

Forward Farmer

The official newsletter of Yahara Pride Farms

Volume 10, Issue 1



Last August, Yahara Pride Farms hosted a Twilight Meeting at Laufenberg Farms, Waunakee. Attendees toured the robotic milking facilities and listened to speakers: Eric Birschbach, owner of Ag Site Crop Consulting, LLC, and Kim Meyer, agronomist with Dane County Land Conservation Division tasked with managing the new Dane Demonstration Farm Network.

Fighting weeds with cover crops



In March, Jose Nunes, a Ph.D. graduate research assistant in the Department of Agronomy at the University of Wisconsin-Madison, provided lessons learned from five years of cereal rye cover crop management for weed suppression research in Wisconsin during the 2024 Yahara Pride Farms Watershed-Wide Conference.

Nunes covered management recommendations to achieve cereal rye biomass levels effective for weed suppression, the impacts of cereal rye biomass on pre-emergence herbicide fate in the soil, and how cereal rye can impact soybean yield.

He highlighted data from the Wisconsin Cover Crop Survey where respondents indicated that waterhemp and giant ragweed were the most troublesome weeds with foxtail species ranking third as the most problematic. Others included marehail, barnyardgrass, palmer amaranth and large crabgrass.

Nunes described the establishment of cereal rye variety, Aroostook, at a seeding rate of 60 pounds per acre.

“We were concerned with high corn residue,” added Nunes. “But adjusted the drill for planting conditions.”

He also emphasized, “Start clean and stay clean with an effective pre-emergence herbicide program.”

The benefits are:

- Not dependent on herbicide-resistance trait
- Protects crop from early-season yield loss due to weed competition
- Buys time for a POST application
- Reduces weed density for POST control
- Simpler to spray

Some concerns that were considered included: a timely activation, crop response, and the impact of cereal rye biomass.

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General Information
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Meyer: An update on Dane Demo Farms



Kim Meyer, an agronomist with the Land Conservation Division in the Dane County Land and Water Resources Department and lead project manager for Dane Demo Farms provide an update on Dane Demo Farms during the 2024 Yahara Pride Farms Watershed-Wide Conference.

Dane Demo Farms is a new initiative dedicated to facilitating farmer-led research in Dane County. It focuses on enhancing agricultural practices to promote water quality and soil health by identifying and breaking down barriers to conservation implementation and by getting local providing farm answers to farmers conservation implementation questions.

Meyer explained that Dane County partnered with NRCS through a joint funding agreement to start the Dane Demo Farm network, in collaboration with the University of Wisconsin.

“We currently have four farms as part of the network including Endres Berryridge Farm in Waunakee, Ripp-Vale Farm in Black Earth, Sime Farm in Stoughton, and Tyler Duerst Farm in Verona,” shared Meyer.

- The Endres Berryridge Farm is a dairy farm. Crops include corn for silage and grain, alfalfa, grass. Conservation efforts include strip tillage and liquid manure and compost.
- The Ripp-Vale Farm is a grain farm. Crops include corn grain, soybeans, and wheat. Conservation efforts include no-till.
- The Sime Farm is a beef and grain farm. Crops include corn for grain and silage, soybeans, wheat, and small grain forages. Conservation efforts include pen pack and compost, no-till, and grazing.
- The Tyler Duerst farm is a grain farm. Crops include corn grain, soybeans, and wheat. Conservation efforts include no-till and minimum till.

Meyer listed the research projects that are active on the farms including cover crop termination plots, soil health comparison study, lime stratification plots, nutrient stratification plots, manure nitrogen management plots, cover crops for low-lying acres, and edge-of-field monitoring.

When working with cover crop termination plots, Dane Demo Farms is trying to determine the best time to terminate a cover crop to achieve goals without sacrificing yield. Sampling includes soil health sampling, nutrient stratification sampling, nitrates, and ammonia, and weed control assessment.

For soil health comparison studies, the program is looking at soil health and how it's improving due to management. Sampling includes potentially mineralizable nitrogen, active carbon, wet aggregate stability, respiration, bulk density, and others.

For example, on the Sime Farm Dane Demo Farms has set up lime stratification plots. Sampling includes standard soil samples from 0 to 2 inches and from 0 to 6 inches.

On the Ripp-Vale Farm, the program is looking at nutrient stratification. Sampling includes standard soil samples from 0 to 2 inches and from 0 to 6 inches.

The Endres Berryridge Farm has manure nitrogen management plots. Sampling includes standard soil samples, standard liquid manure samples, and nitrate and ammonia.

On the Tyler Duerst Farm, Dane Demo Farms will be assessing cover crops for low-lying areas using manure nitrogen management plots. Sampling includes standard soil samples, standard liquid manure samples, and nitrate and ammonia.

For updates on Demo Dane Farms, sign up for the newsletter and to receive texts for field days at www.demofarms.countyofdane.com/Newsletter, or for questions or more information, please contact Meyer at Meyer.kim@countyofdane.com or 608.445.1474. 📧



Yahara WINS activities reducing phosphorus in the Yahara Watershed



Mike Gilbertson, the watershed programs and Yahara WINS coordinator for the Madison Metropolitan Sewerage District, provided background information about Yahara WINS during the Yahara Pride Farms Watershed-Wide Conference.

Yahara WINS is an initiative to achieve clean water goals for the Yahara Watershed through community partners using adaptive management.

Gilbertson reviewed the phosphorus challenge and provided details regarding the Wisconsin surface water criteria for rivers, streams, and lakes.

He added that the Rock River Basin, which includes the Yahara Watershed, has total maximum daily load (TMDL), uneven regulatory framework and point source compliance costs.

Total maximum daily load is used to describe a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

“To reach our goals we need to achieve a phosphorus reduction of 96,000 pounds per year,” said Gilbertson. “This includes point sources such as treatment plants to nonpoint sources such as agricultural runoff.”

Gilbertson also explained that there are lots of opportunities within the Yahara Watershed, which is 27% urban, 47% cropland, and 19% natural vegetation.

Phosphorus reductions are necessary

Gilbertson shared that the average phosphorus concentrations in district wastewater are 6 milligrams per liter in raw wastewater, 0.2 to 0.4 milligrams per liter for treated effluent, with a phosphorus rule target of 0.075 milligrams per liter.

The traditional treatment is very costly: \$140 M (net present value) and \$240 M (actual), which is very expensive for point sources and municipal separate storm sewer systems.

Yahara WINS 2022 year in review

Gilbertson reported that the adaptive management plan reduction goal for 2022 was 43,076 pounds. Implementing partners reported 50,563 pounds of phosphorus reduced in the past year.

“This total is lower than the reduction reported in recent years due to the changed phosphorus reduction calculation methods,” added Gilbertson. “Despite the phosphorus accounting change the annual reduction exceeded the reduction goal for the year, and Yahara WINS is still on track to its 20-year project goals.”

Gilbertson highlighted Yahara WINS reporting requirements with partner reports due to Yahara WINS by May 15. The annual Yahara WINS report is due June 30 and will be sent to the Department of Natural Resources by July 31. The final five-year annual report will provide a program audit.

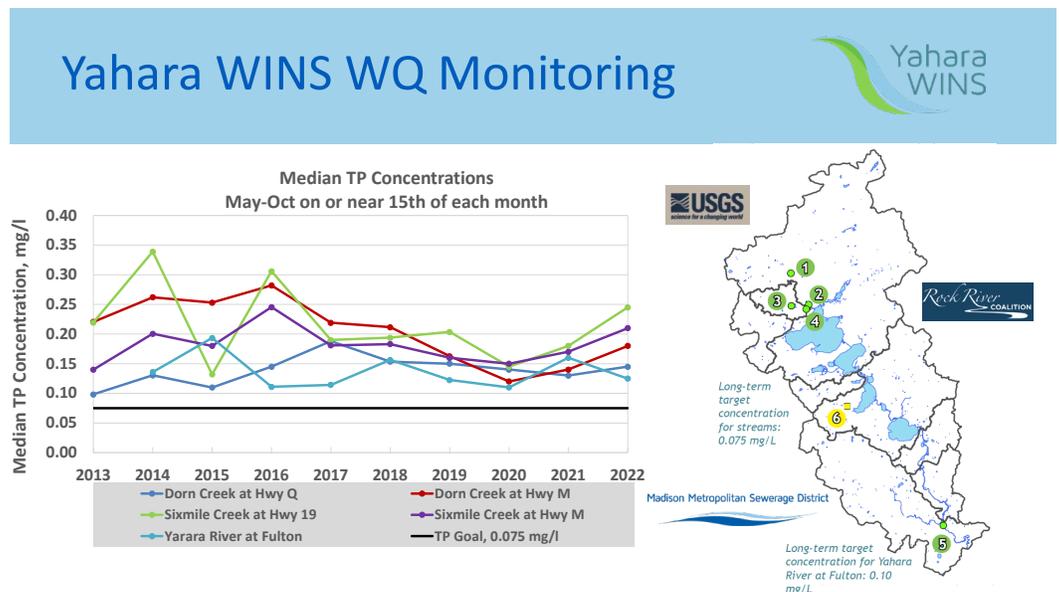
This is the first adaptive management plan in the state and is being promoted nationwide by the U.S. Environmental Protection Agency.

Looking ahead, Yahara WINS will

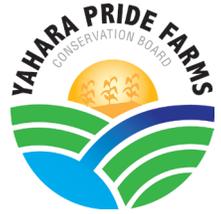
- Continue annual increase in phosphorus reductions – the 2023 goal is 47,862 pounds
- Cost model re-development
- Develop a cost share program with Metrogro.
- Five-year permit expires (first re-issuance)
- Monitoring data analysis
- Summarize AM activities
- Analysis of water quality trends
- Evaluation changes in phosphorus loadings in comparison to implemented AM activities.
- Researching carbon credits

Gilbertson added that as Yahara WINS continues to meet targets and goals, “I’m optimistic that we will continue to surpass goals. Our program is recognized as a national model and the program is being promoted to other states and encouraged to be adopted.”

For more information, please contact Gilbertson at MikeG@madsewer.org.



Yahara Pride Farms: A historical perspective



Jeff Endres, chair of Yahara Pride Farms board of directors, provided a historical perspective of the farmer-led watershed group for conference attendees.

The Yahara Pride Farms Conservation Board was founded in early 2011, in partnership with the Clean Lakes Alliance.

“It was started by an enthusiastic and progressive group of area producers, agronomists, and businessmen to develop a self-regulated, self-recognized, and self-incentivized organization to improve and protect our land and waterways in Dane County,” said Endres. “Through monthly meetings and significant development, the group has successfully created the framework of a strategic instrument in implementing best management practices in agriculture.”

Yahara Pride Farms is a farmer-led, not-for-profit organization working to improve soil and water quality. The Yahara Watershed includes Lakes Mendota, Monona, Waubesa, Kegonsa, and Wingra in central Dane County.

The Yahara River begins north of Lake Mendota in Columbia County and flows south 62 miles connecting Lakes Mendota, Monona, Waubesa, and Kegonsa, and then flows into the Rock River in Rock County.

“We strive to help advance new ideas and technology that balance water quality improvement with farm sustainability and profitability,” said Endres.

He added that historically, Yahara Pride farms formed with long-term goals of creating brand recognition and impetus to join the organization, Yahara Pride Farms grew to 72 members in two years.

Initial sign-ups were concentrated in the Dorn Creek sub-watershed to initiate contact with these farmers, as they played a significant role in the phosphorus Adaptive Management Program started by the Madison Metropolitan Sewerage District.

“Yahara Pride Farms farmers have successfully used a cover crop seeding cost-share program since 2011,” added Endres. “Each year, the number of cover crop acres planted has increased substantially.”

During the summer of 2013, Yahara Pride Farms implemented a Farm Certification Program that recognized farmers for excellent stewardship, while making recommendations to improve conservation weaknesses.

Endres described the why and how of the Yahara Pride Farms Cost Share Program.

“We wanted a program that would compensate farmers for their conservation efforts, and to incentivize water quality improvements by farmers,” said Endres. “Funds for the Cost Share Program are mainly provided by Yahara WINS.”

In 2013, there were four major incentive programs offered within the Yahara Watershed including:

- Cover Crop Assistance
- Vertical Manure Injection
- Strip Tillage
- Farm Certification Program

The program worked with 20 farmers in 80 different fields and the Cover Crop Incentive Demonstration Program reduced phosphorus by 1,957 pounds.

Ten years later in 2023-2024, there were 10 incentive programs offered including:

- Planting an Over-Wintering Cover Crop
- Planting a Non-Over-Wintering Cover Crop
- Low Disturbance Deep Tillage and Cover Crop
- Low Disturbance Manure Injection
- Strip Tillage
- No-Tillage, Planting into Soybean Stubble, Cover Crops, or Alfalfa Only
- Deferred Termination of Alfalfa Until Spring
- Seeding Grass with Alfalfa, Eligible on Highly Erodible Land Only
- Winter Headland Stacking of Manure
- Composting Manure

The program worked with 68 farmers, an increase from 63 in 2021, who provided SnapPlus plans to Yahara Pride Farms for evaluation of the impact of its Cost Share Program.

Outreach

Endres also highlighted the outreach activities that farmer participants engaged in besides providing farm tours.

Coordinating efforts with the Dane County Dairy Promotion Committee, members of Yahara Pride Farms board helped Plant a Seed with families that attended Cows on the Concourse.

Yahara Pride Farms also collaborated with other conservation groups including Upper Sugar River Watershed Association, Dane County Land and Water Resources Department, and Biological Farming Friends during the Dane County Breakfast on the Farm for a Plant a Seed activity and hosted a conservation tent.

Cost Share Program Checks

Endres also shared that the board of directors focused on getting the Cost Share Program checks sent earlier and to include a form that detailed the practices that the farmer registered for and payout per practice.

“This form will be included with each of the Cost Share Program checks,” added Endres. “Thank you for your ongoing support of Yahara Pride Farms! Another year and we have more challenges ahead of us. We don’t know what this year is going to bring but we know that agriculture isn’t the problem; agriculture is the answer to the problem.”

Do you grow soybeans? Are you interested in soil health?

A considerable amount of research has been conducted on soil health including recent work by University of Wisconsin Bean Team member, Lindsay Malone.

The goal is to build off this research by focusing on cover crops and the relationship with soil health.

For this project, soil samples that you collect and ship to us will be analyzed using three soil health measures that center on soil carbon and nitrogen stocks: total organic carbon, mineralizable carbon, and autoclave citrate extractable nitrogen.

These measurements are relatively inexpensive and can be performed on dried soil samples.

Even if you don't use cover crops, you can still participate in this study as we're interested in data from different types of soybean fields for our analysis.

For your efforts, you will receive the results from your soil samples, and we'll discuss the meaning of the results generated from the entire dataset.



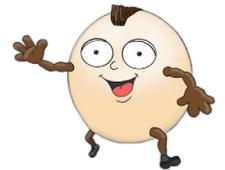
Objective

Connect the use of cover crops to three soil health measurements and soybean yield. What we need from you:

- Collect soil samples from up to four of your 2024 soybean fields and ship to us from your local post office. Shipping will be prepaid.
- Fill out a one-page survey form on the management history of each field.
- Report 2024 soybean yields from sampled fields.

What you will receive:

- A sampling kit with detailed instructions and materials to collect soil samples.
- Confidentiality of your data.
- Extension materials from all the data generated for this study, which will help growers make informed decisions about soil health management on their farms.



We are recruiting growers with a variety of management practices from across Wisconsin.

For more information or to enroll in the study for 2024, please contact Mark Kendall at mark.kendall@wisc.edu or 608.574.5972.

Soil health, *continued from page 1*

Attendees laughed as Nunes told the story of two farmers who got tired of waiting on university people to do some research on the effect of planting soybean green on yield. So they decide to take matters into their own hands.

Farmer 1 was Love, Farmer 2 was Rodgers.

Nunes provided a summary of the results

- Cereal rye can be an effective tool for waterhemp management
- Cereal rye management: planting and termination should be optimized for biomass production (4,500 pounds per acre of dry biomass)
- Effective PRE herbicides are also an important component of weed management
- Soybean is a resilient crop to be part of this system
- Planting green is a viable option to optimize cereal rye biomass production

- Soybean establishment will dictate the success of this system in terms of yield

For more information, please contact Jose Nunes at jjnunes@wisc.edu.

What about soybean yield? A tale of two farmers

Two farmers got tired of waiting on university people to do some research on the effect of planting soybean green on yield. So, they decided to take matters into their own hands.

Farmer 1



Farmer 2



Are you prepared for a manure spill?

By Kim Meyer, agronomist with the Land Conservation Division in the Dane County Land and Water Resources Department

Anyone who has handled liquid manure has probably encountered instances of manure spills, whether it be from an overfilled tanker during loading, splashes on the road due to sudden stops or starts at an intersection, or more serious situations, for example, broken hoses or overflowing storage structures.

It's important to be prepared to efficiently address and contain spills when they occur.

To effectively handle a manure spill, it is crucial to have a plan in place with current contact numbers, appropriate equipment such as tillage machinery for in-field spills, soil, corn silage, or large square bales to create barriers to contain spills, and other necessary tools or materials for emergency response.

In situations where tile inlets are present in fields, using a five-gallon bucket with the bottom removed can help prevent spilled manure from entering the tile system.

Is your tillage equipment easily accessible? Many farmers are opting out of tillage for the soil health and labor-saving benefits; old tillage equipment can get buried in the back of the shed.

If you are hauling liquid manure on your farm, it is critical to have spill response equipment readily available, including tillage equipment.

Do you have a stockpile of soil available on your farm that could be used for constructing a berm to contain a manure spill? Alternatively, consider using corn silage or large square bales to contain spills. It is crucial to have resources easily accessible for prompt response during an emergency.

Do you have a vacuum tanker, or do you know someone who does? It's important to have his or her contact information saved in your phone. A vacuum tanker with a reducer hose is essential for managing larger spills, especially if the spill is confined to a road ditch or other

non-cropland area.

What about those splashes on the road? A small splash may not be an environmental or safety hazard,* but it can look bad for agriculture, especially if you're farming near an urban area.

If you are hauling manure in a heavy traffic area, consider having a big push squeegee, scoop shovel, or other clean up tools available. Taking proactive steps to maintain a clean and tidy roadway not only fosters positive neighbor relations but also contributes to a favorable public image of the agricultural industry as a whole.

Any spill that poses an environmental or safety risk should be reported to the Department of Natural Resources spill hotline at 800.943.0003. In case of a serious injury or hazardous situation, dial 911.

1. Eliminate the source/stop the spill
2. Contain the spill
3. Notify appropriate agencies
4. Clean up the spill

One of the most effective strategies for addressing spills is to proactively prevent them from occurring. Just as in any work environment, rushing through tasks on the farm can increase the likelihood of accidents.

If adverse weather conditions cause delays in emptying a manure pit and there is a risk of spillage, it is advisable to seek assistance.

County land conservation staff, agronomists, and professional manure haulers can provide guidance and support in identifying alternative solutions.

If you want to learn more about manure spill response, check out the four-minute video from the Wisconsin DNR on YouTube, "How to Respond to a Manure Spill" or visit <https://dnr.wisconsin.gov/topic/CAFO/ManureSpills.html>.

**Based on NR 706.07 (2)(a)5, a discharge of liquid fertilizer under 25 gallons is exempt from notification provisions. ¹2*



Upcoming conferences:



**Join us for
Innovations on the Land:**
Madison, Wisconsin June 23-25, 2024

Sand County Foundation's national "Innovations on the Land" conservation symposium brings together farmers, ranchers, forestland owners, and other conservation-minded land managers and thought leaders who strive to improve soil health, water resources and wildlife habitat on agricultural land.

Register at: sandcountyfoundation.org/symposium



Build and refine your strip-till system with dozens of new ideas and connections at the 11th annual National Strip-Tillage

Conference on Aug. 8-9 at the Marriott Madison West Hotel and Conference Center in Madison (Middleton), Wisconsin.

For questions about the conference, please contact Strip-Till Farmer staff at 866.839.8455, 262.432.0388; 262.786.5564 (fax), or info@striptillfarmer.com.

Yahara Pride Farm's 2023-2024 Cost-Share Program

Thank you for your continued support of Yahara Pride Farms. Without farmers like you who are committed to trying and implementing conservation practices, we wouldn't see the continued improvement in water quality throughout the area.

This information outlines the 2023-2024 Yahara Pride Farms Cost-Share Program available to farmers in the Yahara Watershed. This program is designed to help minimize the risk associated with trying new conservation practices on your farm.

It's our hope that you will find value in the practices and implement these practices or combine for even greater environmental impact.

The results from the 2022 Phosphorus Reduction Report indicated that farmers in the program reduced the risk of phosphorus delivery to the Madison Lakes and the Yahara River by 28,463 pounds.

Last fall, farmers enrolled in the 2023-2024 Yahara Pride Farms Cost-Share Program. Our only requirement is that you submit a 590-nutrient management plan for the acres enrolled in the program.

From there, the acres that were enrolled were verified against the 590-nutrient management plans. Payment amounts are calculated based on the verified number of acres per practice, up to the maximum number of acres as stated in the enrollment form and information sheet.

We applaud the efforts of so many of you who have planted more than those maximum acreage amounts and encourage you to keep that positive impact going.

In the 10-year history of the Yahara Pride Farms Cost-Share Program, we have paid-out the maximum amounts stated on our enrollment form for all acres that have qualified.

We strive to continue this level of payment into the future. A majority of the Cost Share Program checks were distributed

during the annual Watershed-Wide Conference in March or sent to farmer participants. The remaining checks will be sent as soon as information is provided.

New this year, a chart indicating the acres that were registered, verified and the amount paid for the Cost Share Program were included with each check.

Your participation is crucial to the continued success of Yahara Pride Farms, and our collective commitment to clean water, productive farms, and pleasant communities. The positive improvements we see are due in large part to the ongoing and impressive work by all of you.

The following incentives were offered for 2023-2024:

- **Strip tillage:** \$15 per acre up to 100 acres (maximum payment of \$1,500 per farm).
- **Low disturbance manure injection:** \$25 per acre up to 125 acres (maximum payment \$3,125 per farm).
- **Cover crops:** \$55 per acre for up to 100 acres of over-wintering crops; \$35 per acre for up to 60 acres of nonover-wintering crops; \$35k per acre for up to 60 acres of deferred fall killing of alfalfa until spring (*Requires waiting until spring to kill alfalfa - hay - in fields that will be rotated into other crops or re-seeded).
- **Low disturbance deep tillage and cover crop planting:** \$55 per acre up to 50 acres.
- **Winter headland stacking:** \$8 per yard up to 400 yards. (*Requires spring/summer application; spring is defined as when the ground is no longer snow covered or frozen).
- **Composting manure:** \$12 per yard up to 400 yards.
- **Adding grass to alfalfa (hay) seedings or seeding grass forage mixtures (alternatives to pure alfalfa stands) on highly erodible (HE) land:** \$25 per acre up to 50 acres.
- **No-till planting into alfalfa, soybean stubble, or cover crops:** \$30 per acre up to 60 acres.



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