



2023

# Annual Report

YEAR 1 (2023)  
Annual Report

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# About Demo Farms

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Dane Demo Farms is a network of farmers that demonstrate and research leading edge conservation practices that improve water quality and soil health throughout Dane County. Their efforts help reduce nutrients and sediment from entering our waters and build healthy soil.

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## **Mission:**

To demonstrate the effectiveness and adaptability of conservation practice systems to reduce erosion, sedimentation and nonpoint source pollution and provide education and technology transfer opportunities for the public, farmers, land managers, agribusiness, environmental organizations, natural resource agencies and research entities.

## **Vision:**

To create a culture that encourages collaborative efforts to restore soil health and reduce runoff pollution, improve water quality, and support a strong regional economy.

## **Objectives:**

The Dane Demo Farms objectives are to:

- Test effectiveness of current and innovative conservation systems
- Provide the transfer of technology and information
- Create opportunities for partners to test research, technical assistance and program implementation on demonstration farm sites
- Implement an information/outreach strategy to share information and lessons learned
- Build interest and capacity to implement more conservation practices throughout the county
- Identify barriers to implementation of practices and explore solutions with input from farmers, agribusiness, resource professionals, and other stakeholders

The partnership is the first of its kind in the Mississippi River basin and currently consists of three farmers within Dane County, their crop consultants, Dane County Land & Water Resources Department, the Natural Resource Conservation Service (NRCS), and the University of Wisconsin - Madison Division of Extension.



Natural Resources Conservation Service  
U.S. DEPARTMENT OF AGRICULTURE



# Meet the Farmers

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The farmers involved in Dane Demo Farms demonstrate leading edge conservation practices and participate in on-farm research. The participating farms have been experimenting with different conservation practices on their farms for several years or more, experiencing both successes and challenges along the way. As each farm has a unique set of interests, needs, and goals; therefore, featured farms represent a wide array of Dane County agriculture on a variety of landscapes, providing a large opportunity for research and farmer-to-farmer learning.

## Endres Berryridge Farm, Waunakee

Brothers Steve, Jeff, and Randy, along with the next generation of Sarah and Zac, make up Endres Berryridge Farm. The Endres' operate a dairy farm northwest of Waunakee in the Six Mile Creek-Yahara River watershed. They farm 1,500 acres of cropland and raise a medium sized herd of registered Holsteins. The Endres' grow corn, alfalfa, wheat, and grass hay. They incorporate cover crops into their cropping system and have tried a variety of tillage options, including no-till and strip-till. Manure management on the farm is also varied, including a composting operation, liquid and solid manures that are digested at community digesters, and the reuse of manure solids for bedding.

The Endres' have been involved with farmer-led conservation efforts for over a decade, with Jeff serving as President of the Yahara Pride Farms farmer-led watershed group since the inception in 2011. The Endres' are interested in a variety of research including compost nutrient cycling and availability, nitrogen management with cover crops and strip till, among others. Jeff hopes that the data collected through the demo farm collaboration will help answer many of the questions farmers in the area have regarding conservation practice implementation.



# Meet the Farmers

## Ripp-Vale Farm, Black Earth

Tom Ripp farms around 350 acres of corn, soybeans, and wheat in the Black Earth Creek watershed. He's a long-time no-till farmer, and has been incorporating cover crops into his cropping system for over ten years. He attributes his innovative thinking to his dad Don, who started no-till farming over 40 years ago. Tom has continued the no-till tradition and expanded it to the low-lying acres he farms along Black Earth Creek.

In more recent years, Tom became interested in soil health and experimented with different cover crops to find what works best on his farm. He is constantly striving to improve his soils while keeping a close check on the economics. Tom's put a lot of thought and time into modifying his equipment to ensure it works with his system. Tom is interested in research around nutrient stratification and how cover crops effect nutrient availability. He also plans to try out different ways of terminating cover crops, including crimping in tandem with herbicides.



## Sime Farm, Stoughton



Bruce and Karl Sime are a father-son farming duo that demonstrate how two generations with very different ideas can work together. They farm just west of Stoughton in the Badfish Creek-Yahara River watershed. The Simes helped start up a farmer-led watershed group south of Madison called the Biological Farmer Friends and have prioritized soil health on their cropland by eliminating tillage, adding cover crops, and integrating livestock into their cropping system.

# Meet the Farmers

## Sime Farm, Stoughton (continued from page 5)

The Simes farm over 650 acres and grow corn, soybeans, wheat, and managed pasture. They raise pastured and confined beef and pastured cow-calf pairs, and compost all of the manure that they collect. With their herd management expertise and Karl's mechanical know-how and YouTube watching skills, they make an innovative team. They are interested in a wide array of research including researching how lime moves through the soil profile in a no-till cover crop system and how to best apply nitrogen when planting green to avoid tie-up.



## Tyler Duerst, Verona

Tyler Duerst operates cropland within the Sugar River watershed. In addition to this, he works for his in-laws in Darlington WI on their medium-sized dairy farm. Within his grain operation, Tyler grows corn, soybeans, and wheat. He practices no-till and plants cover crops after harvesting wheat. Some of the acres Tyler currently manages were part of his family's original home farm. To preserve the land and facilitate its use for agriculture, his family opted to sell a significant portion of the property to Dane County, responding to overtures from developers. Consequently, the land will remain as open space, which includes areas designated for farming.

Tyler is the most recent farm to join Dane Demo Farms, so the research plan for his farm are still being worked out. More to come in 2024.

# Research

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A unique component of the Dane Demo Farm network is that research is conducted by farmers and for farmers, with the focus of answering questions farmers have when it comes to adoption of various conservation practices. There are projects unique to each demo farm and projects that are replicated across all farms. Cooperating farms and/or their service providers complete all field operations within the project plots, including planting, harvest, tillage, pesticide applications, and manure and fertilizer applications.

Current research projects include:

- Cover Crop Termination Plots
- Soil Health Comparison Study
- Nutrient Stratification
- Lime Stratification
- Manure Nitrogen Management with Cover Crop Plots

In 2023, baseline data was collected from nine project sites across Dane County.

## Cover Crop Termination Plots

**When is the best time to terminate a cover crop to achieve goals (whether the goal is to improve soil health, maximize soil cover, control weeds, increase soil organic matter, improve nutrient cycling, etc.) and what are the tradeoffs?**

This project is designed to assess the impacts of different termination timing of rye cover crop in a corn grain, corn silage, and/or soybean rotation.

Sampling includes:

- Soil health sampling - see Soil Health Comparison Study for details
- Nutrient stratification sampling - see Nutrient Stratification Study for details
- Nitrates and ammonia after harvest, before and after planting, and pre-sidedress
- Weed control visual assessment
- Cover crop coverage assessment

# Research

## Soil Health Comparison Study

### How is the soil health on my farm improving due to management?

This project is designed to compare fields that have had intense management for improved soil health, some soil health management, or fields that are managed in a more typical or traditional way.

Sampling includes:

- Potentially mineralizable nitrogen
- Active carbon (POXC)
- Wet aggregate stability
- pH (salt and water)
- % total nitrogen and total carbon
- Respiration
- Bulk density
- Compaction (penetrometer readings at 0-6" and 6-18")
- Standard soil sample (OM, P, K, pH)



## Nutrient Stratification Study

### Does adding cover crops into a no-till system reduce or eliminate nutrient stratification in the soil profile?

This project compares the nutrient stratification in no-till fields with a history of soil health practices, with the nutrient stratification in no-till fields that have little or no history of soil health practices.

Sampling includes:

- Standard soil samples 0-2" (OM, P, K, pH)
- Standard soil samples 0-6" (OM, P, K, pH)

# Research

## Lime Stratification Study

**Does adding cover crops into a no-till system assist with the incorporation of lime into the soil profile?**

This project is designed to compare pH stratification in a no-till system with cover crops (or other soil health improving practices), with and without mechanical lime incorporation.

Sampling includes:

- Standard soil samples 0-2" (OM, P, K, pH)
- Standard soil samples 0-6" (OM, P, K, pH)



## Manure Nitrogen Management with Cover Crop Plots

**What is the best placement of nitrogen fertilizer to avoid tie-up by cover crops?**



This project is designed to assess manure placement in a strip-till and cover crop system and associated nitrogen tie-up.

Sampling includes:

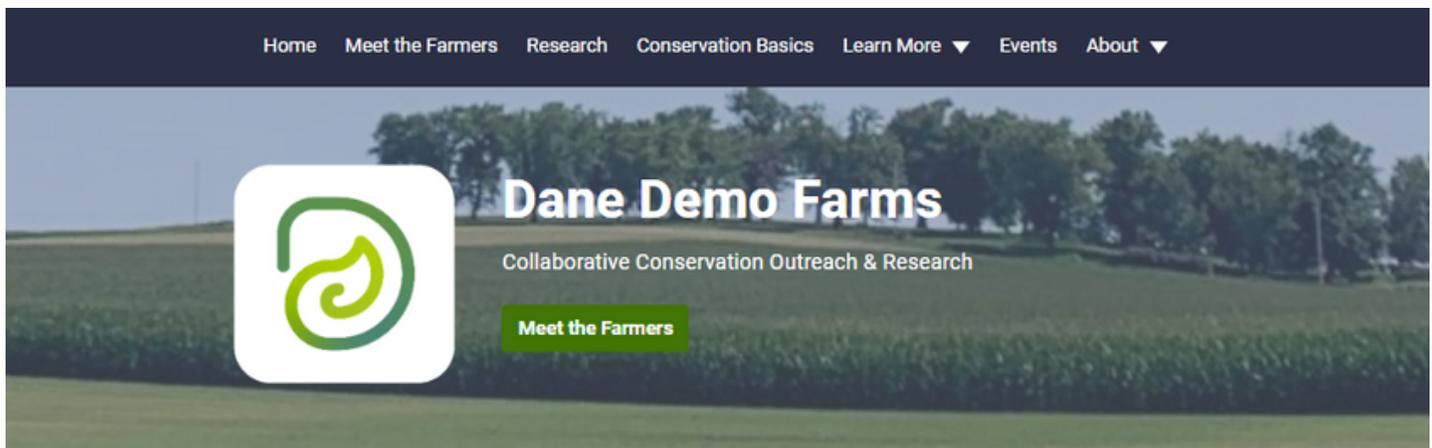
- Standard soil samples (OM, P, K, pH)
- Standard liquid manure samples (solids, N, P, K, S)
- Nitrates and ammonia after harvest, before and after planting, and pre-sidedress

# Outreach

Effective communication with farmers is crucial for the success of the network. In the first year, our efforts were dedicated to raising awareness about the Dane Demo Farm program through various channels, such as a public press event, a new website, and a quarterly newsletter distributed to over 1000 County farmers and landowners. Moving forward to 2024, field days will play a key role in our outreach strategy, guided by input from farmers.

## Website

The Dane Demo Farms website was launched in September and is constantly evolving and expanding as our network grows.



⚠ Register for Dane Demo Farm Events

### Who We Are

Dane Demo Farms is a network of farmers that demonstrate and research leading edge conservation practices that improve water quality and soil health throughout Dane County. Their efforts help reduce nutrients and sediment from entering our waters and build healthy soil. Visit our [Mission & Objectives](#) webpage to learn more.

The partnership is the first of its kind in the Mississippi River basin and currently consists of three farmers within Dane County, their crop consultants, Dane County Land & Water



### Featured Content

[Newsletter](#)

[Become the Next Demo](#)

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# Outreach

## Quarterly Newsletter

We offer a newsletter to help Dane County farmers and others stay up-to-date on Dane Demo Farm topics and events. Anyone interested in staying engaged can sign up for the newsletter on our website.

**Dane Demo Farms**  
The official newsletter of the Dane Demonstration Farm Network

Volume 1, Issue 1

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Check out our website at:  
[demofarms.countyofdane.com](http://demofarms.countyofdane.com)

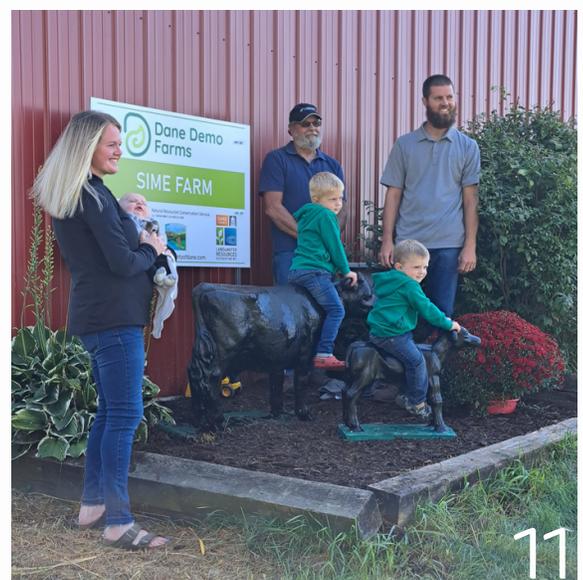
**Demonstration Farms to Provide On-Farm Research**  
The Dane Demonstration Farm Network, known as Dane Demo Farms, kicked off at the beginning of 2023.



## Press Event

The press event organized at the Sime farm in September was a success, attracting the participation of three local news stations. The County Executive, Joe Parisi, together with Josh Odekirk from the USDA-NRCS and Dr. Francisco Arriaga from the UW, addressed the audience on behalf of the project.

Pictured: Bruce and Karl Sime (back center and back right), with Karl's wife Courtney and their three boys



# Looking Ahead

With active research projects implemented throughout our network, Dane Demo Farms is poised for a successful year ahead. We plan to expand our network of farmers, host field events, engage with others through social media, and develop podcasts to reach a broad audience of farmers in the county. The farmers participating in Dane Demo Farms are eager to explore new ideas and seek answers to their inquiries directly on their own farms. Building momentum and establishing a strong foundation requires patience and dedication, and we are prepared for the opportunities that lie ahead.

## Contact our Team

Contact	Role	Phone	Email
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