

The North Central Region-Sustainable Agriculture Research and Education (NCR-SARE) Farmers Forum is an annual event that gives NCR-SARE grant recipients the chance to share information about sustainable agriculture practices with a regional audience. The talks focus on research, demonstration, and education projects that promote sustainable farming and ranching. The projects emphasize the three pillars of sustainable agriculture: environmental stewardship, profitability, and social responsibility.

This highlight is a summary of reports and presentations from the NCR-SARE Farmers Forums held at the 2019 Women in Sustainable Agriculture Conference and the 2020 Northern Plains Sustainable Agriculture Society Food and Farming Conference. These events featured speakers who received awards from NCR-SARE's grant programs. To read the full reports from these projects, go to the national SARE website at <https://projects.sare.org/search-projects/> and use the project number (e.g., FNC10-809) to read more about the project. You can view videos of these presentations online at <https://www.youtube.com/user/NCRSAREvideo>

The next Farmers Forums is scheduled to be held virtually in conjunction with the 2021 Great Plains Fruit and Vegetable Conference.

NCR-SARE is a United States Department of Agriculture-National Institute of Food and Agriculture (USDA-NIFA) program that supports and promotes sustainable farming and ranching by offering competitive grants and educational opportunities. Visit the NCR-SARE website to see educational resources, grant opportunities, and more at www.northcentral.sare.org.

FNC17-1107 Jacquelyn Zita – North Branch, Minnesota –\$15,000

Supporting a Rural, Regional Food System with an Online Food Hub

OBJECTIVE: to develop a rural customer base and consumer motivation to buy organic or sustainably grown produce from small-scale, local farmers through an online food hub.

RESULTS: When a farmers market isn't the answer, what are the options for direct marketing farm products in a rural community? Jacquelyn Zita works with the Women's Environmental Institute (WEI), a nonprofit organization located in east central Minnesota and lives in the small town of North Branch. Back in 2016, WEI had a booth at an area farmer's market, selling a variety of products from local farmers, but they weren't meeting their goals with the booth. They wanted a different way to bring local, sustainably produced food to the surrounding communities, including North Branch. Zita and WEI wondered whether an online farmers market could work in their area. They applied for, and received a SARE grant to develop and implement the idea.

"The specific problem we wanted to address in our two-year grant period was how to put in place a foundation for building an online regional food system with local customers and small scale local farms committed to organic and/or sustainable growing practices," said Zita. "This required an effective increase in rural consumer motivation to buy organic or sustainably grown produce from local farmers through an online service."

WEI recruited farmers interested in online sales, built the website, identified a staff member to coordinate the effort, amplified their social media and promotion activities, and built a customer base, among other activities.

Today, the North Circle Online Farmers Market has more than 22 small local farmers and

PHOTO COURTESY OF THE NORTH CIRCLE FOOD HUB



With support from SARE, Jacquelyn Zita (left) and the North Circle Food Hub distribute produce to local consumers, health providers, food-related businesses, and other markets in Minnesota using an online ordering system.

producers and has 7 drop sites from June-October. Farmers identify and describe their offerings, WEI puts the information online, and customers place their orders from Saturday to Wednesday. On Wednesday, sales close and WEI notifies the farmers about what they have sold, collects the produce at the WEI packing barn, and arranges deliveries of customized boxes to their drop-sites. All told, they increased sales and more than doubled the revenue generated by and for farmers since 2016.

"One clear and gratifying mark of our success... was amassing the cooperation and dedication of all of these farms working together as North Circle farmers," said Zita. "This resulted in the creation of a new kind of local farming community."



Dig Deeper: Learn more about the North Circle online farmers market at <https://northcircleonline.org/>

Doug Landblom – Dickinson, North Dakota – \$199,998

Long-Term Integrated Crop and Livestock Systems

OBJECTIVE: to document the effect of grazing and crop rotation on seasonal soil-nitrogen fertility and on intermediate and long-term soil carbon pools.

RESULTS: Grazing and extending the grazing season can allow producers to reduce their use of harvested feed, which can have economic and environmental benefits. Doug Landblom, a beef cattle specialist with North Dakota State University, says producers who integrate grazing with a diverse crop rotation can see even more benefits. Since 2011, Landblom has been working with North Dakota producers on combining a multi-crop, diverse rotation of cool- and warm-season grasses and broadleaf annuals with yearling steer.

As you might expect, a long-term project involving integrated crop and livestock systems hasn't answered every question, but so far Landblom and the producers have been able to:

- reduce labor and inputs
- improve soil fertility and crop yield
- delay feedlot entry of yearlings
- reduce days on harvested feed
- reduce cow winter feed cost

Landblom reflected on one producer, in particular, who used an extended grazing system to produce exceptional beef quality and gross carcass return.

"A mixed crop and livestock producer in Stark County, North Dakota, retained ownership on 25% of his bottom end heifer and steer calves, and carried them through to finish and slaughter using principles from the SARE-supported Birth to Slaughter Retained Ownership Program," recalled Landblom. "After accounting for all expenses, the producer netted \$617.70 per animal."

Dig Deeper: Curious about mixed crops and stock? A video series about Landblom's research is available at <https://www.ag.ndsu.edu/dickinsonrec/integrated-crop-and-livestock-systems>



PHOTO BY ALAN FRANZ LUEBBERS

New Organic Oat Variety Results Out

OBJECTIVE: to evaluate and compare the performance of 20 oat varieties by performing variety trials at organic farms located in three states within the North Central region during two growing seasons.

RESULTS: From breakfast cereals to animal feed, the demand for organic oats is on the rise. With a 1.8x projected increase in revenue for the organic oats market from 2017 to 2027 (Future Market Insights, 2017), and a shorter growing window, oats might be a good fit for organic growers in the North Central region. A crop that can be spring-sown and harvested earlier in the season is appealing, but South Dakota State University oat breeder, Melanie Caffe-Treml, wants to remind growers that oat variety selection is important when thinking about revenue impact.

"Although oat variety recommendations are available for conventional management systems from several public variety testing programs, very limited information on variety performance under an organic production system is available," says Caffe-Treml. "Because chemicals are not used to control weed and pests in organic farming, the choice of variety constitutes an even more important farm management decision than for conventional farming systems."



PHOTO BY MARKUS SPISKE

With support from SARE, Melanie Caffe-Treml trialed 20 oat varieties under organic management, and the results are in.

Caffe-Treml is working to identify oat varieties for organic growers. She received SARE support to trial 20 oat varieties under organic management with several producers in South Dakota, Wisconsin, and Minnesota, and the results are in. Some of the highlights from the results are listed below.

Organic Oat Variety Trial Highlights

- Oat yields in the multi-state organic oat trials averaged 71 bu./acre in 2017 and 2018, ranging from 60 bu./acre at Lamberton, MN (2018) to 102 bu./acre at Evansville, WI (2017).
- Varieties that were statistically in the top yield group included Betagene, Deon, Saddle, and Goliath.
- For the milling industry, grain specifications generally include a minimum test weight. Caffe-Treml reported that the Antigo, Sumo, Saddle, and Deon varieties were likely to meet the test weight requirement.

Dig Deeper: Organic Oat Variety Trial Results

You can view detailed results of this organic oats variety trial, including maturity ratings, lodging scores, crown rust resistance, milling characteristics, and average test weights at <https://extension.sdstate.edu/sites/default/files/2019-05/P-00107.pdf>



Podcast Series Focuses on Building Soil Health with Cover Crops story by Andy Zieminski



Abbey Wick reported that more than 25,000 people had listened to NDSU's Soil Sense podcast series as of May 2020. You can listen to the podcast series at <https://anchor.fm/soilsense>.

OBJECTIVE: to collect and share regionally-specific data throughout eastern North Dakota on the effectiveness of various cover crop mixes following small grains and prior to soybean using replicated, field-scale plots.

RESULTS: Cover crop acreage increased 50% nationwide from 2012 to 2017, according to the Census of Agriculture. Though acreage in North Dakota has increased 89% in that time span, there are still only around 400,000 acres of cropland with cover crops. Low acreage is largely due to challenges associated with fitting cover crops into rotation where there is a relatively short growing season.

North Dakota State University (NDSU) Soil Health Specialist Abbey Wick received SARE support to partner with producers in eastern North Dakota, where use of cover crops is limited and soil conditions are challenging, to establish replicated plots of cover crops and monitor their performance over two years. The team planted a basic mix of cereal rye, radishes, and turnips, plus other mixes that built on that combination. The goal was to learn how various cover crops perform in North Dakota, thereby giving farmers a range of options to meet their on-farm goals.

A second SARE grant allowed her to evaluate some of the longer-term changes to soil health as the result of cover crops and to address emerging interests from her farmer partners. While varying weather conditions led to mixed results across field locations, treatments and

years, Wick's team is well on their way to accomplishing their primary goal: to create and share a body of knowledge about cover crops in North Dakota. Impacts include:

- Adopting new practices: According to project surveys, up to 26% of farmers and 41% of crop consultant survey respondents are trying or recommending a cover crop practice as a result of attending the Soil Health Café Talk program.
- New information: The team has begun to discover useful information about managing cover crops. For example, they found winter annual cover crops, like cereal rye, help manage early season weeds and maintain consistent soybean yields with proper management.
- Expansive outreach: Through dozens of workshops, tours, magazine articles, booklets, and videos, each project reached over 2,000 farmers and more than 300 professionals with cover crop information. The Soil Sense podcast developed as part of this project has received over 20,000 plays in the second season of episodes. Listen at <https://anchor.fm/soilsense>.

Dana Jokela – Cannon Falls, Minnesota – \$8,947

Using Cover Crops to Reduce Plasticulture

OBJECTIVE: to evaluate interseeding cover crops at various dates into an established pepper crop using both plasticulture and bare ground systems.

PHOTO COURTESY OF DANA JOKELA



Dana and Karin Jokela hope to reduce their use of plasticulture with cover crops.

RESULTS:

Many vegetable farms use plastic mulch or film made from polyethylene to control weeds and

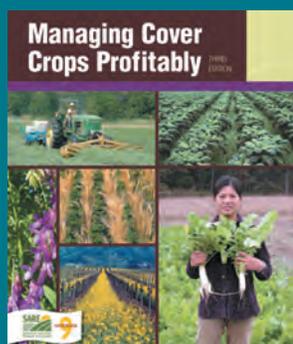
conserve water. Third-generation farmers Dana and Karin Jokela are hopeful that integrating cover crops on their farm can reduce their dependence on this non-renewable, non-biodegradable resource. They grow 12 acres of organic crops at Sogn Valley Farm in Cannon Falls, Minnesota, and one of their primary wholesale crops is peppers.

“Many growers, myself included, plant peppers on plastic mulch because of its soil warming, moisture retention, and weed suppression benefits,” said Dana Jokela. “While an effective tool for us, the waste generated through its disposal doesn't align with our sustainability goals.”

With support from SARE, the Jokelas are attempting to reduce or eliminate plastic by interseeding cover crops at various dates into an established pepper crop. Working with both plasticulture and bare ground systems, they hope the project will show how integrating cover crops can:

- reduce tillage and soil erosion
- add flowers for pollinators
- reduce weeding labor
- fixate nitrogen
- improve fruit quality due to reduced soil splash
- improve production

Dig Deeper: Learn more about experimenting with cover crops on your farm with Marianne Sarrantino's article, “Testing Cover Crops on Your Farm” at <https://www.sare.org/publications/managing-cover-crops-profitably/appendix-a/>



Dig Deeper: Managing Cover Crops Profitably

Ready to learn more about cover crops? SARE's book, *Managing Cover Crops Profitably* explores how and why cover crops work and provides all the information needed to build cover crops into any farming operation. Read it online or download it for free at <https://www.sare.org/resources/building-soils-for-better-crops-3rd-edition/>.

Michael Ostlie – Carrington, North Dakota – \$199,995

Grazing Livestock on Cover Crops in Double or Relay Cropping Systems, Post-Weaning

OBJECTIVE: to study cover crop and livestock integration in a comprehensive manner.



Michael Ostlie used a flex 71 planter and an offset 3 point bracket to plant a grazing mix of barley and rye into corn in July 2019.

RESULTS:

In the Northern Great Plains states, livestock typically eat harvested forages, co-products,

and grains in a drylot for two-to-six months, post weaning, until they enter the feedlot for finishing. What if, instead of using this backgrounding strategy, producers grazed their livestock on cover crops in double or relay cropping systems post-weaning?

Mike Ostlie says it could help farmers decrease feed costs and improve soil health. Ostlie, a Carrington Research Extension Center Agronomist with North Dakota State University, received SARE support to seed cover crops into an existing crop rotation for fall and winter grazing as an alternative to drylot backgrounding. While the benefits of incorporating cover crops into cropping systems are more well known, Ostlie says a lack of research studies on the benefits of cover crops in a cover crop/livestock integrated system are less known.

Working with local farmers, Ostlie hopes to show that with proper management, crop production and fall grazing can occur on the same field, during the same growing season, with positive results for both the crop and the livestock.

The project is still ongoing, but as a North Dakota native, Ostlie is hopeful that he can reduce feeding costs and increase soil health for producers in his home state.

Ostlie was grateful to Steve Zwinger, who presented his presentation at the NCR-SARE Farmers Forum due to an emergency.

Bale Grazing to Build Soil Health



PHOTOS COURTESY OF ERIN GAUGLER

Two farming siblings are working on bale grazing in North Dakota. In the image on the left, you can see a pile of net wrap in the foreground that the cattle grazed through and left to be picked up. The image on the right is the siblings' bale grazing strategy including temporary fencing (in yellow) and permanent fencing (in red).

OBJECTIVE: to demonstrate the impacts of bale grazing on soil health and the development of an ecologically sound, profitable, and socially responsible operation.

RESULTS: What would you do with a depleted piece of land that was farmed without inputs and was no longer productive? When siblings Erin and Drew Gaugler faced a similar circumstance in North Dakota, they wondered, “Could bale grazing help?”

The Gauglers raise cattle and Erin is also a range research specialist at Central Grasslands Research Extension Center. To bale graze, producers typically leave baled hay in the field after cutting it so that cattle can graze on the bales throughout the winter. Producers monitor the cattle and hay supply, and the cattle’s access to bales is controlled using permanent and portable fencing.

“Research from multiple universities has shown that bale grazing can increase nutrient capture, cycling, carbon sequestration, and more,” said Erin, “but there is a lack of real-world application that combines all areas of focus and is readily available for producers to see the benefits and challenges of this winter-feeding strategy.”

With support from a SARE grant, the Gauglers are exploring and documenting the impact of bale grazing on their farm. Their results have encouraged them to expand their areas of impact and renovate more hayland acres by bale grazing. They are sharing their results with area farmers through self-guided tours, field days, extension publications, and testimonials to help demystify bale grazing.

Mailbox Tours

With outreach activities like their “mailbox tour,” where people can stop by on their own, grab a flyer, and take a look at the field, the Gauglers hope to help other producers in their area feel more comfortable with the idea of bale grazing.

“Folks in the local area have asked us several questions about what we are doing with the bales and they wonder how it works,” said Erin. “Drew and I have noticed that a handful of those same people have begun to implement bale grazing on their own operation.”



Dig Deeper: Bale Grazing

If you’re motivated to improve the health of your pasture, or are curious about bale grazing, check out ATTRA’s 20-page resource, “Nutrient Cycling in Pastures” at <https://attra.ncat.org/product/Nutrient-Cycling-in-Pastures/>

Direct Marketing Non-Traditional, Perennial Berries



PHOTOS COURTESY OF MIDWEST ORGANIC & SUSTAINABLE EDUCATION SERVICE

Erin Schneider (left), Claire Hintz (center), and Rachel Henderson (right) received SARE support to expand crop information about non-traditional berries.

OBJECTIVE: to engage, educate, and involve existing and future customers to help determine uses, products, and pricing of less common small fruits to determine best markets and messages for small to mid-sized growers.

RESULTS: Berries are considered high-value specialty crops; that means berries can earn higher returns per unit of land than could be achieved in more traditional agricultural products (Sobekova, 2013). Claire Hintz, Rachel Henderson, and Erin Schneider own and operate farms in Wisconsin, where they each grow berries; each is particularly interested in non-traditional berries.

“People expressed a desire for more fruit in our CSA boxes and at our local farmers’ markets,” explained Hintz, “Yet they don’t fully understand what berries such as Saskatoon are, let alone how they are priced.”

The three Wisconsin Farmers received SARE support to learn more about non-traditional berries. They focused their project on elderberries, currants (red, white, black), honeyberries, and Saskatoons. To get a better handle on producing these varieties, the team worked to figure out investment costs, return on investment, and labor requirements. Using surveys and other customer feedback, they learned that once consumers were familiar with the fruits, they were willing to pay a

fair price—\$5 per pint, generally. When the specialty berries were coupled with education and tasting experiences, customers were willing to pay an average of \$7 per pint.

Ultimately, each producer found a way to sell products best suited to their markets and their farms. Hintz found opportunities to sell fresh berries at her farmers market located on the south shore of Lake Superior, Schneider dove into selling processed fruit, jams, and juice near Madison, and Henderson took her syrups and juices to the Twin Cities in Minnesota, where the market for her currants is strong.

“We were able to determine a better system for pricing and producing fruit,” said Hintz. “Also, these fruits complement our existing production and help us manage increasing risk associated with extreme weather conditions.”

She added that growers considering non-traditional fruits might want to build a base market for fruits first.

“It may make more sense to start with more readily accepted fruit (strawberries, raspberries, blueberries, apples, etc.) and then expand to these varieties,” said Hintz.

Jacob Jungers – Saint Paul, Minnesota – \$199,946

Intercropping Kernza® with Legumes

OBJECTIVE: to determine how intercropping legumes with Kernza® can reduce or eliminate nitrogen fertilizer requirements, improve soil health, and increase economic viability.

RESULTS: You might have heard of Kernza®, a sweet and nutty perennial variety of intermediate wheatgrass being developed by the plant breeders and ecologists at The Land Institute in Salina, Kansas. Kernza® can be cooked like rice or ground into flour. It has attracted the attention of growers, chefs, and brewers who are interested in supporting a new, sustainable crop. With additional support from a SARE grant, Jacob Jungers, a researcher at the University of Minnesota, and several area producers are working on a new facet of Kernza® production—intercropping it with legumes.

“Preliminary data show that Kernza® can be grown in mixture with legumes, but the agronomic practices needed to manage crop interactions to optimize profitability and ecological services are not well established and require regional assessment,” said Jungers.

Six farmers from Minnesota, Wisconsin, and Kansas have teamed up with Jungers to intercrop four legumes including alfalfa, red clover, birdsfoot trefoil, and sainfoin (a perennial, cool-season legume used for forage) with Kernza®. Growing partners sign trademark licensing agreements that support ongoing research to collect data about Kernza®. This research team hopes that legume intercropping might help to reduce or eliminate the already low synthetic nitrogen fertilizer requirements of Kernza®, which would improve its ecological footprint. They will collect yield and input offset data and share it through their Kernza® growers’ network.

Dig Deeper: Learn more about the Kernza Growers’ Network at <https://kernza.org/the-kernza-network/>



KERNZA FIELD PHOTO COURTESY OF UMN



Dig Deeper: Three Wisconsin producers contributed their berry production and marketing data to the Savanna Institute’s series of crop info sheets for beginning perennial crop farmers. Find them online at: <http://www.savannainstitute.org/resources.html>

Lisa Kivirist – Browntown, Wisconsin
– \$22,333

Diversifying Income with Farm-to-Table Bakery Products

OBJECTIVE: to create resources for farmers to improve product, packaging, display, and overall marketing outreach to increase sales of value-added, non-hazardous baked good products.



This farmer-led team in Wisconsin created resources to help farmers diversify by selling baked goods.

RESULTS: In 2017, 130,056 farms sold food directly to consumers, accounting for more than \$2.8 billion in sales (U.S. Census of Agriculture, 2017). New cottage food laws are creating new opportunities for farmers to launch and run bakery businesses out of their home kitchens.

“These state-specific cottage food laws allow you to use your home kitchen to produce specific non-hazardous food products such as baked goods, eliminating the costly and complicated route of needing a commercial kitchen and various licensing,” said Lisa Kivirist, farmer, author, and home baker in Browntown, Wisconsin.

Kivirist and two other women worked to change regulations in Wisconsin to allow home bakers to sell goods. With support from SARE, Kivirist’s farmer-led team was able to keep the ball rolling by developing cottage food bakery resources for farmers.

The team refined and tested recipes to make sure they met the “non-hazardous” criteria which helps ensure product safety. They incorporated farm products in their recipes, and made sure to add frostings and fillings. They also put together guidance on how to create eye-catching packaging and displays for farmers’ market booths.

Dig Deeper: Thinking about diversifying your farm income with baked goods? Take a look at the project team’s non-hazardous recipes and learn more about the Wisconsin Cottage Food Law at <http://cottagefoodhomebakery.com/>

Come & Get It: Serving Food on Your Farm

OBJECTIVE: to create a toolkit for sustainable farmers diversifying into value-added opportunities through on-farm food events, supporting further economic viability.

RESULTS: From 2012 to 2017, the amount of money brought in through agritourism enterprises on U.S. farms rose by 26%, to almost \$950 million. (U.S. Census of Agriculture, 2017). What does that mean for producers? From pizza nights to farm weddings, there are opportunities to diversify into on-farm food service.

With the increased interest in on-farm food ventures, Minnesota nonprofit Renewing the Countryside teamed up with several farmers to create a resource for on-farm food service. With support from SARE, they developed *Come & Get It: What you Need to Know to Serve Food on your Farm*. The publication helps producers understand regulations and learn from other farmers seasoned in on-farm food service operations.

“A big part of this project involves exploring and researching the concept of on-farm food service BEFORE investing or, worse yet, going into debt,” explained Brett Olson, Renewing the Countryside’s creative director. “The materials and resources created through *Come & Get It* give a realistic overview of what is involved in such an endeavor and, importantly, do not sugar-coat or romanticize the process. While there is a lot of hype and interest in such farm-to-table, on-farm dining experiences, *Come & Get It* underscores the reality and often unpredictability of such ventures.”

Come & Get It helps Wisconsin and



PHOTO BY JOHN D. IVANKO

A SARE-supported publication from *Renewing the Countryside* supports farmers interested in hosting pizza nights on the farm.

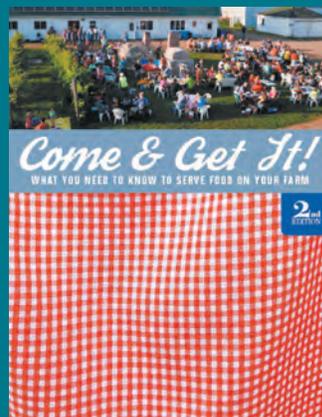
Minnesota farmers determine if on-farm food service will work on their farm, and case studies of successful farm businesses in the two states offer “behind the scenes” tips and first-hand experiences.

Making On-Farm Food Service Work

A word of advice from *Come & Get It*—customers seeking on-farm dining experiences are not looking for a quick, easy, cheap meal. You are looking for people who are:

- looking for unique and off-the-beaten-path experiences, and are willing to drive for it
- “foodies” — those seeking authentic flavors and artisan foods
- supporters of sustainable and organic agriculture
- understanding of the price/value of farm-fresh fare, and willing to pay for it

“I will definitely be able to use the publications created through this project in my work with farmers as I get questions all the time about how to start a pizza farm and serve meals on the farm, but up until now didn’t have anything to offer folks,” said an educator with the Wisconsin Department of Agriculture, Trade and Consumer Protection. “These resources will be readily used.”



Dig Deeper: Serving Food on the Farm

Find advice about running food-related agritourism enterprises on your farm with *Come & Get It: What you Need to Know to Serve Food on your Farm* at <https://northcentral.sare.org/resources/come-and-get-it-on-farm-food-service-manual/>

Bringing Quinoa to North Dakota

OBJECTIVE: to explore quinoa production and marketing in North Dakota, and educate the public about quinoa.

RESULTS: Quinoa [KEEN-wah] is a high protein, gluten-free grain that can be cooked like rice or be ground into flour. The price of quinoa tripled between 2006-2013, achieving \$1.10 per pound in 2017. Quinoa's increased market demand, along with its hardiness in zone 4, has piqued the interest of some regional producers, including Glendon Philbrick of North Dakota.

A farmer and educator, Philbrick lives on the 700-acre farm in Turtle Lake where he grew up, and he is curious about the potential of quinoa for small scale North Dakota farmers. With support from SARE, Philbrick worked with another North Dakota farmer, Steve Eid, to investigate planting methods, harvesting and processing systems, weed control, crop rotation, organic fertilization, and marketing for quinoa.

"Currently, most if not all of the quinoa found in health stores and grocery stores has been imported from nearly four to five thousand miles away," said Philbrick. "This could be an opportunity for organic farmers in North Dakota."

Growing Quinoa

Philbrick and Eid used a converted corn planter and a press drill to seed quinoa and were able to grow quinoa when conditions allowed for adequate seedbed preparation, timely tillage and



PHOTO BY MARIE FLANAGAN

Glendon Philbrick (left) and Steve Eid (right) received SARE support to experiment with growing, harvesting, and marketing quinoa in North Dakota.

planting, little weed competition, and adequate moisture early in the growing season. However, after harvesting the crop, the saponin coating on the quinoa grains proved to be a barrier to marketing.

Processing Hurdles

Quinoa's bitter saponin coating deters birds and insects, but it must be removed for human consumption. Philbrick and Eid could not find processing equipment to remove the saponin coating within a reasonable proximity. Still, Philbrick remains optimistic about quinoa.

"The advantage of a project such as growing quinoa in central North Dakota is the crop diversification and ability to experiment with new crops," said Philbrick. "The disadvantage is the limited access to markets with limited quantities (less than a semi load), and lack of equipment in the region for processing."

Ren Olive – University of Minnesota – \$12,000

Connecting the Dots Between Farmers and Rural Refrigeration

OBJECTIVE: to support the profitability of small and mid-size Minnesota fruit and vegetable farmers through a "farm to fridge" model.

RESULTS: Post-harvest refrigeration can make food safer, increase sales windows, and reduce food waste. However, University of Minnesota (UMN) graduate student, Ren Olive, says refrigeration can be a barrier for farmers, due primarily to cost.

"Imagine a farmer at the end of a farmers market day with an unsold pallet of fresh strawberries that were cooled in water but not refrigerated," said Olive. "The strawberries lost their 'plumpness' and now have a shorter shelf life because the farmer did not have access to refrigeration; considered 'non-marketable culled produce,' the farmer cannot make a sale. This scenario is not hypothetical; as a current UMN Extension employee, I have heard this feedback from multiple Minnesota farmers."

The UMN's Farm to Rural Grocery to Wholesale (F2G2W) program is working with existing rural grocery stores and their wholesale suppliers to "backhaul" locally grown produce on emptied wholesale trucks for redistribution. Olive received SARE support to expand F2G2W to include opportunities for small and medium-size produce farmers to utilize excess refrigeration in rural grocery stores.

Olive is assessing farmers' needs and refrigeration availability at more than 250 rural grocery stores, and is working to answer the question, "Can collaboration between farmers and local, rural grocery stores provide savings to farmers who need refrigeration infrastructure, while helping rural grocery stores profit from leasing unused refrigeration space?"



Dig Deeper: UMN's Farm to Grocery Toolkit is a resource for farmers and grocers to help facilitate the sale of farm-grown products to grocery stores, particularly in rural Minnesota. <https://conservancy.umn.edu/handle/11299/212328>



PHOTO BY MARIE FLANAGAN

Dig Deeper: Quinoa

Curious about growing or marketing quinoa? Read more about it at the Agricultural Marketing Resource Center website: <https://www.agmrc.org/commodities-products/grains-oilseeds/quinoa>

Trying Times: Alleviating and Understanding Farm Stress

OBJECTIVE: to develop an adaptable curriculum to teach people who work with farmers how to recognize and respond to farmers or farm family members in distress.

RESULTS: Farmer stress levels are on the rise. Fueled by low prices, debt, inconsistent weather, isolation, marital stress, farm transfer issues, production challenges, the complexities of COVID-19, and other factors, some farmers are in trouble.

As a producer who has experienced stress herself, Meg Moynihan is poised to help agriculture advisors better respond to the stress they encounter on farms and in rural communities through her advisory role with the Minnesota Department of Agriculture.

Moynihan and a team of experts have been designing, developing, and delivering trainings on farmer stress and mental health called “Down on the Farm” since 2017. These Down on the Farm workshops help people who work with farmers recognize and respond when they suspect that a farmer or farm family member needs help.

With support from SARE, they are building on that work. The farm stress team is working to reach federal agency staff, state

regulatory staff, Extension representatives, lenders, faith and social organizations, and business people in Minnesota with skill-building workshops that focus on suicide and suicide prevention, community-level resource engagement, de-escalation, rural adolescent stress, and conflict resolution. With partners at the Minnesota Department of Health, SAVE, and LivingWorks, they are adapting an evidence and skills-based suicide prevention training called safeTALK to address the unique characteristics of agricultural communities.

“This project addresses the sustainability of farmers themselves,” said Moynihan. “It’s developing curriculum to teach agriculture advisors how to respond when they see farmers in trouble.”

Resources

In association with Meg Moynihan’s work on farm stress, the Minnesota Department of Agriculture and the Red River Farm Network have joined forces to create a new radio and podcast series called TransFARMation. The series is designed to increase awareness and reduce inhibitions about acknowledging farm stress, as well as highlight the resources available. Local farmers, ranchers, and agricultural stakeholders are featured, sharing personal stories and offering a message of hope. Find more information about the podcast at www.rfn.com/transfarmation/.

Moynihan described several components of her farm stress-related work in testimony to Minnesota House and Senate Agriculture committees in February 2020. The video is available at <https://www.house.leg.state.mn.us/hjvid/91/892586/> (starting at 01:50).

If you, or someone you know, is struggling with stress, you can visit <https://farmcrisis.nfu.org/> to find useful resources.

PHOTO COURTESY OF RED RIVER FARM NETWORK



Minnesota farmers Bryan and Sarah Klabunde shared their experiences and offered insight into dealing with a stressful harvest season in a Fall 2019 episode of the TransFARMation podcast.

To find out more about NCR-SARE’s educational programs and grants, please contact:



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