

What is SARE?

Since 1988, the Sustainable Agriculture Research & Education (SARE) program has been the go-to USDA grants and outreach program for farmers, ranchers, researchers and educators who want to develop innovations that improve farm profitability, protect water and land, and revitalize communities. To date, SARE has awarded over \$310 million to more than 7,433 initiatives.

SARE is grassroots with far-reaching impact

Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

SARE communicates results

SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining an online library of practical publications, grantee-produced information products and other educational materials.



www.sare.org

SARE: Advancing the Frontier of Sustainable Agriculture in...

Michigan

Project Highlight: *Developing Michigan's Local, Pasture-Based, Beef Production System*

Whether it's on dinner tables, in restaurants, in schools or at markets, consumers are seeking more local food. In 2010, the Traverse Bay Economic Development Corporation and Michigan Good Food Charter set a goal to source 20 percent of the food for the Traverse City area within a 100-mile radius by 2020. When Michigan State University's Jason Rowntree read that the meat portion of the plan was to be pasture-based if possible, he was inspired.

Rowntree set off to develop a local, pasture-based beef production system for Northwest Michigan. In 2012, he received a SARE grant to connect area beef producers, processors, distributors and retailers to meet Traverse City's 20 percent local-food benchmark. Rowntree's plan included identifying producers to participate in a value chain project called the Grand Vision Grass-fed Certification Program (GVGC), and after three years of participating in the GVGC program, seven producers are now producing grass-fed beef at scale and earning price premiums of 25 percent above the market rate. They also hosted seven pasture walks/field days attended by over 200 people in total, advancing their knowledge of grass-fed beef.

For more information on this project, see sare.org/projects, and search for project number [LNC12-345](#).

SARE in Michigan

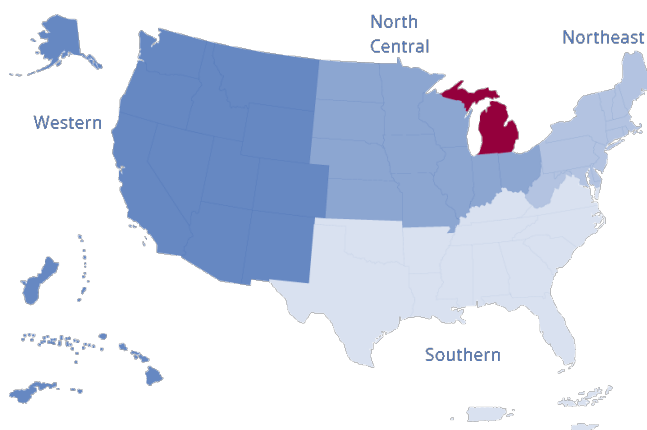
northcentral.sare.org/state-programs/michigan

\$7,849,606
in total funding

275 grant projects

(since 1988)

For a complete list of grant projects state by state, go to www.sare.org/state-summaries



SARE Grants in Michigan

Total awards: 275 grants



127 Farmer/Rancher
47 Graduate Student
4 On Farm
Research/Partnership
22 Professional Development Program
45 Research and Education
6 Youth
24 Youth Educator

Total funding: \$7,849,606



\$996,130 Farmer/Rancher
\$490,763 Graduate Student
\$111,755 On Farm
Research/Partnership
\$1,289,669 Professional Development Program
\$4,910,158 Research and Education
\$2,319 Youth
\$48,812 Youth Educator

Find a complete list of projects on page 3.

SARE's Impact



53 percent

of producers report using a new production technique after reading a SARE publication.

79 percent

of producers said they improved soil quality through their SARE project.

64 percent

of producers said their SARE project helped them achieve higher sales.

Learn about local impacts at:

northcentral.sare.org/state-programs/michigan

Contact Your SARE State Coordinator

SARE sustainable ag coordinators run state-level educational programs for Extension and other ag professionals, and many help grant applicants and recipients with planning and outreach. Visit northcentral.sare.org/state-pages/michigan to learn more.

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For detailed information on SARE projects, go to

www.SARE.org

SARE is funded by the USDA's National Institute of Food and Agriculture (NIFA).

This report includes summaries of competitive grant programs only. Some competitive grant programs that are no longer offered may be included or excluded from the totals in this report depending on the grant program and SARE region.



AGRICULTURE PROJECTS FUNDED IN MICHIGAN

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

Michigan has been awarded \$7,849,606 grants to support 271 projects, including but not limited to, 41 research and/or education projects, 22 professional development projects and 127 producer-led projects. Michigan has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
LNC20-435	Development and delivery of post-harvest spotted wing Drosophila cultural control tactics for for NCR tart cherry growers	\$208,507	Dr. Matthew Grieshop Michigan State University
LNC20-437	Values and adoption in regenerative grazing practices and associated wellbeing outcomes for cow-calf producers	\$249,999	Dr. Jennifer Hodbod Michigan State University
LNC20-442	Strategies for Adaptive Resilience in Sustainable Agriculture for Beginning and Historically Underserved Farmers	\$199,997	Jennifer Silveri Michigan Integrated Food and Farming Systems (MIFFS)
LNC19-416	Cultivating a morel mushroom industry in the North Central United States	\$199,993	Dr. Gregory Bonito Michigan State University
LNC19-430	Eastern Upper Michigan Sustainable Agriculture Curriculum Initiative	\$199,987	Dr. Steve Yanni Bay Mills Community College
LNC18-413	Enhancing healthfulness and demand of Upper Midwestern, locally produced beef	\$199,149	Dr. Jason Rowntree Michigan State University
LNC17-394	Land-Based Learning Centers: A multi-generational educational approach to promoting on-farm sustainable agriculture	\$151,408	Dr. Matt Raven Michigan State University
LNC14-361	Insectary Plants to Enhance Beneficial Insects: Expanding the Palette to Increase Options for Sustainable Crop Production in the NC Region	\$199,887	Dr. Douglas Landis Michigan State University
LNC12-343	Non-Antibiotic Alternatives for Bovine Mastitis Therapy	\$199,912	Dr. Bo Norby Michigan State University
LNC12-344	On-farm Organic Soybean Variety Trials	\$199,153	Robert Battel MSU Extension Daniel Rossman Michigan State University Extension
LNC12-345	A Local Pasture-Based Beef Production System for Northwest Michigan	\$181,342	Dr. Jason Rowntree Michigan State University
LNC11-330	Combining Strip-Tillage and Cover Crops for Resource Conservation and Profit in North Central Vegetable Cropping Systems	\$169,853	Daniel Brainard Michigan State University

LNC08-302	Connecting Landowners, Growers and Markets Using Purchase of Development Rights (PDR)	\$20,900	Barry Lonik Ann Arbor Township
LNC08-307	Diversity – The Continuing Face of Sustainable Agriculture	\$100,000	Barbara Norman Michigan Food and Farming Systems
LNC08-297	Native Plant Conservation Strips for Sustainable Pollination and Pest Control in Fruit Crops	\$148,837	Dr.Rufus Isaacs Dr. Brett Blaauw Michigan State University
LNC07-276	No-till pumpkins using cover crops	\$131,420	Dr.Dale Mutch Michigan State University Extension
LNC07-281	Developing pest management guidelines for organic production of highbush blueberries in the North Central Region	\$149,991	Dr.Annemiek Schilder Michigan State University
LNC06-267	Farmers’ Markets: A Real Opportunity for Michigan Fruit and Vegetable Growers	\$76,600	Dr.Jim Bingen Michigan State University
LNC06-268	Examining the Sustainability of Copper Use for Disease Management and Horticultural Benefit in Tart Cherry Systems	\$145,500	George Sundin Michigan State University
LNC04-244	Integrating Cropping and Nutrient Management Systems on Grass-Based Dairies with Manure Slurry Enriched Micro-Site Seeding	\$137,849	Timothy Harrigan Biosystems and Agricultural Engineering
LNC04-249	Utilizing Native Plants to Enhance Insect and Weed Biological Control	\$150,000	Dr.Douglas Landis Michigan State University
LNC04-251	One year’s seeding: a seedbank approach to sustainable weed management	\$149,903	Karen Renner Michigan State University
LNC03-234	Calcium Inputs for Soil Quality Improvement	\$102,771	Bernard Knezek Michigan State University
LNC02-203	Determining Adaptation of Mono- and Binary Mixtures of Improved Red and Ladino Clovers and Perennial Grasses, Including Perennial Ryegrasses, in the Great Lakes Region	\$94,344	Dr.Richard Leep Richard Leep Consulting
LNC02-215	Multi-Cultural Farmer Mentors	\$99,880	Thomas Guthrie, Jr Michigan Integrated Food and Farming Systems
LNC02-217	User/Grower Educational Materials and Training for Polyethylene Film High Tunnel Winter Production and Harvesting of Organic Salad Greens and Vegetables	\$43,274	John Biernbaum Michigan State University
LNC01-186	Educational Materials and Training that Foster Implementation of Ecologically Based Pest Management Decision-Making in Great Lakes Apple Production	\$63,117	David Epstein Michigan State University
LNC01-187	Earthworks Garden and Poultry Urban CSA	\$99,706	Ashley Atkinson Hunger Action Coalition

LNC01-195.1	Innovative Tart Cherry Orchard Systems: Design, Evaluation, and Demonstration	\$90,742	David Epstein Michigan State University
LNC99-159	Financial Indicators of Sustainability on Michigan Farms	\$27,900	John Durling Michigan Agricultural Stewardship Assn, Crop Soil Sciences Dept
LNC98-139	Innovative Tart Cherry Orchard Systems: Design, Evaluation, and Demonstration	\$75,000	Charles Edson IPM Program, Center for Integrated Plant Systems, Michigan State University
LNC97-112	Enhancing Adoption of Sustainable Agriculture Practices via Farmer-Driven Research	\$100,405	Dr.Dale Mutch Michigan State University Extension
LNC95-082	Domestic Birds as Weed and Insect Pest Biocontrol Agents: Field Experimentation and On-Farm Evaluation	\$25,200	Laura Delind
LNC95-085	Ecological Principles of Habitat Management for Weed and Insect Biological Control	\$94,923	Dr.Douglas Landis Michigan State University
LNC94-064	Integrated System for Sustainability of High Value Field Crops	\$73,000	James LeCureux Michigan State University Extension
LNC93-057	Improving Nitrogen Utilization with Rotation and Cover Crops	\$93,799	Richard Harwood Michigan State University
LNC92-052	The Adoption of LISA Techniques of Pest Management by North Central Fruit Growers	\$42,410	Craig Harris Michigan State University
LNC91-022.1	Development and Demonstration of Methods toward Sustainable Apple Production: Continuation of Systems Integration	\$18,000	Stuart Gage Michigan State University
LNC91-039	A Landscape Ecological Perspective in Insect and Weed Population Regulation in Low-Input and Conventional Systems	\$75,000	Dr.Douglas Landis Michigan State University
LNC91-041	Legume Management Research for VA Mycorrhizal Enhancement in Potato Production	\$96,000	Gene Safir Michigan State University
LNC89-022	Development and Demonstration of Methods toward Sustainable Apple Production	\$24,500	Stuart Gage Michigan State University

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
ENC20-194	Improved sustainable agriculture outreach through behavior-change focused outreach toolkit	\$86,391	Adam Reimer National Wildlife Federation
ENC20-189	Soil Health Nexus: Strengthening Soil Health Programs for Educators and Farmers/Ranchers in the North Central Region	\$90,000	Christina Curell Michigan State University Extension
ENC19-182	Training Agricultural Professionals on Innovative Online Tools for Conservation Planning and Implementation	\$68,058	Erica Rogers Michigan State University Extension

ENC18-169	Advancing Watershed Health Through Watershed Champions	\$74,993	Adam Reimer National Wildlife Federation
ENC12-130	Enhancing the Integrated Pest Management Academy to Provide Professional Development Opportunities for Agricultural Educators that Increase Economically and Environmentally Sustainable Agriculture in Michigan	\$72,484	Erin Lizotte MSU Extension, Suite 400
ENC11-127	Ensuring Sustainable Agriculture in the Face of a Changing Climate	\$74,286	Dr.Tapan Pathak University of Nebraska Julie Doll Michigan State University
ENC09-112	Hoophouse and Organic Farming for Ag Lenders	\$25,329	Vicki Morrone Michigan State University Dr.Susan Smalley Michigan State University
ENC06-088	The New Agriculture Network: an organic farming forum for education and research	\$75,000	Dr.Dale Mutch Michigan State University Extension
ENC06-090	Enhancing the Capacity of Educators and Farm Leaders to work with Socially Disadvantaged Latino Farmers	\$33,750	Juan Marinez Michigan State University
ENC04-081	Community Food Issues: Sustainable Agricultural in Community Development	\$75,000	Mike Hamm Community, Agriculture, Recreation & Resource Stud
ENC02-063	Professional Development - Holistic Management Training	\$146,300	Benjamin Bartlett Michigan State University
ENC01-060	Manure Nutrient Recycling and Environmental Assurance	\$75,075	Natalie Rector MSU Extension
ENC01-061	Crop Ecology Education	\$58,480	George Bird Michigan State University
ENC99-044	Building Human Capital for Value Added Marketing	\$55,180	Natalie Rector MSU Extension
ENC98-029	Michigan Field Crop Ecology: Training and Field Demonstrations	\$47,677	Natalie Rector MSU Extension
ENC97-012.1	Self-Directed Participatory Agent Learning	\$53,700	Natalie Rector MSU Extension
ENC97-024	Improving the Environment for Community Supported Agriculture in Michigan, Ohio, and Indiana	\$23,966	Laura Delind
ENC96-011	Accessing Community-Based Information Sources for Improving Surface Water Quality	\$14,300	Rich Bowman Grand Valley State University
ENC96-012	Participatory Learning Between Farms and Field Crop Area of Expertise Team Members	\$48,200	Natalie Rector MSU Extension
ENC96-017	In-Service Training in Sustainable Agriculture and Agricultural Ecology for NRCS Personnel and Partners	\$30,000	Lawrence Dyer Kellogg Biological Station / Extension

ENC95-003C	Developing Educational Materials and Schools for Sustainable and Profitable Grazing Systems	\$31,500	Dr. Richard Leep Richard Leep Consulting
ENC95-004	Local Sustainable Agriculture Team Building: A Sustainable Agriculture Training Model	\$30,000	Russ LaRowe Michigan Agricultural Stewardship Association

FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FNC20-1233	Organic IPM for Swede Midge on Small-Scale, Diversified Vegetable Farms	\$7,604	Sarah Longstreth Good Stead Farm
FNC20-1255	The Organic Production of Traditional Crops by Mixteco Farmers	\$9,000	Filiberto Villa-Gomez Michigan Food & Farming Systems-MIFFS
FNC19-1155	A Collaborative Research Project Evaluating Greensprouting as a Sustainable Pre-Planting Treatment for Seed Potato Minutubers Under Diverse Growing Conditions	\$27,000	Melissa Boersema Sklarczyk Seed Farm LLC
FNC19-1170	Testing aged manure for enhanced soil health and tree establishment in a pioneer chestnut orchard.	\$8,649	Abby Johnson Ox Heights
FNC19-1173	Intercropping Systems For Small Scale Vegetable Production	\$8,867	Lance Kraai New City Neighbors
FNC19-1194	Designing a Mobile Milking Parlor for a Multi-site Educational Goat Farm	\$8,650	Leah Sienkowski Dreamgoats
FNC18-1113	A Proof of Concept Experiment Evaluating a Greensprouting Pre-Planting Treatment to Increase Seed Potato Yields and Develop Sustainable Practices within the Potato Industry	\$7,500	Melissa Boersema Sklarczyk Seed Farm LLC
FNC18-1118	Bees, Pleeze! - Adding an educational component to a wildflower field at a Midwest blueberry farm	\$7,500	Frank Corrado Moss Funnel Farms
FNC18-1119	Practical exclusion netting for reducing disease vectors in high density apple systems	\$22,050	Jordan Devries Mighty Oak Orchards
FNC17-1081	Proof of Concept - Sustainable Chestnut Production in Northeast Lower Michigan	\$10,255	Abby Johnson Ox Heights
FNC17-1090	A Comparative On-farm Study of Root Crop Production and Postharvest Systems for Scaling Up Diversified Vegetable Farms	\$22,241	Dru Montri Ten Hens farm
FNC17-1092	A Youtube Series; An Introduction to Sustainable Agriculture for Growing Ecological Eaters	\$7,500	Therese Zimmerman Good Shepherd Montessori School
FNC17-1074	Salad and Microgreens Automated Harvester Development	\$7,500	David Coveyou COVEYOU FARMS
FNC16-1033	Open Source Automated Irrigation System for Small Farms, Urban Farms or Specialty Crops	\$7,442	Christian Flickinger Renegade Acres

FNC16-1041	Evaluating On Farm Value Added Production in Utilizing Unmarketable Produce to Reduce Waste While Helping Small Farms Engage in Agritourism and Become More Profitable	\$7,379	Lance Kraai New City Neighbors
FNC16-1050	Using Small Ruminants to Improve Forage Availability in Michigan Equine Pastures	\$6,543	Bess Ohlgren-Miller Arbor Meadow
FNC16-1057	Developing a System of Tissue Culture and Hydroponic Growing Medium for Hop Plant Production	\$22,500	Tim Small Great Lakes Hydrogrow LLC.
FNC16-1060	Optimizing a Short Trellis System for Growing Cascade Hops in Michigan	\$7,500	John Spieth Honeybee Farm
FNC16-1028	Optimal Flock Size for Pasture Raised Layers	\$7,394	Aaron Brower Bluestem Farm
FNC15-983	Exploring Shelter-Based Options for Over-wintering Honeybee Colonies in Northern Climates to Reduce Winter Loss	\$10,752	Brian Bates Bear Creek Organics LLC
FNC15-988	Farm-Generated Fertility: Vermicomposting Horse Manure and Vegetable Wastes	\$7,301	Rachel Cross Spirit of Walloon
FNC15-1005	Improving apiary sustainability by using an overwintered nuc system for colony replacement and expansion instead of purchased package bees	\$7,492	Meghan Milbrath Bending Sickle Community Farm
FNC14-943	Comparing Measurable Indicators of Soil Health under Two Different Forage Harvesting Methods Four times During the Growing Season	\$6,462	Benjamin Bartlett Log Cabin Livestock
FNC14-945	Demonstrating a Quick-Start Process to Help Small Blueberry Farmers Begin Transition To Organic Practices	\$22,439	Frank Corrado Moss Funnel Farms
FNC14-946	Chestnut Harvest Burr Management	\$7,390	Carl DeKleine DeKleine Orchards, LLC
FNC14-951	Building Capacity through Collaboration and Eliminating Urban Food Deserts	\$22,500	Shakara Tyler MSU Center for Regional Food Systems Cary Junior SouthEast Michigan Producers Association (SEMPA)
FNC14-969	Using Wildflower Strips to Enhance Native Pollinators and Other Beneficial Insects that are at Risk due to Increased Chemical Interventions Designed to Control Spotted Wing Drosophila, Drosophila Suzukii	\$7,460	Judy Rant Double R Blueberry Farm
FNC14-976	Developing a Strategy For Utilizing Yard Waste Compost In A Corn And Soybean Rotation To Increase Soil Quality	\$15,736	Ryan Schwehofer Schwehofer Farms
FNC14-980	An Integrated Organic Hops/Cover Crop/Pastured Sheep Production System To Address Agroecological Challenges And Diversify Farming Operations	\$22,288	Amy Tennis New Mission Organics LLC

FNC13-921	A growth and feed comparison study with a focus on organically grown high methionine grains for broiler chickens	\$7,360	travis meier travis meier
FNC13-923	Renovation and Ecological Management of Neglected Apple Orchards in Southeast Michigan	\$7,466	Trevor Newman Roots to Fruits
FNC13-933	Food Drying and Preservation in a Greenhouse Solar Dehydrator	\$7,476	Patrick Scharinger Pond Hill Farm Kelly Doyle Pond Hill Farm
FNC13-941	Organic Potato Variety Trial in Michigan's Upper Peninsula	\$2,246	Michael Wixtrom Wixtrom Natural Farms
FNC12-849	Testing Combined Multiple Sustainable Production Methods in Asparagus for Symbiosis between Irrigation, Biofumigation, Advanced Cultivars, and Soil Amendments	\$7,500	Benjamin Byl Farmer
FNC12-853	Exploring the Potential for Fava Beans (<i>Vicia faba</i>) as a Spring and Fall Cover Crop in Upper Midwest	\$7,461	David Coveyou COVEYOU FARMS
FNC10-809	Growing, Processing, and Selling Omega-9 Canola Oil	\$5,969	Dan Blackledge B & B Farms
FNC10-826	Meeting the Growing Demand for Organic Hops: Low-Trellis Organic Hop Production in the Great Lakes Region	\$17,720	Brian Tennis New Mission Organics Dr.J Robert Sirrine Michigan State University
FNC10-804	Michigan Organic Hops Production: utilizing current IPM models to investigate biocontrol effectiveness on hops pests and diseases in an organic production system	\$5,994	Bonnie Steinman Jeffrey Steinman Hop Head Farms LLC
FNC09-755	Integrating Bats into Organic Pest Management	\$16,323	Bill Erwin Erwin Orchards Steve Tennes The Country Mill Jane Bush Apple Schram Orchard
FNC09-757	Exploring sustainable options for conservation of small woodland parcels through wild-crafting crops	\$3,584	Merrill Clark Lisa Jackson Growing Obsessions Nursery Lisa Lovell
FNC09-778	Cow Taxi Project	\$5,815	Jeff Lubbers Lubbers Family Farm Karen Lubbers Lubbers Family Farm
FNC09-787	Kitchen Gardening for Life	\$6,000	Les Roggenbuck East River Organic Farm
FNC08-719	Novel Vacuum Fruit Harvester	\$18,000	Michael Rasch Westridge Orchards
FNC08-720	Economics of Growing Beer Hops in Southwest Michigan	\$5,995	Ed Dohm
FNC08-735	Utilizing Waste Cardboard for Livestock Bedding on Small Farms	\$2,300	Doreen Passuello

FNC08-713	Greenhouse and Raised Bed Crop Production with Organic Farm Practices with Fruit and Vegetable Production	\$6,000	David Beck
FNC07-654	Establishing a Regional Community Food Project in Rural Northeast Michigan	\$18,000	Brian Botkin
FNC07-658	Ranging Poultry on Temporary Pasture - An Integrated Poultry and Vegetable System	\$3,720	Chris Bardenhagen
FNC07-661	Winter Canola as a Cover Crop and Renewable Energy Source	\$11,898	Steve Tennes The Country Mill
FNC07-662	Evaluating Modified Relay Intercropping (MRI) in Ingham County, Michigan	\$17,925	Tony Ig
FNC06-603	Identifying a Market for Woody Florals, and Other Specialty Cut Flowers in Michigan	\$1,599	Dixie Sandborn
FNC06-618	Growing Community Supported Agriculture with Day-Long Mini Schools	\$4,200	Jim Sluyter
FNC06-639	Evaluating Corn, Soybean and Wheat Varieties in Organic Farm Systems in Michigan	\$17,608	Ivan Morley
FNC05-548	Continuous Fiber Felting Machine	\$6,000	Suzanne Pufpaff Pufpaffs Fiber Processing, LLC
FNC05-550	Winter Hardiness Trials of New Garden Chrysanthemum Varieties and Farm Research on Effectiveness of Winter Mulching Techniques	\$6,000	David Coveyou COVEYOU FARMS
FNC05-556	George Washington Carver's Garden: Farm Model and Mentoring Program for Seniors and Youth	\$18,000	Robert Crowder
FNC05-579	Developing a Community Sponsored Vegetable Operation in Rural Northeast Michigan	\$6,000	Brian Botkin
FNC05-580	Encouraging Managed Grazing in Michigan	\$9,245	Howard Straub Straub family farm
FNC05-589	Growing New CSA Farmers: Conference and Mini-School for Community Supported Agriculture	\$14,000	Jim Sluyter
FNC04-526	Free Range Egg Cooperative	\$12,475	Sam Catey
FNC04-530	A Comparison of the Profitability of Subsoil Heated and Unheated Hoophouse vs. Field Production of Cool-Climate Salad Crops in Central Lower Michigan	\$3,033	Philip Throop
FNC04-505	Comparing Alfalfa and Red Clover as Economical Dairy Cow Forage	\$2,197	Mike Iho

FNC04-509	Garber's Summer Farm Day Camp	\$4,166	Cindy Garber
FNC03-439	Pasture Improvement Trial: Enhancing Results By Analyzing Samples and Observing Cattle Grazing Preferences	\$6,000	Mike Iho
FNC03-440	Designing My Path into Sustainable Organic Farming	\$5,448	Roy Monzo
FNC03-462	Establishing Successful Organic Orchards	\$6,000	Peter Ways
FNC03-470	Sweeping the Orchard Floor as a Housekeeping Practice to Effectively Control the Plum Curculio Insect in Organic Orchards	\$6,000	James Koan
FNC03-481	The Value of Mint: Preserving Historical Mint Fields with Windbreaks	\$3,870	James Crosby Crosby Mint Farm
FNC02-432	Small Scale/Youth Organic Gardening Project Continuation	\$18,000	Leroy Ray, Jr. The Farm School Cooperative
FNC02-390	Encouraging More Bio-Diversity on My Farm By Providing A Safe Harbor for Nature's Best Mouse Trap: The Endangered Barn Owl	\$1,822	James Koan
FNC02-391	Mill Race Center Farmers Market Community Supported Agriculture Outreach Program	\$12,800	Beth Neff
FNC02-401	Pasture Improvement Trial	\$1,197	Mike Iho
FNC02-418	Meeting the Needs of the Michigan Craft Brewing Industry: The Potential of Barley and Hops As Alternative Crops	\$9,357	Wendell Banks
FNC01-344	Incorporating Minority Farmers in the Sustainable Agricultural Movement	\$5,000	Roger Outlaw
FNC01-356	Organic Dairy	\$11,700	Chuck Oliver Oliver Farm
FNC01-369	Determination of Market and Profit Feasibility for an Organic Specialty Cut Flower Business in a Rural Northern Michigan Community	\$5,000	Kim Smith-Potts
FNC01-384	CSA Dairy	\$5,000	Gene Allen
FNC01-340	Bats as Part of a Sustainable Pest Management Approach to Controlling Moth Pests in Commercial Apple Production	\$4,799	James Koan
FNC00-292	Multi-farm CSA: A Group Marketing Initiative for Rural Northern Michigan	\$14,890	Rick Meisterheim

FNC00-306	A Youth-operated Certified Compost Production and Distribution Scheme	\$15,000	Leroy Ray, Jr. The Farm School Cooperative
FNC00-307	Pathogen Reduction in Apple Cider Production	\$4,450	Michael Beck Cider Production Manager
FNC00-322	Cutting the Red Tape: Processing Pastured Poultry to Meet Market Demands	\$5,125	Kay Jones
FNC00-325	Building a Thermal-Blast Peeler to Prepare Chestnut for On-Farm, Value-Added Processing	\$5,082	Corey Allen
FNC99-250	Researching the Cost-effectiveness of Building a State-licensed, Mobile Poultry Processing Facility as a Regional Farmers' Group	\$14,967	Rick Meisterheim
FNC99-251	Creating a Farmer-youth Sustainable Production and Marketing Cooperative for a Group of Black Farmers in Van Buren County, Michigan	\$15,000	LeRoi Ray Farm School Cooperative
FNC99-260	Heirloom Apples	\$5,000	Pepper Bromelmeier
FNC99-264	Organic Marketing Cooperative	\$9,254	Thomas Judge
FNC99-268	Flexible Low-cost Poultry Processing	\$4,180	Jack Knorek Oak Moon Farm
FNC99-277	Utilizing Breeding Ewes' Grazing Abilities for Pasture and Crop Residue to Lengthen the Grazing Season	\$4,325	Tamra Ashley
FNC98-202	Expanding Partnerships between Southern Michigan Cash Crop Farmers and Northern Michigan Livestock Farmers	\$5,000	Henry Miller
FNC98-203	Southwestern Michigan Marketing Plan for Locally-Grown Produce	\$10,000	Phillip Prillwitz
FNC98-204	On-Farm Market for High Quality, Locally Grown Products and an Experience for School Children	\$4,490	Pamela Bosserd
FNC98-213	You-Pick for the Handicapped	\$5,000	Thomas Robinson S&S Farm Market and Greenhouse
FNC98-236	Cover Crops' Influence on Soil Quality in No-Till Corn/Soybean Rotations	\$5,000	Gary Manley
FNC98-240	Utilizing Alternative Methods for Silage Harvest and Storage	\$5,000	David McCartney
FNC97-167	Innovative Farmers Seeking Sustainable Solutions through On-farm Demonstrations	\$4,750	Kevin Vandy-Bogurt

FNC97-189	The Economics of Seed Saving on Three Biological Farms in Western Michigan	\$4,676	Paul Keiser
FNC97-168	Developing Partnerships between Southern Michigan Cash Crop Farmers and Northern Michigan Livestock Producers	\$5,000	Henry Miller
FNC97-199	Processing and Marketing Milk Produced on our Small Dairy Farm	\$5,000	George Shetler
FNC97-170	Integrated Row Tillage Project	\$3,523	Todd Williams
FNC97-172	Swine Finishing in a Hoop Structure with Deep Bedding	\$5,000	Gary Blonde
FNC97-179	The Custom Grazing of Replacement Dairy Heifers on Fuego Fescue and Barenburg Ryegrass under a Management-intensive Grazing System	\$3,518	Helene Paulik
FNC97-183	Transition from Traditional Grain or Livestock Agriculture to On-farm Roadside Marketing of Produce	\$5,000	Pamela Bosserd
FNC97-186	Farmer Networking to Direct Precision Ag Technologies Toward Sustainability	\$4,950	Tom Waller
FNC97-166	Innovative Farmers Seeking Lowest Nitrogen Rates for Corn on Sandy Soils to Protect Ground Water	\$4,021	Eric Hiscock
FNC97-187	Marketing On-farm Composted Manure	\$9,700	Joe Slater
FNC96-139	Permaculture Greenhouse System: Integrating Greenhouse and Poultry Production	\$5,000	Rick Meisterheim
FNC96-152	Extending the Vegetable Growing Season in Northern Michigan with Polyhouses	\$2,696	James Chadwick
FNC96-155	Using Forage and Grazing Systems as an Alternative to Row Crops on Michigan Muck Soils	\$5,000	John Oswalt
FNC95-109	The Development of an On-farm Learning Center	\$5,000	Bob Fogg
FNC95-113	Nitrogen Management on Sandy Soils for Environmentally and Economically Sustainable Corn Production	\$5,000	Edmond Groholski
FNC95-122	Stockpiling Pasture by Interseeding Annual Rye into Existing Pastures	\$640	Chuck Cornillie
FNC95-125	Improving Ground and Surface Water Quality by Reducing Commercial Fertilizer Applications to Land Receiving Livestock Manures	\$4,644	Calvin Dyke

FNC94-061	Livestock Watering Systems	\$3,604	Joe Golimbieski
FNC94-065	Implementing Sustainable Agricultural Practices to Attain Organic Certification	\$5,000	Bob Carriveau
FNC94-066	Pasture Renovation and Reseeding	\$3,325	John Milbocker
FNC94-077	Composting Swine Carcasses	\$2,900	Ed Fisher
FNC94-083A	On-Farm Composting of Livestock Manure	\$2,500	Joe Slater
FNC94-083B	On-Farm Composting of Livestock Manure	\$2,500	Bob Wackernagel
FNC94-086	Developing a Stewardship Plan for Water Quality	\$4,538	Tom Guthrie
FNC93-056	Bio-Control of Colorado Potato Beetle Utilizing Poultry	\$2,044	Quinn Cumberworth
FNC93-035	Intensive Rotational Grazing for Sheep	\$1,868	John Oswald
FNC93-037	Manure Composting in Dairy Operations	\$2,600	George Shetler
FNC93-043	Evaluating Forages in Rotational Grazing System for Dairy	\$4,688	Dale Kellenberger
FNC93-049	Evaluating Liquid Manure as Nutrient Source in a Commercial Orchard	\$4,551	John Muma
FNC93-050	Composting Rural and Urban Waste	\$4,950	Marlin Goebel
FNC92-024	Production and Marketing of Organic Beef	\$2,020	Kathy Theil

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GNC20-312	Exploring how farmers' perceptions of soil health affect their management decisions	\$12,710	Michigan State University W.K. Kellogg Biological Station Tayler Ulbrich Michigan State University
GNC19-282	Incorporating biochar into urban agroecology	\$14,140	Diarmaid Ó Foighil Nicholas Medina University of Michigan
GNC19-283	Improving N management in processing carrots using drone-based remote sensing for more sustainable production	\$14,563	Zachary Hayden Horticulture, Michigan State University Michael Metiva Michigan State University

GNC19-284	Sustainable Weed Control: In-Row Weed Cultivation Strategies for Midwest Vegetable Growers	\$10,738	Daniel Brainard Michigan State University Daniel Priddy Michigan State University
GNC19-290	Integrating manure composition from portable spectroscopy with simulation modeling to evaluate long-term dynamics of manure mineralization and sustainability of cropping systems	\$14,055	Dr. Bruno Basso University Foundation Professor, Department of Earth and Environ Ben Tirrell Michigan State University
GNC19-280	Detection of Tarnished Plantbugs, Apple Maggots, and Codling Moths in Bats' Diet in Southern Michigan Apple Orchards	\$14,889	Dr. Amy Russell Grand Valley State University Randi Lesagonicz Grand Valley State University
GNC18-268	Nutrition Management for European Foulbrood (EFB) Recovery in Honey Bees	\$11,995	Dr. Rufus Isaacs Dr. Gabriela Quinlan Michigan State University
GNC18-255	Cover Crop Mixtures for Nitrogen Use Efficiency on Grain/Arms in Southern Michigan	\$11,970	Dr. Jennifer Blesh University of Michigan Alison Bressler University of Michigan
GNC17-244	Measuring Farmer Response to the Rate of Agricultural Innovation: Experimental Evidence from Michigan	\$11,979	Dr. Nicole Mason Michigan State University Stephen Morgan Michigan State University
GNC17-251	Optimizing between-bed management strategies in plasticulture vegetables for improved crop production and soil health	\$12,000	Zachary Hayden Horticulture, Michigan State University Alyssa Tarrant Michigan State University
GNC16-223	Green Tools: Improving Sustainability by Integrating New In-Row Cultivation Equipment and Competitive Cultivars	\$11,994	Daniel Brainard Michigan State University Sam Hitchcock Tilton Department of Horticulture, Michigan State University
GNC16-225	Luring Generalist Predators from Field Borders to Control Crop Pests	\$11,728	Zsafia Szendrei Michigan State University Dr. Adam Ingraio Michigan State University Extension
GNC15-211	Evaluating Agricultural Applications of Orchard Nest Boxes and Perches for a Declining Raptor Species: Quantifying Impacts on Pest Rodents and Birds	\$9,959	Dr. Catherine Lindell Michigan State University Megan Shave Michigan State University
GNC15-205	Sustainable Pest Management Approaches for Raspberry Growers	\$9,979	Dr. Rufus Isaacs Dr. Heather Leach Michigan State University
GNC14-192	Linking Soil Testing with Farmer Decision Making - An Interdisciplinary Approach	\$6,853	Dr. Phil Robertson Michigan State University/ Kellogg Biological Station Brendan O'Neill Michigan State University
GNC14-194	Integrating Flowering Windbreaks for Insect Management in Cucumbers	\$9,989	Zsafia Szendrei Michigan State University Nicole Quinn Michigan State University
GNC14-196	Biodiversity Effects on Soil carbon Gain in Annual and Perennial Cropping Systems	\$6,382	Dr. Phil Robertson Michigan State University/ Kellogg Biological Station Dr. Christine Sprunger The Ohio State University

GNC13-171	Understanding the Economics of Hoophouse Crops in Northern Climates	\$9,999	Bridget Behe Michigan State University Laura Haselhuhn Michigan State University
GNC13-173	Development of an Integrative Two-tiered Systemic Approach to Manage Bacterial Canker of Sweet Cherry by Targeting Critical Environmental Infectious Periods	\$9,983	Gregory Lang Michigan State University Tiffany Lillrose Michigan State University
GNC13-177	Effects of Pest Management and Conservation Plantings of Bee Communities in Highbush Blueberry	\$9,962	Dr.Rufus Isaacs Dr. Emily May Michigan State University
GNC13-181	Use of Water Mist to Protect Tree Fruit from Spring Frost Damage	\$9,865	James Flore Jeffrey Andresen Michigan State University Ishara Rijal Michigan State University
GNC13-164	Quantification of Nitrogen Lost to Greenhouse Gas Emissions in Cover Crop Systems	\$9,924	Dr.Dale Mutch Michigan State University Extension Victoria Ackroyd Michigan State University
GNC12-158	Improving Resource Use Efficiency Through Strip Tillage, Cover Cropping, and Deep Fertilizer Placement	\$9,915	Daniel Brainard Michigan State University Dr.Sieglinde Snapp Michigan State University Erin Haramoto University of Kentucky
GNC10-117	Nitrogen Mineralization from Weed Residues	\$9,544	Dr.Kurt Steinke Michigan State University Laura Bast Michigan State University
GNC10-134	Artisanal Agrifood Processing and Food Safety Regulation: Responding to the Concerns of Small Processors and Regulators in Michigan	\$9,903	Dr.Jim Bingen Michigan State University Jenifer Buckley Michigan State University
GNC10-141	Combining Alternative Cover Crop Strips, Living Mulches and Strip Tillage for Effective Weed and Nutrient Management in Organic Sweet Corn Production	\$9,960	Daniel Brainard Michigan State University Carolyn Lowry Michigan State University
GNC10-146	Low Tunnel Strategies for Microclimate Modification and Early Vegetable Production	\$9,591	Mathieu Ngouajio Rebekah Struck Faivor Michigan State Univ
GNC09-108	A novel approach for optimizing the benefits of cereal-legume cover crop mixtures in vegetable cropping systems	\$9,983	Daniel Brainard Michigan State University Mathieu Ngouajio Zachary Hayden Horticulture, Michigan State University
GNC09-116	Evaluation of Plant Composition and Strip Size on the Effectiveness of Native Plant Conservation Strips for Sustainable Enhancement of Beneficial Insect Communities	\$9,910	Dr.Rufus Isaacs Dr. Brett Blaauw Michigan State University
GNC08-095	Treatment of Agricultural Runoff Using Filter Strip	\$10,000	Dr.Steve Safferman Michigan State University Dr.Rebecca Larson Univesrity of Wisconsin-Madison
GNC08-096	Best Hispanic Farmer's Management and Marketing Strategies in Michigan	\$9,950	Dr.Jim Bingen Michigan State University Lourdes Martinez Michigan State University

GNC08-097	Sustaining Farmers Markets that Serve Low-Income Consumers	\$9,995	Kimberly Chung Michigan State University Dru Montri Michigan State University
GNC08-099	Determination of the relationship between soil nutrients, mycorrhizae, and plant health in organic blueberry production	\$9,900	Dr. Annemiek Schilder Michigan State University Jesse Sadowsky Michigan State University
GNC07-080	Advanced cropping system for sustainable production of Fraser fir (Abies Fraseri) in Christmas tree productions	\$10,000	Pascal Nzokou Michigan State University Dr. Paligwende Nikiema Michigan State University
GNC07-082	Demonstration of a sustainable method of Beauveria bassiana delivery for use against plum curculio	\$9,822	Mark Whalon Michigan State University Renee Pereault Michigan State University
GNC07-086	Evaluation of supplemental flowering plant strips for sustainable enhancement of beneficial insects	\$9,797	Dr. Rufus Isaacs Dr. Nathaniel Walton Michigan State University
GNC06-069	Distribution Strategies for Developing Farm-to-School Connections	\$9,784	Mike Hamm Community, Agriculture, Recreation & Resource Stud Betty Izumi Michigan State University
GNC06-063	Development of winter cover crop varieties and complementary mixtures for North Central Region grain systems	\$9,882	Dr. Sieglinde Snapp Michigan State University Brook Wilke Michigan State University
GNC06-064	Improved management of striped cucumber beetle, <i>Acalymma vittatum</i> (F.) (Coleoptera: Chrysomelidae) by using a squash trap crop and a polyculture of cucumber and tomato.	\$10,000	Dr. Mike Brewer Michigan State University Dr. Edward Grafius Michigan State University Matthew Kaiser Michigan State University
GNC06-065	Integrating and Evaluating Livestock Guarding Dogs for Reducing Wolf-Human Conflict on Michigan Farms	\$7,504	Thomas Gehring Central Michigan University Anna Cellar Central Michigan University
GNC05-044	Processes Involved in the Weed Suppressiveness of Hairy Vetch and Implications for Weed Management in Vegetable Production	\$10,000	Mathieu Ngouajio Erin Hill Central Michigan University
GNC05-050	Managing Crop Residues: Balancing Soil Quality and Farm Profitability	\$9,970	Dr. Phil Robertson Michigan State University/ Kellogg Biological Station Terrance Loecke Michigan State University
GNC05-056	An Interdisciplinary Framework for Sustainable Tart Cherry (<i>Prunus cerasus</i> L.) Production	\$10,000	Deborah Letourneau University of California J Robert Serrine Department of Environmental Studies
GNC04-036	Cropping System to Improve Vegetable Production Under Short Crop Rotation	\$10,000	Mathieu Ngouajio Mohan Salvaraj Department of Environmental Studies
GNC04-037	Community Farmers: The Pathways and Opportunities to Success for New, Innovative Farmers in Michigan	\$9,720	Dr. Jim Bingen Michigan State University Taylor Reid Michigan State University

GNC03-017	Effect of Sustainable Ground Floor Management Systems on Root System Dynamics of Apple and their Contribution to Carbon Sequestration and Nutrient Cycling in the Soil	\$9,977	Ronald Perry Dario Stefanelli Michigan State University
GNC02-011	Integrating Cover Crops into Blueberry Production for Sustainable Japanese Beetle Control	\$10,000	Dr.Rufus Isaacs Dr. Dr.Zsofia Szendrei Michigan State University

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
ONC18-042	Developing Profitable Double-Crop Systems after Winter Barley	\$26,730	Dr.Maninderpal Singh Michigan State University
ONC18-051	Evaluating agritourism strategies for small scale sustainable agriculture operations	\$29,620	6166087436Garrett Ziegler Michigan State University Extension
ONC17-025	Cultivating partnerships: Building Farm-research Networks for Improved Physical Weed Control	\$25,595	Daniel Brainard Michigan State University
ONC15-001	Northeast Michigan Aerial Cover Crop Seeding Demonstrations	\$29,810	Dr.James DeDecker Michigan State University AgBioResearch and Extension

YOUTH EDUCATOR GRANTS

Project #	Project Title	SARE Support	Project Leaders
YENC20-150	Educating Youth in Sustainable Farming and Value Added Production.	\$3,981	Lance Kraai New City Neighbors
YENC18-126	TechGYRLS Sustainable Agriculture Overnight Camp	\$2,000	Dr.Grace Lubwama YWCA Kalamazoo
YENC18-127	Urban Farming as a Sustainable Business	\$2,000	Tommy McDoniel Asbury CDC
YENC18-128	Flowers for Food and Thought	\$2,000	Joan Nelson Allen Neighborhood Center
YENC18-130	Grow Healthy, Lansing! Nutrition Education in the Edible Schoolyard	\$2,000	Stephanie Onderchanin NorthWest Initiative
YENC18-120	Avalon Housing's Youth Leadership Program	\$2,000	Ashley Blake
YENC17-118	Pondering Pollinators	\$2,000	Josh Wald-Kerr Allen Neighborhood Center
YENC17-111	New City Farm Youth Gardening & Cooking Club Education Project	\$2,000	Alaina Dobkowski New City Neighbors
YENC16-096	An Agricultural Field Trip for Elementary Students from Prairieview (Lakeview, Battle Creek, MI)	\$1,996	Katie Bridges Prairieview Elementary
YENC16-103	Youth Service Corps: Addressing Food Access through Sustainable Food Systems Study & Community Service Projects	\$2,000	Josh Wald-Kerr Allen Neighborhood Center

YENC16-104	Farmers Leading Youth (FLY) BeeKeeping	\$2,000	Jessica Patton Neighborhood Building Urban Gardens
YENC15-086	Eastside Youth Service Corps: Expanding the Edible Hunter Park, Increasing Food Security, Promoting Sustainable Agriculture and Fostering Food Entrepreneurism	\$2,000	Rita O'Brien Allen Neighborhood Center
YENC14-074	Youth Service Corps Fruit Tree Project: Sustainable Approach to Neighborhood Fruit Access	\$2,000	Rita O'Brien Allen Neighborhood Center
YENC13-063	Green Tops Sustainable Agriculture Boot Camp	\$2,000	Elizabeth Longley The Baldwin Center
YENC13-066	Hancock Greenhouse Project	\$1,998	Brian Rajdl Hancock Public Schools
YENC12-046	Youth Intern Program at Growing Hope	\$2,000	Danielle Gartner Growing Hope
YENC12-047	Detroit Arsenal Garden Project	\$1,371	Dave Galer U.S. Army Garrison-Detroit Arsenal
YENC12-058	Building Sustainable Agriculture Connections for Ypsilanti Farm to School	\$2,000	Deborah Weiker Food System Economic Partnership
YENC10-032	GVSU Upward Bound TRIO Flower and Herb Garden at the GVSU Sustainable Agriculture Project	\$1,996	Levi Gardner Grand Valley State University
YENC10-036	Edible Avalon Summer Youth Program	\$1,807	Kristin Kaul Edible Avalon
YENC10-028	Engaging Youth in Neighborhood-based Urban Agriculture	\$2,000	Matthew McDermott Lansing Urban Farm Project
YENC09-013	The Early Bird Gets the Worm	\$1,977	Nate Beelen Whitefish Township Community School
YENC08-007	Michigan Envirothon	\$1,707	Svenja Drebes Michigan Association of Conservation Districts
YENC08-009	Leelanau Farm Connection	\$1,978	Pam Schmidt Michigan State University Extension - Leelanau Cou

YOUTH GRANTS

Project #	Project Title	SARE Support	Project Leaders
YNC09-036	Student Report on the Northern Michigan Small Farms Conference	\$360	Megan Brown
YNC08-013	Not Just Chicken	\$373	Marley Sukenik
YNC08-015	Custom Raised Broilers	\$400	Jared Reimann

YNC08-024	Grass-Fed Lamb Agriscience Project	\$400	Alexandria Schut
YNC08-027	Nature's Eco-Wicks	\$392	Laquetta Hogan
YNC08-029	Sustainable Backyard Egg Production from a 9 Year Old's Perspective	\$394	AnnaLiesa Durling

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

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