



Faribault County cover crop trials spark some permanent conversion



VIDEO: [Nathan Carr discusses the SWCD's work with farmers who tried cover crops for the first time.](#)

SWCD offered technical assistance, incentives through three-year BWSR Clean Water Fund demonstration grant

In Faribault County, 13 farmers incorporated 800 acres of cover crops into their corn-and-soybean operations for the first time with an incentive from a demonstration grant and technical support from soil and water conservation district staff.

A \$55-an-acre payment — available through a cover crop demonstration grant the Minnesota Board of Water and Soil Resources awarded to the Faribault County Soil & Water Conservation District — offset the risk of trying

something new. The incentive targeted hilly, erosion-prone fields — mostly in the southeastern part of the county. Tim Perrizo used the incentive to pay for custom aerial cover crop seeding on the 70-acre field he enrolled.

In 2022, he planted cover crops on the entire 750 acres he farms — some of it on his own; 550 acres with assistance from a three-year Environmental Quality Incentives Program (EQIP) sign-up through the USDA's Natural Resources Conservation Service.



Natural Resources
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Top: Faribault County SWCD Co-program Administrator Nathan Carr visited with Eric Volsen on the Kiester Township site where the Volsens hosted a field day in September 2022, part of outreach efforts tied to a Clean Water Fund-backed Cover Crop Demonstration Grants Initiative award from BWSR. The grants encouraged farmers to try cover crops and related soil health practices. Faribault County SWCD provided incentive payments through the grant. The Volsens were not among those new adopters; they tried cover crops as a prevent-plant measure in 2013. **Above:** Among the species growing Nov. 1, 2022, were, from left, Japanese millet, kale, purple-top turnip and sunflowers. **Photo Credits:** Ann Wessel, BWSR



The Faribault County SWCD used its portion of a BWSR Clean Water Fund-backed Cover Crop Demonstration Grants Initiative award to offer farmers incentives for trying cover crops and related soil health practices. On Nov. 1, 2022, cover crops emerged from corn stubble in one of the enrolled fields.

Increasing cover crop establishment and related tillage practices to encourage first-time experimenters and benefit water quality was the goal of BWSR’s \$1 million, Clean Water Fund-backed 2020 Cover Crop Demonstration Grants Initiative. The Faribault County SWCD was one of five SWCDs to receive part of that grant. Other recipients were the East Otter Tail, Stearns County, Root River and Traverse SWCDs. The SWCDs offered financial incentives, technical assistance and education.

“We’ve seen a lot of erosion in the springtime after snowmelt where there’s no living residue. We’re a corn-and-soybean county, and when the corn and soybeans aren’t growing, we do see a lot of erosion. Cover crops would be able to fix that issue,” said Faribault County SWCD Co-program Administrator Nathan Carr. “The clean water benefit of cover crops would be holding back phosphorus and nitrogen, stopping erosion from flowing into the water bodies.”

Because the COVID-19 pandemic suppressed its education and outreach efforts, the Faribault County

SWCD received a one-year extension on the three-year grant that expired Dec. 31, 2022. From its own budget, the SWCD offered the additional year of incentive payments to producers who had signed on to the three-year trial. Nine agreed, enrolling 450 acres.

“We were asking for them to do multiple species of cover crops, and we were also asking for a change in practice. Most likely that’s a tillage practice — \$55 an acre should be (enough) to pay for someone to do custom strip-



Carr



Perrizo

till,” Carr said of work related to the initial and extended incentive payments.

Perrizo was among those who signed on for a fourth year.

“I just liked what I was seeing, and I was able to manage the planting. The yield of the crops remained the same. I can cut back on some herbicide in the spring by using the cover crop on my soybeans,” Perrizo said. “I was able to save money on herbicide.”

A third-generation farmer, Perrizo, 64, raises corn, soybeans and sweetcorn in Prescott Township with his son, Jaydan, and wife, Sue. He’d planted no-till soybeans

“ The wind erosion and the water erosion — those are big factors. You drive by my fields, and you don’t have the dirt in the ditches from wind erosion. I collect all the dirt from my neighbors. ”

— Tim Perrizo, Faribault County farmer, on the benefits of cover crops



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for 20-plus years before trying cover crops. For the first couple of years, he fine-tuned cover-crop planting methods and chemical application.

Perrizo recalled standing in a waist-high winter rye cover crop that first year and wondering how the soybeans could grow through the mass. Three weeks after chemical termination, he said the beans were 8 inches tall and the field was weed-free.

“That’s just fantastic weed control, and the beans don’t mind coming up through green matter and the dying rye. They seem to thrive with that kind of a ground cover,” Perrizo said.

He expanded the practice to another 80 acres with

support in 2020 and 2022 from a Minnesota Pollution Control Agency Environmental Protection Agency grant available through the Greater Blue Earth River Basin Alliance.

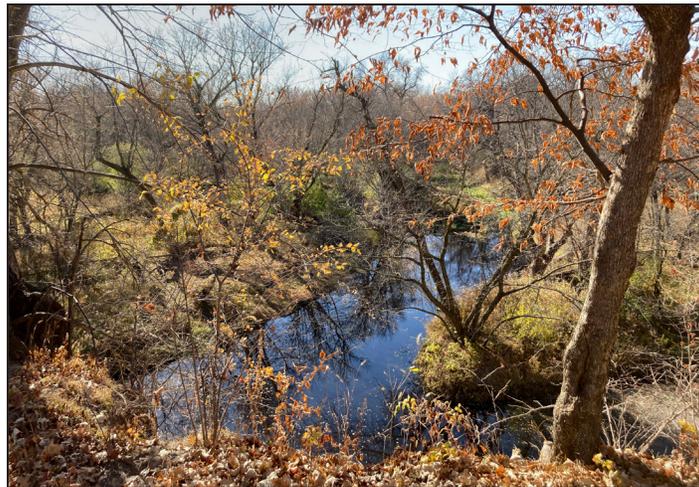
“I will continue to plant cover crops after the government money (ends). I’ve had enough years now, it’s showed me it does work and it’s worth every penny,” Perrizo said. “It’s proved to me that it’s economically feasible.”

On lighter soils, Perrizo said cover crops’ organic matter will help to improve soil health. On heavier ground where cover crops take up excess moisture in the spring, he aims to improve drainage through less tillage.

“I’m hoping to see water infiltration in soils and just continue controlling the wind and the water erosion,” Perrizo said. “The wind erosion and the water erosion — those are big factors. You drive by my fields, and you don’t have the dirt in the ditches from wind erosion. I collect all the dirt from my neighbors.”

In 2021, about 8,500 of the county’s roughly 400,000 acres of ag land were planted in cover crops. The SWCD supported about 5,000 acres of cover crop plantings through the BWSR grant, and through a series of grants available via the Minnesota Pollution Control Agency. NRCS assistance supported about 3,500 acres of cover crops in the county.

Lee Nachreiner, a Waseca-based NRCS soil conservationist whose territory includes Faribault County, said EQIP assistance provides a bit of a safety net for farmers who consider the upfront costs of seed, custom planting and chemical termination — but can’t



Trees framed the East Fork Blue Earth River Nov. 1, 2022, near Blue Earth. Improved water quality is among the benefits of cover crops.

“ Keeping your soil more protected from wind and water erosion is huge. Preventing soil erosion is not only keeping sediment out of our water bodies — (along with) the nutrients that are attached to those soil particles; it’s also helping you save on fertilizer. ”

— Lee Nachreiner, NRCS soil conservationist



immediately quantify the soil-health benefits.

“When cover crops improve yields, you don’t know how much your yields are going to be. You don’t know how long (soil health improvements) are going to take. There are enough benefits that you can’t put a dollar amount on. On the face of it, it’s a leap of faith, almost,” Nachreiner said. “But science and research does support cover crops’ long-term benefits.”

Producers who commit to a change in practice face additional considerations.

“Some of the obstacles of adopting soil health practices in Faribault County include the cost. A lot of producers already have their equipment, already have their equipment paid for. With soil health, changing of that tillage



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practice, buying something to apply your own cover crops — the cost of that could be upwards of \$200,000,” Carr said. “To a farmer who is towards the end of their career, five to 10 years left, that is hard investment to make.”

The Clean Water Fund grant’s incentive-based payment offset the cost of custom cover crop seeding or tillage so farmers could test the practice over three years on a smaller field before making that investment.

By extending the incentive for one more year, the SWCD achieved its goal of continuing

Details

THE STRIP-TILL PREFERENCE: In Faribault County, Carr said producers have favored strip-till over other reduced-tillage or no-till options. It requires less of a mind-shift and has produced slightly higher yields compared with no-till. “Strip-till is one of the only options to do some sort of tillage while you have a cover crop growing on your field. We have seen a lot of success with producers doing strip-till over the last 10, 15 to 20 years,” Carr said. “It also has a seed bed. They can put the nutrients right in the strip. They don’t need another pass in the spring.”

SCHOOL DEMO PLOTS: Some of the remaining BWSR grant funds will help to establish 8 acres of cover-crop, no-till and strip-till test plots this year in a 40-acre field owned by the Blue Earth Area Public School and farmed by its FFA chapter. Wells’ United South Central school district has been working with cover crops and strip-till for years. “We can get them looking at it and learning about it at an earlier age,” Carr said.

cover crops on at least 50% of the land enrolled in the initial demonstration. The aim is to expand cover crops’ adoption — independently, with technical assistance from the SWCD, and with financial incentives as they become available.

Carr elaborated on the potential benefits to farmers.

“One is time. Some of the tillage practices take a lot of time, whereas if you’re going to no-till, you can harvest it and be done. That also saves fuel. Another benefit would be eventually inputs being able to go down,” Carr said. “If you’re recycling those nutrients with

the cover crops, hopefully you wouldn't have to put as much nitrogen, phosphorus, (and) potassium down."

And, Nachreiner added, the fertilizer that is applied will be less likely to blow away or wash away.

"Keeping your soil more protected from wind and water erosion is huge. Preventing soil erosion is not only keeping sediment out of our water bodies — (along with) the nutrients that are attached to those soil particles; it's also helping you save on fertilizer," Nachreiner said. "That's money saved right there."

Cover crops can benefit the land, Carr said, by adding

diversity, increasing organic matter and improving soil structure, which improves water-holding capacity.

Eric and Amanda Volsen offered a firsthand look at some of those benefits in September when they hosted a soil health field day — part of the Faribault County SWCD's grant-related outreach efforts — on the 120-acre Kiester Township field where, two months earlier, six years of soil health improvements were put to the test.

A July 5 downpour brought 8 inches of rain in two hours. The next night, the canning company's combines showed up to harvest the pea crop.

"I've seen horror stuff with

the combines. They leave a rut from one end to the other," Eric Volsen said late last fall. But the field's soil structure had improved as a result of planting cover crops for the past five years, and no-tilling for even longer. "So we really set this farm up for success through a disaster, and it was really eye-opening to see the devastation to the field was very minimal."

By Nov. 1, a 10-species cover-crop mix flourished and beef cattle grazed in the field.

A sixth-generation farmer, Volsen, 38, raises about 700 acres of corn, soybeans, small grains and canning crops with Amanda and their four children. He also farms

alongside his father. A prevent-planting brought on by a wet spring in 2013 introduced him to cover crops. He learned more from a friend, continued to adopt soil health practices, and now sits on the Faribault County Soil Health Team. He's striving to convert his entire farm to no-till within the next couple of years.

"My main goal with all of the practices that I'm following through with is to preserve the land, give the next generation an opportunity to have a step up rather than a step down," Eric Volsen said. "I want to be doing my part with the control that I have on my operation to do the best I can with what I have."

Five soil-health questions with Eric Volsen

Faribault County farmer Eric Volsen elaborated on his experience implementing soil-health practices on the 700-acre farm he runs with his wife, Amanda, and their four children. The following excerpts from an interview are edited for length and clarity.

BETTER SOIL CONDITIONS:

We're seeing long-term effects. The soil's turning around; the structure's there. It's performing much better with the conditions that we are faced with. We get the binding of the soil with the soil aggregates, the chemistry that goes on with reducing the tillage and letting Mother Nature take over. With the microorganisms, it gives them a chance to rebuild without tearing them up and airing them out. What we're seeing on top is a better footing in wet conditions — just like the peas. That field would not have been harvestable in a conventional setting. It would not have been passable. With



Eric Volsen raises corn, soybeans, small grains and canning crops.

the no-till structure it was able to hold the combines up and they were able to harvest the crop.

CHALLENGES: People that are farming conventionally have certain issues that they're facing every year, too, with weather and crop situations, disease — whatever it might be. In this soil health world, we're not necessarily getting rid of problems. We're trading one set of problems for another. We still have management. We still have things that we need to watch.

If we let our cover crops get too far along, that'll choke out our cash crop. We're learning as we go, but we are finding out that some of the problems that we are having are very similar to some of the farmers that are farming conventionally. We have to figure out is it really our practice, or is just the year and what it's giving us?

POTENTIAL SAVINGS: I'm eliminating a field cultivation pass in the spring, possibly two. I'm completely eliminating the fall full-width

tillage. I'm putting that money toward strip-till and applying nutrients that way. With no-till, I don't have any of that cost.

SPECIALIZED EQUIPMENT:

On no-till fields, Volsen plants with a 1990 John Deere seeder set at 7.5-inch row spacing. He discovered that cover crops such as rye can be terminated in the spring by crimping, so Volsen modified a roller with chevron crimping bars that crease plants' stems and cut off nutrients.

THE MENTAL SWITCH: It's a different system, so just mentally trying to switch over to doing things a different way is hard. But we've seen the benefits come from the cover crops, the cows, having multiple crops in a rotation rather than just the corn and soybeans — and we're leaning toward going strictly to no-till. I would say within the next year or two, I'm really close to not doing any tillage.