PPNT	Block 7-0-1	4.6	4.6		
Manure- PPNT	Block 7-1-2			3.2	5.5

DATCP certified labs for routine soil analysis and nitrate tests

The following soil testing laboratories are Wisconsin DATCP certified.

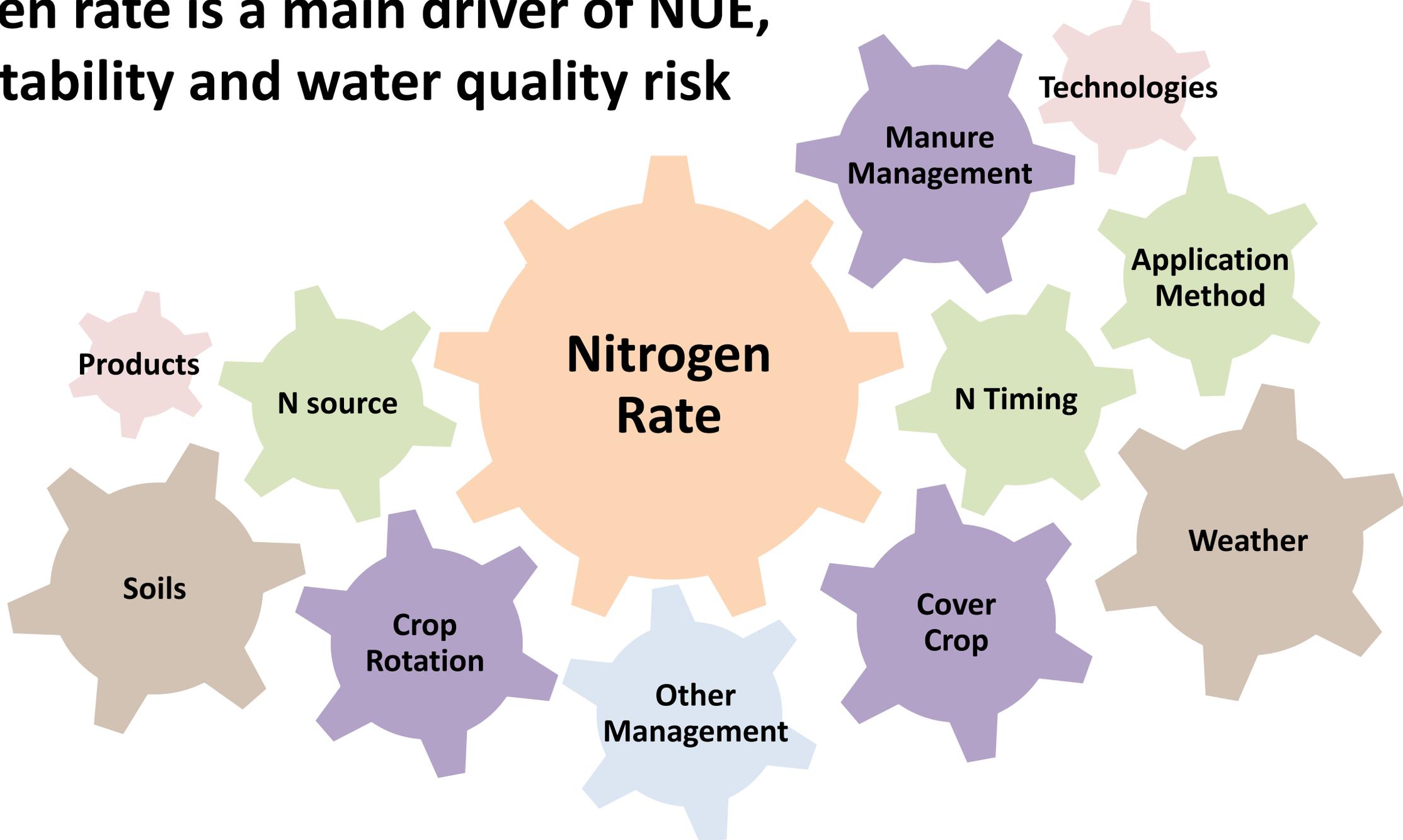
Laboratory	Website	Contact Info.	Address
Waypoint Analytical Illinois	https://waypointanalytical.com/	(217) 359-7680 supportil@waypointanalytical.com	2902 Farber Dr. Champaign, IL 61822
Wisconsin DATCP certified soil testing laboratories participating in the Manure Analysis Proficiency Program are listed below:			
Midwest Laboratories Inc.	https://midwestlabs.com/	(402) 334-7770 contactus@midwestlabs.com	13611 B St. Omaha, NE 68144
A&L Great Lakes Laboratories, Inc.	https://algreatlakes.com/	(260) 483-4759 lab@algreatlakes.com	3505 Conestoga Dr. Fort Wayne, IN 46808
UW Soil & Forage Analysis Lab	https://uwlabs.soils.wisc.edu/	(715) 387-2523 soil-lab@mailplus.wisc.edu	4702 University Avenue Madison, WI 53705
AgSource Cooperative Services	https://agsource.com/	(715) 758-2178 bonduel@agsource.com	106 North Cecil St. Bonduel, WI 54107
		(715) 687-9997 stratford@agsource.com	117609 Forward St. Stratford, WI 54484
Minnesota Valley Testing Laboratories, Inc. (MVTL)	http://mvtl.com/	(800) 782-3557 mnsoil@mvtl.com	1126 N Front St. New Ulm, MN 56073
Rock River Laboratory	https://rockriverlab.com/	(920) 261-0446 office@rockriverlab.com	710 Commerce Dr. Watertown, WI 53094



**REMEMBER TO TAKE
AND SHARE PICTURES!**



Nitrogen rate is a main driver of NUE, profitability and water quality risk

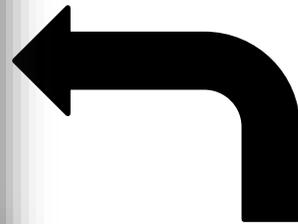
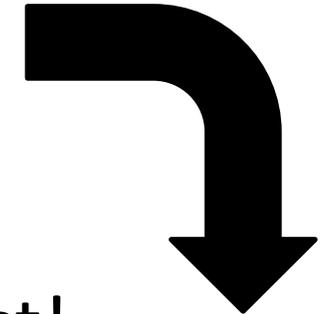


Community & Outreach

Reach out for assistance with...

- meetings
- field days
- handouts
- presentations
- advertising

...related to your NOPP project!



Opportunities to gather and share experiences, learnings, & outcomes



Manure Incorporation x Nitrogen Rates

THE PROJECT
How does the light incorporation of manure (as compared to no incorporation) impact optimal commercial nitrogen application rates for the following corn grain crop in northwest Wisconsin?

In 2023 and 2024, a farmer in Dunn County implemented a nitrogen rate trial investigating nitrogen availability from turkey manure. The manure was either surface applied or lightly incorporated with four synthetic nitrogen rates applied in addition to the manure. Every treatment was replicated four times.

Vertical tillage pass on two strips of the trial to lightly incorporate previously applied manure.

	PPNT		PSNT	
	0-1'	1-2'	0-1'	1-2'
2023 Surface applied	39*	27	151	65
2023 Incorporated	57	38	58	58
2024 Surface applied	57	38	58	58
2024 Incorporated	59	35	53	58

*2023 pre-plant soil nitrate (PPNT) sampled after manure application but before incorporation.

THE TAKEAWAYS

- Greater yield when manure was incorporated into soil vs surface applied across all nitrogen rates
- In 2023, EONR was 26 lb-N/ac less when manure was incorporated vs surface applied
- In 2024, corn yield increased as nitrogen rate increased and yield did not reach plateau
- No significant difference in soil nitrate between manure application methods

This project was conducted in collaboration with the Rec Carbon Conservation Farmers and is part of Wisconsin's Nitrogen Optimization Pilot Program.

Funding for this research project is provided by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). The views expressed in written materials, publications, speakers, and moderators do not necessarily reflect the official policies of DATCP, nor does any mention of trade names, commercial products, or services imply endorsement by the State of Wisconsin.

Community & Outreach

Spotlight NOPP projects: "Wisconsin Agriculture – Extension"



NOPP Project Spotlight!

Four farms affiliated with the Lafayette Ag Stewardship Alliance (LASA) are Nitrogen Optimization Pilot Program (NOPP) grant recipients. Their project is designed to explore the following question: "What is the optimum N rate that maximizes profitable corn grain production and limits the risk of N loss to environmental factors when planted green into cereal rye cover crop?".

The group asserts that understanding the N cycle within a cover crop system is paramount to successful N management, noting that the N immobilization rate of cereal grain cover crops is expected to increase as the C:N ratio of cover crops increases.

Another motivating factor for pursuing NOPP funding is the opportunity to conduct local on-farm, field-scale research within the driftless region of Wisconsin. Due to a high risk of soil and nutrient runoff and nutrient leaching in this geography, this project will evaluate the N management requirements necessary to increase acres of cover cropping and no-till across the region. In addition, the ability for producers to conduct field-scale research on-farm offers increased validity and acceptance amongst growers compared to remote, small-plot research.

Learn more about the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Nitrogen Optimization Pilot Program and grant recipients here: https://datcp.wi.gov/_/CommercialNitrogenOptimizationP...

Picture: Participating producer Mike Berget (Berget Family Farms) discussing diverse cover



NOPP Annual Reports



NOPP By The Numbers

67 Trials conducted in 2024

105 Trials conducted to date

106,140 Acres covered by participating farms

Which crops' nitrogen responses are being investigated?

2024 Outreach Efforts

2,066 individuals engaged in NOPP and on-farm research knowledge sharing at over:

7 Conference Sessions 16 Field Days 19 Meetings

Access the 2023 NOPP Annual Report online: go.wisc.edu/2023NOPP

Equipping Wisconsin Farmers to Conduct On-Farm Nitrogen Research

The Nitrogen Optimization Pilot Program (NOPP) was developed to support Wisconsin farmers to address farmer-driven nitrogen management questions that can improve farm profitability and reduce nitrate leaching to ground and surface waters.

NOPP grants may provide up to \$50,000 per producer per funding cycle, with up to 20% of the award directed towards UW-Madison (UW) for monitoring. The grants are designed to encourage producers to develop innovative approaches to optimize the application of commercial nitrogen. For the 2024-25 cycle, the program focused on replicated and randomized two-year nitrogen-rate trials. NOPP is funded by the state of Wisconsin, administered by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and supported by UW.

Due to Wisconsin agriculture's unique variety in soil types, management systems, and weather patterns, localized trials can assist farmers in optimizing commercial nitrogen fertilizer management on individual farms. Furthermore, on-farm research reaches beyond individual farms to support local resources and regional peer-to-peer learning. Data resulting from NOPP projects will also contribute to UW statewide nitrogen guidelines, furthering the impact of these projects.

Currently funded projects evaluate optimum commercial nitrogen rates for corn grain and silage, potatoes, forages, cranberries, and sunflowers, with additional topics investigating manure and legume crediting, cover crops and nitrogen cycling, new products and technologies, and the influence of inherent soil or landform properties. As the first funded NOPP projects wrap up and data is analyzed and shared back to farmers and partners, final reports will be shared publicly on the [DATCP.NOPP webpage](http://DATCP.NOPP.webpage).

Peirick NOPP Report

Jefferson County

Data Collection Began: 2023
Data Collection Ended: 2024
Site Years: 2

Other Collaborators:
Tony Peirick
Bill Stangel
Tom Novak
Phillips Crop Care

Takeaways

- Economic optimum nitrogen rate (EONR) was 85 lb-N/ac in 2023 with relatively flat yield response to nitrogen. Corn yield at 0 N was 207 bu/ac.
- Low EONR and high yield at 0 N likely due to 2nd year alfalfa credit.
- In 2024, EONR was reached at 154 lb-N/ac.
- Greater post-harvest soil nitrate at highest N rate in both years, with especially high values in 2023 at N rates greater than EONR.

Nitrogen use efficiency for corn in the Rock River Basin

Overview

The Upper Rock River Basin is characterized by Silurian dolomitic bedrock, making it prone to groundwater pollution. The Dodge County Farmers Healthy Soil Healthy Water producer-led group aimed to reduce nutrient losses and improve farmer profitability by conducting on-farm nitrogen rate trials paired with extensive soil sampling. This report focuses on one of thirteen sites in the area conducting this trial.

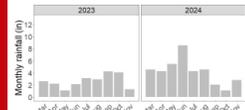
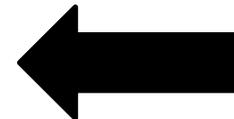


Figure 1. Monthly rainfall during the growing season in 2023 and 2024 with data from Watertown, WI. Data gathered from NOAA's National Centers for Environmental Information.

Table 1. Field history for 2023 and 2024.

Peirick	2023 South 40	2024 March 6
Soil series	St. Charles	Pella
Soil texture	Silt loam	Silt loam
Soil drainage class	Moderately well drained	Poorly drained
Years of previous 10 receiving manure	2	3
Years of previous 10 with cover crop	2	8
Years no-till	10	10
Irrigation	No	No
Drainage tile	No	Yes
Previous crop	Corn*	Corn

*Field was alfalfa in 2021.



Educational materials

Resources available



Commercial Nitrogen Optimization Pilot Grant Program

The Commercial Nitrogen Optimization Pilot Program (NOPP) is a grant program funded by the State of Wisconsin, administered by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP), and supported by the University of Wisconsin–Madison Department of Soil Science and Division of Extension. This program aims to refine and enhance the understanding of methods that optimize commercial nitrogen applied to agricultural fields, helping to protect vital soil and water resources.

NOPP is designed to encourage agricultural producers to develop innovative approaches to optimize the application of commercial nitrogen for a duration of at least two growing seasons. The producers must collaborate with a UWS institution, which will monitor the grant project on-site. The total award to an applicant cannot exceed \$40,000.

To learn more about the basics of the program, watch Lindsey Rushford, former UW NOPP Coordinator, talk about the program on *Life on the Farm*:



FORMS FOR GRANTEES

APPLICATION AND RESOURCES

PROJECT SPOTLIGHTS

REPORTS, MEDIA, AND WEBINARS

Program Contacts
 DATCP NOPP Program Manager
 Susan Mockert
 (608) 224-4648
Susan.Mockert@wisconsin.gov

Technical Research Guide

Research terminology

- Replicate: repeating treatment
- Block:** repeating treatments grouped together
 - Blocks allow for ease in sampling and data organization/analysis.
 - Blocking may not be possible for all experiments due to field shape/size. All treatments may then be completely randomized.
- Treatment:** strip that management is applied to
- Plot:** Each unique strip, only occurs once for each project

Block 1	Plot 1	Treatment 1	0 N
	Plot 2	Treatment 2	100 N
	Plot 3	Treatment 3	200 N
Block 2	Plot 4	Treatment 3	200 N
	Plot 5	Treatment 1	0 N
	Plot 6	Treatment 2	100 N
Block 3	Plot 7	Treatment 3	200 N
	Plot 8	Treatment 2	100 N
	Plot 9	Treatment 1	0 N

Figure 1. Plot design with labeled research terminology.

Research design requirements

Some projects might not be able to meet these requirements due to equipment size, fertigation patterns, long term crop impacts, etc. Contact Monica or Lindsey to work around any specific issues and develop a viable research project.

Replication

Definition- Repeating experimental treatments across conditions. For example, if a research project has 4 nitrogen rates, these rates would need to be repeated or replicated 4 times across the field



How to take 2ft soil samples

University of Wisconsin Extension
 10.7K subscribers

Subscribe Like Share Download

<https://datcp.wi.gov/Pages/CommercialNitrogenOptimizationPilotGrantProgram.aspx>

Resources available

[On-Farm Research – Crops and Soils](#)

Nitrogen Optimization Pilot Program (NOPP) Protocols

NOPP, a grant program funded by the State of Wisconsin and administered by DATCP, supports farmer-driven, on-farm research crucial to improving profitability and water quality through improved commercial nitrogen management. Available protocols are designed to support NOPP applicants, as well as anyone interested in investigating nitrogen dynamics and management on their own farm. Protocols and other technical resources developed by the UW-Madison Department of Soil and Environmental Sciences and Division of Extension.

[On-Farm Research](#) [Get Involved](#) [Resources](#) [Results](#) [Partners](#)

- [NitrogenRate](#)
- [NitrogenUse Efficiency for Corn Grain and Silage](#)
- [Manure Management Comparison](#)
- [Cover Crop Management Comparison](#)
- [Nitrogen Application Timing Comparison](#)
- [Nitrogen Source Comparison](#)
- [Nitrogen Placement Comparison](#)
- [Product Trial](#)



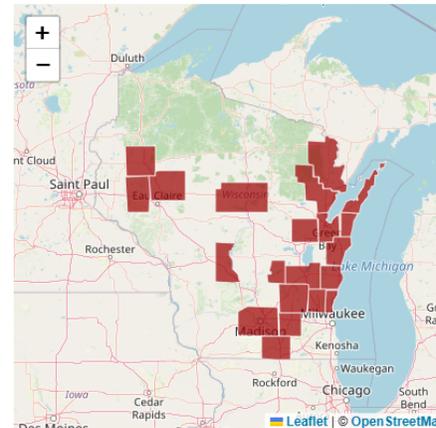
Read more about [DATCP's Nitrogen Optimization Pilot Program and its request for proposals](#).

On-Farm Research Results

Ready to dig into the data? Look no further. Scroll down for our collection of on-farm research project reports and other on-farm research projects we're involved in.

[On-Farm Research](#) [Get Involved](#) [Resources](#) [Results](#) [Partners](#)

By County Selection



By Other Filters

Keyword Search

Counties

Research Year(s)

Topic Areas

Crop

Soil Texture

Program

Research Category



Questions?



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