

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 \$309 million to more than 7,407 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...

Utah

Project Highlight: *Better Onions, Fewer Inputs*

Onions are a high-value crop, but high fertilizer rates and aggressive use of pesticides to suppress weeds, diseases and insects threaten the sustainability of onion production. In Utah, growers and researchers are working to show how changes in management practices can allow farmers to maintain profitable yields while lowering their use of inputs.

In 2013 a SARE-funded team led by Utah State University's Diane Alston studied the effect of certain changes on onion yields, in particular fertilization rates and crop rotations. They were following the lead of a small group of onion producers in the state who were finding they could reduce their use of pesticides by lowering their use of fertilizers and still achieve good yields.

The team pursued multiple objectives and developed a body of information that is helping Utah's producers adopt more sustainable practices. They surveyed nearly 60 farms to better understand production system predictors of pests and yield; conducted field experiments that showed reducing fertilizer rates could reduce pest densities; and created an interactive production modeling tool.

In an assessment of producers conducted near the end of the project, 67 percent said the information they learned would help them diversify their operation, and 80 percent felt it would help them reduce their use of off-farm inputs.

For more information on this project, see sare.org/projects, and search for project number [SW13-034](#).

SARE in Utah

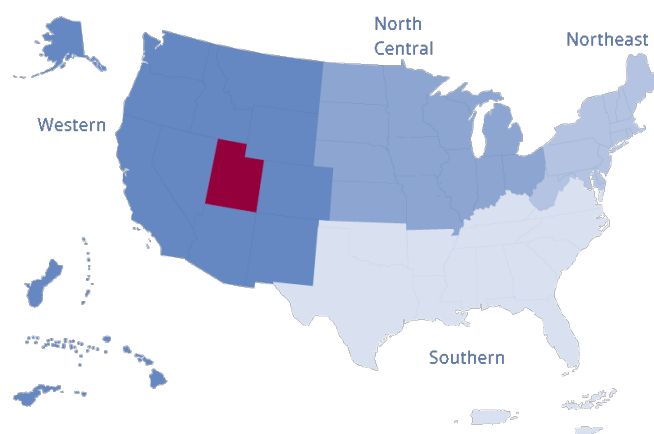
western.sare.org/sare-in-your-state/utah

\$5,358,896
in total funding

73 grant projects

(since 1988)

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



SARE Grants in Utah

Total awards: 73 grants



19 Farmer/Rancher
7 Graduate Student
6 On Farm
8 Research/Partnership
8 Professional Development Program
32 Research and Education
1 Research to Grass Roots

Total funding: \$5,358,896



\$115,837 Farmer/Rancher
\$158,111 Graduate Student
\$279,590 On Farm
\$474,531 Research/Partnership
\$4,269,668 Professional Development Program
\$61,160 Research and Education
Research to Grass Roots

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:

western.sare.org/sare-in-your-state/utah

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 western.sare.org/state-pages/utah 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 UTAH

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

Utah has been awarded \$5,358,896 grants to support 72 projects, including but not limited to, 31 research and/or education projects, 8 professional development projects and 19 producer-led projects. Utah has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
SW19-905	Can we manage public rangelands for producers and the environment?: Using grazing-duration to balance livelihoods, clean water, sage-grouse habitat, and sustainable forage	\$349,979	Dr.Kris Hulvey Working Lands Conservation Taylor Payne Utah Department of Agriculture's Grazing Improvement Program
SW19-909	Identifying Stacked Conservation Practices that Optimize Water Use in Agriculture	\$349,977	Matt Yost Utah State University Niel Allen Utah State University Dr.Earl Creech Utah State University Neil Hansen Brigham Young University Matthew Heaton Brigham Young University Dr.Bryan Hopkins BYU Ross Spackman Brigham Young University-Idaho
SW18-058	Establishing a protocol for receiving cattle that are at-risk of having a mineral deficiency	\$206,209	Dr.Kara Thornton Utah State University
SW17-046	Grass-birdsfoot trefoil mixtures to improve the economic and environmental sustainability of pasture-based organic dairies in the western U.S.	\$214,123	Dr.Blair Waldron USDA-ARS
SW17-077	Best Management Practices for Regionally-Distinct Populations of the Blue Orchard Bee	\$246,910	Theresa Pitts-Singer USDA Agricultural Research Service
SW15-003	Training cattle to graze medusahead and avoid velvet lupine: A new tool to sustain the economic viability of livestock operations in the Western US	\$249,909	Dr.Juan Villalba Utah State University
SW15-029	Improving Tart Cherry Sustainability	\$230,154	Dr.Brent Black Utah State University
SW14-015	Integrated Byproduct Streams for Enhanced Viability of Combined Dairy Farm and Milk Processing Operations	\$295,688	Dr.Donald McMahon Western Dairy Center, Utah State University
SW13-034	Onion Systems Management Strategies for Crop Nutrition, Weeds, Thrips, and Iris Yellow Spot Virus	\$169,299	Dr.Diane Alston Utah State University

SW10-088	Grass-Legume pastures to increase economic and environmental sustainability of livestock production	\$209,907	Dr.Blair Waldron USDA-ARS
SW08-076	Cultural Management of Onion Thrips and Iris yellow Spot Virus	\$133,441	Dr.Jennifer Reeve Utah State University
SW07-014	Sustainable Vegetable Production: Screening Cover Crops for Water Use Efficiency	\$118,411	Dr.Daniel Drost Utah State University
SW07-035	High Value Crop Rotations for Utah High Tunnels	\$144,495	Brent Black PSC Department, Utah State University Dr.Brent Black Utah State University
SW04-060	Perennial Forage Kochia for Improved Sustainability of Grass-Dominated Ecosystems	\$149,503	Dale Zobel ADVS Dept., Utah State University
SW02-013	Sustainable Water Management for Irrigated Asparagus	\$23,014	Dr.Daniel Drost Utah State University
SW01-001	Value Added Opportunities from the Manufacture and Feeding of Silages Produced from Liquid Cheese Whey and Other By-products to Growing and Finishing Cattle and Beef Cows	\$59,777	Dale Zobel ADVS Dept., Utah State University
SW01-020	Production of Drought-adapted Intermountain Native Plants Through Low-cost, In-containers for Emerging Western Markets	\$71,686	Roger Kjelgren Utah State University
SW01-023	Biofumigants in Commercial Onion Production to Enhance Soil Nutrient Availability, Soil Quality, and Control of Weed, Nematode, and Disease Pests	\$134,317	Brad Geary Brigham Young University
SW01-034	Assessment of Value Added Milk from Pasture-based Dairies	\$78,000	Tilak Dhiman Utah State University
SW00-040	In-house composting in high-rise, caged layer facilities	\$60,975	Richard Koenig Utah State University
SW00-063	Impact Assessment of Western Region SARE Projects	\$38,500	Dr.Rhonda Miller WSARE
SW99-024	The Effects of Altering the Protein Efficiency of Lactating Dairy Cows on the Whole-farm Nitrogen Efficiency of Dairy Farms: Subcontract 1	\$19,184	Allen Young Utah State University
SW99-024A	The Effects of Altering the Protein Efficiency of Lactating Dairy Cows on the Whole-Farm Nitrogen Efficiency of Dairy Farms.	\$89,571	Allen Young Utah State University
SW99-024B	The Effects of Altering the Protein Efficiency of Lactating Dairy Cows on the Whole-Farm Nitrogen Efficiency of Dairy Farms	\$19,184	Richard Kohn
SW98-058	Reducing Chemical Inputs in Arid-Climates Through Sustainable Orchard Management	\$261,044	Schuyler Seeley Utah State University

SW96-032	Identification of Management Practices and Cultivars for Organic Hard-Winter Wheat Production	\$93,911	David Hole Utah State University
SW95-006	A Livestock Production System Less Reliant on the Use of Publicly Owned Lands	\$60,000	Randall D. Wiedmeier Utah State University
SW95-015	Public-Land Grazing Permittees Under Pressure: Sustainability of Coping Strategies on Private Land	\$63,000	D. Layne Coppock Utah State University
LWD93-006	Navajo Nation Whole Farm/Ranch Sustainable Systems Demonstration Project	\$14,000	Lyle G. McNeal Utah State University.
LWD93-034	Four Corners Navajo Nation Sustainable Agriculture Demonstration Project	\$100,000	Lyle G. McNeal Utah State University.
LWD92-005	Conference on the Science of Sustainable Agricultural Systems	\$15,500	David Bezdicek Washington State University

RESEARCH TO GRASS ROOTS GRANTS

Project #	Project Title	SARE Support	Project Leaders
RGR20-007	Using the Wyoming Ranch Tools site to evaluate selected Western SARE research projects to assess economic sustainability for individual producers	\$61,160	Bridger Feuz Master Stockman Consulting

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
WPDP19-14	Enhancing Enterprise Diversification Assessment for Native American Farmers to Enhance Economic Sustainability	\$67,650	Ruby Ward Utah State University Vicki Hebb Trent Teegerstrom University of Arizona
EW15-023	Sustaining the Future of Navajo Rangelands via Mobile Learning Tools to Promote Enhanced Vegetation Management	\$62,260	Dr. Gerald Hawkes New Mexico State University
EW14-017	Building Business Management Capacity for American Indian Agricultural Businesses	\$75,000	Ruby Ward Utah State University
EW13-005	Economic Evaluation of Agricultural Diversification through Agritourism for the Intermountain West	\$74,492	Dr. Kynda Curtis Utah State University
EW09-007	Economic Evaluation of Alternative (low-water use) Crops for the Great Basin	\$99,724	Carol Bishop University of Nevada Cooperative Extension Dr. Kynda Curtis Utah State University
EW06-005	Entrepreneurial Sustainable Agriculture: Alternatives for Processing, Packing, Labeling and Marketing in Internet/Retail Environments	\$58,755	John C. Allen, PhD Western Rural Development Center
EW06-018	Disseminating Research-based Information to Improve Great Basin Rangelands	\$21,605	Summer Olsen Utah State University Mark Brunson Utah State University
EW04-010	Communication of Range Demonstration Project Results	\$15,045	Ken Mills Utah Association of Conservation Districts

FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FW19-343	Can barley fodder be fed in place of grass hay to dairy goats and dairy sheep and what effect will it have on milk production and composition.	\$19,407	Anita Wilson Milky Hollow Creamery
FW07-315	Bramble Variety Trials in Utah to Reduce Disease, Increase Production and Enhance Profitability	\$23,250	Rick Heflebower Utah State University
FW06-012	Interseeding Forage Kochia in Established CRP Land for Enhanced Livestock and Wildlife Utilization	\$7,621	Ron Harper
FW06-027	Commercial Artichokes in the Intermountain West	\$5,180	James Haggarty Sun River Farms
FW06-327	Integrating Annual Crop Residues, Perennial Pastures, and Livestock Management to Extend the Grazing Season and Minimize Losses of Soil Nitrogen	\$10,000	Thomas Griggs Utah State University
FW05-022	Increasing the Profitability of Raspberries by Extending the Growing Season	\$2,310	Clark Willis
FW04-014	Goats as a Weed Control Alternative in Small Acreage Ranchettes	\$3,382	Kyle Christensen
FW04-037	Tomato Disease Prevention and Production Enhancement	\$2,095	Aviva Maller-O'Neil Rick Heflebower Utah State University
FW04-314	Organic Dairy Transition in Northern Utah	\$7,500	Clark Israelsen Utah State University Cooperative Extension
FW03-201	Winter Cover Crop Experiment	\$1,120	Aviva Maller-O'Neil
FW03-306	Season Extension Experiment	\$1,250	Rick Heflebower Utah State University
FW00-019	Medusahead Control and Revegetation in Southern Cache County, UT	\$6,414	Guy Pulsipher
FW00-054	Southern Utah Forest Products Association Cooperative Marketing Act	\$4,835	Brian Cottam
FW00-317	The Original Cache Junction Families Popped Wheat	\$2,801	Wes Roundy
FW99-080	Composting Poultry Waste Inside High Rise Layer Houses	\$4,992	Mike Shepherd
FW99-117	Hovenweep Burn Reseeding and Demonstration Area	\$4,000	Mary Tso

FW97-038	Increased Forage Production during Alfalfa Rotation Years in Johnson Canyon, Utah. Biological Control of Scotch and Bull Thistle on Disturbed Alfalfa Pastures	\$2,900	Michael E. Noel
FW97-065	Alternative Cropping For the Navajo Reservation	\$4,300	Mark Maryboy
FW95-084	Pasture Aeration and Fertilizer Study	\$2,480	Ken Carter

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GW20-215	Identification of effective cover crop varieties and integrated management practices for weedy and invasive plant suppression in the Western US	\$25,000	Steve Young Utah State University Danielle Thiemann Utah State University Danielle Thiemann Utah State University
GW18-106	Brown Marmorated Stink Bug in Utah's Intermountain West	\$24,999	Dr.Diane Alston Utah State University Mark Holthouse Utah State University
GW18-156	Utilizing Tannin-Containing Forages and Holos Software for Sustainable Beef Production in the Intermountain West	\$20,204	Dr.Jennifer Reeve Utah State University Kathryn Slebodnik Utah State University
GW17-060	Navajo Spinach (Cleome Serrulata): Improving Seed Germination from Wild Populations Gathered across Native Lands of the Four Corners	\$24,969	Dr.Daniel Drost Utah State University Reagan Wytsalucy Utah State University
GW15-046	Improved simple on-site soil quality testing for soils in the Intermountain West	\$24,844	Dr.Jennifer Reeve Utah State University Esther Thomsen USU
GW13-006	Determination of gas emissions from manure sources in animal feeding operations	\$25,000	Scott B. Jones Utah State University Dr.Rhonda Miller WSARE Pakorn Sutitarnnontr Biological Engineering Department, Utah State University
GW12-030	Contributions to pest suppression through predator phenology and functional diversity	\$13,095	Dr.Ricardo Ramirez Utah State University Erica Stephens Utah State University

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
OW19-343	Management strategies for Tomato spotted wilt virus and curtoviruses in Utah	\$31,149	Claudia Nischwitz Utah State University Dr.Diane Alston Utah State University Richard Heflebower Utah State University Extension - Washington County

OW19-346	Promoting crop diversification and soil health for cut flower production	\$49,999	Dr.Melanie Stock Utah State University Dr.Brent Black Utah State University Dr.Daniel Drost Utah State University Dr.Larry Rupp Utah State University
OW18-007	Supporting Natural Enemies of the Cabbage Aphid with Hedgerow Plantings	\$48,554	Laura Horn Wild Bee Project
OW14-036	Biochar Amendment to Enhance Tomato and Melon Productivity and Protect Against Phytophthora Root Rot Disease	\$49,990	Marion Murray Utah State University
OW13-005	Rangeland Restoration on the Channel Scablands of Eastern Washington	\$49,931	Dr.Kip Panter USDA-ARS-PPRL
OW12-020	Feedlot performance, feed efficiency, and profitability of cattle fed either a complete mixed ration or allowed to voluntarily select their diet.	\$49,967	Beth Burritt Utah State University

**Total funding from the USDA SARE program to
Utah
\$5,358,896**



For further information on projects, contact Western SARE at (435) 797-2257 or wsare@usu.edu.

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