

BETWEEN THE LAKES DEMO FARM NETWORK



REPORT

Between the Lakes
Demonstration Farm Network

Conservation Agriculture for Clean Water & Healthy Soils



Year 2 (2021)
Annual Report

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ABOUT THE DEMONSTRATION FARMS

The Between the Lakes Demonstration Farm Network, a collaboration between U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS) and Calumet County Land & Water Conservation Department, in partnership with Fond du Lac, Sheboygan and Manitowoc counties, was formed in 2020 to test and demonstrate conservation practices to reduce phosphorus, nitrates, and sediment entering the Great Lakes basin.

The four demonstration farms, Nick Kleiber Grain Farm LLC, Greendale Farm, Dallmann East River Dairy, and Libertyland Farms, represent a wide range of farm types, but all have a common goal – to share the knowledge learned on their farms about innovative techniques to improve soil health. These farmers, with technical support from the project management team, voluntarily implement conservation agricultural



practices in their operations. They also host educational field days and share their soil health journeys with other farmers and the public with the goal of helping others implement soil health practices in their operations. In this way, the Network tests and demonstrates the best conservation practices to reduce non-point source pollution entering the Great Lakes basin.

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FARM SUMMARIES

GREENDALE FARM



Dale Theel

Greendale Farm is a 650 acre grain farm in Fond du Lac County owned by Dale and Denise Theel. Dale has 35+ years of experience no-till planting corn, soybeans and wheat in heavy clay soils. Dale has recently started to include cover crops in his no-till system. He has found that cover crops make no-till management easier and better.

Soil health activities for 2021 included planting corn no-till green into cover crops of red and crimson clover and also a cover crop of winter rye and crimson clover. He used a roller crimper and herbicide at corn emergence to terminate the cover crops. He also tried inter-seeding several multi-species cover crop mixes into V3 corn using a spinner spreader. He was able to manage one soybean field without herbicide because the cover crop provided season-long weed suppression.

Planned activities for 2022 include planting soybeans green into the overwintered multispecies cover crop. Corn will be planted no-till green into a diverse cover crop that was established after winter wheat. Dale also plans to continue experimenting with inter-seeding cover crop mixes into V3 corn. He has a special interest in including cover crop species that flower for the benefit of pollinator insects later in the season. He found that crimson clover, phacelia and flax looked promising in 2021.



Greg Gries

LIBERTYLAND FARM

Libertyland Farm is a Manitowoc County dairy farm run by three generations: Harlan and Judy Gries, their son Greg and his daughter and son in-law Rachel and Zak Kenneke. They milk 320 cows and farm 1000 acres. The farm recently installed robotic milkers and a feed area runoff diversion system to reduce the amount of water going into manure storage.

Soil health activities for 2021 included frost seeding winter rye into corn stalks followed by no-till soybeans. This practice reduced crop damage from Canada Geese. The farm also planted 170 acres of corn no-till green into a cover crop of winter wheat. Libertyland Farm also seeded a corn silage field with a companion crop of alfalfa in 2021 to evaluate the practice. The farm has found that using a spinner-type fertilizer spreader followed by a rotary hoe pass has been working well to quickly establish fall cover crops after corn silage and soybeans.

Planned activities for 2022 include many more acres of corn and soybean planted green into cover crops of winter wheat or winter rye. The use of minimum disturbance manure injection into recently planted cover crops will be expanded. Libertyland Farm intends to include some hairy vetch into their cover crop mix after wheat harvest in 2022.

FARM SUMMARIES

DALLMANN EAST RIVER DAIRY



Nick Dallmann

Dallmann East River Dairy is a 3000 cow, 3300 acre dairy on the border of Manitowoc and Calumet Counties. The farm utilizes two center pivot irrigation systems to apply feed storage area runoff water instead of co-mingling the runoff water with liquid manure.

Soil health activities for 2021 included planting 190 acres of corn no-till green into winter rye. The farm also no-till planted 170 acres of corn into winter rye stubble and followed up with minimum disturbance manure the day after planting. Corn was also no-till planted into alfalfa sod that was terminated the previous fall.

Planned activities for 2022 include planting corn green into winter rye and also no-till planting corn into alfalfa stubble and winter rye forage stubble. The farm intends to try a cover crop on fall terminated alfalfa fields intended for no-till corn. They also intend to explore new methods to apply liquid manure to growing crops.



Nick Kleiber

NICK KLEIBER GRAIN FARM LLC

Nick Kleiber Grain Farm is a 1100 acre farm in Sheboygan County. Nick has been converting to no-till corn, soybeans and wheat for several years. He has noticed that the long-term no-till fields have become his highest yielding fields. He became a Demonstration Farm cooperator to show that soil health principles work on clay soils.

Soil health activities for 2021 included a side-by-side comparison of corn planted no-till green into winter wheat, winter rye and without a cover crop. He also planted most of his soybeans green into a cover crop of winter wheat or winter rye. Nick inter-seeded a portion of a corn field with a diverse cover crop mix at V3 using an inter-seeder drill. He also tried a strip of surface spread cover crop seed to compare the success of establishment.

Planned activities for 2022 include more corn and soybeans planted no-till green. He has a side-by-side trial set up to compare corn planted with and without a wheat cover crop and also with and without minimum disturbance subsoiling to see if soil compaction is affecting yields. Nick also plans to plant corn no-till green into a field that had manure applied with a minimum disturbance injection rig in fall. He is also planning on a trial to learn more about soybean root disease management in no-till fields.

OUTREACH ACTIVITIES

In-Person Outreach

Farmers learn best from other farmers, and when the information they receive is locally-based, and relevant to them. For this reason, one of our main outreach strategies is in-person field days. Farmers, agency personnel, and county conservation professionals attend in-person days where they are shown local soil health practices our demonstration farmers are using.

Participants can ask questions of demonstration farmers, and can see on-the-ground practices that are working. They may also find practices that aren't working so well, and can explore ways to adapt these practices to work better in their systems.



In-Person Outreach at a Glance

This year, in conjunction with our county partners and with the support of the demonstration farmers, we hosted 3 large field days, and 3 pop-up field days.

Field Days

- Conservation Agriculture Field Day
- Nick Kleiber Grain Farm LLC
- Sheboygan County
- June 23
- New Ways for New Challenges
- Libertyland Farms - Greg Gries
- Manitowoc County
- August 18
- Hands-On Soil Health Clinic
- Greendale Farms - Dale Theel
- Fond du Lac County
- October 20

Pop-Up Field Days

- Frost seeding winter rye and spreading fertilizer into corn stalks at Libertyland Farm - March 5
- Frost seeding clover into winter wheat at Greendale Farms - March 15
- Planting corn green into winter rye cover crop at Dallmann East River Dairy - May 1



FIELD DAYS

Nick Kleiber Grain Farm June 23, 2021

This field day took participants to two sites and presented seven soil-health topics. Nick Kleiber showed strips where he'd planted corn green and discussed his experience with this practice. The crowd inspected strips that had recently been no-till planted green, and Nick shared his planter settings and attachments he uses. Participants explored a field of soybeans planted green into winter rye, where Nick discussed some challenges he had, specifically the soybeans seeming to lag behind others planted at the same time.

Ted Hoffman discussed the need to control weeds while growing a cover crop. Afterwards, participants inspected plots where nine types of herbicides had been applied over cover crops. Maps were available for participants to check back on the plots' progress throughout the season.

Barry Bubolz demonstrated the rainfall simulator, showing the crowd the importance of soil health. Sheboygan County provided information about cost sharing opportunities for soil health practice implementation.



FIELD DAYS

Libertyland Farm
August 18, 2021

Greg Gries discussed the benefits of frost seeding winter rye into corn stubble residue, including his finding that this deterred geese from damaging the soybeans. He also shared lessons learned from barley and wheat planted after corn silage with a manure application, versus without.

Participants were then placed into three groups and rotated between 20-minute talks. Dr. John Grabber discussed how to establish an alfalfa plot using corn as a companion crop. He showed a plot of alfalfa interseeded into corn, and participants inspected the rows.

Andy Dexheimer and Emily Micolichuk of Miller Engineers and Scientists showed participants the innovative feed storage pad, and how it diverts rainwater to keep clean water clean. Participants toured the feed pad storage area and explored how rainwater was managed.

R. Braun Inc. and Rightway Applications showed three low-disturbance manure toolbars and discussed how they work. Participants got up-close to the machinery to inspect it, and asked questions. After lunch, participants were able to walk through the barn and view robotic milkers in action.



FIELD DAYS

Greendale Farm
October 20, 2021

Dale Theel discussed the no-till and cover crop systems he's used and lessons learned over 30+ years. Phillip Laatsch, Dale's agronomist, added supplementary comments and info. Participants got a photo tour of corn planted no-till green, and Dale commented on his preferences for planting time and stage of crop growth. Dale and Phillip also showed participants a spring frost seeded multispecies cover crop planted after winter wheat.

Greg Olson, from Sand County Foundation, presented about prairie strips including what they are, plus how they benefit soil health and pollinators.

Dan Stoffel, a farmer who has implemented prairie strips on his farm, gave his perspective on how to make the strips work in your operation. Participants viewed a prairie strip planting demonstration.

Becky Wagner discussed soil health analyses and how to interpret the results. Jamie Patton performed a soil pit demonstration, showing healthy soil and how to create it. Anne Pfeiffer described how UW Madison's On-Farm Research Network Program assists farmers in collecting meaningful soil health information on their land. Fond du Lac County and NRCS personnel discussed cost-share options for soil health practices.



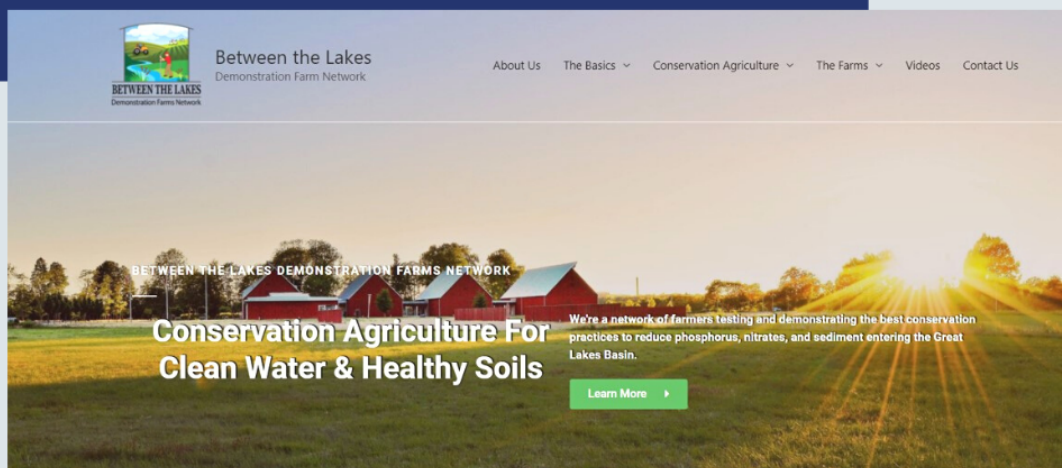
OUTREACH ACTIVITIES (CONTINUED)

Digital Outreach

This year we grew our digital outreach substantially. We built a website (BTLDemoFarms.org), built a Facebook page, and created a Youtube channel.

Aside from in-person events, our main outreach tactics have been to create digital materials that are available online for farmers to access at their convenience. This has included educational Facebook posts with illustrative images, and videos about soil health topics.

We also purchased, in partnership with Upper Fox-Wolf Demonstration Farms Network, audio and visual equipment to support our outreach specialist in producing professional materials.



Digital Outreach at a Glance

Educational Materials Created

- 15 videos
- >45 Facebook posts
- Informational postcards
- Farmers Protecting Water Quality poster
- Who We Are & What We Do handout
- Frost Seeding virtual webinar

Digital Material Creation Software Acquired

- Canva (graphic design)
- Hitfilm Express (video editing)
- Adobe Rush Premier (video and audio editing)
- Audacity (audio editing)
- Google Images/Video editor

Communication Platforms Utilized

- Facebook (@BTLDemoFarms)
- EZ-Text
- Eventbrite
- Google Forms

Outreach specialist, Maranda Miller, poses with the new video and audio recording setup Between the Lakes Demo Farm Network helped purchase.

Project Partners



Report Credits

Summaries Written by - Steve Hoffman & Maranda Miller

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WE'RE LOOKING FORWARD TO 2022

BETWEEN THE LAKES DEMONSTRATION FARM NETWORK

Conservation Agriculture for Clean Water & Healthy Soil

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