Nitrogen Optimization Pilot Program Orientation Meeting

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Susan Mockert
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Extension
UNIVERSITY OF WISCONSIN-MADISON

DEPARTMENT OF SOIL SCIENCE
University of Wisconsin-Madison

Agenda

- Program goals & NOPP team
- Surveys, terminology, data, & resources
- Contracts & reimbursements
- Community, outreach, & sharing
- 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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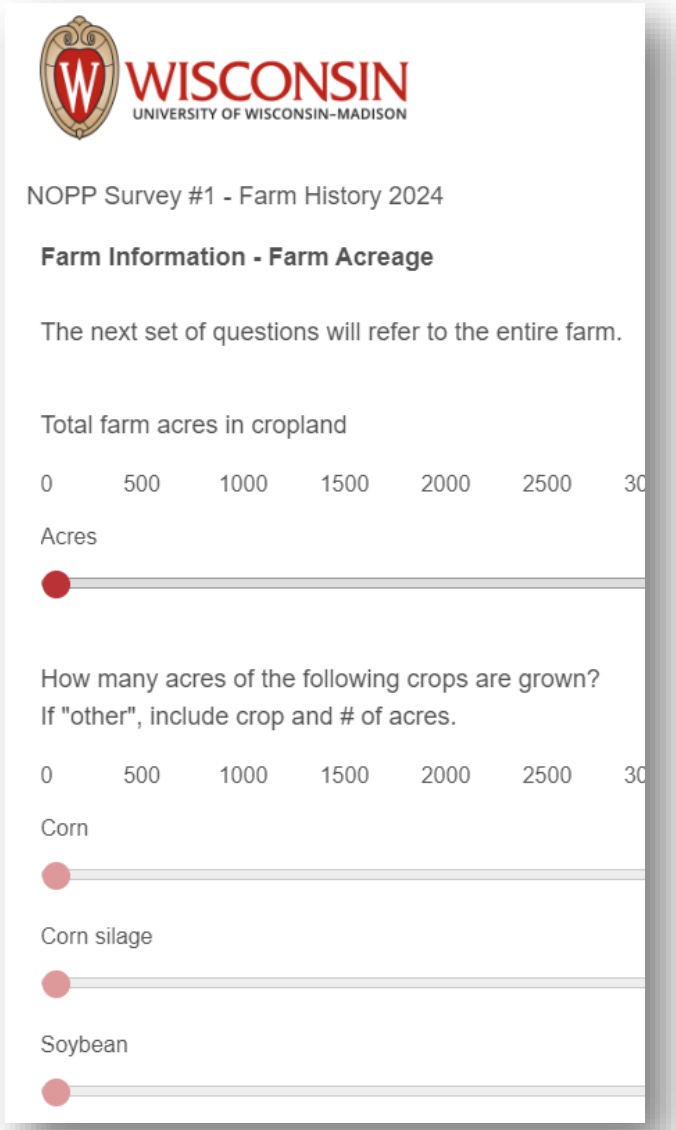
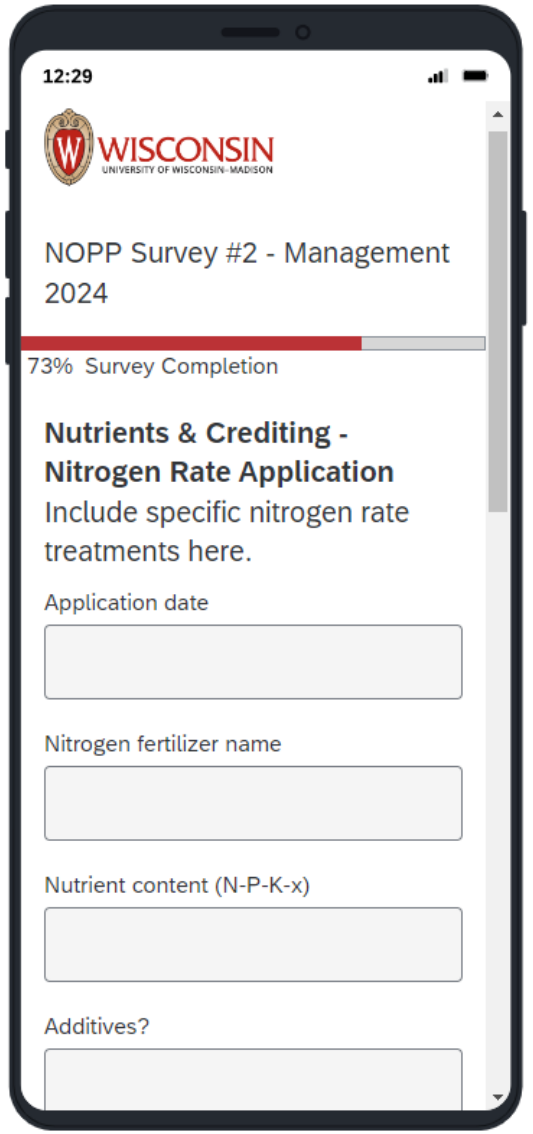
Surveys

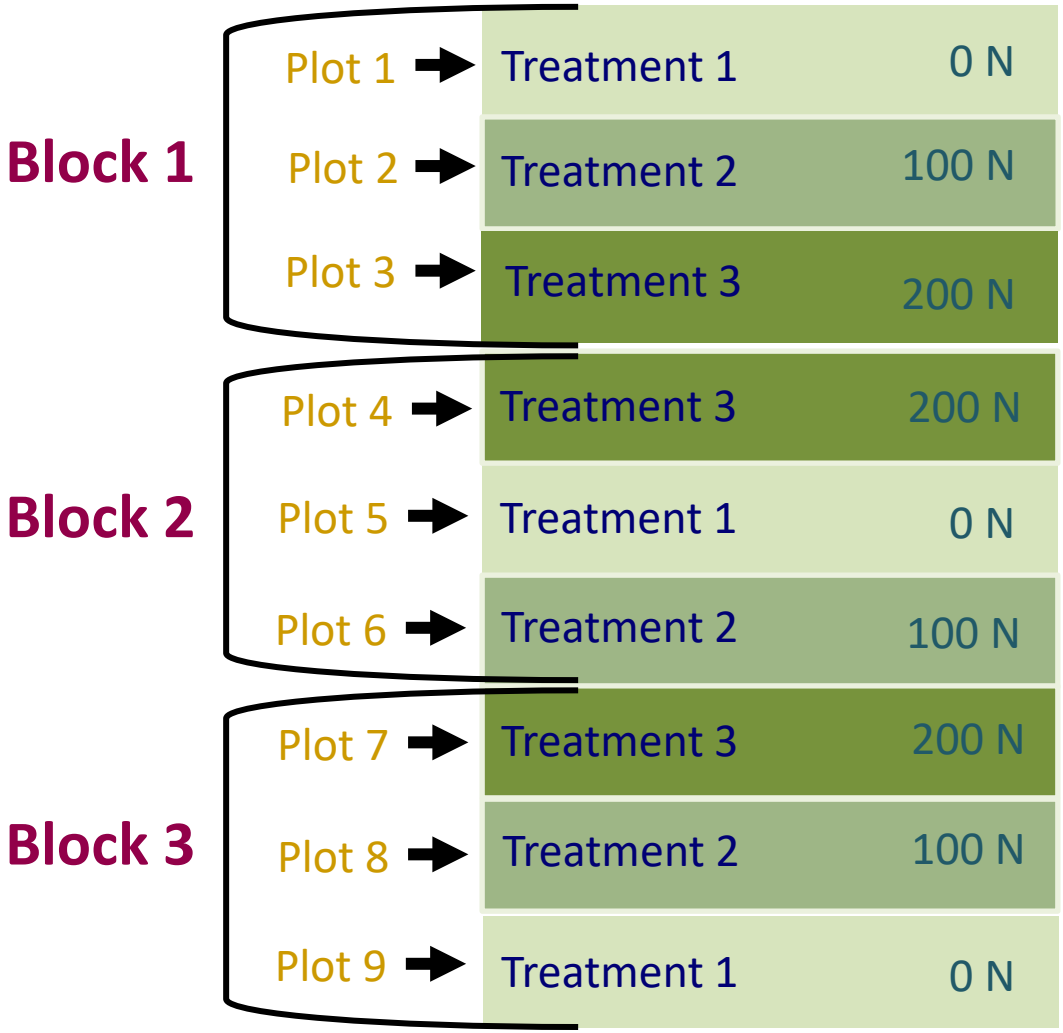
- Will be emailed this week
  - Each farm/producer will be provided a unique link
- Return Farm History Survey by **May 1st**
- Return Management Survey following harvest

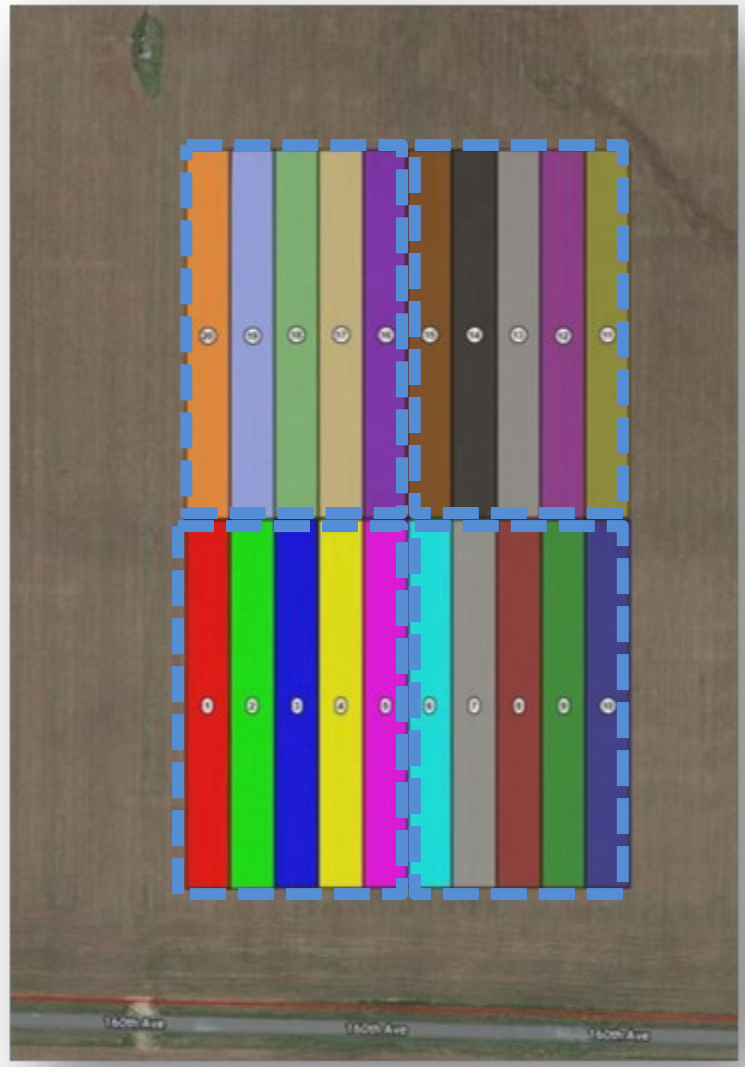




Research design

- Randomized complete block design
  - **Replicate:** repeating treatments
  - **Block:** repeating treatments grouped together
  - **Treatment:** Strip that management is applied to
  - **Plot:** Each unique strip, only occurs once for each project




160th Ave
160th Ave
160th Ave

Research design

- Randomized complete block design

  split plot

  - **Replicate:** repeating treatments
  - **Block:** repeating treatments grouped together
  - **Treatment:** Strip that management is applied to
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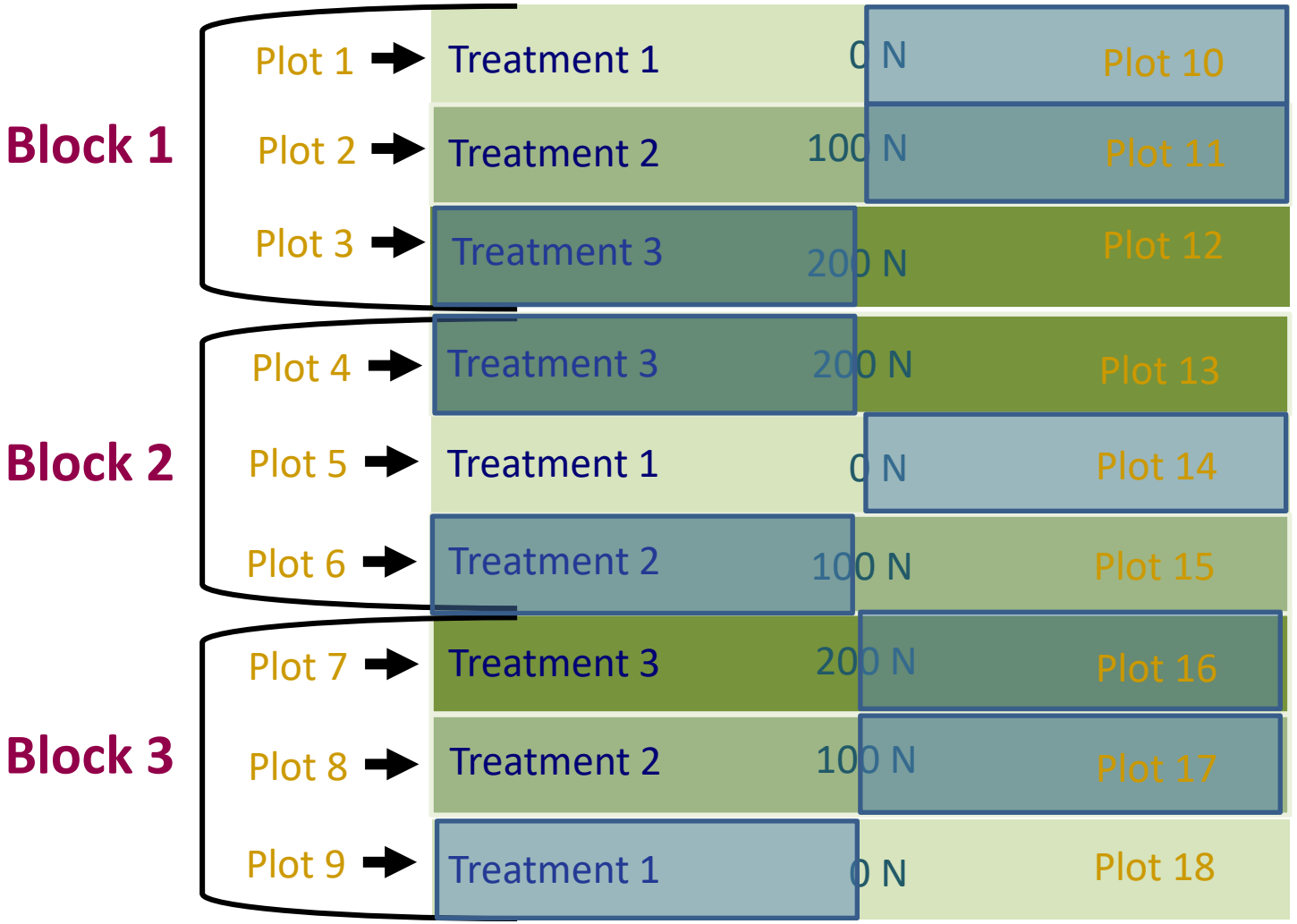


2023 NOPP Field Map (top of page is north)

Turzinski

Data collection

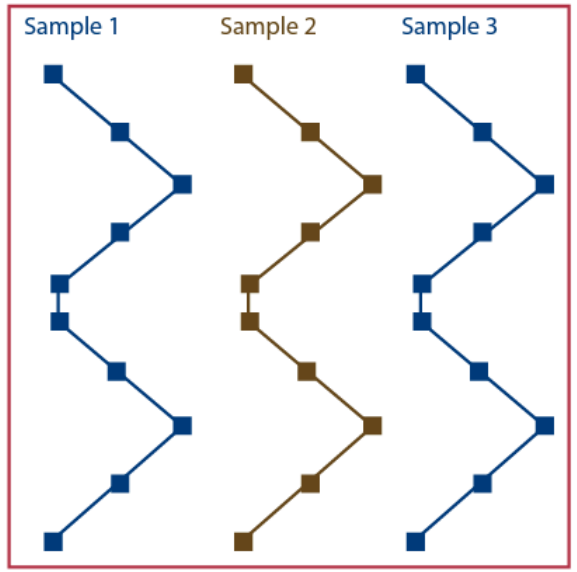
- Soil sampling
  - Capture variability within a field, treatment, or plot
  - Sample at level that treatment is applied
    - More finite the better!

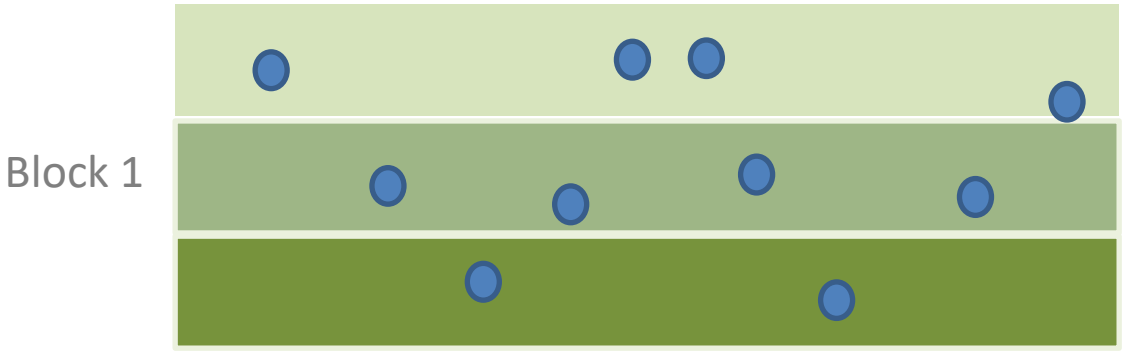
A2100

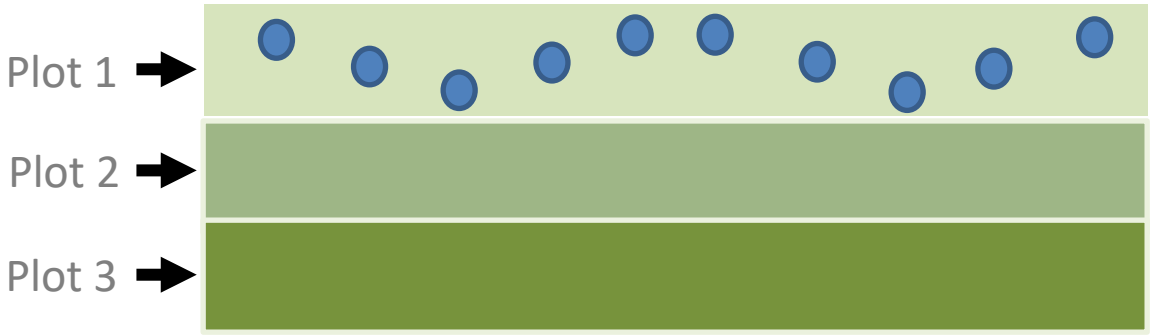
Sampling soils for testing

John B. Peters and Carrie A.M. Laboski

Figure 1. Recommended W-shaped sampling pattern for a 15-acre field. Each sample should be composed of at least 10 cores.





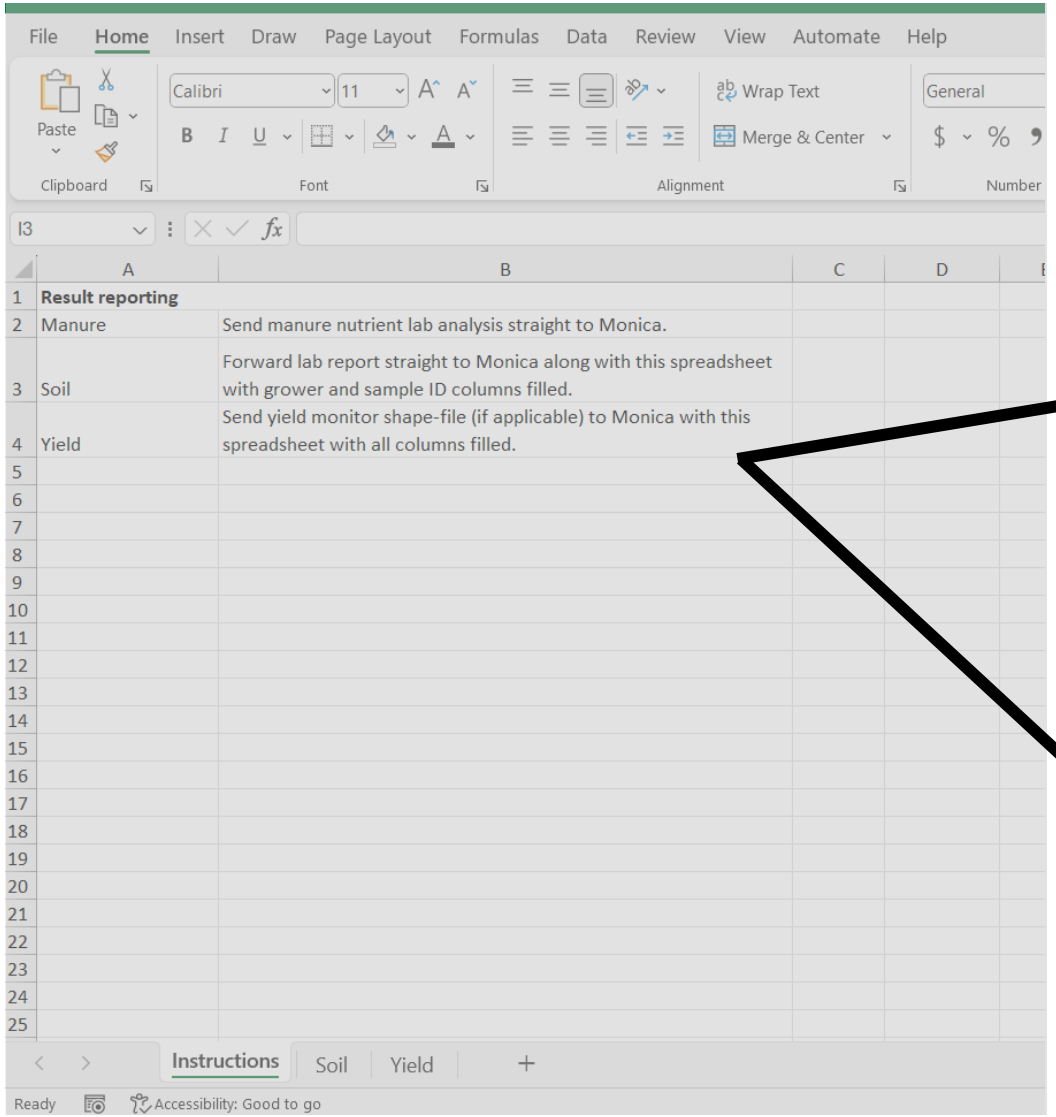


DATCP certified labs for routine soil analysis and nitrate tests

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:			
Farmers Edge	https://www.farmersedge.ca/	(515) 348-8639 fe.labs@farmersedge.ca	200 SE 37th St. Suite 200 Grimes, IA 50111
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://uwlab.soils.wisc.edu/	(715) 387-2523 soil-lab@mailplus.wisc.edu	4702 University Avenue Madison, WI 53705
AgSource Laboratories	https://vas.com/agronomic-consulting/	(715) 758-2178 bonduel@vas.com	106 North Cecil St. Bonduel, WI 54107
Minnesota Valley Testing Laboratories, Inc. (MVTL)	http://mvtl.com/	(800) 782-3557 mnsoil@mvtl.com	1126 N Front St. New Ulm, MN 56073
Dairyland Laboratories	https://www.dairylandlabs.com/	(715) 687-9997 https://dairylandlabs.com/contact-us	117609 Forward St. Stratford, WI 54484
Rock River Laboratory	https://rockriverlab.com/	(920) 261-0446 office@rockriverlab.com	710 Commerce Dr. Watertown, WI 53094

Result reporting



	A	B
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	Send yield monitor shape-file (if applicable) to Monica with this spreadsheet with all columns filled.
5		

	A	B	C	D	E	F	G
1	year	grower	sample_ID	block	manure	analysis	depth
2	2024			1	manure	routine	0-6"
3	2024			1	no_manure	routine	0-6"
4	2024			2	manure	routine	0-6"
5	2024			2	no_manure	routine	0-6"
6	2024			3	manure	routine	0-6"
7	2024			3	no_manure	routine	0-6"
8	2024			4	manure	routine	0-6"
9	2024			4	no_manure	routine	0-1'
10	2024			1	manure	PPNT	0-1'
11	2024			1	no_manure	PPNT	0-1'
12	2024			2	manure	PPNT	0-1'
13	2024			2	no_manure	PPNT	0-1'
14	2024			3	manure	PPNT	0-1'
15	2024			3	no_manure	PPNT	0-1'
16	2024			4	manure	PPNT	0-1'
17	2024			4	no_manure	PPNT	0-1'
18	2024			1	manure	PPNT	1-2'
19	2024			1	no_manure	PPNT	1-2'
20	2024			2	manure	PPNT	1-2'
21	2024			2	no_manure	PPNT	1-2'
22	2024			3	manure	PPNT	1-2'
23	2024			3	no_manure	PPNT	1-2'
24	2024			4	manure	PPNT	1-2'
25	2024			4	no_manure	PPNT	1-2'
26	2024			1	manure	PSNT	0-1'
27	2024			1	no_manure	PSNT	0-1'

	A	B	C	D	E	F	G	H	I
1	year	grower	plot	block	manure	n_rate	harvested_ac	yield	moisture
2	2024		1	1	manure	1			
3	2024		2	1	manure	2			
4	2024		3	1	manure	3			
5	2024		4	1	manure	4			
6	2024		5	1	manure	5			
7	2024		6	1	manure	6			
8	2024		7	1	no_manure	1			
9	2024		8	1	no_manure	2			
10	2024		9	1	no_manure	3			
11	2024		10	1	no_manure	4			
12	2024		11	1	no_manure	5			
13	2024		12	1	no_manure	6			
14	2024		13	2	manure	1			
15	2024		14	2	manure	2			
16	2024		15	2	manure	3			
17	2024		16	2	manure	4			
18	2024		17	2	manure	5			
19	2024		18	2	manure	6			
20	2024		19	2	no_manure	1			
21	2024		20	2	no_manure	2			
22	2024		21	2	no_manure	3			
23	2024		22	2	no_manure	4			
24	2024		23	2	no_manure	5			
25	2024		24	2	no_manure	6			
26	2024		25	3	manure	1			
27	2024		26	3	manure	2			

Instructions | Soil | Yield

REMEMBER TO TAKE AND SHARE PICTURES!

Resources available

Commercial Nitrogen Optimization Pilot Grant Program

Introduction to Program

The application period for the 2024-2025 Nitrogen Optimization Pilot Program (NOPP) grant cycle is now closed.

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.

Under 92.14(16), Stats., grant recipients must meet all of the following eligibility requirements to be considered for funding:

- Project must include two growing seasons.
- UWS institution should monitor the grant project on-site.
- Priority will be given to innovative projects not currently funded through state or federal programs.
- Priority will be given for longer-term projects.

NOPP Spotlights

Resources

General Information

Announcement of 2023 NOPP Grant Recipients

NOPP & Crop Insurance

Making Payments

2024 Application

2024 Request for Proposals

2024 Application Part 1

2024 Application Part 2

FAQs for 2024 Application

2024 NOPP Application Webinar

Technical Research Guide

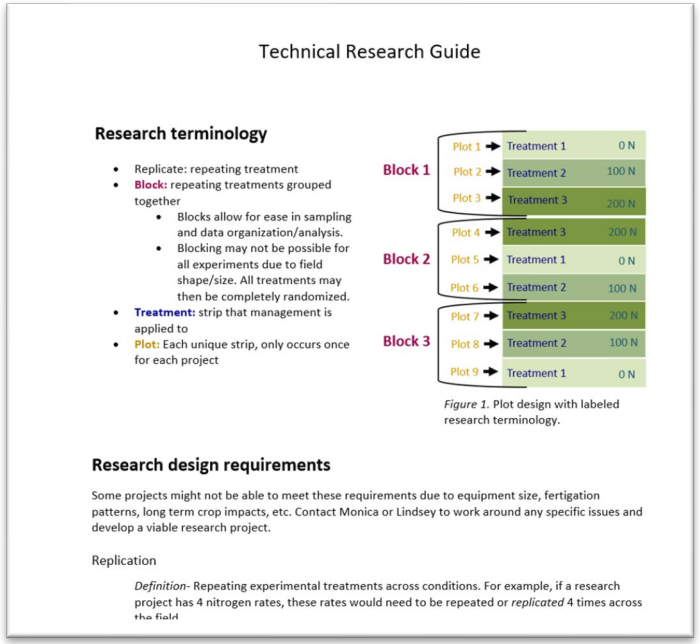
Forms for Grantees

W9 Form

Reimbursement Form

NOPP Farm History Survey 2023

Webinars



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

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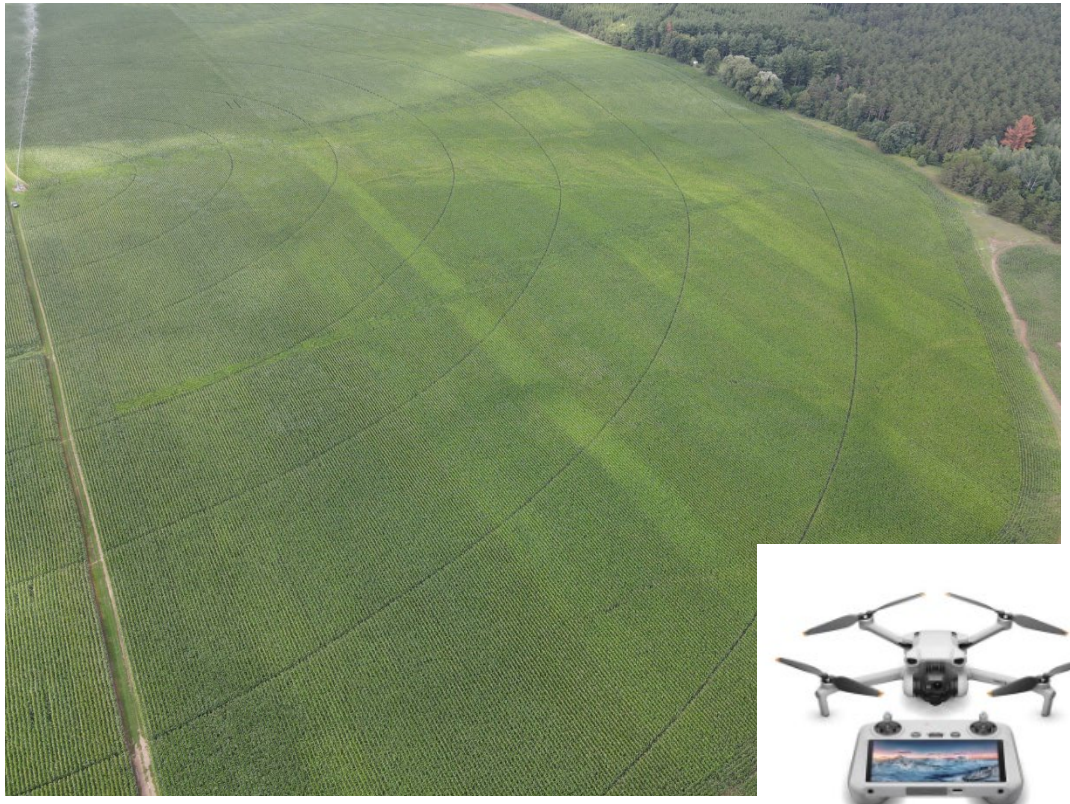
https://datcp.wi.gov/Pages/CommercialNitrogenOptimizationPilotGrantProgram.aspx

Technical support

- Sampling assistance
- Extra probes



ADMINISTRATION OF GRANTS

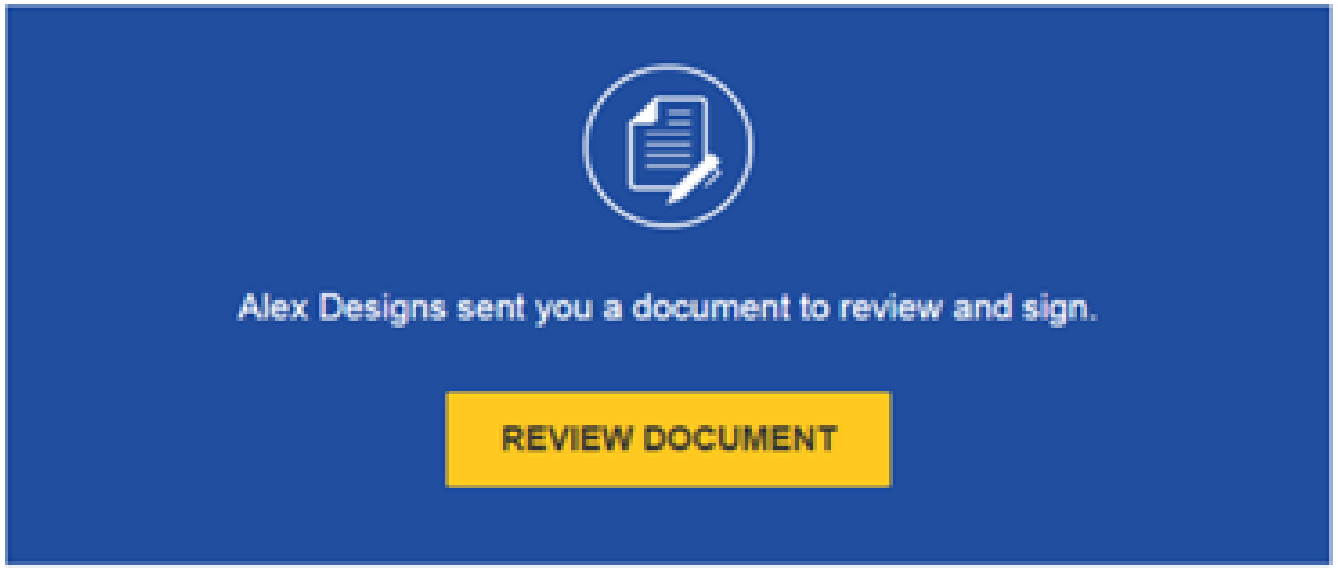
- UW Portion of Award
- Contracts
- Payments

CONTRACTS

- Contracts between grantee and DATCP
  - Acceptance of Award Document
  - Who needs to be included?
- Attachments to contract
- DocuSign

DOCUSIGN

1. Review the DocuSign email: Open the email and review the message from the sender. Click **REVIEW DOCUMENT** to begin the signing process.



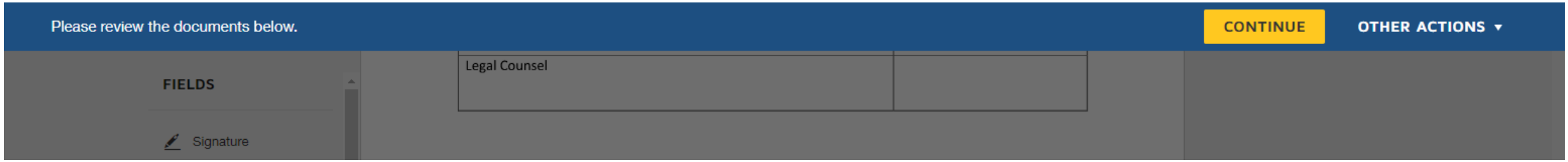
Please Review & Act on These Documents

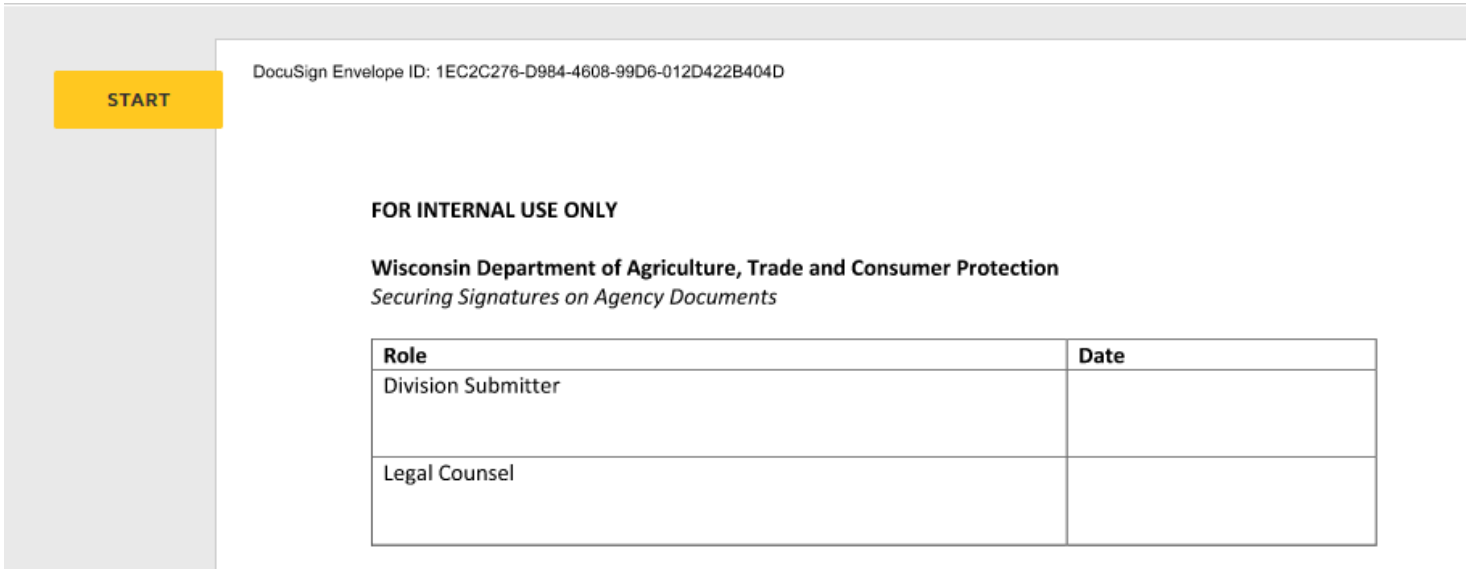
Susan Mockert
DATCP

Powered by DocuSign

A Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) document is ready for your signature. Please sign at your earliest convenience.

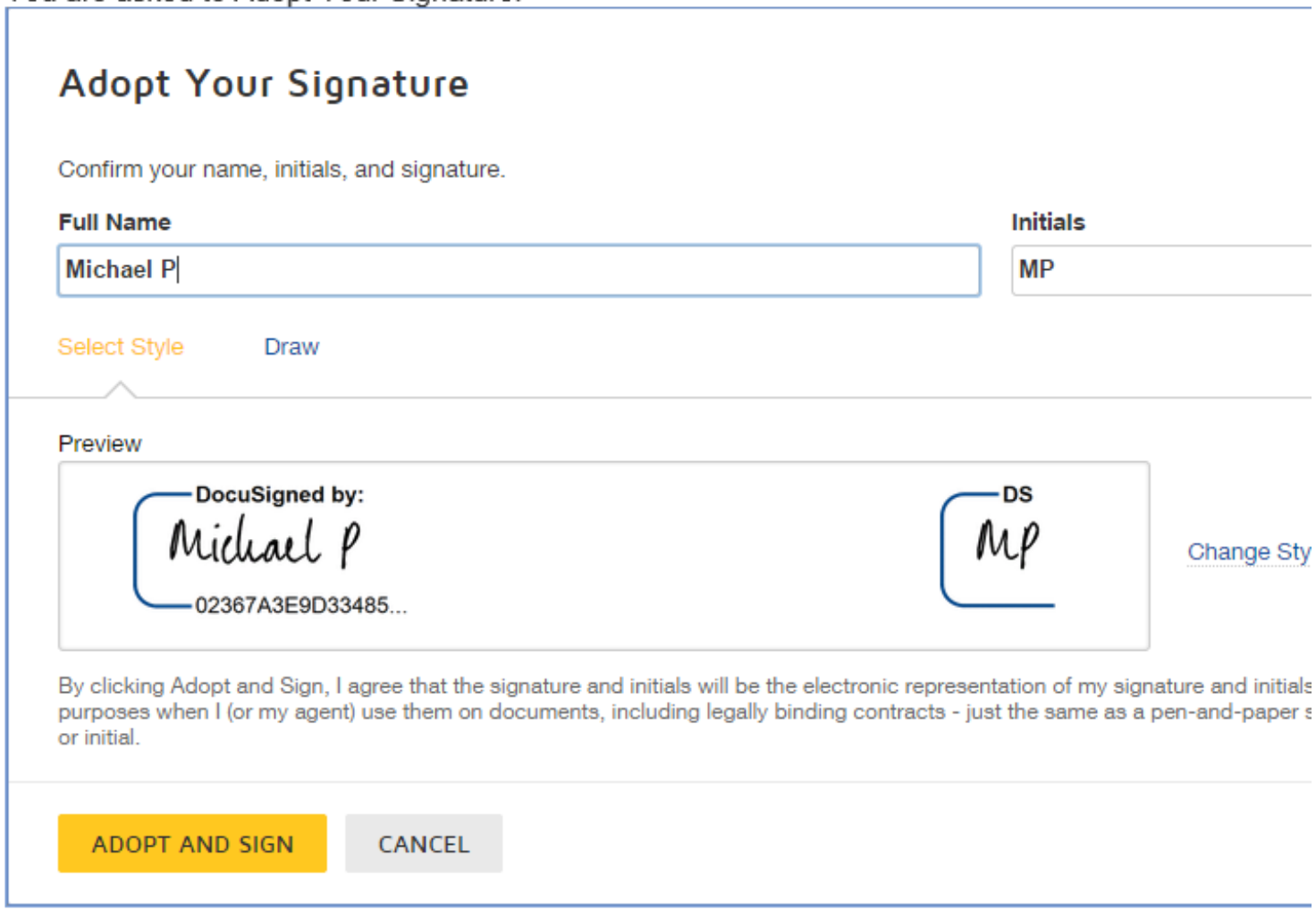
View More





3. Start the signing process: Click the **START** tag on the left to begin the signing process. You are taken to the first tag requiring your action.

You are asked to Adopt Your Signature.



4. Verify your name: Verify that your name and initials are correct. If not, change them as needed.

REIMBURSEMENTS

- NOPP grants will be paid using a reimbursement system.
- Proof of all payments are required for this grant.
  - Invoices
  - Point of Sale receipts
  - Spreadsheets for stipends paid out
- Each expense needs to relate back to a line item on the approved budget.
- A reimbursement form is available on the NOPP webpage.
- Will need W-9 forms to add entity to be paid to the State system.

Community & Outreach

Scan to access private NOPP Facebook group

You're encouraged to plan outreach events & materials related to your NOPP project!
Let us know about events/meetings so we can help promote it and if you'd like assistance.

Community & Outreach

We will work with each group to spotlight your NOPP project on Facebook: "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/.../CommercialNitrogenOptimizationPi...

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

Opportunities for NOPP participants to gather to share experiences, learnings, & knowledge.


Questions?