NORTH CENTRAL SARE
Sustainable Agriculture Research & Education
www.northcentralsare.org

AGRICULTURE PROJECTS FUNDED IN MINNESOTA

by USDA's
Sustainable Agriculture Research and Education (SARE) Program
1988-2019

Minnesota has been awarded $12,315,924 grants to support 300 projects, including but not limited to, 72 research and/or education projects, 32 professional development projects and 131 producer-led projects. Minnesota has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE support	Project Leaders
LNC19-415	Empowering sustainable farmers with proactive, community-centered farm law education, resources, and networks.	$198,199	Rachel Armstrong Farm Commons
LNC19-423	Summer Cover Crop System Management: New options for Upper Midwest vegetable producers	$199,803	Dr.Julie Grossman University of Minnesota
LNC19-427	Promoting manure composting for livestock operations	$50,000	Chryseis Modderman University of Minnesota Extension
LNC18-406	Intercropping the Perennial Grain Kernza® with Legumes for Sustained Economics and Environmental Benefits	$199,946	Jacob Jungers
LNC17-395	Deep Winter Food Production in the North Central Region	$196,423	Greg Schweser Regional Sustainable Development Partnerships
LNC17-398	Winter Camelina: New cash crop opportunities for sustainable sugar beet production	$199,999	M. Scott Wells University of Minnesota
LNC17-392	Collaborative Evaluation of Ecosystem Services Provided by Urban Agricultural Best Management Practices in the Twin Cities Metropolitan Area	$198,529	Dr.Nicolas Jelinski University of Minnesota
LNC16-379	Evaluating Measurement Techniques of Pasture Productivity to Document Benefits of Enhanced Grazing Systems	$109,771	Dr.Rod Greder University of Minnesota Extension
LNC14-360	Reweaving the Economic Fabric to Support Sustainable Farms and Ag-based Businesses	$199,634	Jan Joannides Renewing the Countryside
LNC14-364	Bringing the Benefits of Legume Cover Crops to Northern Midwest Climates	$114,497	Dr.Julie Grossman University of Minnesota
LNC13-353	Promoting Sustainable Biological Control of the Soybean Aphid by Examining the Effect of Biodiversity on	$178,558	Dr.George Heimpel University of Minnesota

	Releases of the Parasitoid Wasp Aphelinus glycinis		
LNC12-342	When Farming Reality Doesn't Match the Business Plan	$165,293.60	Kent Solberg Sustainable Farming Association
LNC11-334	Connecting Sustainable Farmers to Emerging Health Care Markets	$162,952	Anna Claussen Institute for Agriculture and Trade Policy Karen Quiroz Institute for Agriculture and Trade Policy
LNC11-336	Organic Beans and Peas: Nutritious and Gluten-free Local Foods	$199,217	Dr.Craig Sheaffer University of Minnesota
LNC10-325	Agripreneur Training Center	$166,900	Kat Vann Main Street Project Edward Ritchie Main Street Project
LNC10-328	Developing Hazelnut Germplasm for the Upper Midwest	$175,000	Dr.Lois Braun Research Associate
LNC10-320	Building Capacity for Local Foods Infrastructure Development	$171,079	Dr.Kathryn Draeger University of Minnesota Regional Sustainable Development Partnerships Greg Schweser Regional Sustainable Development Partnerships
LNC09-313	Farmer field school approach to increasing cover crop adoption in Iowa and Minnesota	$174,295.73	Sarah Carlson Practical Farmers of Iowa
LNC09-315	Sustainable Inquiry Research and Education Network (SIREN)	$156,336	Pauline Nickel SW Research & Outreach Center
LNC09-316	The role of imidacloprid systemic insecticide on colony collapse disorder of honey bees and decline of bumble bee pollinators	$175,000	Dr.Vera Krischik UMinnesota
LNC08-294	Antibiotic Uptake by Vegetable Crops from Manure-Applied Soils	$139,420	Dr.Satish Gupta University of Minneota
LNC08-296	Behavior Manipulation of the Multicolored Asian Lady Beetle in Midwest Vineyards: Novel Repellants and Attractants for a Sustainable IPM "Push-pull" Strategy	$114,030	Eric Burkness University of Minnesota
LNC08-301	Indigenous Corn Restoration Project	$150,000	Winona LaDuke White Earth Land Recovery Project
LNC06-275	Alternative Bedding and Management of Composting bedded Pack Dairy Barns	$150,000	Jeffrey Reneau University of Minnesota
LNC05-263	Ag Diversification on the Airwaves – Diversification Broadcasts to Inform and Inspire	$124,535	Meg Moynihan Minnesota Department of Agriculture
LNC05-264	Reducing Pesticide Use in Honey Bee	$150,000	Marla Spivak

	Colonies through Sound Sampling and Treatment Procedures		University of Minnesota
LNC04-246	Green Eating and Vacationing in Minnesota: Eat and Play to Support Sustainable Agriculture	$150,000	Jan Joannides Renewing the Countryside
LNC04-248	Traditional Community Agriculture Restoration	$150,000	Winona LaDuke White Earth Land Recovery Project
LNC03-226	Enhancing Pasture Productivity by Improving Winter Survival of Perennial Ryegrass	$149,998	Paul Peterson University of Minnesota
LNC03-229	Experiential Learning Opportunities for Graduate and Undergraduate Students	$60,000	Helene Murray University of Minnesota
LNC03-231	Microbial Safety of Organic Fruits and Vegetables	$139,650	Francisco Diez-Gonzalez University of Minnesota
LNC03-232	“Livestock Your Way” Series Publications: Producer Guides to Goal Setting and Management Options for Dairy and Poultry Enterprises in the Upper Midwest	$73,500	Meg Moynihan Minnesota Department of Agriculture
LNC02-202	A Sustainable Approach to Reducing Pesticide and Antibiotic Use in Honey Bee Colonies	$99,600	Marla Spivak University of Minnesota
LNC02-204	Policy Research and Development to Support Multiple Benefits from Agriculture: Phase II	$95,350	Carolyn van Schaik Land Stewardship Project
LNC02-209	New Immigrant Agriculture Project	$69,000	Glen Hill Minnesota Food Association
LNC02-214	The Occurrence of Antibiotic Resistant Bacteria in Manure, Manure-Applied Fields, and Pets on the Farm	$99,835	Dr.Satish Gupta University of Minneota
LNC02-219	Restoring Native Perennial Legumes for Forage, Feed and Food	$100,000	Donald Wyse University of Minnesota
LNC01-188	Evaluating Open-Pollinated Corn Varieties	$75,300	Zeno Wicks, III South Dakota State University
LNC01-192	Beginning Farmer Program: Evaluation and Expansion	$96,430	Karen Stettler Land Stewardship Project
LNC00-200	Getting a Handle on the Barriers to Financing Sustainable Agriculture	$69,043	Carolyn van Schaik Land Stewardship Project
LNC00-168	Phosphorus Mobilization and Weed Suppression by Buckwheat.	$50,000	Jim Stordahl University of Minnesota Extension Service
LNC00-177	Managed Intensive Rotational Grazing	$13,629	Julie Klocker

	for Farms Affected by Urban Growth		
LNC00-179	Assessing soil quality changes in alternative and conventional cropping systems	$93,300	Deborah Allan University of Minnesota
LNC99-146	Economic Analysis and Policy Development To Support Multiple Social, Economic and Environmental Benefits Produced by Farms	$92,840	Mara Krinke Land Stewardship Project George Boody Land Stewardship Project
LNC99-149	Strategies for Conversion to Organic Production Systems	$96,472	Elizabeth Dyck University of Minnesota, Southwest Experiment Station
LNC99-152.1	A Sustainable Approach to Controlling Varroa Mites of Honey Bees	$86,286	Marla Spivak University of Minnesota
LNC99-155	Native Perennial Legumes: New Species for Grazing Systems	$100,000	Nancy Ehlke University of Minnesota
LNC99-161.1	People to People: Enhancing the Quality of Life and Profitability of Family Farms	$58,000	Lynda Converse Sustainable Farming Assn of Central Minnesota
LNC99-145	Presenting NCR SARE Research Results in the Context of Whole Farm Planning	$85,000	Diane Jensen The Minnesota Project John Lamb The Minnesota Project Inc
LNC98-128	Congregationally Supported Agriculture	$38,900	Phillip Arnold Center Chapter Sustainable Farming Assn
LNC98-133	Strengthening Links Between Meat Producers, Processors, and Consumers	$6,000	Jenifer Buckley Sustainable Farming Association of Northeast Minnesota
LNC98-134	Perennial Legumes for Sustainable Pasture Systems	$99,800	Dr.Craig Sheaffer University of Minnesota
LNC98-136	Addressing Agricultural Practices and Water Quality Issues through Youth-Developed Decision Cases	$41,498	Marla Reicks Dept of Food Science and Nutrition, University of Minnesota
LNC97-111	Farm Beginnings: An Educational Training and Support Program to Establish Young Dairy Farmers in Southeast Minnesota	$90,000	Chuck Schwartau Goodhue County Extension
LNC97-117	A Sustainable Approach to Controlling Mite Pests of Honey Bees	$78,750	Marla Spivak University of Minnesota
LNC96-109	Packaging, Testing, and Disseminating a Set of Indicators for Ecological, Financial, and Social Monitoring on Farms	$88,000	George Boody Land Stewardship Project
LNC96-098	People to People: Sustainable Agriculture Networking for Farmers and Rural Communities	$97,000	DeEtta Bilek Sustainable Farming Association of Minnesota

LNC96-103	Experiential Learning Activities for an Undergraduate Minor in Sustainable Agriculture Systems	$122,732	Dr.Craig Sheaffer University of Minnesota
LNC95-090	Weed Control for More Sustainable Soybean Production	$80,000	Nicholas Jordan Dept of Agronomy and Plant Genetics, University of Minnesota
LNC95-092	Obstacles to Market Access for Family Farm Hog Producers	$50,180	Mark Schultz Land Stewardship Project
LNC94-067	Future Farmers in Sustainable Agriculture	$20,800	Leslie Reindl Minnesota Food Association
LNC94-075	Biological, Financial, and Social Monitoring to Develop Highly Sustainable Farming Systems	$50,000	George Boody Land Stewardship Project
LNC93-058	Annual Medics: New Legumes for Sustainable Farming Systems in the Midwest	$130,000	Dr.Craig Sheaffer University of Minnesota
LNC92-045	Midwest Alternative Agriculture Education Network	$120,000	Patrick Moore Land Stewardship Project
LNC91-034	Strip Cropping Systems to Reduce Energy Inputs and Optimize Profitability	$53,000	Gyles Randall University of Minnesota
LNC90-011.2	The Middle Border On-Farm Research Consortium	$113,580	Patrick Moore Land Stewardship Project
LNC90-027	Rotational Grazing Systems for Wisconsin and Minnesota Dairy Farmers – An Evaluation of Animal and Forage Performance and Whole-Farm Socio-Economic Analysis	$118,700	Dr.Craig Sheaffer University of Minnesota
LNC89-011.1	The Middle Border On-Farm Research Consortium	$107,697	Audrey Arner Land Stewardship Project
LNC89-020.1	Performance and Economics of a Low-Input Feeder Swine Operation	$21,700	Carlos Pijoan College of Veterinary Medicine
LNC88-001	Integration of Conservation Tillage, Animal Manures, and Cultural Pest Control in Corn	$98,500	David Andow University of Minnesota
LNC88-011	The Middle Border On-Farm Research and Information Network	$75,000	Patrick Moore Land Stewardship Project
LNC88-020	Performance and Economics of a Low-Input Farrow to Feeder Swine Operation	$42,100	Carlos Pijoan College of Veterinary Medicine

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE support	Project Leaders

ENC19-178	Professional Development Program for Silvopasture Adoption	$89,530	Theresa Keaveny Sustainable Farming Association of MN
ENE19-154	Building the Resiliency of Farms through Farm Law Education of Agriculture Professionals	$155,725	Rachel Armstrong REAP Food Group
ENC18-164	Sustainable Farm Law 101 for Agriculture Professionals and Educators	$74,947	Rachel Armstrong Farm Commons
ENC18-171	Blazing Trails through the Jungle of Food Regulations	$67,086	Helene Murray MN Institute for Sus. Agric., Univ. of MN
ENC18-170	Trying Times: Tools to Understand and Alleviate Farm Stress	$72,714	Meg Moynihan Minnesota Department of Agriculture
ENC17-158	SFA Networking for Soil Health	$75,000	Theresa Keaveny Sustainable Farming Association of MN
ENC17-160	Training an Influential Network of Farming, Beekeeping and Extension Experts to Promote Bee Health	$75,000	Rebecca Masterman
ENC16-151	Empowering Professionals with Sustainable Farm Law	$70,613	Rachel Armstrong Farm Commons
ENC15-145	Soil Health and Nutrient Management Training for Immigrant and Minority Farming Communities	$74,760	Dr.Julie Grossman University of Minnesota
ENC15-147	Networking for Soil Health	$75,000	Wayne Monsen Sustainable Farming Association Kent Solberg Sustainable Farming Association
ENC13-140	The Conservation Biological Control Short Course	$71,710	Eric Mader The Xerces Society
ENC13-141	Integrating Continuous Living Cover (CLC) into Farming Systems through Professional Development	$74,658	Richard Warner Green Lands Blue Waters
ENC12-135	Growing a Network of GAPs Educators in the Upper Midwest	$74,385	Michele Schermann University of Minnesota Annalisa Hultberg University of Minnesota
ENC10-114	Sustainable Poultry, Pastures, Soils, and Vegetable Education in Minnesota	$73,952	Timothy Arlt University of Minnesota Extension
ENC09-110	Building Extension Capacity in the North Central Region to Address Agricultural Energy Use	$74,919	Patrick Walsh UW-Madison Scott Sanford University of Wisconsin-Madison
ENC08-104	Building Minnesota's Farm to School Policy and Infrastructure through	$75,000	Stephanie Heim University of Minnesota - Extension

	University of Minnesota Extension and Community Partnerships		
ENC07-097	Sustainable Renewable Energy Training for Agriculture and Natural Resource Professionals	$50,000	Karen Quiroz Institute for Agriculture and Trade Policy Jim Kleinschmit Institute for Agriculture and Trade Policy
ENC06-091	Organic Dairy Short Course for Ag Professionals	$66,250	Meg Moynihan Minnesota Department of Agriculture
ENC05-086	Conservation Planning Training for Private Sector Agronomy Service and Local Conservation Agencies	$53,562	Tim Gieseke Minnesota Project
ENC04-080	Food Alliance Workshops: Helping Extension Educators Build Community Food Systems with Certified, Sustainable Agricultural Practices	$13,645	Jim Ennis
ENC04-083	A Tri-State Expansion: Educator Training using the Farm Beginnings Model	$74,856	Catherine Twohig Land Stewardship Project
ENC03-073	Smarter Farmers, Smarter Lenders: Educating Toward a Sustainable Community	$90,000	Carolyn van Schaik Land Stewardship Project
ENC02-069	Business Planning for Alternative Enterprises – Train the Trainer Program	$62,775	Robert Craven University of Minnesota
ENC02-064	Bringing Farmland Conservation-Based Estate Planning to Agricultural Professionals	$83,314	Julia Freedgood American Farmland Trust
ENC02-065	Elementary Organics: Multi-track Training for Minnesota's Agricultural Educators and Advisors	$59,360	Meg Moynihan Minnesota Department of Agriculture
ENC02-068	Supporting Community with Retail and Institutional Food Service; Keeping it Safe, Legal and Local	$42,206	Audrey Arner Land Stewardship Project
ENC01-062	Getting a handle on the barriers to financing sustainable agriculture	$69,043	Carolyn van Schaik Land Stewardship Project
ENC99-038	"Training on Grazing and Monitoring Riparian Corridors in Minnesota and Wisconsin"	$71,110	Carolyn van Schaik Land Stewardship Project
ENC97-019	Minnesota Sustainable Farming Association Chapter Networking	$41,600	DeEtta Bilek Sustainable Farming Association of Minnesota
ENC96-014	Decision Cases for Sustainable Agriculture: A Video Training Project for Professional Development	$52,380	Helene Murray MN Institute for Sus. Agric., Univ. of MN
ENC95-009	A Comprehensive Educational Program for "Training the Trainers" in Sustainable Agriculture in Minnesota, Wisconsin, and Iowa	$108,905	Helene Murray MN Institute for Sus. Agric., Univ. of MN
ENC95-005	Life After CRP	$30,000	Peter Buesseler

FARMER/RANCHER GRANTS

Project #	Project Title	SARE support	Project Leaders
FNC19-1188	Effects of Non-Chemical Pest Control on the Profitability of Day-Neutral Strawberry Production in the Midwest	$8,998	Dr.Andrew Petran Twin Cities Berry Company
FNC19-1202	Malting Organic Oats, Heritage Wheats, and Heritage Barley	$26,978	Noreen Thomas Doubting Thomas Farms
FNC19-1153	Expanded production of Hanchotte (Coccinia abyssinica), a tropical root crop under the Mid-West climatic conditions	$8,930	Kano Banjaw Rome Farm
FNC19-1193	Grazing Sheep in an Upper Midwest Vineyard to Control Vegetation	$11,340	Kami Schoenfeld Circle S Cattle and Lambs
FNC19-1160	Sustaining the Sugar Bush in a Tribal Community to Educate, Reduce Fuel Usage and Increase Marketable Maple Sap Products.	$9,000	Eric Dupuis Dupuis Sugarbush
FNC19-1165	Mobile Unit to Facilitate More Intensive Rotational Grazing	$25,383	Dr.Rod Greder University of Minnesota Extension
FNC19-1171	Expanding cover crop use through interseeding into established vegetable plantings	$8,947	Dana Jokela Sogn Valley Farm
FNC18-1144	Skalko Bee Farm	$7,500	John Skalko Skalko's Honey Bee Farm
FNC17-1099	Does Open-Pollinated Corn Have a Place on Today's Organic Farm?	$6,008	Stanley Smith Stanley Smith
FNC17-1102	The Minnesota Hmong Agriculture Cooperative's Aggregation and Value-added Program	$19,350	Phenhli Thao Minnesota Hmong Agriculture Cooperative
FNC17-1107	Building a Virtual On-Line Food Hub for Small Scale Sustainable Farms in Rural Areas	$15,000	Jacquelyn Zita Women's Environmental Institute
FNC17-1108	Integrating Cover Crop Seeding and Strip Tillage into a One Pass System	$6,650	Lee Thompson Lane Ridge Farms Dan Coffman NA
FNC16-1048	Assessing the Value of Hay Litter During Winter Bale Grazing	$12,139	John Mesko Lighthouse Farm
FNC16-1063	Increasing Soil Health and Infiltration with Cover Crops	$7,398	Vernon Uit De Flesch Uit de Flesch Farms
FNC16-1042	Anishinaabe Traditional Food	$15,000	Winona LaDuke

	Restoration for Local and Market Consumption		Winona LaDuke Heritage Farm
FNC16-1047	Subsurface Irrigation ' Aerogation to Improve Productivity and Reduce Nutrient Movement	$7,460	Russ Martie Russ Martie Farm
FNC15-1002	Intensive Rotational Grazing with Sheep on Riparian Land to Target Invasive Reed Canary Grass and Common Buckthorn	$7,477	Nancy Lunzer Farm / Ranch
FNC15-1022	Native Youth Plant a Bee Meadow	$7,500	Joy Persall Peta Wakan Tipi/Dream of Wild Health
FNC14-960	Open Source Solutions for Vineyard Health Management	$7,500	Stephen Lunak Flying L Ranch Vineyard
FNC14-964	Cover Crop Network Costshare	$22,340	Robin Moore Land Stewardship Project Taylor Morical Morical Farms
FNC14-965	Developing Profitable and Sustainable Fiber Markets in Southern Minnesota	$19,800	Jean Mueller State of Minnesota
FNC14-974	Adapting Cover Crops to Northern Climate Conventional Cropping Systems	$22,471	Troy Salzer Carlton County Extension Abe Mach Mach Farms
FNC14-948	Management of the Spotted Wing Drosophila using High Tunnels	$14,850	Erik Gundacker Scenic Valley Farm
FNC13-909	Water Capture from High Tunnel Diversion into Irrigation System using Renewable Energy	$7,499	Cherry Flowers Page & Flowers
FNC13-914	White Earth Land Recovery Project Fish Fertilizer Project	$7,500	Winona LaDuke White Earth Land Recovery Project
FNC13-925	Developing Commercial Elderberry Production in Minnesota	$14,980	Christopher Patton Midwest Elderberry Cooperative
FNC12-870	Profiles of Farmers in Sustainable Agriculture	$14,634.25	Tim King Whole Farm Cooperative
FNC12-874	Developing Soil Fertility Systems for Urban Agriculture in the Upper Midwest	$7,239	Alexander Liebman Stone's Throw Urban Farm
FNC12-890	Sustainable Straw Based Animal Welfare Friendly Growing Unit for Hogs	$7,450	Paul Sobocinski
FNC12-894	Heron Lake Watershed District Cover Crop Demonstration Project	$6,642	Jan Voit Heron Lake Watershed District
FNC12-860	Finishing Time And Weights Of Grass-	$19,829	Jane Jewett

	Fed Beef Animals		WillowSedge Farm
FNC10-803	Mobile Farmers' Market	$6,000	Diane Wilson Peta Wakan Tipi
FNC10-807	Bio char Kiln Fabrication and Operation	$3,893	John Topic self
FNC10-831	Small-Scale Oilseed Processing: Evaluating Edible Camelina Oil for its Market Demand and Value-Added Opportunities	$5,999.81	Phillip Batalden Kathleen Batalden Smith Omega Maiden Oils
FNC10-838	Control of Buckthorn with Hogs, Cutting Feed Costs with Food Waste	$5,979.08	Nancy Lunzer Farm / Ranch
FNC10-840	Scaling Up to Meet Market Demand for Local, Organic Broccoli	$16,932	Linda Halley Aaron Blyth Big River Farms Chris Blanchard Purple Pitchfork
FNC10-842	Big Bluestem Management Using High Density/Short Duration Grazing	$5,907	Leslea Hodgson Root Prairie Galloways
FNC09-788	White Earth Goat Maanadikoshensag Project	$18,000	Winona LaDuke White Earth Land Recovery Project
FNC09-747	Creating a Sustainable Year-Round Greenhouse Cropping System Using Straw-bale Culture and LED Lighting	$6,000	Karen Weiss
FNC09-749	Growing Blackberries Organically under High Tunnels for Winter Protection and Increased Production	$5,100	Craig Gundacker Erik Gundacker Scenic Valley Farm
FNC09-758	Comparing the pasture restoration potential and financial viability of Cornish Cross vs. Red Broilers, in combination with heritage pastured hogs, for a small pastured poultry operation in NE Minnesota	$3,867	Cindy Hale Clover Valley Farms, LLC Jeff Hall Clover Valley Farms, LLC
FNC09-760	Examine the benefits of winter kill Sorghum-Sudan grass (Sudex) as a weed suppressing mulch in tomato production	$3,650	Katie Cramer Cramer Organics
FNC09-762	Kenyan Women's Community Sustainable Farming (CSF) Project: Cultivation of Mwangani (Cleome gynandra)	$17,286.50	Elizabeth Kackman Thomas Kackman
FNC09-777	How does the rotational grazing of poultry on cover crop land on a vegetable farm affect soil health and economic success?	$6,000	Mark Boen Bluebird Gardens
FNC08-704	City Backyard Farming	$6,000	Xe Susane Moua

FNC08-722	Build it and they will come: Integrating beneficial beetle habitat with organic growing systems economically	$6,000	Juan Carlos Cervantes Celestial Harvest, Inc
FNC08-723	Increasing Safety and Sustainability and Reducing the Use of Pesticides and Other Farm Chemicals Among Hmong Farmers	$18,000	Ly Vang
FNC08-727	Indoor cultivation of mushrooms to diversify farm and test local markets	$3,699.10	Inga Haugen
FNC08-734	The Minnesota African Women Sustainable Backyard Farming Project	$17,981	Siona Nchotu
FNC08-740	Native Youth Teach Healthy Diets (Learning to Love Vegetables!)	$5,952	Diane Wilson Peta Wakan Tipi
FNC07-686	Supporting the Environment and Healthy Food for Latino Markets	$15,410	Alma Edelia Ramos Margarito Ramos
FNC07-694	Nutritional Values of Hmong Plants and Herbs	$6,000	Mhonpaj Lee
FNC07-664	Utilizing Warm-Season Grasses in Forage Production in a Changing Climate	$5,700	Jerry Tourtillot
FNC07-677	Winter Plant Protection On Blueberries in Northern Minnesota	$3,996	Al Ringer
FNC06-605	Equine Forestry: Promotion of a Low-Impact Forest Harvesting Method	$6,000	Tim Carroll Cedar River Horse Logging
FNC06-610	Lake Superior Chapter SFA Farm Beginnings Program	$9,155	Cree Bradley Lake Superior Chapter, Sustainable Farming Assoc Mark Thell Lake Superior Chapter Sustainable Farming Assoc
FNC06-642	Improved Productivity in Winter Greenhouse	$1,565	Carol Ford
FNC06-643	Impacts of Aeration Incorporation of Turkey Litter on the Yield and Quality of Alfalfa Production in Northern Minnesota	$5,902	Jerry Tourtillott
FNC05-563	Determining the Relationship Between and Economics of Consistent Rate of Gain and Intermuscular Fat (high in CLA & Omega 3)	$17,195	Don Struxness
FNC05-569	Dream of Wild Health Indigenous Corn Propagation Program	$6,000	Sally Auger
FNC04-506	Designing and Validating Plant	$13,733	Paula Westmoreland

	Communities/Cropping Systems for Multiple Benefits		
FNC04-511	Connecting Meat Goat Producers to Existing Ethnic Consumers	$5,000	Bob Hassett
FNC04-515	Advanced Techniques for Sustained Marketing Success of Team Farmers	$17,146	Constance Kartens
FNC04-516	Commercial Production of Osmia Lignaria in Minnesota	$6,000	Eric Mader
FNC04-529	Evaluation of Raspberries Grown in High Tunnels for a Northern Climate	$6,000	Lois Hoffbauer
FNC04-539	Improved Management of Rye Cover Crops for Organic Soybean Production	$16,150	Don DeWeerd
FNC04-498	Decorative Woody Florals Learning Circle	$9,454	Michele Skogrand
FNC04-544	Sustainable Small Farm Promotion Using Novel Market Stand	$3,960	Sean Albiston Blue Roof Organics
FNC04-501	How Fall Cutting Versus Fall Residue Affects Yield and Quality of Alfalfa the Next Year	$5,600	Fred Keller
FNC04-546	Expanding Consumer Interest & Home Gardeners' Use of Heritage Tomato	$2,181	Ardie Eckardt
FNC03-454	Adding Value to Honey Products Through the use of Melissopalynology Techniques	$6,000	Brian Fredericksen Ames Farm
FNC03-472	Restoration of Traditional Anishinaabeg Agricultural Practices, Utilizing the Three Sisters Gardening Method	$6,000	Winona LaDuke White Earth Land Recovery Project
FNC03-478	Using a Vertical Shoot Position Trellis and Micro-Nutrients to Reduce Labor and Increase Fruit Set	$2,502	Tim Gieseke Minnesota Project
FNC03-480	Dream of Wild Health, a Project of Peta Wakan Tipi	$6,000	Sally Auger
FNC03-483	Developing a Saskatoon Berry Market in the Upper Midwest	$5,310	Patricia Altrichter
FNC03-487	Yield and Feeding Value of Annual Crops Planted for Emergency Forage in Minnesota	$5,150	David Sjostrom
FNC02-396	Testing the Use of a Modified Crop Rotation System to Control Colorado	$6,000	Janaki Fisher-Merritt

	Potato Beetle		
FNC02-415	Utilizing Water Conservation and Infiltration for Black Walnut Production	$2,645	Tim Gieseke Minnesota Project
FNC02-429	Producing High Levels of CLA in Grassfed Beef in an Area with a Short Growing Season	$17,908	Don Struxness
FNC02-434	Promoting Healthy Maple Forests	$9,545	Bruce Savage
FNC02-438	Compost Heat for Group Nursing	$6,000	Dennis Rabe
FNC01-377	Sustainable Straw Based Farrowing System Modified After the Swedish Model	$4,973	Paul Sobocinski
FNC01-378	Utilizing Bats to Control Agricultural Pests	$2,600	Joe Lancaster Wilder Forest Farm
FNC01-379	Comparison of Winter Farrowing Techniques on 4 Farms for High Value Pork Production for Niman Ranch	$14,481	Dave Serfling
FNC01-337	Zumbro Rover Watershed Cover Crop Project	$5,000	Andy Hart
FNC01-347	Four Season Production in a Northern Climate Greenhouse	$3,896	Charles Knierim
FNC01-358	Marketing Sustainable Wood Products	$14,850	Tom McMillin
FNC01-362	Organic Hog Production Using Several Organic Feed Rations as Compared with Conventional Hog Production	$11,034	Warren Roberts
FNC01-363	Reducing Heating Costs in Greenhouses	$14,991	Roger Peterson
FNC00-303	Specialty Poultry and Egg Marketing to Asian Markets in Minneapolis/St. Paul Metro Area for the B/S Poultry Cooperative	$5,000	Chong X Vang
FNC00-312	Evaluation of Christmas Tree Varieties for Northern MN	$4,962	Jesse Hoffbauer
FNC00-324	Promoting and Distributing PastureLand Products	$10,000	Dan French
FNC00-290	Expanding, Enhancing and Diversifying Sales with Team Farmer Marketing	$14,850	Constance Kartens

FNC00-296	Dairy Marketing Options	$9,900	Mike Salber
FNC00-300	Dream of Wild Health Network	$5,000	Sally Auger
FNC00-301	Heritage Maize Project	$14,997	Frank J Kutka
FNC99-288	Growing Various Species of Angelica as a Forest Crop in the Midwest	$4,971	Rose Haywood
FNC99-253	Farm on Wheels, Marketing to the Consumer	$5,000	Linda Noble
FNC99-254	South Central Minnesota Sustainable Farming Association Marketing Club	$1,595	Nancy Aspelund
FNC99-256	Year-Round Renewably Heated and Powered Greenhouse	$4,997	Steven Schwen
FNC99-267	Integration of Intensive Sheep Grazing with a Vineyard/Orchard Operation	$5,000	Michael Burke
FNC99-282	Using a Confinement Building as a Deep-bedded Building Based on Hoop House Principles	$4,700	Dwight Ault
FNC98-210	Keep the Cows in the Corn, Even during the Winter Stoms	$4,997	Don Struxness
FNC98-221	Creating and Expanding Direct Markets for Sustainable Products	$5,000	Dennis Rabe
FNC98-234	Low Environmental Impact Establishment of Hybrid Poplar Plantation	$2,790	Michael Nohner
FNC98-208	Sustainable Hog Production in Old Farm Buildings	$4,770	Dave Serfling
FNC97-165	Feeding the Saints	$9,650	Tim King
FNC97-169	Development of Cultivation Equipment for Diversified Vegetable Production	$3,194	Joe Lancaster Wilder Forest Farm
FNC97-177	Cattle, Grass and Streams: Can They Work Together as a Sustainable Ecosystem?	$4,690	Ralph Lentz

FNC97-178	Native Minnesota Medicinal Production Feasibility Study	$5,000	Renne Soberg
FNC97-182	Increased Pasture Profits through South African Dorper Sheep	$1,790	Michael Burke
FNC97-190	Diversifying a Small Crop Farm with Hogs, Poultry, Apples and Plums	$1,536	Nancy Aspelund
FNC97-194	Community-based Marketing with the World Wide Web	$9,992	Lee Ann Van Der Pol
FNC96-145	Pipestone Lamb Marketing Project	$10,000	Michael Fruechte
FNC96-147	Sheep Offal Composting Project	$9,580	John Essame
FNC96-156	Prairie Farmers Co-op Producer-owned Livestock Processing and Marketing	$10,000	Dennis Timmerman
FNC96-158	Hog Production in an Existing Facility Using Swedish Techniques	$5,000	Lyle Haroldson
FNC95-089	Winter Farrowing in a Low-input System	$3,991	James Van Der Pol
FNC95-091	Living Mulches in Minnesota Wheat	$1,373	Dave Birong
FNC95-098	Harvesting Wildflower Seed Crops from Marginal Land	$1,819	Frank J Kutka
FNC95-102	Developing Weed Control Methods for Organic Raspberry Production	$4,700	Kevin Edberg
FNC94-072	Wild Flowers on Marginal Lands	$3,775	Frank J Kutka
FNC94-078	Incorporating Rotational Grazing into Conventional Dairy Enterprise	$4,961	Randy Meyer
FNC94-088	Multi-Phase Swedish-Style Hog Structure with Attached Pastures	$3,095	Nolan Jungclaus
FNC93-033	Evaluating Productivity of Various Pasture Species by Utilizing Comsec Pasture Gauge and Bulk Density Plates	$3,920	Dan French
FNC93-034	Hazelnut Windbreak Adds Diversity	$4,125	Phillip Brase

FNC93-045	Comparing Composted and Raw Manure in Crop Production	$1,600	Rich Vander Ziel
FNC93-051	CRP Acres — Pastures or Crop Production	$5,000	Charles Cornillie (deceased)
FNC93-053	Establishment of Warm Season Grasses and Interseeding Legumes into Cool Season Pastures	$3,500	Ted Rolling
FNC92-007	Weed Control and Fertility Comparisons in Solid Seeded and 30″ Row Soybeans	$4,974	David Michaelson River GLO Farms
FNC92-013	Weed Control in Sugar Beet Production Utilizing Ridge Tillage and Cover Crops	$5,000	Alan Brutlag

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE support	Project Leaders
GNC19-276	Field implementation of botanical repellents for organic management of spotted-wing drosophila (Drosophila suzukii) in small fruit	$8,266	Matthew Gullickson University of Minnesota Mary Rogers University of Minnesota
GNC18-267	Farm to Fridge: Assessing Need and Availability of Underutilized Refrigeration in Rural Grocery Stores for Use by Fruit and Vegetable Farmers	$12,000	Nicholas Jordan Ren Olive
GNC17-235	Enhancing edge-of-field woodchip bioreactors to reduce nitrogen leaching using bioaugmentation and biostimulation	$11,929	Dr.Satoshi Ishii University of Minnesota Emily Anderson University of Minnesota
GNC17-245	Identification and pyramiding of candidate genes controlling adult plant resistance in oats against crown rust disease	$11,999	Shahryar Kianian USDA Eric Nazareno University of Minnesota
GNC17-252	Assessing agroecosystem services and end-use malting quality of winter barley in a soybean-winter barley double cropping system in the Upper Midwest	$11,986	Dr.Kevin Smith University of Minnesota Becky Zhong University of Minnesota
GNC16-218	Determination of Decomposition Rates of Cover Crop Residues and Their Nutrient Release Characteristics	$11,906	Dr.Daniel Kaiser University of Minnesota Sabrina Badger University of Minnesota, Department of Agronomy and Plant Genetics
GNC16-224	Agroecosystem Impact of Relay and Double Cropping winter Annual Oilseeds in Corn and Soybean	$11,902	Donald Wyse University of Minnesota Cody Hoerning University of Minnesota
GNC16-229	Maximizing Pollinator Protection and Natural Pest Suppression in Minnesota Fruit and Vegetable Crops	$12,000	Dr.Ian MacRae University of Minnesota, Department of Entomology Eric Middleton University of Minnesota
GNC16-232	Cover Crop Cold Tolerance for High	$10,875	Dr.Julie Grossman

	Tunnels		University of Minnesota Elizabeth Perkus University of Minnesota
GNC15-204	Identification of Native Minnesota/Midwestern U.S. Hop (Humulus lupulus L.) Communities as a Resource for Novel Disease Resistance Traits	$9,808	Dr.Angela Orshinsky University of Minnesota Joshua Havill Univeristy of Minnesota
GNC15-213	Evaluating Alternative Host Plant Use of Spotted Wing Drosophila, Drosophila suzukii	$10,000	Christopher Philips University of Minnesota Grace Sward University of Minnesota
GNC15-214	Ecologically-based Pest Management Strategies for Imported Cabbageworm in Broccoli	$9,394	Mary Rogers University of Minnesota Aimee Talbot University of Minnesota
GNC15-215	Evaluating Sustainable Alternatives of Rootstock Selections in Grafted Tomatoes to Enhance Yield Potential in High Tunnel and Field Production	$9,900	Dr.Emily Hoover University of Minnesota Richard Traugott UMN
GNC14-187	Improving Soil Health and Microbial Activity through Zone Tillage and Innovative Cover Cropping Strategies	$9,995	Dr.Julie Grossman University of Minnesota Peyton Ginakes University of Minnesota
GNC13-169	Assessing Nitrogen and Carbon Pools in a Perennial Biomass Alley Cropping System in Minnesota U.S.A.	$9,719	Dr.Craig Sheaffer University of Minnesota Joshua Gamble University of Minnesota
GNC13-170	Integrating Host-Plant Resistance and Insecticides for Sustainable Soybean Aphid Management	$9,938	Dr.Robert Koch Department of Entomology, University of Minnesota Anthony Hanson University of Minnesota
GNC12-150	Effect of Growth Meat Quality, and Profitability of Organically Raised Dairy-Beef Steers	$9,445	Dr.Bradley Heins University of Minnesota Elizabeth Bjorklund University of Minnesota
GNC12-152	Integrating Sustainable Agriculture with K-12 Curriculum through School Garden/Orchards: a Pre-Service Teacher Training	$9,987	Dr.Cindy Hale University of Minnesota Duluth Brian Bluhm University of Minnesota Duluth
GNC12-153	Benefits of Propolis to Honey Bee Health and Immunity	$9,900	Marla Spivak University of Minnesota Renata Borba University of Minnesota
GNC12-159	Improving Perennial Ryegrass Seed Production in Northern Minnesota: Developing Metabolomics-Assisted Selection Techniques for Crown and Stem Rust Resistant Cultivar Development	$9,997	Dr.Eric Watkins University of Minnesota Eric Koeritz University of Minnesota
GNC10-137	Profiling Microbial Communities in Soils from Organic, Sustainable, and Conventional Cropping Systems	$9,999	Dr.Craig Sheaffer University of Minnesota Donald Wyse University of Minnesota Dr.Adria Fernandez University of Minnesota
GNC10-131	Reducing Manure and N Fertilizer Inputs	$9,919	Jeff Coulter

	in Alfalfa-Corn Rotations		University of Minnesota Matt Yost Utah State University
GNC09-102	The effects of Nosema ceranae infection on honey bee health and Colony Collapse Disorder	$10,000	Marla Spivak University of Minnesota Michael Goblirsch University of Minnesota - Department of Entomology
GNC09-104	Reducing Pre-weaning Mortality in Loose-Housed Farrowing Systems	$9,980	Dr.Yuzhi Li University of Minnesota Christina Phillips University of Minnesota
GNC07-075	Evaluating Rye Germplasm for Use as a Cover Crop in the Upper Midwest	$9,898	Paul Porter University of Minnesota Michael Kantar University of Minnesota
GNC07-083	Determination of volatile compounds that elicit removal of diseased brood by hygienic honey bees.	$10,000	Marla Spivak University of Minnesota Jodi Swanson University of Minnesota
GNC06-059	Analysis of Travel Patterns of Bison and Cattle on Native Nebraska Sandhills Rangeland	$9,807	Charles Butterfield Chadron State College Andrew Cassiday Chadron State College
GNC06-071	Breeding and Development of Perennial Sunflower and Perennial Flax Varieties for Low-Input Agriculture	$9,700	Donald Wyse University of Minnesota Brent Hulke University of Minnesota
GNC06-072	Comparison of Use and Chemical Composition of Propolis Collected by U.S. Honey Bees	$10,000	Marla Spivak University of Minnesota Michael Simone University of Minnesota, Dept Ecol., Evol. & Behav
GNC05-042	Nitrogen Fertilization for Hybrid Hazelnuts in the Upper Midwest	$9,589	Jeffrey Gillman University of Minnesota Dr.Lois Braun Research Associate
GNC05-054	Use of green manures to reduce inoculum production of Fusarium graminearum on wheat residues	$10,000	Dr.Ruth Dill-Macky University of Minnesota Dr.Linda Kinkel University of Minnesota Carlos Perez University of Minnesota
GNC04-034	The title of the project: From Beneficial Insect to Economic Pest: a Sustainable Management to the Asian Lady Beetle in Midwestern Grapes	$9,633	William Hutchison Univeristy of Minnesota Tederson Galvan University of Minnesota
GNC03-023	Comparing Vesicular-Arbuscular Mycorrhizal Colonization in Conventional versus Organic Strawberry Production Systems	$10,000	Dr.Emily Hoover University of Minnesota Marjorie Ross University of Minnesota
GNC03-024	Systems Evaluation of the Components of Reduced Input Dairy Farms	$9,620	Dennis Johnson
GNC02-004	Reproductive Success and Survival of Grassland Passerines in an Agriculture Landscape: the Contribution of Alternate	$10,000	Vernon Cardwell Melissa Driscoll University of Minnesota

	Grazing Systems to Bird Population Viability		
GNC02-005	The Effect of Crop-Weed Gene Flow on the Competitive Ability of Weedy Sunflower	$10,000	Donald Wyse University of Minnesota Ruth Shaw University of Minnesota Kristin L Mercer University of Minnesota

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE support	Project Leaders
ONC19-053	A Comprehensive Curriculum for Cold Climate Grapevine Production: Practical Skills for the Novice and Vineyard Manager	$38,390	Dr.Matthew Clark University of Minnesota
ONC19-058	Building farmer capacity to produce and market vegetable seed in Minnesota through seed production trials and education	$40,000	Kitt Healy Organic Seed Alliance
ONC18-043	Increasing value-added opportunities through on-farm food service: Research, resources & field days	$29,992	Brett Olson Renewing the Countryside
ONC17-029	High Tunnel Immigrant Farmer Training and Demonstration Plot	$30,000	Nick Mabe The Good Acre
ONC16-016	Building Capacity via Peer-to-Peer Food Safety Education with Hmong-American Fruit and Vegetable Farmers	$29,897	Annalisa Hultberg University of Minnesota
ONC16-019	Causes of Honey Bee Queen Failure in Commercial Beekeeping Operations	$30,000	Marla Spivak University of Minnesota
ONC16-015	On Farm Research to Quantify the Value of Cover Crops for Nutrient Crediting	$30,000	Spencer Herbert Minnesota Department of Agriculture Aicam Laacouri Minnesota Department of Agriculture
ONC15-003	Maximizing Pollinator Services from Native Bees	$29,964	Dr.Karl Foord University of Minnesota
ONC15-009	Shifting Local Trends with Cover Crops and Short Season Corn	$29,870	Robin Moore Land Stewardship Project

YOUTH EDUCATOR GRANTS

Project #	Project Title	SARE support	Project Leaders
YENC19-133	Murray Middle School's Sustainable Agriculture and Forestry Grant Proposal - Soil to Table with Cultural Relevance	$2,900	Timothy Chase Murray Middle School
YENC19-137	Educating urban youth via decision cases and curriculum on hoop house vegetable production	$4,000	Dr.Julie Grossman University of Minnesota Illiana Livstrom University of MN Anne Pfeiffer University of Minnesota
YENC18-129	Sustainable Agriculture Internship	$2,000	Carley Rice

	Including Study of Compost Nutrient Cycling in Urban Agriculture		Spark-Y
YENC18-131	Arts US Young Growers!	$1,999	Roi Ward
YENC18-123	Expanding Career Success and Environmental Stewardship Through Beekeeping Education	$2,000	James Hansen Lyle Public School
YENC15-085	Big River Farms Youth & Family Engagement Program – a Project of the Minnesota Food Association	$2,000	Laura Hedeen Minnesota Food Association
YENC12-055	Community Youth Education Program through Stone's Throw Urban Farm	$1,986.74	Anna French
YENC09-021	Intergenerational Farm Experience	$1,972	Chianeng Thao Association for the Advancement of Hmong Women in Minnesota Ly Vang Association for the Advancement of Hmong Women in Mnnesota
YENC08-001	Seed to Seed: Riverway Learning Community Gardening Project	$2,000	Jacqueline K M Paulsen Riverway Learning Community

YOUTH GRANTS

Project #	Project Title	SARE support	Project Leaders
YNC10-062	Learning to Spin: Turning Wool into Yarn	$393.90	Nelson Morlock Seven Story Farm
YNC09-031	Hunting for Farmers	$398.03	Chandler Trout
YNC09-035	RecROOTing Seniors to Sprout	$397.75	Sarah Anderson
YNC09-039	Beneficial Bees from a Teenager's Perspective	$393.74	Amanda King
YNC09-045	Moving Midget White Turkeys off the Critical List	$400	Joshua King
YNC08-022	Goat Birthing Process and Meat Goat Grooming Videos	$400	Tia Muller
YNC08-014	Maple Syrup Making	$221.79	Michaela Handke
YNC08-002	Utilizing A Barrel of Space	$400	Dillon Boen Bluebird Gardens
YNC08-016	Eat Healthy, Garden to Eat – Eat to Live	$400	Annemarie Esther Keller

PDP STATE PROGRAM GRANTS

Project #	Project Title	SARE support	Project Leaders
NCMN19-001	Minnesota 2019-20 SARE State Plan of Work	$130,000	Kate Seager Minnesota Institute for Sustainable Agriculture Wayne Martin University of Minnesota
NCMN17-001	Minnesota Annual State Report	$110,000	Kate Seager Minnesota Institute for Sustainable Agriculture

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$12,315,924

For further information on projects, contact North Central SARE at (612) 626-3113 or ncrsare@umn.edu.

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