

## A Sense of Where You Are

### 11 Examples of Viewing Farms in Context

By Brian DeVore

On a sunny day in June, hundreds of ewes make their way through a narrow grazing paddock, flowing along the contours of a Driftless Area hill in southeastern Minnesota like a woolly river. Later in the growing season, a west-central Minnesota farmer shows off a flat-as-a-pancake field that had formerly grown hybrid poplars — it's now being converted to another form of perennials that can be grazed by beef cattle. As trains rumble by just a few yards away, a vegetable farmer in the middle of Minneapolis grapples with the challenges of building soil health in the city. In western Wisconsin, a produce and chicken operation bases part of its marketing strategy on the idea that rural people deserve to eat healthy food as well. In central Minnesota, a dairy farming family realizes that building biology isn't just good for the land and crops — it also improves quality of life. Seventy miles to the south, an organic farmer checks a massive whiteboard “spreadsheet” set up in his machine shed to schedule daily tasks at a time when climate change leaves little room for error. In southwestern Minnesota, a family converts row cropped fields to annual and perennial forages as their neighbors haul corn past their fields to the local ethanol plant.

Doing things in “context” is a big part of the regenerative farming discussion these days. In fact, the original “five principles of soil health” — armor the soil, minimize soil disturbance, increase plant diversity, keep living roots in the soil, and integrate livestock — now have a sixth companion: keep things in context. It's not enough to adopt a practice that, for example, produces a marketable product, reduces labor, or builds good aggregate soil structure. One also needs to figure out where that practice fits in as far as the bigger, interconnected picture is concerned. Raising corn when prices are high makes sense when considering it as an isolated enterprise. But what's

the cost from a labor, input, and equipment point of view? And what happens when the market nosedives? Integrating cover crops into a corn-soybean operation is always a good idea if reducing erosion and building soil biology are the goals, but how sustainable is the practice if it doesn't generate enough economic value to keep it going in the long term?

During the 2024 field day season, consid-



An LSP grazing school in June highlighted the importance of taking a big picture view of livestock farming. (Drone photo by Nikki Meyer)

ering things in context was a major theme of discussion in pastures and crop fields, as well as in vegetable plots and high tunnels. On the following pages are 11 examples of farmers connecting the dots and putting them into perspective every chance they get.

#### 1) Red Dresses & Magic Management

One of the ways Rachele and Jordan Meyer keep things in context is to avoid being distracted by what they call “the woman in the red dress.” Is a new enterprise a good fit for the farm, or is its flashiness overshadowing the downsides of adding it to the mix? The Meyers are in their early 30s and have six children. That means any business decisions they make on the farm must be balanced against the needs of the family, first and foremost. That became particularly

clear in the spring of 2024, when they experienced the heartbreaking tragedy of having their 2-year-old daughter, April, taken from them in a farm accident.

They keep their balance utilizing the “three-legged stool” strategy: the farm family perches on top of this metaphorical stool, and each leg represents a key ingredient to overall success: profitability, soil health, and quality of life. Such a strategy helped the family not only determine recently that adding an enterprise like sheep worked for them, the land, and their family, but also led them to decide that the cow-calf and turkey businesses they formerly had were not a good fit. Besides raising the ewes and running a conventional dairy, they have pasture-based enterprises that involve rotationally grazing goats, beef cattle, hogs, and poultry. They direct-market meat to consumers, as well as lease out their goats to people hoping to rehabilitate worn-out land that's been taken over by invasive plants.

In late June, the couple explained how they utilize this management strategy while hosting a Land Stewardship Project grazing school on the hilly acres they farm in southeastern Minnesota's Houston County. Over a two-day period, farmers and other experts led discussions on everything from setting up fencing and watering systems on a budget to monitoring soil health, assessing pasture quality, utilizing government conservation programs, and crunching the numbers on farm profitability.

To the mix of aspiring, new, and established graziers present, the Meyers recommended “learning your farm first” before putting in more permanent infrastructure such as perimeter fencing. Fortunately, innovations such as light-weight, portable electric fencing make it possible to try out grazing techniques in different areas before settling on a more permanent system.

“Our biggest thing is to be adaptive,” said Rachele.

On the second day of the school, the couple led participants to a 15-acre field on rented ground that, before they started farming it, had suffered the environmental and agronomic consequences of years of row-cropping and heavy tillage. The recent addition of the ewes has helped the Meyers add economic value to the perennials and annuals that are now building soil and crowding out the weeds.

“This whole field as far as you can see was giant ragweed,” Jordan said, pointing beyond their flock of hair sheep at a diverse

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stand of forages growing along the contour of the hill. With the assistance of Skipper, a massive, white Maremma guard dog, he and Rachele then moved the flock to a new paddock. Rotational grazing is often associated with squared off, grid-like paddocks, but on this Driftless Area topography, the Meyers often utilize portable fencing to create long, narrow foraging channels. These linear paddocks hug the contours of the rugged landscape and force animals like sheep into smaller areas for a shorter period of time, creating a “mob” effect. Again, it’s all about context — the sheep have a lighter impact on the soil compared to cattle, meaning they needed to be crowded more to get the same effect of trampling manure and biomass into the soil while knocking back weeds; it’s the epitome of an adaptive, rather than a cookie-cutter, rote approach to raising livestock.

There’s adapting to the landscape, and then there’s adapting to the state of the soil and the limiting factor of climate, as well as one’s access to that most valuable of resources: time. For example, one of the other grazing school instructors was George Heller, who’s launched a livestock operation on sandy, drought-prone soil in northern Minnesota’s Wadena County. Before Heller started farming it, the land was impoverished by years of continuous hay production. He’s also dealing with a 120-day growing season; in contrast, the growing season in southeastern Minnesota can be 150 days or more. As Heller put it during a discussion about soil biology in one of the Meyers’ pastures, “I’m always planning for winter.”

“That’s his context,” quipped Jordan Meyer at one point. The point being that if Heller attempted to stock his paddocks at the same rate the Meyers do on their comparatively rich soil, it would be an economic and ecological disaster.

But over the past five years, Heller has built up an adaptive rotational grazing operation on 290 owned and rented acres that supports his cattle and sheep, as well regenerates the depleted soil. He is building this enterprise literally from the ground-up — beyond fencing and watering systems, as well as a four-wheeler, his infrastructure is minimal, and he estimates that not counting the land costs, he has just a few thousand dollars invested in the whole operation.

Heller’s day job is running a concrete business, so he has limited time to spend managing the farm. One way he buys a few precious hours is to run cattle and sheep

together in the same paddocks as a “fherd.”

In the end, the grazing school wasn’t just about stocking rates, or what kind of grass to plant on former corn ground, or which fencing reel works best (even though plenty of talk focused on such nuts and bolts topics) — it was about how to make the kinds of observations and calculations that put daily decisions in context.

As a grazing specialist for the USDA’s Natural Resources Conservation Service (NRCS), Jeff Duchene has set up rotational grazing plans for farmers in at least 50 of Minnesota’s 87 counties. Not surprisingly, farmers frequently ask him for advice on what type of forage to plant. What is the ultimate species that will withstand drought,



“Our biggest thing is to be adaptive,” said pasture-based livestock producer Rachele Meyer. (LSP Photo)

flooding, and disease, while producing a nutritious feed for decades?

“Not to disappoint anyone, but that grass doesn’t exist,” said Duchene while leading a plant identification session in one of the Meyers’ hilltop pastures. “There is no magic grass — the magic is in the management.”

Clifford Johnson, a central Minnesota crop and livestock farmer, explained to the participants that regenerative management often involves compromises — sometimes one may have to turn to tillage or chemical applications, which can set soil health back temporarily. It’s all about keeping the big picture in perspective and not allowing a few backward steps stop a farm’s overall trajectory forward. It also helps to have a sense of humor.

“I call myself the HRH — Honest Regenerative Hypocrite,” Johnson joked. ♦

## 2) In the Blood

History is a critical piece of context. All too often, farming practices are carried out without taking into consideration past practices and their subsequent impact. Regenerative farmers often say they are “listening to the land” when making

management decisions. Chemicals, iron, and oil can muffle what the land’s saying, but only temporarily. And the results of such a disconnect can be disastrous: both in terms of keeping the operation financially and ecologically sustainable, as well as when it comes to maintaining a farming future generations want to be involved in.

During an Iowa Organic Association field day in late August, brothers Parker and Sam Beard made it clear that they are quite aware of the historical context of their family’s farm, which is tucked away amongst the picturesque hills near Decorah, in northeastern Iowa. At the beginning of the field day, the brothers took field day participants to a ridge overlooking the farm’s milking parlor. While people watched, Sam and his wife, Jen, moved the dairy herd to a new grazing paddock — the land was covered in a dense stand of grasses and forbs, which were doing well despite a recent spate of droughty weather. But there is some erosive history here. It turns out long before the brother’s parents, Dan and Bonnie Beard, bought this farm, it had been plowed and row-cropped.

“At one point it had to be farmed in 17 different pieces because of the gullies,” said Parker.

That history was one reason the elder Beards adopted pasture-based dairy production soon after moving onto the land in the 1980s. In 2003, they transitioned to certified organic. In 2017, the Beards entered the grass-milk market, which means they receive another price boost on top of their organic premium for feeding their cows a 100% forage-based diet.

These days, Canoe Creek Dairy is being managed by a new generation of graziers — Parker, 30, and Sam, 32, have transitioned into the operation. Parker, along with his wife Esther, focus on the dairy end of the operation, while Sam and Jen produce beef.

Spend any time with the Beards and it’s clear that the family has not only made farming a viable option for the next generation — all four of the Beard children are involved in farming — from an economic and agronomic point of view, but from a quality of life standpoint as well.

“It’s always something we did as a family,” said Sam of producing livestock on grass. “There’s the joy of doing it together and getting to share the responsibilities and victories and difficulties.”

During the tour of Canoe Creek’s hilly pastures, it was evident that the brothers are more committed than ever to their family’s legacy of perennial plant-based livestock production. But that doesn’t mean they

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aren't willing to add their own twists to the system. For example, instead of weaning calves soon after they are born, the Beards now utilize a smaller herd of nurse cows, also called nanny cows, to feed the young stock. This not only saves the labor of hauling milk buckets to calves while keeping them healthy, it also provides a way to make use of parts of the farm that would be difficult to graze the main milking herd on.

And now that the brothers are having children of their own, new generational depth is being sunk into the soil: these days, their young daughters play at "making fence" using beat-up wire spools.

"They say, 'We're going fencing, papa,'" said Parker with a smile. "I think grazing is in our blood, and this farm's blood too." ♦

### 3) Seeking Signs of Life

Jerry and Nancy Ackermann's context is this: for around four decades, they have been raising corn and soybeans in southwestern Minnesota's Jackson County, a region dominated by the kind of flat, fertile fields that regularly churn out impressive yields of row crops utilizing conventional production methods. So the Ackermanns would be forgiven for pretty much raising crops the way folks always have in their neighborhood. Such production methods rely on tillage, exposed soil, and killing off weed and insect pests with chemicals.

But the Ackermanns also bring the context of being long-term stewards to the table. "I was always taught you try to leave the ground in better shape than when you took it over," said Jerry during a late-August field day the couple hosted.

So they've long implemented no-till practices to protect the soil from eroding. And it became clear a few years ago that just armoring the soil wasn't enough, that biology also needed to be built up utilizing the living roots cover crops can provide. As a result of these soil health practices, they're seeing better water infiltration and increased organic matter levels. The farmers have also been able to maintain high yields, despite the fact that they've reduced nitrogen fertilizer applications over the years.

During the field day, which was sponsored by the Soil Health Coalition, Practical Farmers of Iowa, and Pheasants Forever, Jerry emphasized how less tillage and more resilient, self-reliant soil has allowed them

to cut their spending on fertilizer, fuel, tile drainage, and tillage equipment.

"I look at cover crops as an investment and not an expense," Jerry said. "I'm using the money I'm saving on fuel and labor to pay for the cover cropping, and I feel I'm still 40 or 50 bucks ahead."

Particularly striking is how, since they've adopted no-till and cover cropping, the Ackermanns have experienced fewer problems with pest insects. Jerry comes across as a no-nonsense row crop farmer, one who crunches the numbers and notices cause and effect. But he made it clear that when it comes to the complex, often mysterious, interactions that result from building biological life on his farm, he's willing to step back and just enjoy the results. In fact, his agronomist is a bit mystified at how little spraying for insect pests needs to be done on the Ackermann farm.

"Whether it's beneficial insects that's controlling the bad bugs or whether it's your soil practices, I don't know," Jerry recalled the agronomist once telling him. "But something is working."

Sometimes the answer is as simple as this: life generates more life. During the field day, Stephanie McLain, a soil health specialist for the Minnesota office of the NRCS, showed the results of some insect trapping she had done on the Ackermann land that week. What was particularly exciting for her was that beneficial insects that feed on the "bad bugs" were found not just in a patch of wetland habitat the farmers have restored, but in the cropped fields as well — the ecological boundaries between the domesticated and wild parts of the farm were porous.

"In agriculture, we often focus on killing things," said McLain later. "These farmers who get into soil health realize it's not about death, it's about life, and it's about building this ecosystem." ♦

### 4) Forest for the Trees

Grazing livestock have been described as "combines that poop." That's



Sam and Jen Beard moving cows on their northeastern Iowa farm. "It's always something we did as a family," says Sam of grass-based livestock production. (LSP Photo)

an accurate, if somewhat graphic, depiction of how moving cattle and other animals through well-managed paddocks can rebuild soil that's been decimated by tillage, chemical use, and compaction.

Langdon Collom farms in a part of west-central Minnesota that sorely is in need of such rejuvenation. On parts of the land he farms, the soil starts to thin out to the point where it's not unheard of to hit gravel when digging down just a bit past the surface. On a hot evening in mid-September, under a sky made smoky by distant Canadian wild fires, the farmer explained how he's used beef cattle to bring the soil back to life. His family was hosting a field day sponsored by "Match Made In Heaven: Livestock Plus Crops," an initiative that's helping show ways crops and livestock can be integrated in a profitable and sustainable manner. Match Made In Heaven is a six-state collaboration involving 50-plus groups, including LSP.

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Jerry Ackermann's agronomist is a bit mystified at how little spraying is needed on his farm. "Something is working," the agronomist told the farmer. (LSP Photo)

And Collom wasted little time showing that when done under the auspices of managed rotational grazing, the marriage of animals and land can be a happy one. He walked field day participants out to a spot that had grown corn and soybeans for years. Six years ago, he seeded it down to perennial forages and started rotationally grazing it. That worked well, but three years ago, thanks to advice he received from Sustainable Farming Association grazing specialists Kent Solberg and Jonathan Kilpatrick, he “upped his game,” as he put it, by increasing the number of paddocks, varying their sizes, and manipulating stocking densities.

On this September evening, the results were evident: there was a verdant mix of perennials that had been grazed 40 days before and were ready for another pass by Collom’s Black Angus cow-calf beef herd. This was a field that had weathered three years of drought and then, in a reversal of fortune, early 2024 rains so pervasive that at one point part of his herd was stranded on the opposite side of a swollen waterway.

“The pasture just rejuvenates itself,” Collom said in half amazement as Kilpatrick dug up a fragrant spadeful of soil.

It’s one thing to bring a field growing annual row crops back to life using walking biology, but quite another to take on a parcel of land that resembles a dendrological obstacle course. At one point, Collom led the group across the road to a 40-acre field that represented a failed experiment in perennialization. Three decades ago, a company came in and bought up thousands of acres of land in the neighborhood and planted fast-growing hybrid poplars for the pulp paper market. The business went bust, and Collom bought this particular field with the trees still growing on it.

The poplars had sucked massive amounts of fertility out of the ground and when they were cut, stumps and logs made it difficult to even navigate a four-wheeler through the field. The farmer bought a type of heavy disc used by road construction crews and “beat-up” on the woody leftovers. He then planted a 15-way mix of cover crops and began grazing it. Besides getting low-cost forage off the field, Collom is finding that the biological activity he’s triggered is helping break down the plantation’s remnants.

On this particular evening, a few bare spots were evident, but the former poplar grove was beginning to resemble a thriving stand of forages. “After only three years,



**Langdon Collom (right) and Jonathan Kilpatrick examine a field that has been converted from row crops to perennial forages. “The only thing we’re taking off the soil is a pound of beef, versus a bunch of hay or corn, and all the organic matter with it,” said Collom. (LSP Photo)**

it’s become a field I could conceivably raise corn on,” said Collom.

But he isn’t breaking out the corn planter anytime soon. His experience with adaptive grazing on other parts of the farm has, by the farmer’s estimation, virtually doubled his carrying capacity. That’s resulted in a healthier biological cycle and more money in the bank.

“Actually, when we do taxes now it’s not quite as easy to show losses as it used to be, so we’re coming on to a new problem there,” Collom chuckled. “But we’ll be able to handle that one.” ♦

## 5) The Quickening

When your context is farming in the city, everything is a little faster, denser, and louder.

“We grow everything very intensively,” said Elyssa Eull on a warm evening in early September while she stood near the entrance to California Street Farm, an urban vegetable operation that grows food on a third-of-an-acre. As she said this, a BNSF train engine rolled by a few yards away.

Aspiring and newbie farmers had gathered here on this particular day to see how this Northeast Minneapolis operation was able to make a go of it on land tucked between a set of railroad tracks and an open lot, just across the street from a collection of artist spaces called the California Building. The event was being put on by the Twin Cities Metro Growers Network, which is an initiative of the Sustainable Farming Association.

During the field day, staffers with the University of Minnesota’s Extension Service, as well as the local office of the NRCS and the USDA’s Farm Service Agency, were on-hand to share information on resources available to farmers raising food in urban areas. As she provided a tour of the well-tended vegetable plots and two hoop houses she uses to raise over 50 varieties of vegetables, Eull fielded questions about soil health, fertility issues, government cost-share funding that’s available, and the economics of producing food in the city. It was clear the field day participants were here to learn how to make a go of it in agriculture, even if the setting was concrete and curbs, rather than fields and fencelines.

During the 2024 growing season, the farm had 37 Community Supported Agri-

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**“Because it’s such a small area, the challenges I’m experiencing with soil health are quickened,” said Elyssa Eull, shown leading a field day on her vegetable operation in Northeast Minneapolis. (LSP Photo)**

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culture (CSA) shares and marketed produce through a farmstand set up next to the plots, as well as via the Northeast Minneapolis Farmers' Market. Eull, who's 30, makes enough during the growing season to pay two part-time employees and to support herself. But she didn't sugarcoat it: urban agriculture comes with plenty of potholes, particularly when it comes to soil health.

"Because it's such a small area, the challenges I'm experiencing with soil health are quickened," she said. "It's like in one year I have three years of accumulation of disease, or stress, or using up those nutrients."

The farmer has responded by focusing on



**"It's for the benefit of not just farmers, but the community," said Wisconsin farmer Rodrigo Cala of a program that gets locally produced food into area food shelves. (LSP Photo)**

utilizing cover crops and low-till methods to build the soil's resiliency. Eull also removes the plastic from the hoop houses periodically so that natural precipitation can dilute salts that tend to accumulate in the soil.

Eull, who is a graduate of LSP's Farm Beginnings course (see page 26), feels she has the confidence to tackle such problems because raising food in the city on a commercial basis is starting to be taken more seriously. She's benefited greatly from U of M Extension research and NRCS conservation cost-share programs that have in the past been mostly directed at bigger row crop farmers in rural areas. For example, one of her hoop houses was funded by the Environmental Quality Incentives Program (EQIP), an initiative of the NRCS.

"I think there's a real awareness of urban farming being real farming," said Eull as she

headed over to California Street's farmstand on a nearby street corner, brimming with late-summer bounty. ♦

## 6) Food Bank Booster

Here's some troubling context in the land of plenty: in 2023, 18 million U.S. households were food insecure at some time during the year, according to the USDA. That figure is up from 17 million in 2022. Food insecurity is defined as a situation where people can't access the sustenance they need to live their fullest lives. In short, these are people who simply aren't getting enough to eat. It's a problem that's more common in rural communities; such areas comprise less than two-thirds of all U.S. counties, but nine out of 10 counties with the highest food insecurity rates are rural, says Feeding America.

Meanwhile, there are plenty of farmers who are willing and able to produce food for local eaters in their communities, but who are stymied by a marketing and distribution system that's structured around commodities like corn and soybeans. This troubling gap between farmers and eaters was the focus of attention during an August field day on Rodrigo Cala's farm in western Wisconsin's Barron County.

"In rural communities it's difficult to get really healthy food," said Cala. "We need to find a way to help low-income families get access to organic food, natural food."

That's why Cala, who raises produce, chickens, hogs, and sheep, is participating in a program that's trying to reduce some of that food insecurity in rural areas while supporting farmers who churn out produce, meats, and value-added products. The Wisconsin Local Food Purchase Assistance Program pays farmers a fair price for their production, and then distributes that food to local food pantries and food banks. Called LFPA for short, versions of the initiative exist in other parts of the country, and are often structured around a partnership between state departments of agriculture and farm and food nonprofits. The USDA administers the program, which is funded by the federal American Rescue Plan.

In Wisconsin, the program has been up and running for two years and is led by the Department of Agriculture, Trade, and Consumer Protection, in collaboration with Marbleseed, the Wisconsin Food Hub Coop-

erative, and the Wisconsin Farmers Union. In 2024 alone, 125 farmers from throughout the state sold \$1.8 million worth of food through the program.

Cala sells produce and pork through the LFPA, and said it now accounts for about 20% of his farm's income. Since the program picks up the food at the farm, it helps alleviate two major headaches for farmers: marketing and transportation.

One of the farmers attending the field day was Mike Lenz, who, along with his wife, Jody, operates Threshing Table Farm in Star Prairie, Wis. Like Cala, the Lenzes have been selling produce through the LFPA program the past two years.

Lenz said being involved with the program has allowed them to employ at least four more seasonal employees, which means more money is circulated in the community.

"The money stays local to our area and the produce stays local to our area," he said. "It gives me a lot of hope, actually." ♦

## 7) First Things First

So, here's a chicken or egg situation to ponder: when launching a farming operation, when should you approach the local NRCS office about applying for funding to set up infrastructure such as a high tunnel or a rotational grazing system? It might be tempting to apply for an EQIP grant right from the get-go, so when you buy that first herd of cattle, they're ready to be plopped into the paddocks, where they'll immediately start turning grass into protein.

Not so fast, say Klaus Zimmermann-Mayo and Emily Hanson. They operate Whetstone Farm, a vegetable and grass-based livestock enterprise in western Wisconsin's Polk County. Their advice is to first figure out what kind of farming you like to do and what kind of system fits best with the land, resources, and labor available. In other words, determine what kind of context you'd like to set that infrastructure up in.

"We tried to do a lot of things when we first started and had a lot of ideas about what we wanted to do and what farming would look like," Zimmermann-Mayo said recently while standing next to Whetstone's old-fashioned barn. "Some things we got more passionate about and got better at and are still doing, and a lot of things we dropped."

For example, through trial-and-error the couple figured out that raising pigs and chickens didn't quite work out for Whetstone; a cow-calf beef herd and a flock of ewes were a better fit. Today, besides livestock, they raise vegetables and market the food via CSA, a farmers' market, and direct-to-eater sales. They launched the farm

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on 40 acres a decade ago, and recently added another 135 acres. Over the years, the operation has brought together multiple partners and enterprises. It is now run as a collaborative farm consisting of eight adults in total.

Whetstone has benefited from multiple NRCS programs — they used EQIP funds to put in a high tunnel and a rotational grazing system, and receive payments for grazing their livestock in a way that builds carbon, prevents erosion, and keeps water clean.

Hanson and Zimmermann-Mayo shared their experiences with utilizing government conservation programs during an August field day sponsored by GO FARM CONNECT, a farmer-led initiative to build relationships between non-traditional farmers and agricultural support agencies such as the NRCS and Farm Service Agency. Other sponsors of the field day included Renewing the Countryside and the USDA.

The couple led field day participants on a tour of their rotational grazing system as well as their vegetable plots and the high tunnel. The farmers made it clear that this infrastructure didn't get established right away. Whetstone, for example, didn't get cost-share funding to put in a high tunnel until Hanson and Zimmermann-Mayo had been on this land for four years.

Brandon Wiarda agrees with this trial-and-error, wait-and-see, approach. He's a NRCS resource conservationist for Wisconsin's Pierce, Saint Croix, Polk, Burnett, and Washburn counties. During the field day, he reminded participants that the NRCS's priority is to fund on-farm projects that help address conservation issues, such as water quality and soil health. That's why it's important for applicants to look around their farm and figure out what kind of NRCS-funded infrastructure can help them be more viable economically, agronomically, and environmentally. In a sense, applying for NRCS funds successfully is a bit of a dance that involves matching the agency's goals with what the farmers want to accomplish. He acknowledged that a lot of beginning farmers get frustrated that the NRCS can't help fund projects as soon as an operation is getting launched.

"We're not just helping farmers build up infrastructure from scratch," said Wiarda. "We need to be solving some existing environmental problem as justification to use taxpayer dollars."

In the case of Whetstone, the high tunnel has provided a way to raise vulnerable vegetables in a new climate reality.

"We simply couldn't raise certain crops without the high tunnel," said Hanson while giving a tour of the structure, which was

fragrant with a crop of August tomatoes.

Once a farmer has bootstrapped it a few years and feels ready to commit to a certain kind of production infrastructure, approaching an agency like the NRCS can be worth the paperwork — yes, there's plenty of paperwork — involved with applying for funding. As Wiarda pointed out, the federal Inflation Reduction Act almost doubled his agency's budget, and more money is now being earmarked for small and beginning farmers, as well as producers who were historically underserved.

"This is how we want to farm and these programs have made it more doable," said Zimmermann-Mayo. "The myth of the individual going out and doing it on your own is BS." ♦

## 8) The Big Picture

When someone calls Matthew Fitzgerald for advice about getting into organic crop production, the central Minnesota farmer's first response is a question of his own: "Do you own a fishing boat?" If they say yes, Fitzgerald then recommends they sell it, because, as he puts it, "You're going to have to work all summer" to raise organic crops.

On an overcast day in late August, the 33-year-old farmer provided a visual representation to back up his argument that organic crop producers would be better off investing in ice fishing gear.

"This is what being an organic farm looks like," Fitzgerald quipped as he spun around a large dry-erase whiteboard set up in his farm's cavernous machine shed. This "big



As a result of climate change, "We simply couldn't raise certain crops without the high tunnel," said Emily Hanson, shown here with Klaus Zimmermann-Mayo. (LSP Photo)

reveal," as he called it, was meant to show a group of farmers — along with lenders and folks involved with the marketing-end of organic farming — gathered for a field day that although organic agriculture comes with benefits such as a lower impact on the environment and premium prices, it also involves some very, very busy days during the growing season, days made even more hectic by the fact that climate change narrows the window of opportunity available for getting critical field work done.

The field day, which was sponsored by the Organic Agronomy Training Service, Grain Millers, the U of M's Forever Green Initiative, and the Minnesota Office for Soil Health, was focused on providing a comprehensive view of the opportunities and challenges associated with organic crop production. Fitzgerald's planning board, which he calls "Farm Flow," was a good place to start.

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"This is what being an organic farm looks like," said Matthew Fitzgerald, referring to the "Farm Flow" planner his operation uses during the growing season. (LSP Photo)

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The chart uses different colored dots to track daily weed management across the 2,700 acres the McLeod County farm grows certified organic corn, soybeans, wheat, peas, and edible beans on. Each color represents a different weed control method — tine weeding, rotary hoeing, flame weeding, and utilizing an electric zapper. Why the fixation on weed control? Fitzgerald said that they've found that the biggest factor impacting organic yields is how well weed pests are controlled. And whereas a conventional farm might have at its disposal a few "big hammers" in the form of chemicals to control problems, an organic farm has to rely on several smaller practices and tools. Timing is everything: getting rained out on a day when you needed to get in and rotary hoe can have major negative repercussions down the line. And such weather disruptions are more common than ever these days.

"We're really on the front lines of climate change as organic farmers," said Fitzgerald. "We don't have cover-up tools available to deal with those swings in the weather."

Fitzgerald's father, Joe, has been raising organic crops since 1994, and he says the Farm Flow board provides a handy way to, at a glance, track gaps in the weed control

schedule and figure out what needs to be done to fill in those blank spots. The Fitzgeralds are so happy with the Farm Flow system that they are in the process of digitizing it and making it available to other farmers.

After a farmer panel on marketing, a mini-tour of the Fitzgeralds' weed control equipment, and a field-side discussion about the balancing act organic crop farmers must strike between controlling weeds with tillage and maintaining soil health, it became



**Field day participants examine a cover crop planting demonstration at Meadowbrook Dairy. "It seems like we are working less and getting more done as a family," said Alex Udermann. (LSP Photo)**

clear why something like a giant planner is needed to help navigate the growing season. It can also help a farmer justify that feeling of being a bit overwhelmed at times.

"Stepping back after going through a weeding season, it's like, 'Wow, *that's* why I'm so tired,'" Matthew said. ♦

## 9) The Snowball Effect

There's nothing like getting diminishing returns on your investment in time, labor, and resources to put things in context.

"I just got sick and tired of spending money on fertilizer, planting in the dry powder, and watching the soil blow away," said Alex Udermann while sitting next to a stack of hay bales on his family's farm in central Minnesota's Stearns County.

"And we were working until 11 or 12 every night trying to get everything done."

In 2016, Meadowbrook Dairy, after decades of conventional tillage, began cutting soil disturbance and utilizing cover crop mixes to reduce erosion and build organic matter. The farm consists of an 80-cow dairy and 300 beef steers. It also raises corn, soybeans, alfalfa, and small grains on 1,000 acres. Today, the operation is 100% no-till on its corn and soybean acres, multi-species mixes of cover crops are a regular part of the rotation, and the farm is focused on getting manure applied across fields at rates that are agronomically correct.

When Meadowbrook hosted a Practical Farmers of Iowa field day in August, it was clear these changes were paying off. A slaking demonstration and some impromptu sampling showed that the somewhat sandy soil had good aggregate structure, with signs

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## Give it a Listen

Tune in to LSP's *Ear to the Ground* podcast to hear the voices of the farmers and others featured in this "Farmer-to-Farmer" feature. The episodes are available at [landstewardshipproject.org/series/ear-to-the-ground](http://landstewardshipproject.org/series/ear-to-the-ground), or on various podcast platforms.

- ✓ Episode 342: **Ignoring the Red Dress** (Rachelle Meyer)
- ✓ Episode 343: **Healthy Soil Vs. Plastic Worms** (Clifford Johnson)
- ✓ Episode 344: **Flerd is the Word** (George Heller)
- ✓ Episode 346: **Pasture Pixie Dust** (Jeff Duchene)

- ✓ Episode 348: **Urban Agrarian** (Elyssa Eull)
- ✓ Episode 349: **Family, Farming & Forages** (Parker & Sam Beard)
- ✓ Episode 350: **Cranking Up Capacity** (Langdon Collom & Jonathan Kilpatrick)
- ✓ Episode 351: **Less Tillage, More Money** (Jerry Ackermann)
- ✓ Episode 352: **Land of the Living** (Stephanie McLain)
- ✓ Episode 353: **7 Years Later** (Jon Stevens)
- ✓ Episode 354: **Great Expectations** (Jay Fuhrer)

- ✓ Episode 355: **Silver Buckshot** (Matthew & Joe Fitzgerald)
- ✓ Episode 356: **First Things First** (Klaus Zimmermann-Mayo & Brandon Wiarda)
- ✓ Episode 357: **Against the Grain** (Allen Deutz)
- ✓ Episode 358: **Low Input-High Returns** (Alex Udermann)
- ✓ Episode 359: **Trash to Treasure** (Julie Reberg)
- ✓ Episode 360: **Food Bank Booster** (Rodrigo Cala & Mike Lenz)

of activity on the part of earthworms and other beneficial critters.

Udermann is the fifth generation on this farm, which also consists of his wife, Krissy, his brother, Jake, and the brothers' parents, John and Mary Lou. As Alex explained during the field day, this transition to regenerative practices has helped the farm dramatically reduce its reliance on chemical inputs. Udermann estimates they've saved roughly \$100 per acre on the cost of putting in a crop, and that accounts for the roughly \$55 an acre they spend on cover cropping. A lot of that savings results from fewer tire trips across the fields.

"We now have just the three steps — cover cropping, applying manure, and planting — instead of the eight or 10 we had before," said the farmer. "It seems like we are working less and getting more done as a family. It's fun farming again."

Getting so many payoffs from building soil health doesn't come without some investments. But in a process that Udermann describes as a "low input transition," the farmers avoided large outlays of money in the beginning. Rather than sinking big bucks into new equipment, for example, Meadowbrook Dairy invested more in taking a different approach to management and the way they viewed their soil. They did this, for instance, by using their existing field equipment to no-till soybeans. And once those no-tilled beans began to show signs of paying off financially, then the family began putting money into tools such as a no-till planter for corn. At that point, Udermann explains, such purchases are no longer seen as a one-way expense — expenditures graduated to the level of being long-term investments in fortifying a more resilient way of farming.

More investments are in the offing. The last stop on the field day tour was a demonstration of some experimentation Meadowbrook is doing with composting. Julie Reberg, a district conservationist for the NRCS, explained that by breaking down into a biologically rich soil amendment manure and other "waste" materials produced by the farm, the operation can further reduce its reliance on purchased inputs while building the land's long-term resilience. Udermann has been playing around with low-cost composting by making piles consisting of manure, wood chips, straw, and other materials, and flipping them with his skid steer loader. He'd also like to do more with the kind of

compost extracts that are produced via the static Johnson-Su Bioreactor system.

"There's always more," a visibly excited Udermann said after the field day. "Once you get bit by the soil bug, it just becomes a snowball rolling down the mountain." ♦



**Soil health expert Jay Fuhrer examined a field sample on the Jon and Carin Stevens farm seven years after first visiting the operation. "...the bar has been raised when it comes to soil health on this farm," he said. (LSP Photo)**

## 10) 7 Years Later

Be careful who you invite onto the farm, especially if it's a return visit. Jon and Carin Stevens learned that lesson in late August when a nationally known soil health expert walked their fields and grubbed up some samples during a field day sponsored by the Minnesota Soil Health Coalition, U of M Extension, and the state department of agriculture, among others.

The Stevenses' farming context is that they are raising corn and soybeans pretty much on the edge of where such row crops can be raised successfully in Minnesota. They have 750 crop and pasture acres in Pine County. To get a sense of how far north that is, there are times when they've had to use tillage to fix damage black bears wreak on their fields. And as Jon puts it, the low-lying landscape of the farm can be pretty unforgiving when it comes to compaction, turning into a layer of "concrete" so hard that water can barely penetrate.

Traditionally, operating in such a harsh environment has prompted Maple Grove Farm to rely on moldboard plowing and other forms of intense tillage to tame the soil. But during the past half-dozen-years, the farmers have made some significant changes to the operation, including utilizing more no-till practices and cover cropping. And Carin has added a cow-calf herd, which they rotationally graze. Overall, the Stevenses have developed a rotation that involves, for example, four years of grazing their beef

herd on forages, and then taking advantage of the fertility added by the manure and legumes to grow two years of cash crops like corn and soybeans on the former grazing paddocks.

The farmers have noticed dramatic changes to their fields as a result of this integration of row crops, livestock, and perennials. Water is infiltrating better, their beef herd is thriving, and their input costs have dropped.

"Those food grade soybeans over there had no purchased phosphorus and potassium applied to them this year," said Jon, pointing to a lush stand of the legume. "It's working."

Still, the couple was nervous about having Jay Fuhrer be the main speaker at their field day. While a staffer with the NRCS, he was instrumental in developing the Burleigh County Soil Health Team in North Dakota. That team, which consisted of farmers like Gabe Brown, as well as government natural resource experts and scientists, played a key role in sparking the current soil health revolution we're seeing in this country and beyond. Today,

Fuhrer travels widely as a soil health consultant and speaker. By coincidence, he had visited Maple Grove Farm seven years ago, just as the operation was beginning to make major changes to the way it managed soil. Back then, Fuhrer could barely get his shovel in the ground to take samples.

So, when he hiked the operation's fields in 2024, there was some trepidation as to what he'd find. This time, the shovel slid in easily, unearthing dark clumps of soil with good aggregate structure.

"What I'm really seeing here is that the bar has been raised when it comes to soil health on this farm," Fuhrer said. "I think they've done a really good job of connecting the cropping system and the grazing system. Maybe seven years from now we can look at it again." ♦

## 11) Against the Grain

In case Allen and Kathleen Deutz need a reminder of one of the main reasons corn dominates the landscape in their part of southwestern Minnesota, they need to look no further than the massive Archer-Daniels-Midland ethanol plant that rises to the sky just across one of their fields. Here's their context: that plant has been gobbling up corn in the region since the mid-1980s. As a result, fences have been taken down, pastures and hay ground plowed up, and livestock pretty much removed from the land.

"It changed the landscape," said Allen

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one evening recently, gesturing toward the biofuel plant across the Redwood River.

The Deutzes farm some 800 acres in Lyon County. They do raise corn, and yes, much of it goes to that ADM plant. But as farmers from throughout the region haul corn past the Deutz place — Allen jokes that “every farmer in four counties drives by my farm at some point” — they can’t help but notice a different look to this particular farm’s landscape: there are small grains such as wheat, well-kept fences, and forages — and animals out there grazing those forages.

Literally in biofuel’s massive shadow, the Deutzes are going against the grain. About half the acres that make up Redwood River Farms produce crops for the organic market. They have a cow-calf beef herd, as well as a flock of hair sheep. Goats and hogs are also part of the mix, and the couple direct-markets meat to area eaters. All those animals are raised on rotationally grazed perennials and summer annuals. They also graze a local Minnesota Department of Natural Resources wildlife area. The Deutzes dairy farmed until they sold the herd in 2016, and re-integrating animals onto the farm hasn’t been easy. For one thing, they had to set up miles of fencing, which they were able to do with the help of the NRCS’s EQIP program.

At first glance, not taking full advantage of a handy local market for a crop that grows well on this land may not seem to make sense. But the Deutzes have some good, commonsense reasons for not going whole hog into growing corn for biofuels. Allen has a master’s degree in economics and teaches ag business at Southwest Minnesota State University in Marshall, so he knows how to crunch the numbers and do financial projections. He sees livestock as a

way to diversify the farm’s income stream while providing a kind of insurance policy that fortifies the farm against crop failures — something that’s become particularly critical in recent years as climate change cooks up extreme weather events on a regular basis.

For example, during a September field day sponsored by the Sustainable Farming Association and the Department of Natural Resources, Allen explained how a drought in 2023 devastated a corn crop he had planted. However, after checking with his insurance agent, he was able to bring cattle onto the fenced field and graze it. That not only produced some economic value from the ruined crop while controlling weeds, but built soil fertility for the next growing season, when he planted organic wheat on the field. That wheat was his most profitable crop in 2024. The Deutzes knew that the drought-stricken field probably got some second looks from farmers driving to the ethanol plant, but over the long-term, it’s turned out to be a success.

“It didn’t look good, but I knew that failed corn field made sense economically,” Allen said while standing at the edge of the 40-acre plot. “I’m not stuck in a rut of always having to make money from having corn and soybeans in my rotation. The livestock and fencing system gives us options, and with the erratic weather systems we have now, it provides some resilience.”

At one point, the Deutzes took the field day participants to a 170-acre parcel north of the farmstead. Allen explained how this



**Allen Deutz examines a stand of forages he plans to graze. In the background is an ADM ethanol plant, which buys corn from a wide area around his southwestern Minnesota farm. The farmer sees not devoting his entire land base to growing corn for the plant as a way to stay economically and agronomically nimble. (LSP Photo)**

“summer pasture,” which was made up of wheat, oats, barley, field peas, common vetch, and buckwheat, would be grazed. In 2025, organic corn will be planted in the resulting nutrient-rich soil.

As the sun set, the lights of the ADM plant twinkled at the edge of the field. Biofuel was being distilled above the ground. Biology was being built beneath it. □

*Numerous groups sponsor on-farm field days in the region. For details, see LSP’s events calendar at [landstewardshipproject.org/upcoming-events](http://landstewardshipproject.org/upcoming-events), or sign-up for the LIVE-WIRE e-letter at [landstewardshipproject.org/live-wire-sign-up](http://landstewardshipproject.org/live-wire-sign-up).*