Sustainable Agriculture Research & Education





Non-Profit Cultivates Food, Community, & Hope in Ferguson, MO

The Newsletter of the NCR-SARE Program

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On a neighborhood street in Ferguson, Missouri, flanked by fields of spinach and beets, is a hand-painted sign announcing, "Mueller's Organic Farm, Homegrown Fruits & Vegetables." This is the EarthDance Organic teaches organic Farm School-the sign pays homage to the Muellers, a pioneering organic farming family through handsthat established this farm in 1883.

In 2008, agroecologist and future farmer Molly Rockamann started a non-profit organization to support work on a small parcel of land at Mueller Farm; she called it EarthDance. Four years later, EarthDance purchased the Mueller Farm to both preserve the historic Mueller Farm and connect people confirmed in my with the land through community food production. Today, EarthDance farms about 3.5 acres on the 14-acre parcel.

The green fields, small brick farmhouse, greenhouse, and flowers at EarthDance stand in contrast to the Ferguson that has been depicted in the news in recent months; yet the highly diversified system of vegetables, herbs, and flowers at EarthDance is located just about a mile from the Ferguson police station. EarthDance's vision: organic farmers feeding the world, communities caring for the land, and farms inspiring creativity.

EarthDance's staff of 11 organizes and offers a wide variety of programs and activities for Ferguson and surrounding communities, some of which have been supported through NCR-SARE Youth Educator and Farmer Rancher grants. A brief history of EarthDance's SARE-supported work includes a farm apprenticeship program, a summer camp for youth in 2011 and 2012; a Junior Farm Crew Program that pays and trains high school students; the installation of a pear orchard to increase the availability of local, sustainably grown fruit; and the "greening" of a greenhouse with sustainable energy solutions. These activities focus on sustainable growing methods and quality of life for the surrounding communities, which are a priority for Rockamann.

The EarthDance Farm and Garden Apprenticeship Program agriculture on education in fields and markets using experienced farmers and gardeners.

"I have never been more rebelief in humanity than to see the hard work and compassion for one another and our planet that has been so evident in our apprenticeship class each year," said

Rockamann. "One of the reasons that I started our apprenticeship program was to connect more people to the Mueller Farm so that it could remain a productive organic farm. We have achieved that goal each year."

Jennifer Fleischmann, a Saint Louis native and the Marketing Coordinator at EarthDance, says that with more than 170 graduates of the program, projects like the apprenticeship program socially and economically empower Ferguson. She says SARE's support has enabled their impact on sustainable agriculture to be more widespread.

"The future farmers that the apprenticeship program trains will plant, harvest, and sell our veggies at the Ferguson Farmers Market. In a place where food deserts have become a widespread fixture, our apprentices contribute to increasing local access to healthy, organic produce," said Fleischmann.



EarthDance Farm in Ferguson, Missouri has received SARE support for a variety of sustainable farming and community-building initiatives. including their Junior Farm Crew project. Photo by Molly Rockamann.

Another SARE-funded program that cultivates future food leaders is EarthDance's Junior Food Crew, where 20 members have learned agricultural skills, leadership, and job skills. Junior Food Crew members leave with knowledge of food and farming that will enable them to lead and continue the conversations that need to be had to advance the good food movement.

Story continued on page 4.

Full of brilliant color



photographs, Youth Renewing the Countryside shares remarkable stories of young people in each state changing the world through rural renewal. Read it online for free: http://www.sare. org/Learning-Center/ Books/Youth-Renewingthe-Countryside

NCR-SARE Awards More than \$2.5 Million in Grants

NCR-SARE is pleased to announce the projects that have been selected for funding for several grant programs. More than 90 projects were awarded more than \$2.5 million through NCR-SARE grant programs this past year, which offer competitive grants for producers, researchers, students, educators, organizations, and others who are exploring sustainable agriculture in America's Midwest.

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. More than 40 grant projects were selected to receive a total of more than \$400,000 through this NCR-SARE grant program.

For the Youth Educator Grant Program, NCR-SARE awarded more than \$25,000 to 14 projects. The Youth Educator Grant Program supports educators who teach young people what sustainable agriculture is and help them explore related career options.

The Graduate Student Grant Program is a competitive grant program to fund graduate student projects that address sustainable agriculture issues. For the Graduate Student program, NCR-SARE awarded more than \$150,000 to 16 projects.

For the Partnership Grant Program, NCR-SARE awarded more than \$330.000 to 12 projects. The Partnership Grant Program is intended to foster cooperation between agriculture professionals and small groups of farmers and ranchers to catalyze on-farm research, demonstration, and education activities related to sustainable agriculture. For the 2015 Partnership Grant Program, \$200,000 of the partnership grant pool of funds was available for projects focused on cover crops and soil health. This special request for proposals on cover crops and soil health was made possible by a one-to-one match of funds between NCR-SARE and the Howard G. Buffett Foundation.

The Research and Education Grant Program is a competitive grant program for researchers and educators involved in projects that explore and promote environmentally sound, profitable, and socially responsible food and/or fiber systems. For the Research and Education program, NCR-SARE awarded more than \$1.6 million to 9 projects.

To learn more about the projects that were selected for funding, visit the NCR-SARE website for lists of funded projects and descriptions of the projects at www. northcentralsare.org/Grants/Recent-Grant-Projects.

To learn about the NCR-SARE grants funded in your state, visit the NCR-SARE website here: www.northcentralsare.org/ Educational-Resources/Funded-Grants-in-Your-State, where you can view a portfolio summary and funded grants list for every state and island protectorate.

NCR-SARE administers several competitive grant programs. Each grant program has specific goals, audiences, and timelines. The focus for the NCR-SARE grant programs is on research, education, and outreach. Funding considerations are made based on the relevance and potential of the project to increase the sustainability of agriculture in the region, as well as how well the applicant articulates the research and education components of their sustainable agriculture grant proposals.

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, and nonprofit organizations. In addition, regional representatives of the U.S. Geological Survey, the U.S. Department of Agriculture, the Environmental Protection Agency, the Natural Resources Conservation Service, and NCR agribusinesses, state agencies, and foundations sit at the table to distribute grant money.

Applying for NCR-SARE Grants

NCR-SARE has online resources to help you learn more about writing proposals for NCR-SARE grant programs. Read tips, tutorials, and watch videos online at www.northcentralsare. org/Grants/Write-a-Successful-Grant.

Assistance from SARE State Coordinators

SARE sustainable agriculture coordinators in every state and island protectorate offer training about sustainable practices and share SARE project results. State coordinator responsibilities include professional development—promotion, networking and coordination, especially of SARErelated activities—and communication and evaluation. Learn more about your SARE State Coordinator and view documents about funded grants in your state by visiting NCR-SARE online at www.northcentralsare.org/ State-Programs or contact the NCR-SARE office.

Michael Fields Grant-Writing Assistance

Did you know that the Michael Fields Agricultural Institute Grant Advisor can help you apply to federal and state grant and costshare programs that could help you improve your farming business? If you are a woman farmer, beginning farmer, limited resource farmer, or a member of a historically socially disadvantaged group in the Midwest, you are invited to contact Deirdre Birmingham for free grant advising service from the Michael Fields Agricultural Institute. Contact Deirdre at (608) 219-4279 or deirdreb4@gmail.com for more information.



2 FIELD NOTES

Grantee Finds Efficiency in Grass-Fed Beef Production Systems

by Katelyn Asfield and Marie Flanagan

Jane Jewett shares information about productive grass-fed beef systems at her farm in Palisade, MN. Photo by Betsy Wieland.



For more than 20 years, Jane Jewett has owned WillowSedge Farm near Palisade, MN. An increasing interest in grass-fed beef operations led Jewett to make the transition to grass-fed beef in 2008, and today she raises grass-fed Angus and Angus-Hereford cross cattle along with hogs, broiler chickens, and laying hens.

"I had been researching grass-fed beef production for a while and knew that's where I wanted to go," Jewett explained. "The world food price crisis in 2007-2008 is what really pushed me to take the leap. I figured we needed to learn how to raise meat without feeding grain."

Her interest in applying for an NCR-SARE grant sparked after reading the scientific journal article titled: "Comparative Life Cycle Environmental Impacts of Three Beef Production Strategies in the Upper Midwestern United States" (2010). Jewett was curious about a passage that assumed 1,100 lb. live weight and 22 months of age at slaughter for grass-fed beef; compared to 1,400 lb. and 17 months for feedlot beef. Jewett was somewhat surprised by these findings because she knew she could produce 1,100 lb. live weight in a lesser amount of time solely on forage. She hypothesized that the long finishing time of grass-fed beef cattle in the study could be due to producers raising heritage breeds of cattle, which tend to grow more slowly and may be smaller-framed animals than modern breeds; or to using an inadequate quality of forage. Jewett felt that modern breeds raised on well-managed grass and forage were not properly represented in the study and wanted to compare the productivity of grass-finished systems with a feedlot beef system in a situation where cattle breeds and level of management of the system were similar.

In 2012, Jewett applied for an NCR-SARE Farmer Rancher Grant and received \$19,829 to study the finishing time and weights of grassfed beef animals. The funds provided Jewett the opportunity to collaborate with other grass-fed beef producers who were producing 1,100 lbs. or greater live weight in a 15-to-18 month time frame. Three grass-fed beef producers collaborated with Jewett on the project: Edgar Brown from Willow River, MN; Jake and Lindsay Grass, owners of Grass Meadows Farm from Pine City, MN; and Bill and Bonnie McMillin from Kellogg, MN.

Over the course of two years, Jewett and the collaborators collected data on 2011- and 2012-born calves, beef steers' weaning weights, spring pre-pasture weights, pre-slaughter live weights, carcass weights, and the rotations through pastures. In addition to the data collection, Jewett and others involved in the project planned and held outreach activities to present the research and glean information from other beef producers.

With the help of Carlton County Extension, Aitkin County NRCS, the University of Minnesota Extension, and the Northeast Minnesota Forage & Grassland Council, Jewett got the word out about her events to producers in the area.

"I think the mailings sent out by Aitkin NRCS were the most effective strategy for getting area farmers to attend," said Jewett. "Forage and livestock are very common components of NE MN farms, and that Council has a lot of members, so it was effective to work within that existing structure for offering events."

Jewett found that it was possible to produce an 1,100 lb. live weight (600 lb. carcass weight) in a 15-to-18 month time frame, depending on genetics and feed. She noted that with quality forage and good genetics, grass-fed results can exceed feedlot results–Bill McMillin achieved 1,387 lb. live weight (749 lb. carcass weight) in 14 months.

"I think this project succeeded in demonstrating that grass-fed beef can be more productive and efficient at producing beef than is frequently portrayed in both scientific literature and in the media," she explained.

Jewett is hopeful for the future of grass-fed animal production systems. She says that if it can be demonstrated that grass-fed beef can approach feedlot beef in terms of efficiency of production, then beef researchers might be more willing to study and promote some hybrid systems that include feeding of some grain, but also longer times spent on grass.

"If we can capture the environmental benefits of pushing more acres into perennial forage while sacrificing very little of the beef productivity potential of a feedlot, I think that would be ideal—and I also think that is achievable," said Jewett.

For more information and figures on Jewett's NCR-SARE Farmer Rancher project, visit the SARE project reporting website at www.mysare.sare.org and search for project number FNC12-860, or contact the NCR-SARE office. To learn more about Jewett's WillowSedge Farm, visit the WillowSedge's website at www.janesfarm.com.



With support from a SARE grant, EarthDance is retrofitting a greenhouse to demonstrate energy savings that can be realized through bench-top heating. Photo by Beth Nelson.

(story continued from page 1...)

The greenhouse at EarthDance allows for energy efficient season extension with support from SARE, but it also provides an important community gathering space. EarthDance has been able to start seedlings on site, which saved transportation costs and time, and the structure extends onfarm programmatic space for community engagement offerings. EarthDance's latest project, the Practicing Peace Initiative, will launch this month with a free public Stress & Trauma Relief Workshop, which will be held in booth at the local Ferguson Farmers Market, the greenhouse.

"Our long-term vision for agriculture is for farms to become integral places in

communities again, places where people come together over shared values and learn how to work together on common ground. I'm happy our greenhouse can be a covered space for people to work on cultivating their inner strength while also being a place to grow seedlings for producing food on the farm," shared Rockamann.

Beyond their SARE-funded activities, EarthDance heals and builds community through collaborations with the Ferguson-Florissant School District, a waitlisted CSA and an Artist in Residence Program, their Practicing Peace Initiative, farm tours, field trips, public speaking engagements, and Farmers Formal, EarthDance's annual farm-raiser.

Non-Profit Grows Food, Hope

(story continued from page 1)

"Our SARE projects introduce more individuals and groups to the field of sustainable agriculture," said Rockamann. "Many urban and suburban residents in our region have never visited a farm prior to their first steps on EarthDance soil. Youth who experience collecting a chicken egg for the first time, or harvest produce that hits their plates or stomachs minutes later are opened up to a new way of eating, growing, and living. We are thrilled with the number of youth who say they want to be farmers when they grow up after participating in EarthDance programs. Offering a rigorous full-season training program for adults is one of the ways in which we're preparing new farmers for operating their own farming enterprises. The more people are exposed to career opportunities in sustainable agriculture, the brighter future that farming has."

For more information on EarthDance's NCR-SARE Youth Educator and Farmer Rancher projects, visit the SARE project reporting website at www.mysare.sare.org and search for project numbers FNC09-785, YENC12-053, FNC14-970, FNC15-999, and YENC15-089, or contact the NCR-SARE office. Visit EarthDance online at www.earthdancefarms.org.



EarthDance's farm-to-table summer camp for middle school students included hands-on lessons about organic farming as well as a culinary component for more than 25 youth. Photos by Rachel Levi.

And the 2015 Cover Crops Survey Says...

A survey of more than 1.200 farmers across the country revealed that cover crops boosted corn yields last year by a mean of 3.66 bushels per acre (2.1%) and increased soybeans by an average of 2.19 bushels per acre (4.2%)-the third year in a row a yield increase following cover crops was recorded by the Conservation Technology Information Center (CTIC) Cover Crop Survey. The survey. conducted by CTIC with funding from SARE and the American Seed Trade Association, also registered a fifth year of steady increase in the average number of acres planted to cover crops. Average acres of cover crops per farm reported in the surveys have more than doubled over the past five years.

While the survey showed yield increases among growers who use cover crops, they are interested in more than the yield benefit. The three most-cited benefits of using cover crops were:

- increased soil health (22 percent)
- increased soil organic matter (20 percent)
- reduced soil erosion (15 percent)

The survey also provided insight into why

growers use or do not use cover crops. Growers cited the top challenges to growing cover crops as:

- establishment (22 percent)
- cover crop seed cost (20 percent)
- time and labor required for planting and managing cover crops (19 percent)

The extensive survey, which was distributed

with assistance from Corn and Soybean Digest, gathered perspective from more than 1,000 farmers, including 1,248 farmers who completed the entire survey, and hundreds more who answered selected questions. Of those who completed the survey, 84 percent have planted cover crops and 16 percent had not yet used them. The survey also presents data on a wide range of issues, from



The 2015 Cover Crops survey report should be a valuable tool for farmers, ag retailers, conservation advisors, policy makers, and many others interested in conservation agriculture, especially in the North Central region.

> management practices to landlord attitudes about cover crops to the most influential sources of information on the practice.

Read more about the survey online at www.sare.org/covercropsurvey. Questions about the cover crops survey and results can be addressed to Dr. Rob Myers, Director of Professional Development Programs for NCR-SARE at myersrob@missouri.edu.

NCR-SARE Heroes: George Bird and Jerry DeWitt

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. Coordinated by the NCR-SARE Alumni Organization, this recognition acknowledges the leadership, vision, contributions, and impact that these heroes have made in the field of sustainable agriculture in the region. In 2015, George Bird and Jerry DeWitt were named as NCR-SARE Heroes for their service, leadership, and lasting impact in sustainable agriculture.

George Bird is a professor in the Department of Entomology at Michigan State University. A native of New England, Bird spent much of his childhood on a poultry and dairy farm in southeastern Vermont and as a teenager, managed a commercial orchard in western Massachusetts. He received his B.S. and M.S. degrees from Rutgers University (1961, 1963) and a Ph.D. from Cornell University in 1966.

Prior to starting his position with Michigan State University in 1973, Bird served as a Research Scientist with Agriculture Canada and was a faculty member at the University of Georgia. From 1991-1993, he served as National Director of the Sustainable Agriculture Research and Education (SARE) Program. For 19 years, Bird served on the Board of Directors of the Rodale Institute. He co-edited the 2006 book, Developing and Extending Sustainable Agriculture: A New the Central Asia Integrated Pest Management - Collaborative Research Support Program (IPM-CRS) and the Borlaug Fellowship Program.

Jerry DeWitt is a professor emeritus of Entomology at Iowa State University (ISU). During his 38-year tenure with ISU, he served as an associate dean, assistant extension director, and director of the Leopold Center

for Sustainable Agriculture. He has served as interim national program leader for the Sustainable Agriculture Research and Education (SARE) Program three times, as well as serving as the project coordinator/state coordinator for SARE's Professional Development Program within Iowa for 15 years. He currently resides in North Carolina and is involved in local and organic agriculture with the Carolina Farm Stewardship Association where he serves as board president. He also is involved with Social Contract. Currently, Bird participates in Slow Money NC, which supports local North Carolina entrepreneurs with targeted lowinterest loans. DeWitt is an avid photographer of local, sustainable, and organic agriculture nationwide. His images have appeared in many books, publications, and websites devoted to America's agriculture.

> Read more about the NCR-SARE Heroes and the NCR-SARE Hero Program online at www.northcentralsare.org/About-Us/ Regional-Initiatives/NCR-SARE-Hero-Recognition-Program.

New Administrative Council Members for NCR-SARE

Teresa Engel, Vicki Morrone, Erin Schneider, and Kevin Warner were recently elected to the NCR-SARE Administrative Council.

Teresa Engel has been elected as a state department of agriculture representative for the NCR-SARE Administrative Council. Since 2008, Engel has managed the Wisconsin Department of Agriculture, Trade, and Consumer Protection's Buy Local, Buy Wisconsin grant program. She has participated on the review panel for the Wisconsin Specialty Crop Block Grant Program and the Agriculture, Diversification, and Development Program, and she served on the 2009 panel for the USDA's Farmers Market Promotion Grant Program. Engel has an organic sunflower, grains, vegetable, and flower farm near Madison, WI.

Vicki Morrone has been elected as a university or college researcher/ educator representative for NCR-SARE's Administrative Council. Since 2002, Morrone has been an organic field crop and vegetable outreach specialist at Michigan State University (MSU). As a member of the MSU Center for Regional Food Systems, she is the "go to" person to provide farmers and educators with assistance with all aspects of organic production certification.

Erin Schneider has been elected as a farmer or rancher representative for the NCR-SARE Administrative Council. Schneider is a co-owner and steward of Hilltop Community Farm, a diversified CSA and orchard in La Valle, WI. She just completed a term as one of two North American delegates on the World Farmer Organization Women in Agriculture Committee, and is a member of the Wisconsin Farmers Union, Farmers Raising Ecologically Sustainable Healthy Food, and the Organic Fruit Growers Association.

Kevin Warner has been elected as an agribusiness representative on the NCR-SARE Administrative Council. Warner is a project coordinator at Fair Shares in Saint Louis, MO. Fair Shares operates as a food hub, utilizing a year-round CSA distribution model for 350 families. He is also co-president of Slow Food Saint Louis. In 2014, Warner led the writing and submission of a successful USDA AMS Local Food Promotion Program grant.

NCR-SARE would like to extend gratitude to Corrine Alexander, Jim Goodman, Edgar Hicks, and Jill Pritchard whose terms on the Administrative Council have come to an end.

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 www.MySARE.sare.org, or follow NCR-SARE on Facebook or Twitter to receive regular updates like these.

South Dakota rancher Linda Simmons received a SARE grant to experiment with reduced-pesticide fly control systems to help conserve beneficial insects like the dung beetle. This is SARE project FNC14-977.

With support from SARE, the Ohio Ecological Food and Farm Association has been sharing information with veterinarians and other livestock professionals who manage organic dairy herd health. This is SARE project ENC13-139.

Renewing the Countryside and FEAST Local Food Network's SARE project is bringing Slow Money to Minnesota. This is SARE project LNC14-360.

With SARE support, Daniel Roth conducted several comparisons related to leek production and leek clone production on his farm in Missouri. This is SARE project FNC13-928.

Now Available: Updated Guide to USDA Programs

The USDA has a wide range of financial assistance programs, but finding the right one can be difficult, complicated further by trying to stay up to date with changes in funding following each Farm Bill.

Thanks to the newly updated guide Building Sustainable Farms, Ranches and Communities: A Guide to Federal Programs for Sustainable Agriculture, Forestry, Entrepreneurship, Conservation, Food Systems, and Community Development, producers, researchers, nonprofits and landowners can find programs to help them achieve their goals.

The 86-page guide covers 63 government programs and has been updated to include programs included in the 2014 Farm Bill. Each listing provides a description of the program's available resources, information on how to apply, and in some cases, examples

of how the funding has been used. Additionally, the guide includes basic information on how to design sound projects, find appropriate programs and write grant applications.

"Building Sustainable Farms, Ranches and Communities provided me with concise, comprehensive, well-organized and userfriendly information on federal grant programs," says Mary Holland, a regional food systems entrepreneur who serves the Upper Midwest.

Beginning farmers faced with hefty start-up costs can use the guide to find grants and loans, in addition to technical assistance. Landowners will find opportunities to be compensated for participating in land and energy conservation programs. And experienced producers looking to conduct research to improve agricultural practices can find programs to help foster innovation on their farms.

The guide also opens doors for people who have never applied for USDA funding before.

Building Sustainable Farms, Ranches and Communities was developed through a partnership between the Michael Fields Agricultural Institute, the National Center for Appropriate Technology and the National Sustainable Agriculture Coalition, with support from SARE and other USDA agencies. The guide was first published in 1997 and this is the

4th update.



To download a free PDF of *Building Sustainable Farms, Ranches and Communities* and to learn how to order hard copies, visit www.sare. org/buildingsustainable-farms.

Michigan Researchers Combine Strip-Tillage and Cover Crops for Resource Conservation in Vegetable Crops

Innovative farmers are curious about the benefits of conservation agriculture practices, such as strip-tillage and cover cropping, for improving soils and reducing risks associated with extreme weather events. However, they have concerns about weed, insect, or disease management. Researchers at Michigan State University (MSU) are attempting to address some of these concerns as they investigate the impact of strip-tillage and cover crops on weeds, insects, crop yield, and profitability in sweet corn, snap beans, and cucurbit crops.

Daniel Brainard and Zsofia Szendrei, professors at MSU, had observed that strip-tillage in vegetable crops had the potential to provide multiple direct benefits relative to conventional tillage systems. They wanted to better understand the effects of reduced tillage and cover crops on pests and invest some time developing management practices for farmers to optimize strip-tillage systems for crop productivity.

With support from a 2011 \$169,853 NCR-SARE Research and Education grant, Brainard and Szendrei evaluated the effects of tillage, cover crops, and weed management practices on soils, pests, and profitability in a three year sweet corn - snap bean - cucurbit rotation.

"Given predicted increases in climate variability, the need for resilient cropping systems has never been more important," said Brainard. "Successful adoption of striptillage depends on understanding pest responses, and adjusting pest management practices including rates, types, and timings of pesticides, as well as complementary practices such as cover crops and stale seed beds to reduce the risk of crop yield losses in these systems."

Through a combination of long-term research farm trials, short-term on-farm trials, and grower interviews and surveys, Brainard and Szendrei observed improvements in soil moisture retention under strip-tillage, reductions in input costs, and equivalent or higher yields in snap beans, sweet corn, and pickling cucumber. They also identified the need for greater attention to weed management practices to address potential problems from build-up of weeds such as large crabgrass and horsenettle under strip-tillage. Growers involved in their research commented specifically on the moisture retention benefits of strip-tillage, as well as reduced soil splash on vegetables.

Brainard and Szendrei noted that cover crops, in some cases, improved soil moisture retention, reduced soil erosion, and helped suppress winter annual and summer annual broadleaf weeds. On the other hand, they reported that cover crop residues sometimes interfered with crop establishment and early growth, and also occasionally exacerbated insect pest problems.

Rough estimates show the publications and presentations from Brainard and Szendrei's SARE project reached more than 1,000 growers, who are now better equipped to decide whether and how to adopt strip-tillage on their farms.

"In climates like Michigan, each year is very different," said Brainard. "Having this rich set of data under diverse crops and weather conditions gives us deeper understanding of costs and benefits of conservation agricultural for vegetable systems, and greater confidence in providing useful recommendations to growers."

Read more about Brainard and Szendrei's NCR-SARE Research and Education grant and view tables and figures from their project on the SARE project reporting website. Simply search by the project number, LNC11-330 at www.mysare.sare.org, or contact the NCR-SARE office for more information.



These images from research plots at Michigan State University depict winter squash after a heavy rainfall. The image on the left is under conventional tillage, while the image on the right is under strip tillage with a rye cover crop. Photos by Daniel Brainard.

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Did you know NCR-SARE is on YouTube, Facebook, and Twitter? Keep track of our grant opportunities, projects, events, and more. Search for North Central Region SARE and follow us!

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ABOUT NCR-SARE

NCR-SARE funds cutting-edge projects every year through competitive grant programs, and has awarded more than \$50 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 a NCR-SARE grant? Before you write the grant proposal, determine a clear project goal, and engage in sustainable agriculture research on your topic. Need help determining which program is best suited for your project? Go to www.northcentralsare.org/Grants for more information, or contact the NCR-SARE office.

For more information about any of the NCR-SARE grant programs, go to www.northcentralsare.org/Grants or contact the NCR-SARE office at 612-626-3113 or ncrsare@umn.edu.

Photo Credits for this issue of Field Notes: Daniel Brainard, Marie Flanagan, Rachel Levi, Beth Nelson, Molly Rockamann, and Betsy Wieland.

NCR-SARE GRANT TIMELINES*

Farmer Rancher*

Early August - Call for Proposals Released Early December - Proposals Due February - Funding Decisions Spring - Funds Available to Recipients

Graduate Student*

March - Call for Proposals Released Early May - Proposals Due Late July - Funding Decisions September - Funds Available to Recipients

Research and Education*

August - Call for Preproposals Released Late October- Preproposals Due Late January - Full Proposals Invited April - Full Proposals Due Late July - Funding Decisions Fall - Funds Available to Recipient

Professional Development Program*

Late January - Call for Proposals Released Early April - Proposals Due Early August - Funding Decisions October - Funds Available to Recipient

Youth Educator*

Early August: Call for Proposals Released Mid November: Proposals Due February: Funding Decisions Spring: Funds Available to Recipients

Partnership*

Early August: Call for Proposals Released Late 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

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The compost pile intrigues visitors at Growing Power's urban farm in Milwaukee, WI. Photo by Marie Flanagan.