

High-Efficiency, Year-Round Tropical Greenhouse in SD

In South Dakota, soybeans, corn, wheat, sunflowers, and alfalfa come to mind when contemplating the state's number one industry - agriculture. However, in Aurora, South Dakota, some of the crops at Wayward Springs have veered in a different, more exotic direction.

Shannon Mutschelknaus is a mechanical engineer and a farmer at Wayward Springs. As a child, he developed an interest in horticulture and eventually began saving seeds and growing tropical and sub-tropical trees. It wasn't long before he discovered a market demand for exotic tropical fruit trees.

"I discovered the demand for exotic tropical fruit trees was robust because seasonal hurricanes regularly ravage them," explained Mutschelknaus.

Mutschelknaus wanted to use his engineering, research, and horticulture expertise to build a specialized greenhouse to expand his exotic plant business. With support from a \$9,000 NCR-SARE Farmer Rancher grant, he compared the design trade-offs of multiple passive solar greenhouse technologies. He was able to apply the data gleaned from his research to inform how he built a passive solar greenhouse with a "climate battery."

Climate battery greenhouses use the earth below the greenhouse to manage excess heat captured during the day. Tubing is buried beneath the greenhouse, and a fan circulates air through the tubing. Warm, humid daytime air circulates underground, where it cools down before re-entering the greenhouse. Fans push the cool air underground to absorb the earth's heat and bring warmth back into the structure.

Growing in the Greenhouse

In his greenhouse, Mutschelknaus now grows crops like leafy greens, peppers, tomatoes, and novel fruits like passion fruit, loquats, soursops, and cherimoya. He shared a list of his most successful produce for local customers and sauce producers:

- Naranjilla has proven to be a delicious, productive citrus/kiwi-like fruit that is attractive to the local flavor palate.
- Super hot peppers, like Carolina Reaper, Apocalypse Scorpions, and Habanero have been very successful for sauce makers. Mutschelknaus is currently growing Carolina Reaper peppers for Halogi, whose hot sauce has been featured on the popular YouTube series Hot Ones.
- Passion fruit sells easily to local customers, especially to producers of sauces.

Many have expressed interest in the design and outcomes of his project.

"With growing fossil fuel costs, the benefit of solar heat storage systems like this start to make fiscal sense," said Mutschelknaus. "This prototype is small for commercial production but can easily be adapted to larger sizes or even high tunnels. The correct tubing layout and fan selection are key to an effective system."

Dig Deeper

Mutschelknaus' greenhouse plans are available online for free on the SARE reporting website. Visit <https://projects.sare.org/project-reports/fnc19-1185/> or contact the NCR-SARE office.

NCR-SARE's Farmer Rancher Grant program starts accepting proposals in mid-August, with a deadline in December. Learn more here: <https://northcentral.sare.org/Grants>.

The Newsletter
of NCR-SARE

Summer 2022
Issue 46



In Aurora, South Dakota, Shannon Mutschelknaus compared the features of multiple passive solar greenhouse designs.

He now grows leafy greens and tomatoes in his greenhouse, along with novel fruits like loquats, soursops, and cherimoya (above). Photos courtesy of Shannon Mutschelknaus.

NCR-SARE Awards \$6.5 Million in Grants

NCR-SARE is pleased to share the results for our grant programs for 2021-2022. NCR-SARE's competitive grant programs awarded 128 projects more than \$6.5 million this past year; the programs offer grants for producers, researchers, students, educators, organizations, and others who are exploring sustainable agriculture in America's Midwest. Another \$1.3 million supported NCR-SARE's regional state coordinators, who train agriculture professionals in sustainable practices and raise awareness about SARE resources.

The Farmer Rancher Grant Program is a competitive grant program for farmers and ranchers who want to explore sustainable solutions to problems through on-farm research, demonstration, and education projects. In 2022, 42 grant projects were selected to receive a total of more than \$745,000 through NCR-SARE's Farmer Rancher Grant Program.

For the 2022 Youth Educator Grant Program, NCR-SARE awarded more than \$101,000 to 18 projects. The competitive Youth Educator Grant Program supports educators who seek to provide programming on sustainable agriculture for youth.

The Graduate Student Grant Program is a competitive grant program to fund graduate student projects that address sustainable agriculture issues. For the 2021 Graduate Student program, NCR-SARE awarded more than \$347,000 to 24 projects.

For the 2022 Partnership Grant Program, NCR-SARE awarded more than \$676,000 to 18 projects. NCR-SARE's Partnership Grant Program is intended to foster cooperation between agriculture professionals and farmers and ranchers to catalyze on-farm research, demonstration, and education activities.

The Research and Education Program is a competitive grant program for researchers and educators involved in projects exploring and promoting environmentally sound, profitable, and socially responsible food and/or fiber systems. For the 2021

Research and Education program, NCR-SARE awarded more than \$3.7 million to 15 projects.

For the 2021 Professional Development Program, NCR-SARE awarded almost \$931,000 to 11 projects. NCR-SARE Professional Development Program competitive grants emphasize training agricultural educators in extension, the Natural Resources Conservation Service, private, and not-for-profit sectors, using farmers as educators and addressing emerging issues.

Visit the NCR-SARE website for more information about funded projects, timelines, and information on how to apply at <https://northcentral.sare.org/grants/apply-for-a-grant/>, or contact the NCR-SARE office.

To learn about the SARE grants in your state, visit the NCR-SARE website: <https://sare.org/grants/funded-grants-in-your-state/>, where you can view a portfolio summary and list of grants funded for every state and island protectorate. The focus for each of the NCR-SARE grant programs is on research and education. Funding considerations are based on how well the applicant presents the problem being addressed, the project's relevance to sustainable agriculture in the 12-state North Central region, and how well it aligns with NCR-SARE's goals, among other factors specific to each grant program.

NCR-SARE's Administrative Council (AC) members decide which projects will receive SARE funds. The AC includes a diverse mix of agricultural stakeholders in the region. Council members hail from regional farms and ranches, the Cooperative Extension Service, universities, federal agencies, and nonprofits. Since 1988, the SARE program has helped advance farming systems that are profitable, environmentally sound, and good for communities through a nationwide research and education grants program. Part of USDA's National Institute of Food and Agriculture, the program funds projects and conducts outreach to improve agricultural systems.

Apply for a Grant

If you are interested in writing a proposal for an NCR-SARE grant, we are here to help. We can provide grant reports from other projects, lists of funded projects, or other sustainable agriculture information. Visit <https://northcentral.sare.org/grants/apply-for-a-grant/> for more information or contact the NCR-SARE office.

Grant-Writing Assistance from SARE State Coordinators

SARE has a network of state coordinators working in each state and island protectorate. Your SARE state coordinator can provide advice and feedback as you work on your grant proposal. Find your SARE State Coordinator and view documents about funded grants in your state by visiting NCR-SARE online at <https://northcentral.sare.org/state-programs/state-coordinators/>.

Put Your Ideas to the Test: How to Conduct Research on Your Farm or Ranch

"How to Conduct Research on Your Farm or Ranch" is a SARE bulletin that outlines how to conduct research on a farm or ranch at the farm level using practical strategies and peer-reviewed research findings. It describes real-life examples and gives practical tips for both crop and livestock producers. Read it or order a copy for free online at <https://www.sare.org/resources/how-to-conduct-research-on-your-farm-or-ranch/>.



Virtual Field Days

Need to convert your in-person field day to a virtual one? NCR-SARE has resources for hosting virtual field days for producers, agricultural professionals, and educators. Find SARE's virtual field day information online at <https://www.sare.org/publications/farmer-field-day-toolkit/hosting-virtual-field-days/>.

The Basics of Manure Composting

Many farms, especially organic farms, use compost to build better soil. Composting involves managing organic waste so microbes can break down the material, turning it into compost. Most organic materials, like manure, can be composted. Composting manures is becoming an increasingly popular option for farmers. By composting their manure, they can reduce the amount of material they have to spread, stabilize the nutrients in the waste, and reduce manure odors.

“Manure is a valuable nutrient source that supplies both macro and micronutrients for plant uptake,” said Chryseis Modderman, University of Minnesota crops extension educator and manure management specialist. “It also increases soil organic matter, which leads to better soil structure, water holding capacity, and microbial activity. In addition, there are sustainable benefits of using composted manure over

raw manure, such as decreased transportation costs, fewer pathogens, weed seeds, reduced nutrient pollution, less odor, and increased organic nitrogen content.”

Modderman is working alongside Mary Keena at North Dakota State University to help producers in Minnesota and North Dakota as they explore the option of composting manure. During the project, they hosted manure composting workshops with support from a \$50,000 NCR-SARE Research and Education grant. As part of the 2-day workshops, they created a manure composting video series. These videos included lectures, applied composting procedures, interviews with the producer cooperators and tours of their operations, and an interactive diagnostic video where participants identified compost problems and decided how to correct them. One week after the videos were released, a live online discussion was held with the producer panel to answer questions and discuss the

topics outlined in the videos.

Dig Deeper

View the manure composting video series online at <https://www.youtube.com/playlist?list=PLQLK9r1ZBhhHTdh359Aa7dronJVQthEAH>. For more information on this NCR-SARE Research and Education grant project, visit https://projects.sare.org/sare_project/lnc19-427/.

NCR-SARE’s Research and Education grant program starts accepting proposals in mid-August. Learn more here: <https://northcentral.sare.org/Grants/>.



Composted manure at Yahara Pride Farm in Wisconsin. Photo by Marie Flanagan.

Cultivating Food and Community with Indianapolis’ Soul Food Project

Soul Food Project and farm has been operating since 2017 on the Northeast side of Indianapolis, Indiana. The farm uses sustainable practices such as no-till, cover crops, and crop rotation. It grows crops like tomatoes, squash, cucumbers, kale, and Swiss chard to distribute within the community. Danielle Guerin (pictured right) is the Founder, CEO, and Executive Director of Soul Food Project. In 2020, Guerin received a \$7,525 Farmer Rancher grant to expand Soul Food Project’s reach by exploring direct sales and marketing.

“The Northeast side of Indianapolis has been a food desert for over 20 years, only just receiving a small grocery store in 2016,” said Guerin. “Many residents still rely on fast food establishments or take the bus to the nearest grocery store, which is a 30-minute trip. While economic viability for my operation is important, I want to be as socially responsible as possible. Therefore, I focus on improving the quality of life for the community I operate in.”

Guerin made plans to pilot both a farmers market stand and a veggie Community Supported Agriculture (CSA) share program for ten subscribers. Unfortunately, complications due to COVID-19 meant the farmers market was primarily unavailable for the summer of 2020. But she ran ads for their CSA shares on Facebook and the Nextdoor app, which proved worthwhile. In 2021, Soul Food Project distributed 170 lbs. of vegetables to 11 families. For 2022, their goal for their CSA program is 20 subscribers.

“People jumped at the opportunity to be in the CSA program,” said Guerin.

Guerin says beginning urban farmers looking to start direct sales should engage with community members and find out what works best in that community. A resource she found helpful as she set up Soul Food Project’s CSA program was Soul Fire Farm’s “Sowing the Seeds of Justice Food Manual,” which is available on the SARE website at <https://northeast.sare.org/resources/sowing-the-seeds-of-justice-food-manual/>.

Guerin received a subsequent \$4,237 Youth Educator grant to support Soul Food Project’s Youth Grow Indy program, an urban farming experience for youth aged 9-18. Students are exposed to agriculture careers and the local food system while exploring agriculture.

Learn more about Guerin’s NCR-SARE grant projects online at <https://projects.sare.org/project-reports/fnc20-1220/> and https://projects.sare.org/sare_project/yenc22-177/.

NCR-SARE’s Farmer Rancher and Youth Educator grant programs start accepting proposals in mid-August. Learn more here: <https://northcentral.sare.org/Grants/>.



Soul Food Project Founder and CEO, Danielle Guerin. Photo courtesy of Soul Food Project.

Growing Solutions with Chicago's West Side

Growing Solutions Farm received a SARE grant to enhance their sustainable growing program that engages with young, diverse, West Side learners.

Located in Chicago's West Side neighborhood, Urban Autism Solutions' (UAS) Growing Solutions Farm offers urban agriculture and vocational training site for young adults with Autism Spectrum Disorder (ASD). Their 1.2-acre farm is a training environment where young adults ages 16-22 can learn about urban and sustainable agriculture and develop transferable job skills. The farm has growing plots, a high hoop house, a cooling shed, composting bins, and an outdoor tented classroom.

In 2018, the organization offered its first Community Supported Agriculture (CSA) shares to 12 subscribers. With support from a \$3,905 NCR-SARE Youth Educator Grant, UAS set out to expand its educational opportunities, increase its CSA offerings, and share more produce with its community.

Through classroom instruction and hands-on experiences, program participants learned more about preparing the soil, creating composting systems, maintaining crops, planting seeds and seedlings, and weeding garden beds. They harvested, tended, and packaged produce to sell at farmer's markets alongside Growing Solutions Farm's lead grower, Tucker Kelly. The participants also hosted farm tours and helped package shares for the farm's CSA program.

UAS offers an 8-box CSA share from June to September with salad greens, kale, herbs, tomatoes, cucumbers, and more. Their onsite farm stand is open two days per week. In

partnership with Grace Seeds Ministry, twenty percent of the weekly crop gets donated to West Side food pantries and program participants.

"For 2022, we are at capacity with 30 CSA subscribers," said UAS Executive Director Heather Tarczan. "We're grateful to have people who donate CSA subscriptions to community members in need."

UAS is also at capacity with educational program participants for 2022. Thirty young adults from West Side Chicago Public High School transition programs are working and learning at Growing Solutions Farm this summer.

"The farm is an exceptional place; it is a safe environment that nurtures and helps one grow," said Tarczan. "Through the support of organizations like NCR-SARE, we can support and help make transformative experiences in the lives of those that would not have this kind of opportunity otherwise."

Dig Deeper

For more information on this NCR-SARE Youth Educator grant project, visit <https://projects.sare.org/project-reports/yenc21-168/> or contact the NCR-SARE office.

NCR-SARE's Youth Educator grant program starts accepting proposals in mid-August. Learn more here: <https://northcentral.sare.org/Grants/>.



Exploring Yellow Perch and Aquaculture

Between 2008 and 2020, Bill West of Blue Iris Fish Farm in Black Creek, Wisconsin, worked on six related SARE grants involving aquaculture and yellow perch. A new report written by West includes a summary of the aquaculture research projects he has participated in and updates for each SARE project.

Although the target species of West's SARE research was yellow perch, practitioners can apply the results of the projects to other species, including members of the genus *Lepomis* (true sunfish) and other members of the perch family.

"We have added new information that we've learned since the end of the projects," said West. "As will be shown by this report, many facets need to be addressed to take a species from 'egg to market' successfully. Each completed grant advanced our knowledge of specific details in the process."

Of course, indoor aquaculture operations exist (typically known as recirculating aquaculture systems or RAS), but West says most small to medium-sized fish culture operations are outdoor. Whether the aquaculture system is indoor or outdoor, West's continuum of research has focused on figuring out how to supply feed-trained fingerlings and come up with a more precise "recipe for success."

You can download West's "Aquaculture – A Continuum Tracking Single Species Progress Based on SARE Support" online <https://northcentral.sare.org/resources/aquaculture-and-yellow-perch/>.

Feeding a Community

Tucker Kelly (right) with Growing Solutions Farm passes a bin of produce to Linda Wygant of Grace Seeds Ministries. The farm shares fresh produce with food pantries through a partnership with Grace Seeds Ministries. Photo courtesy of Urban Autism Solutions.



NCR-SARE Heroes: Roy Ballard and Tom Coudron

In 2012, the NCR-SARE Administrative Council created the NCR-SARE Hero Recognition to highlight, recognize, and pay tribute to those who have made significant contributions to NCR-SARE and/or National SARE. NCR-SARE is pleased to announce that Roy Ballard and Tom Coudron have been named the 2022 NCR-SARE Heroes.

Roy Ballard



2021 NCR-SARE Hero, Roy Ballard. Photo courtesy of Purdue Extension.

Roy Ballard's 40-year career exemplifies his commitment to education, horticulture, and community food systems. After completing a Bachelor of Science degree in agriculture education from Purdue University and a Masters of Science degree in secondary education and teaching from Indiana University, Ballard started teaching ornamental horticulture at South Central Area Vocational School from 1979 to 1991.

Ballard joined Purdue University as an Extension Educator in 1991 and became a Hancock County Extension Agriculture and Natural Resources Educator in 2006. He continued in that position until 2018, when Ballard assumed the role as the County Extension Director, before retiring in 2019. During his tenure with Purdue Extension, Ballard helped spearhead FoodLink, a statewide online produce database through Purdue Extension, the Hoosier Harvest Market, a farmer-owned online farmers' cooperative, and the Ways to Grow Program, a business-building program that reached a 19-county area in southeastern Indiana.

An authority on small farms, local foods, and sustainable agriculture in Indiana, Ballard served on multiple committees and working groups outside Purdue, such as the Indiana Farm to School Network and Indiana Farm Bureau. In 2019, Ballard received the Indiana Farm Bureau's Frederick L. Hovde Award of Excellence in Educational Service to Rural People of Indiana.

During his tenure as Indiana's SARE State Coordinator from 2009 to 2019, Ballard nurtured the growth of Indiana's engagement with NCR-SARE by promoting NCR-SARE's opportunities to potential grant applicants. He encouraged many successful SARE grantees and promoted SARE resources across the state. During that time, you could expect to see Ballard staffing a SARE booth at events like the Indiana Small Farm Conference (which he co-founded), the Indiana Horticultural Congress, and the Indiana Farm Bureau State Conference.

Tom Coudron



2021 NCR-SARE Hero, Tom Coudron. Photo courtesy of Mizzou CAFNR.

Tom Coudron's career in advancing sustainability spans more than 40 years. He holds a Bachelor of Science degree from Saint John's University and a Ph.D. from North Dakota State University. With a background in entomology, Coudron held a position as a research chemist with the U.S. Department of Agriculture Agricultural Research Service at the Biological Control of Insects Research

Laboratory (BCIRL) in Columbia, Missouri from 1981 until he retired in 2018. His research has contributed significant findings about using beneficial insects in biological control systems and has inspired many researchers who have collaborated with him. He served on the editorial board for the Annals of the Entomological Society of America. He was a convener for the International Organization for Biological Control Global Working Group on Mass Rearing and Quality Assurance. Even after retirement, Coudron collaborates with USDA-ARS and contributes to research projects at BCIRL. He also serves as an Adjunct Associate Professor at the University of Missouri and as a Scientific Advisor for the Association of Natural Biocontrol Producers. Additionally, Coudron is a beekeeper and serves on the board of the Boone Regional Beekeepers. He served as a board member of the National Farmers Union from 2000 to 2018 and is the current President of the Missouri Farmers Union.

Coudron's engagement with the SARE program has been extensive. He chaired the NCR-SARE Technical Committee from 2001 to 2010, and served on the Administrative Council from 2001 to 2011, serving as chair from 2010 to 2011. As a leader of NCR-SARE's Circle of Sustainability subcommittee, Coudron took part in listening sessions which reflected his respect and desire to bring together people with differing viewpoints as a way for them to share their perspectives on sustainability and agriculture. He continues to support NCR-SARE as a reviewer for grant proposals and has participated in the NCR-SARE Alumni Committee since 2009.

Read tributes and learn more about the NCR-SARE Heroes online at <https://northcentral.sare.org/about/regional-initiatives/ncr-sare-hero-recognition-program/>.

New Book: Manage Weeds on Your Farm



Sustainable weed management is essential for improving crop yield and increasing farm and ranch profitability. SARE's newest book, *Manage Weeds on Your Farm: A Guide to Ecological Strategies*, examines the biology and behavior of common weeds and provides an integrated set of non-chemical control strategies that exploits their weaknesses. *Manage Weeds on Your Farm* will help organic and conventional farmers alike better understand and manage weeds efficiently, effectively, and ecologically.

"In my opinion, this book has the best information on weed management that is available today," says Klaas Martens of Lakeview Organic Grain in Penn Yan, N.Y. "Our understanding of weed control is still growing rapidly, and this book will certainly become an invaluable tool for every farmer who wants to control their weeds sustainably."

Manage Weeds on Your Farm features profiles of five farmers who use the physical, ecological, and biological factors of common weeds to develop science-based management strategies appropriate for their operations.

It is written by the late Charles L. Mohler, John R. Teasdale, and Antonio DiTommaso; it is published by SARE. It is free to read online or to download as a PDF at www.sare.org/weeds.

Reaching Women in Agriculture: A Guide to Virtual Engagement



SARE's new bulletin, "Reaching Women in Agriculture: A Guide to Virtual Engagement" brings together information, tips and tools to deliver effective and engaging online (and hybrid) education for farm and ranch women on topics related to farm viability, resilience, and conservation.

encounter when trying to access in-person education.

As such, the strategies, practices, and lessons learned from this shift to online engagement will be applicable well beyond the global pandemic.

This guide was developed through a partnership between American Farmland Trust and University of Vermont Extension. Download or view it online at <https://www.sare.org/resources/reaching-women-in-agriculture-a-guide-to-virtual-engagement/>.

While COVID-19-related restrictions issued in 2020 that curbed in-person gatherings were the impetus for developing this resource, online offerings can help address barriers—travel time and costs, and conflicts with farm, family, and off farm employment—many women may

NCR-SARE Grants At-A-Glance

Learn more about exciting SARE-supported projects! Use the project number listed with these projects to find more information at <https://projects.sare.org>, or follow NCR-SARE on Facebook, Instagram, or Twitter to receive regular updates like these:

Illinois State University graduate student Emily Hansen is encouraging adoption of cover crops by demonstrating the benefits they provide to soil microbial communities. This is SARE project GNC21-320.



In Minnesota, Zachary Knutson has been rotationally grazing cattle and sheep across a mixture of biennial small grain forages and summer annual cocktail mixes. This is SARE project FNC21-1283.



The MARSH Food Cooperative in Saint Louis, MO is a worker-owned urban farming cooperative that grows food for a consumer co-op and the broader community. This is SARE project FNC21-1293.



Missouri grower Matt Renkoski has been grafting large diameter native persimmon seedlings (.5 to 4.0-inch diameter) using a bark grafting technique. This is SARE project FNC20-1247.



Purdue Horticulture and Landscape Architecture has a new resource with guidance for scheduling vegetable crops for winter high tunnel production. Find the resource at <https://projects.sare.org> under project ONC15-008.



Farming can be a community practice; however, farmers are increasingly “siloe” on the farm. As farms get bigger, help becomes scarce. Small towns lose coffee shops and feed mills, the social hub where farmers once shared information.

With support from a \$39,900 NCR-SARE Partnership grant, Dane County Land Conservation was able to support and create intentional spaces for a group of farmers willing to take a chance on establishing and utilizing cover crops on their farms to improve soil health.

SARE funds were used through the project to bring new cover crop-adopting farmers to experienced farms to ask pointed questions, talk directly about equipment, and take tours of the farm. By funding these one-on-one “farmer dates,” specific questions often lost at large field days could be addressed, leading to better and quicker adoption of cover crops. By creating spaces for farmers to share ideas, successes, and failures, the farmers in Southern Dane County expanded cover crop implementation dramatically in just a few short years. The participating farmers opened their farms to anyone who wanted to learn more, share ideas, and even equipment.

Grazing Cover Crops and Advancing Farmer Networking in Wisconsin

by Marie Raboin

Dane County Land Conservation is creating opportunities for farmers to share their ideas about cover crops with one another. This story and photo were contributed by SARE grant recipient Marie Raboin with Dane County Land Conservation.

To see landscape-scale changes, farmers need to feel support from their community. The most successful farmers have support from several levels within their community, from family, friends, and other farmers. This grant facilitated real change on a landscape scale by giving farmers the space to learn from one another and valuing the time of the experienced farmers. The change that has occurred can be seen driving 55 mph down a county road. The difference can also be seen as the confidence grows in a young group of farmers who want to improve water and soil quality on their farms. They are becoming leaders in their community.

A secondary outcome of this grant was that the farmers participating took their organization to the next level and formed a producer-led watershed group, advocating for biological systems thinking approaches to farming in Southern Wisconsin.

Although the farm sizes vary in range and focus, this group of farmers continues to innovate and lead in the field of true regenerative agriculture.

Dig Deeper

During the project, the team created a YouTube Channel called “Lawn Chair Farming.” The focus is on regenerative agriculture practices, including grazing and harvesting cover crops. Watch six episodes on YouTube at <https://youtu.be/gH5mjF-vqKQ>.

To learn more about this NCR-SARE Partnership grant project, visit the SARE project reporting website at <https://projects.sare.org/project-reports/nc19-063/>, or contact the NCR-SARE office.



NCR-SARE’s New Administrative Council Members

Kristy Borelli, Kara Kasten-Olson, Zelia Wiley, and Steve Yanni are new members of the NCR-SARE Administrative Council (AC). The Administrative Council sets program priorities and makes granting decisions for NCR-SARE.

- Kristy Borelli has been hired as National SARE’s new associate director and fills the SARE Associate Director position on the AC. Borelli served as SARE’s Pennsylvania state coordinator and on the Northeast SARE AC.
- Kara Kasten-Olson has been elected as the Department of Agriculture representative on the AC. Kasten-Olson is the Agriculture Program Supervisor at the Wisconsin Department of Agriculture Trade and Consumer Protection and raises livestock in Wisconsin.
- Zelia Wiley has been elected as an at-large university representative on the AC. Wiley is the Assistant Dean and Director of Diversity Programs for the College of Agriculture at Kansas State University, where she provides leadership in inclusion and diversity.
- Steve Yanni has been elected as a 1994 land grant institution representative to the AC. Yanni is the Land Grant Director for Bay Mills Community College, a tribally controlled college in Upper Michigan along the shores of Lake Superior.

NCR-SARE would like to extend gratitude to Julie Doll, Jamie Good, Kim Kroll, and Amber Marlow, whose terms on the Administrative Council have ended.



UMN, BioAgEng Building
1390 Eckles Ave., Suite 120
Saint Paul, MN 55108
www.northcentral.sare.org

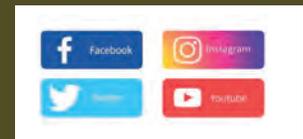
ADDRESS SERVICE REQUESTED

Send address updates to
mart1817@umn.edu or visit
<https://northcentral.sare.org/about/join-our-mailing-list/>

This product was developed with support from the Sustainable Agriculture Research and Education (SARE) program, which is funded by the U.S. Department of Agriculture — National Institute of Food and Agriculture (USDA-NIFA). Any opinions, findings, conclusions or recommendations expressed within do not necessarily reflect the view of the SARE program or the U.S. Department of Agriculture. USDA is an equal opportunity provider and employer.



Did you know NCR-SARE is on Facebook, YouTube, Instagram, and Twitter? Keep track of our grant opportunities, projects, events, and more. Follow, like, or friend us!



ABOUT NCR-SARE

NCR-SARE funds cutting-edge projects every year through competitive grant programs, and has awarded more than \$80 million worth of grants to farmers and ranchers, researchers, students, educators, public and private institutions, nonprofit groups, and others exploring sustainable agriculture in the 12 states of the North Central region.

Are you interested in submitting a proposal for an NCR-SARE grant? Before you write the grant proposal, determine a clear project goal, and look for sustainable agriculture research on your topic. Need help determining which program is best suited for your project? Go to <https://northcentral.sare.org/grants> for more information, or contact the NCR-SARE office at ncrsare@umn.edu.

NCR-SARE GRANT TIMELINES*

- Farmer Rancher***
August - Call for Proposals Released
December - Proposals Due
February - Funding Decisions
Spring - Funds Available to Recipients
 - Graduate Student***
February - Call for Proposals Released
April - Proposals Due
July - Funding Decisions
September - Funds Available to Recipients
 - Research and Education***
August - Call for Preproposals Released
October - Preproposals Due
January - Full Proposals Invited
March - Full Proposals Due
July - Funding Decisions
Fall - Funds Available to Recipients
 - Professional Development Program***
February - Call for Proposals Released
April - Proposals Due
July - Funding Decisions
Fall - Funds Available to Recipients
 - Youth Educator***
August - Call for Proposals Released
November - Proposals Due
February - Funding Decisions
Spring - Funds Available to Recipients
 - Partnership***
August - Call for Proposals Released
October - Proposals Due
February - Funding Decisions
March - Funds Available to Recipients
- *Timelines are subject to change.

NORTH CENTRAL REGION SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION PROGRAM CONTACT INFORMATION

Phone: 612-626-3113
Email: ncrsare@umn.edu
www.northcentral.sare.org



**UPDATE YOUR SUBSCRIPTIONS
STAY CONNECTED**

UPDATE YOUR SUBSCRIPTIONS

Do you want to update the way you receive information from NCR-SARE? Visit us online to subscribe or adjust your subscription to our newsletter. You can also sign up to receive information about our grant programs. Visit us online to update your preferences: <https://northcentral.sare.org/about/join-our-mailing-list/>.