Outreach Effort in MN and IA Promotes Cover Crop Adoption

An NCR-SARE sponsored outreach project is using a farmer field school approach to increase cover crop adoption in IA and MN.

Sarah Carlson, Project Coordinator and Research and Policy Director at Practical Farmers of Iowa, is an agronomist who conducted on-farm research for her master’s thesis with several farmers. Practical Farmers of Iowa has been conducting on-farm research within their membership on cover crops since 1987.

Linda Meschke, project participant and Executive Director of Rural Advantage, learned about cover crops at an early age. Her father used cover crops on their beef farm in northern MN when establishing alfalfa or hay crops. In her adult life, Meschke covered the topic of cover crops as the Vocational Agriculture Instructor at Fairmont, MN schools despite the limited adoption in the area at that time. Rural Advantage supports sustainable agriculture initiatives that help to advance adoption and farmer learning about forward thinking agriculture practices through their third crop initiative.

“This has greatly freed up farmers time in the fall to get cover crops seeded and the airplane pilots are now beginning to transfer knowledge between each other on how to successfully plant cover crops using planes,” explained Carlson. “We have polled the pilots in the state of IA and surrounding states and are creating a cover crop business directory listing seedhouses, pilots and custom sprayers who can help farmers get this practice done.”

According to Carlson, the major outputs of this project will be farmer to farmer learning, on-farm cover crop demonstration, and outreach to increase the base knowledge levels of cover crops with farmers and resource agency staff in MN and IA. The goal is to use annual surveys to attempt to find the number of acres of cover crops planted directly due to our outreach efforts as well as the changes made by those already utilizing cover crops.

“SARE has a long history with cover crops,” said Carlson. “Many research projects have been conducted, but a campaign for increasing the visibility of that research seemed necessary. NCR-SARE seemed like the perfect funder for this type of research.”

Although the project began in 2009, the outreach is already resulting in more landowners understanding the multiple benefits of installing these conservation practices. For instance, the team is actively working with airplane pilots who want to aerial-seed cover crops before crops are harvested.

“Integrating cover crops into the cropping system can have significant impact on reducing soil, nitrogen, or phosphorous losses. In addition, cover crops can provide multiple other benefits, including building soil health, providing wildlife habitat, and reducing water flow off the landscape.”

Practical Farmers of Iowa and Rural Advantage wanted to partner to disseminate information to farmers and key participants through farmer field schools utilizing hands-on experience and practice with the crop field days and workshops to tell neighbors about cover crops, and also incorporate farmers’ knowledge to build a decision-making tool which could provide information for farmers in the entire NCR-SARE area. In 2009, the team submitted a proposal for an NCR-SARE Research and Education Grant program and was awarded $174,296.

“Sustainable Agriculture Research & Education

Cover Crops continued on pg. 2
Wisconsin hosts North Central meeting on “Scaling Up” Local, Sustainable Food Systems

by Lisa Bauer

Farmers markets, CSA farms, and other opportunities for consumers to buy fresh, local foods are popping up around every corner. Yet a 2010 USDA report found that direct-to-consumer sales accounted for only 0.4 percent of total agricultural sales in 2007, up from 0.3 percent in 1997.(1)

A growing group of people are interested in getting more local foods into the hands of more eaters -- and providing additional marketing channels for farmers to produce sustainable, local foods.

To explore new ideas for creating local food systems on a grander scale, the NCR-SARE’s Professional Development Program (PDP) hosted a 2-day conference in Madison, WI, September 28-29, 2010.

The overall goal for the training was development of a regional network of educators, working on scaling up local, sustainable food systems, who could actively share information and as a result be more effective in efforts to scale up “good food” systems in their states.

About 80 educators from the 12 North Central Region states attended in state teams. Twenty additional participants from other regions joined the training.

NCR-SARE PDP leaders asked state team members to make a one-year commitment to work on “scaling up,” starting with participation in a pre-conference webinar. The webinar, with 75 attendees, helped define “scaling up” and “sustainable foods” as well as introduced “Tiers of the Food System,” a conceptual framework for understanding different production and consumption relationships across food systems.(2)

Following the webinar, the conference in Madison provided participants with workshops and time to reflect, connect with educators in other states, and start on plans to scale up local foods in their own areas.

Michael Shuman, of the Business Alliance for Local Living Economies, offered a taped keynote on day one and joined the group live on day two to share his thought-provoking perspective on community food systems.

A diverse panel took the stage on day one to address critical challenges in aggregating, processing, and distributing local foods. Breakout sessions took two tracks. The farm track addressed production issues, such as multi-farm collaboration and post-harvest handling as well as farm economic issues, such as costs, marketing, and tools available. The community track looked at the impact of local food systems on community economics as well as challenges with local food supply chains.

Day two of the conference took participants to a variety of tour stops, including an entrepreneurial cheese factory, a grocery store incorporating local foods, a local foods processor/distributor, a University of Wisconsin commissary serving local foods, and a food cooperative.

The afternoon of day two allowed state teams to interact and plan, using the Healthy Food Systems Toolkit framework to discuss steps that teams and the regional effort can take to move ahead in the next year and the next five years.

“Scaling up” work doesn’t end here. The conference planning committee continues with a thorough training evaluation and planning for additional webinars.

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Cover Crops continued from page 1

The team believes that their method of having farmers to talk to each other at field days and conference workshops ensures that the knowledge being shared is as practical as possible.

“Cover crops are one piece of the puzzle to encourage 2-year row crop farmers to begin moving toward a longer rotation,” said Carlson.

“It also helps our more experienced farmers try very out of the box research projects and provide practical information for those farmers interested in going beyond the standard winter rye added to a corn or soybean system.”

The following organizations are jointly funding a University of Minnesota Extension Conservation Agronomist position housed at the Rural Advantage office: Greater Blue Earth River Basin Alliance, Bush Foundation, The McKnight Foundation, Steven Leuthold Foundation, NCR-SARE, Board of Water and Soil Resources (Clean Water Legacy Act grant), and the Minnesota Pollution Control Agency (Clean Water Partnership Phase II Implementation Grant Agreement).

Read more about this NCR-SARE Research and Education Grant Program project online on the SARE project reporting website. Simply search by the project number, LNC09-313, at http://www.sare.org/projects/ or contact the NCR-SARE office for more information at ncrsare@umn.edu.

SARE Resource: “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. Revised and updated in 2007, the 3rd edition includes new chapters on brassicas and mustards, six new farm profiles, as well as a comprehensive chapter on the use of cover crops in conservation tillage systems. Updates throughout are based on more than 100 new literature citations and consultations with cover crop researchers and practitioners around the country. Appendices include seed sources and a listing of cover crop experts. Download it for free or order a print copy online at http://www.sare.org/publications/covercrops.htm. Place an order by telephone by dialing (301) 374-9696.
Researchers at the University of Nebraska - Lincoln (UNL) have made new and ongoing research in the fields of organic and sustainable agriculture available online, for agriculture educators in particular.

Charles Francis, a UNL Agronomist, and Shannon Moncure, a training specialist for the State of Nebraska, wanted Extension and Natural Resources Conservation Service (NRCS) educators, high school vocational agriculture teachers, and public sector administrators in KS, NE, ND, and SD to become more knowledgeable about organic farming and ranching practices and system design.

While UNL offers a course in organic farming to undergrads and graduate students, Francis realized that much of this information was not being made easily available to many interested teachers and specialists in the western Great Plains region, including NRCS, Extension, and High School Vocational Agriculture teachers.

In 2006 Francis and several graduate students teamed up at UNL and submitted a proposal for a NCR-SARE Professional Development Program (PDP) Grant and were awarded $75,000 to develop a ‘train the trainers’ program to provide educators in NRCS, Extension, and high schools with practical information and hands-on experience in organic farming and ranching system practices and design. Ashley Colglazier, Justin VanWart, and Sam Wortman from the Department of Agronomy & Horticulture helped plan and guide the workshops across the region.

“The opportunity to spread information about sustainable agriculture and future practices and systems alternatives to key teachers, advisors, and decisions makers seems to us to be a key goal of the SARE program,” said Francis. “The administration and decisions on grants is regionalized, which makes this an ideal place to seek funding for region-specific programs, especially in education and professional development.”

Several training sessions were conducted throughout the region which offered new information and opportunities for networking and professional contacts. Based on the participation in workshops and feedback on surveys following the events, Francis and Moncure are convinced that bringing together farmers and educators from various agencies was highly successful in raising awareness about sustainable agriculture and specifically organic farming.

“Workshop participants expressed increased interest in organic agriculture and improved basic knowledge about organic inputs and practices, as well as marketing,” said Moncure. “This beginning - as well as the networking and personal connections afforded by interaction during workshops - may lead to greater and more in-depth understanding of organic agriculture. They will be able to integrate new ideas into their curricula and workshops, and even into their personal gardening and farming activities. As expressed by many workshop participants, listening to and talking with experienced organic farmers is highly attractive to this audience, and the resources we have offered, based on just such a wealth of knowledge, have been well-received by our core audience of educators.”

Along with the workshops, the team developed an online resource. Sustainable and organic agriculture educators, practitioners, and other interested parties received announcements about the renovated website. The website contains links to online videos, PowerPoint presentations, and other online resources to support agriculture educators as they teach about sustainable and organic agriculture.

In October, Organic Farming: The Ecological System (Francis, 2009) was published by the mainstream American Society of Agronomy, with influences from the work supported by the NCR-SARE grant project. The book relates farming practices, understanding of components and mechanisms, and design of systems using natural environments as models.

Read more about Francis and Moncure’s NCR-SARE PDP project online on the SARE project reporting website. Simply search by the project number, ENC06-092, at http://www.sare.org/projects/ or contact the NCR-SARE office for more information at ncrsare@umn.edu.
Wisconsin Farmers Explore Feeding Strategies for Pasture Raised Poultry

Three farms in the Mason, WI area concerned about health and safety of big barn chickens have created a how-to manual and a research bulletin that share information about feeding strategies for pasture raised poultry.

Pasture Perfect, LLC is a partnership of three farms - Great Oak, Wild Hollow, and Vranes farms. All three farms of Pasture Perfect Poultry started raising chickens for their own families due to concerns about the health and safety of big barn chickens. Each started selling to their neighbors and then to their neighbor’s neighbors.

After operating independently, they entered into a formal partnership in 2008 to cooperatively market and process chickens and turkeys under the Pasture Perfect Poultry brand. Each farm is currently raising 600-800 poultry per year with nearly 1,600 processed on the farms using a processing trailer built and owned by Pasture Perfect. The poultry are direct marketed to customers in Ashland and Bayfield County, WI. In addition to poultry, each farm is engaged in other farming practices including pastured lamb, pork, vegetables, eggs, fruit, and/or hazelnuts.

The birds are raised with a Day-Range pastured poultry system. The Day-Range system consists of a mobile pen, or “hoopie,” located within an electrified-fenced area. The system can maximize access to pasture, allow for freedom of movement, and reduce labor costs. All three operations had experience raising chickens using the Day-Range system and were natural problem solvers. They wanted to conduct on-farm research to determine the effectiveness of feeding strategies for maximizing forage intake and feed conversion of pasture raised broiler chickens in a Day-Range system.

In 2008, the group submitted a proposal to the NCR-SARE Farmer Rancher Grant program, and were awarded $6,209 to complete on-farm replicated feeding trials.

“SARE has a history of funding innovative projects, particularly for exploring alternative poultry production systems,” said Melissa Fishbach of Pasture Perfect. “We thought our project could answer a basic poultry production question while also serving as a model for other poultry research.”

It was hypothesized that feeding the chickens their entire daily ration once per day would allow the chickens to exhibit their natural foraging behavior and potentially increase their weight gain and feed utilization efficiency. Furthermore, the once per day feeding system could potentially reduce labor costs by requiring only one visit of the chickens each day.

According to the project team, based on the results of this Day-Range research, it appears that feeding the total daily ration between 11 am and 2 pm is a viable option and may even result in better feed utilization and higher finish weights.

According to Fishbach, the once-a-day feeding would equate to up to about 28 hours saved over the 4 week pasture grow-out period. Multiplied by an hourly wage of $12 per hour, feeding once per day could save up to $336 per batch of birds. Although the results were not consistent across all four batches tested, Fishbach indicated that the once-per-day feeding could impact the performance of the birds. A 0.5 lb average weight increase was observed at one of the batches, which equated to an extra $1.40 of revenue per bird, assuming a retail price of $2.85 per pound.

“In addition to the economic, environmental, and social impacts, our project demonstrates very real economic benefits,” said Fishbach. “Perhaps, more importantly, the research protocol outlined in our project will allow poultry producers to refine the pastured poultry production system and assist in decision making. We hope other pastured poultry projects will utilize our how-to manual to design their own experiments. We also hope the publications we developed will inspire other producers to document their projects will utilize our how-to manual to design their own experiments. We also hope the publications we developed will inspire other producers to document their projects will utilize our how-to manual to design their own experiments. We also hope the publications we developed will inspire other producers to document their production systems in similar detail.”

Two educational pieces were created as a result of the project, a research bulletin produced by Jason Fishbach of Bayfield County UW-Extension in cooperation with Pasture Perfect, and a how-to manual produced by Pasture Perfect. Both are available online, or in print by contacting the NCR-SARE office:


Read more about Pasture Perfect’s NCR-SARE Farmer Rancher Grant Program project online on the SARE project reporting website. Simply search by the project number, FNC08-729, at http://www.sare.org/projects/ or contact the NCR-SARE office for more information at ncrsare@umn.edu.
NCR-SARE Graduate Student grant recipient Meghann Jarchow and other Iowa State University (ISU) researchers say tallgrass prairies offer many other benefits to landowners in addition to fertile soil.

In 2009, the team submitted a proposal to the NCR-SARE Graduate Student Grant program and were awarded $9,965 to study how to incorporate native prairies into working farm landscapes.

"Before European settlement, more than 85% of IA was tallgrass prairie," said Jarchow. "By 2007, 64% of IA was cropped in either corn or soybean, and less than 0.1% of the land was tallgrass prairie. Increasing the amount of prairie in IA will improve environmental quality and the natural resource base on which IA agriculture depends and may also improve farmer profitability if the prairies provide a market-valued product."

Many of the benefits of tallgrass prairies are outlined in a new publication, *Incorporating Prairies into Multifunctional Landscapes*, written by Jarchow, a Ph.D. candidate in the ISU Department of Agronomy, and her advisor, Matt Liebman, ISU’s Henry A. Wallace Endowed Chair of Sustainable Agriculture. Jarchow provided many of the full-color photographs in the publication (right).

The research team is developing multi-year cropping systems for IA that integrate annuals and perennials. Their work will include establishment of prairies on IA farms, increased knowledge of prairies grown as biomass feedstocks, scientific and extension publications and presentations, and field days. They hope that increased farmer familiarity with the establishment, utility, and environmental benefits of native tallgrass prairies will encourage planting of prairies in agriculturally-dominated landscapes.

The publication looks at ways that prairies can be incorporated into farms, how they affect nearby crops, and resources to establish prairies.

The publication was sponsored by NCR-SARE, the Leopold Center, and ISU Agriculture and Natural Resource Extension. The publication can be downloaded, or printed copies requested at no charge from the ISU University Extension Online Store at: [https://www.extension.iastate.edu/store/](https://www.extension.iastate.edu/store/).

Read more about the ISU’s tallgrass prairie project online on the SARE project reporting website. Simply search by the project number, GNC09-107, at [http://www.sare.org/projects/](http://www.sare.org/projects/) or contact the NCR-SARE office for more information at [ncrsare@umn.edu](mailto:ncrsare@umn.edu).

Beth Nelson to Serve as Associate Director for NCR-SARE

Beth Nelson has been hired as the Associate Director for the NCR-SARE program, a new position at NCR-SARE. Housed at the University of Minnesota, Saint Paul campus, Nelson will support the NCR-SARE Research and Education and Graduate Student grant programs administratively, and provide leadership for SARE within the region.

Prior to coming to her new position with NCR-SARE, Nelson served as the Minnesota Sustainable Agriculture Coordinator for NCR-SARE since 2004. She facilitated SARE-supported educator professional development in sustainable agriculture in Minnesota, and promoted other SARE research and education opportunities.

Nelson earned graduate degrees in plant physiology at Purdue University and the University of Minnesota before joining the Minnesota Institute for Sustainable Agriculture (MISA) as the Associate Program Director for the Information Exchange Program in 2000. MISA is a partnership between the University of Minnesota and the Sustainers’ Coalition.

"I’m looking forward to working more closely with the grant programs," said Nelson. "SARE grantees are so innovative—I know the things that grantees are researching today will be making headlines a few years down the road! I’m also looking forward to working with the Administractive Council."
The MacArthur Foundation announced NCR-SARE Grant recipient and University of Minnesota Professor of Entomology, Marla Spivak, as a 2010 Genius Award recipient for her pioneering research into the genetics and behavior of honey bees, as well as her passion for beekeeper education.

Spivak’s NCR-SARE-funded research, spanning more than a decade, has focused largely on identifying and breeding for the traits that allow honey bees to defend themselves against parasites such as the Varroa mite, a particularly destructive pest. In addition, she has worked to develop effective sampling strategies that help beekeepers accurately assess parasite infestation in their colonies, which in turn can help them make better decisions about using costly treatments.

Spivak is the second NCR-SARE-supported innovator to win a MacArthur grant in recent years. Will Allen, a 2008 winner, is a pioneer in urban agricultural practices and in building local food systems that benefit poor inner-city residents.


To order print copies ($23.50 plus $5.95 s/h) visit www.sare.org/WebStore, call (301) 374-9696, or write to SARE Outreach, PO Box 753, Waldorf, Maryland 20604-0753. (Please specify title requested when ordering by mail.) Allow 3-4 weeks for delivery. Call (301) 374-9696 for more information on bulk, rush, or international shipments.

Scaling Up Local Food Systems continued from pg. 2

Each state team will work on scaling up local sustainable food systems from their own unique perspective and with their own resources.

To see conference presentations and resources, go to http://fyi.uwex.edu/aic/local-food/scaling-up/

(1) Martinez, Steve; Hand, Michael; Da Pra, Michelle; Pollack, Susan; Ralston, Katherine; Smith, Travis; Vogel, Stephen; Clark, Shellye; Lohr, Luanne; Low, Sarah and Newman, Constance. Local Food Systems: Concepts, Impacts, and Issues. Economic Research Report No. (ERR-97) 87 pp, May 2010.


Lisa Bauer is a freelance writer/editor/project manager, stationed in Madison, WI, but working on sustainable agriculture issues across the North Central region. She kicked off her career as NCR-SARE’s first communications specialist.
NCR-SARE, in cooperation with the Nebraska Great Plains Resource Conservation & Development Council (RC&D) and Iowa Golden Hills Resource Conservation & Development (RC&D), conducted public listening sessions at three locations in east-central NE and southwest IA to discuss increasing the sustainability of their agriculture.

The NCR-SARE listening sessions serve as an opportunity to bring together people with differing viewpoints within a community of place to share their perspectives of sustainability and agriculture. Reports resulting from the listening sessions serve as a respected information source on the status and prospects of sustainable agriculture and as such guide the Administrative Council that directs the NCR-SARE competitive grants and other programs.

“The purpose for the listening sessions is for NCR-SARE to learn from residents of the region what is on peoples’ minds, what NCR-SARE is doing well, and what we might change to better meet the needs of people who live in the region,” said Bill Wilcke, Regional Coordinator of NCR-SARE.

NCR-SARE and the RC&Ds partnered with cooperative extension and community colleges to provide public meeting facilities in Lincoln, NE, Omaha, NE, and Council Bluffs, IA. The sessions took place in late September, 2010, in Lincoln, NE at the University of Nebraska-Lincoln Extension Office, Council Bluffs, IA, at Iowa Western Community College, and Omaha, NE at Metropolitan Community College.

“Southwest Iowa and east central Nebraska form a natural ‘food shed’ based on the naturally occurring flow of goods and services between the rural countryside and the metropolitan areas, explained Norman Hanson, Chairperson of the Nebraska Great Plains RC&D.

To discover how the communities of Lincoln and Omaha, NE and Council Bluffs, IA are defining sustainability in their area, listening sessions were held in each of the communities during a three-day visit by NCR-SARE researchers and educators. The sessions included facilitated discussions, tours, and question and answer periods, among other activities.

Grounding their perceptions in visits to local community gardens, small-scale producers, and programs to foster future growers, the participants then listened at each location as stakeholders in the local food system discussed their perceptions of current trends and how their communities will sustain food production and distribution in the future.

After an introduction ice-breaker that generated ideas defining community, participants were asked a round of questions in each listening session. They received a handout with the questions as they registered and the questions were posted as the group discussed them. Questions addressed topics such as trends in rural and urban food systems, community and regional challenges for food systems, observed successes in urban and rural communities, perceptions of sustainable agriculture, and the future of food systems.

Some of the major trends addressed by participants included: an increase in local production and distribution, a decreased proportion of farming to production needs, an increased need for effective and accurate communications about food systems and regulations, gaps between the pricing and affordability of land and food, the availability of food sources, an increased awareness of health and food relationship, a need for more reliable education/knowledge at all intersections in the food system, a need for employment security for all in food delivery system, and the need for more and younger farmers.

A summary of findings and the data that support the conclusions and recommendations for next steps was developed. It will help guide NCR-SARE in its effective design and distribution of grants.

In order to generate and disseminate sound and practical information and to increase the sustainability of agriculture, NCR-SARE will continue to listen and respond to groups and communities of farmers, ranchers, researchers, and extension agents throughout the region. Suggestions of where listening sessions should take place are welcome and you can direct ideas to ncrsare@umn.edu.
ABOUT NCR-SARE

NCR-SARE has awarded more than $40 million worth of competitive grants to farmers and ranchers, researchers, students, educators, public and private institutions, nonprofit groups, and others exploring sustainable agriculture in 12 states.

NCR-SARE funds cutting-edge projects every year through grant programs.

Are you interested in becoming a project coordinator 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 http://sare.org/ncrsare/apply.htm for more information, or contact the NCR-SARE office.

For more information about any of the NCR-SARE grant programs, go to http://sare.org/ncrsare/cfp.htm or contact the NCR-SARE office at 612-626-3113 or ncrsare@umn.edu.

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GRANT PROGRAM TIMELINES*

Farmer Rancher Grant Timeline
- Early August: Call for Proposals
- Early December: Proposals Due
- March: Proposal Status Notification
- Spring: Funds Available to Recipients

Graduate Student Grant Timeline
- Fall: Call for Proposals
- January: Proposals Due
- March: Funding Decisions
- Fall: Funds Available to Recipients

Research and Education Grant Timeline
- April: Call for Pre-Proposals
- June: Pre-Proposals Due
- Early Fall: Preproposal Notification
- Late Fall: Full Proposals Due
- March: Funding Decisions Made
- Fall: Funds Available to Recipient

Professional Development Grant Timeline
- Late March: Call for Pre-Proposals
- Late May: Pre-Proposals Due
- Late June: Preproposal Notification
- Late August: Full Proposals Due
- November: Funding Decisions Made
- Early Spring: Funds Available to Recipient

Youth and Youth Educator Grant Timeline
- Early August: Call for Proposals
- Mid January: Proposals Due
- March: Proposal Status Notification
- Spring: Funds Available to Recipients

*Timelines are subject to change.