

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...

Wyoming

Project Highlight: *A Better Way to Identify Livestock Disease*

Despite measures that had successfully eradicated brucellosis in cattle and stopped its spread to humans, the deadly disease can still be found in elk and bison in the greater Yellowstone area. Over the past 10 years, the disease began spreading to local livestock, leading to expensive quarantines and economic losses to producers as they choose to, or are required to, euthanize cattle to undergo imperfect and time-consuming diagnostic testing. A positive result from the currently used test does not guarantee that the animal was in fact infected.

To reduce these burdens on ranchers, University of Wyoming graduate student Noah Hull worked to increase the ability to identify animals infected with brucellosis in the greater Yellowstone area by creating and validating a new molecular assay. As the project progressed, Hull found that this test was twice as effective as the traditional method at identifying animals that were truly infected. Perhaps more meaningfully to producers, the new testing procedure can be done on animals while still alive, which could lead to a reduction in culling. The turnaround time for results is much faster as well. To spread the word about his findings, Hull held four stakeholder meetings in the state that reached 120 participants.

For more information on this project, see sare.org/projects, and search for project number [GW16-038](#).

SARE in Wyoming

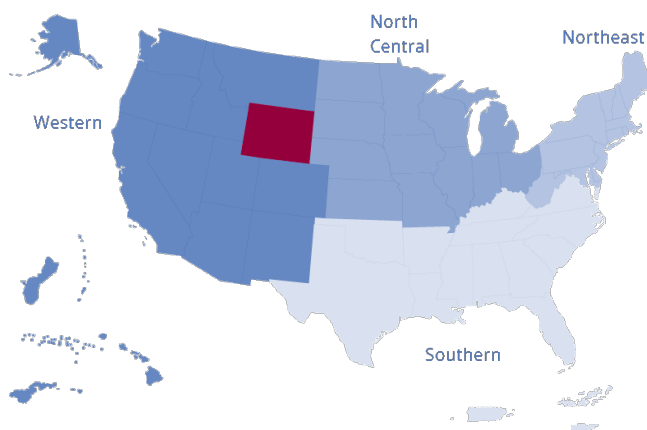
western.sare.org/sare-in-your-state/wyoming

\$2,863,061
in total funding

53 grant projects

(since 1988)

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



SARE Grants in Wyoming

Total awards: 53 grants



2 Enhanced State Grants
18 Farmer/Rancher
9 Graduate Student
3 On Farm Research/Partnership
5 Professional Development Program
16 Research and Education

Total funding: \$2,863,061



\$49,258 Enhanced State Grants
\$188,806 Farmer/Rancher
\$200,168 Graduate Student
\$147,278 On Farm Research/Partnership
\$349,976 Professional Development Program
\$1,927,576 Research and Education

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/wyoming

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/wyoming 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 WYOMING

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

Wyoming has been awarded \$2,813,803 grants to support 50 projects, including but not limited to, 15 research and/or education projects, 5 professional development projects and 18 producer-led projects. Wyoming has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
SW18-021	Integrating livestock and cover crops into irrigated crop rotations	\$249,954	Dr. Jay Norton University of Wyoming
SW10-073	Prescribed Grazing to Sustain Livestock Production, Soil Quality, and Diversity in Rangeland Ecosystems	\$197,268	Dr. Kenneth Tate University of California Davis
SW07-049	Evaluation of Camelina sativa as an alternative seed crop and feedstock for biofuel and developing replacement heifers.	\$155,000	Dr. Bret Hess University of Wyoming
SW05-117	Integrated Crop and Livestock Systems: Dryland Crop Rotations to Improve Economic and Ecological Sustainability in the Central High Plains	\$212,928	Dr. Steve Paisley University of Wyoming
SW04-051	Record Management Computer Database for Wyoming Cow-Calf Producers	\$18,563	Dallas Mount University of Wyoming
SW03-008	Annual Legume-Based Systems for Sustainable Integrated Crop/Livestock Enterprise Diversification on the Central High Plains	\$200,000	James Krall University of Wyoming
SW02-011	Economic Impacts of Undernutrition on Fetal Programming during Early Gestation in the Cow: Effects on Growth, Development and Carcass Characteristics of Steers and Reproductive Efficiency of Heifers	\$23,014	Stephen Ford University of Wyoming
SW98-071	Annual Legumes in Fallow as an Integrated Crop/Livestock Alternative in the Central Great Plains.	\$173,979	James Krall University of Wyoming
SW97-018	Integrating nemade-resistant crops into sugar beet rotations	\$113,184	David Koch University of Wyoming
SW96-010	Western Integrated Ranch/Farm Education	\$36,326	John Hewlett University of Wyoming, Department of Agricultural Economics
SW96-029	Potential of a Corn/Annual Medic Intercropping System for Weed Control, Reduced Soil Erosion and Improved Forage Production	\$95,100	James Krall University of Wyoming

SW95-007	Sustainable Rangeland Based Beef Cattle Production Systems	\$155,260	Michael A. Smith University of Wyoming
SW94-034	Western Integrated Ranch/Farm Education	\$90,000	John Hewlett University of Wyoming, Department of Agricultural Economics
SW94-006	Legume Cover Crops in Fallow as an Integrated Crop/Livestock Alternative in the Northern and Central Great Plains	\$160,000	James Krall University of Wyoming
LW91-022	Brassica Utilization in Sugar Beet Rotations for Biological Control of Cyst Nematode	\$47,000	David Koch University of Wyoming

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
EW10-012	Equipping Extension Educators to Address Producer Needs in Energy Education	\$99,596	Sarah Hamlen MSU Extension
EW10-020	Ranch Sustainability Assessment: Economic, Ecological, & Social Indicator Monitoring	\$85,000	Dr. John Tanaka University of Wyoming
EW07-016	Educator Training for the Wyoming Cow-Calf Record Management System	\$9,500	Dallas Mount University of Wyoming
EW00-024	Sustaining western rural landscapes, lifestyles, and livelihoods through agricultural enterprise diversification: a collaborative partnership.	\$80,880	Boyd Byelich USDA-NRCS
EW94-018	Extension Sustainable Agriculture Training in Colorado and Wyoming	\$75,000	Joe Hiller University of Wyoming, Cooperative Extension Service

FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FW09-319	Enhancing Rural Agricultural Family and Community Development in Wyoming Through Sustainable Biofuel Crop Production	\$49,873	Donn Randall Wyoming Business Council
FW08-303	Utilizing Soil Moisture and Microclimate Monitoring Technology to Reduce Water and Energy Needs and Improve Sugar Beet Crop Production for Producers in the Big Horn Basin Region of Wyoming	\$29,923	Caryn Agee Washakie County Conservation District
FW08-307	Nitrogen Use Efficiency of Cool-Season Perennial Forage Grasses Planted With and Without Alfalfa Under Irrigation for Hay Production	\$14,999	Dr. Blaine Horn University of Wyoming
FW06-021	Management of Iron Deficiency in Bean with Annual Ryegrass Interplantings	\$9,505	Mike Ridenour
FW05-035	Brush Mower/Mixed Mountain Shrub Enhancement	\$19,370	Myrtle and Clyde McColloch JY Ranch
FW04-030	Progeny Evaluation to Determine an Economically Based Index for Sire Selection	\$7,500	Sandra Snider

FW04-035	Tree Windbreak	\$7,500	Betty Rodriguez
FW03-004	Wind and Water	\$6,000	Betty Rodriguez
FW02-207	BOS Grass Grown Premium Beef Marketing	\$7,495	James Millett
FW02-210	Platte County Farmer's Market	\$2,434	Susan Schamel
FW01-047	Prevention of High Altitude Disease Losses in Beef Cattle Utilizing PAP Test Scores, EPDs, and Gene-Mapping Techniques	\$7,500	Jon Robinett Diamond G. Cattle Co. LLC
FW00-278	Internet Marketing of Organically Grown Wyoming Gourmet Garlic	\$3,930	Steve Shesler
FW00-093	Pastured Poultry Production with Research on Sustainability of Grazing Lands	\$1,477	Joleen and Greg Marquardt
FW99-060	Improving Ranch Unit Stability and Sustainability through Grazing Irrigated Alfalfa	\$3,500	Rick March
FW96-023	Tall Stature Grasses for Winter Grazing and Spring Calving	\$2,800	Matt Weber
FW95-045	Integrated Management to Improve Rangeland Health and Reduce Noxious Weeds	\$5,000	Ogden Driskell Bearlodge Cattle Company
FW95-067	Initiation of Integrated Management	\$5,000	Tom Bruce
FW95-076	Flitner Wetland Habitat Enhancement Project	\$5,000	Mary & Stan Flitner

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GW18-025	The Critical Role of Soil Microbiota to Sustainable Agriculture: Quantifying short-term microbial and vegetation feedback to intensive grazing.	\$24,184	Linda Van Diepen University of Wyoming Emily Bean University of Wyoming, The Pennsylvania State University
GW18-170	Evaluation of Pulse Crops for Dryland Production	\$25,000	Dr. Carrie Eberle University of Wyoming Amberle Filley University of Wyoming
GW17-059	Cattle Diets and Performance: Enhancing What We Know with Advanced Plant DNA Technology	\$24,970	John Derek Scasta University of Wyoming Tamarah Plechaty University of Wyoming, Laramie & Unites States Department of Agriculture - Agricultural Research Service, Cheyenne, WY
GW16-038	Increasing sustainable agriculture through enhanced diagnostics with Brucella infection	\$24,818	Dr. Brant Schumaker, DVM, MPVM, PhD University of Wyoming Noah Hull, MPH University of Wyoming

GW16-068	Conservation biological control of alfalfa weevil in Wyoming	\$7,280	Makenzie Benander University of Wyoming
GW15-020	Economic and Environmental Sustainability of Irrigated Grass-Legume Mixtures	\$24,998	Dr. Anowar Islam University of Wyoming Albert Adjesiwor University of Wyoming
GW14-023	Improving Feed Efficiency in Sheep Through Rumen Manipulation and Producer Adoption	\$25,000	Dr. Kristi Cammack University of Wyoming Melinda Ellison University of Idaho
GW11-007	Impacts of age on residual feed intake and its effect on reproductive parameters and profitability in ewes	\$24,990	Dr. Kristi Cammack University of Wyoming Dr. Rebecca Cockrum Colorado State University
GW08-016	Potential of Managing Iron and Zinc Deficiency in Dry Beans with Interplantings of Annual Ryegrass and Increased Bean Density	\$18,928	Andrew Kniss University of Wyoming Emmanuel Omondi University of Wyoming - Dept 3354

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
OW20-355	Does cattle selection matter? Testing larkspur-native vs larkspur-naïve cattle to reduce death losses on larkspur infested rangelands.	\$49,991	Daniel Cook USDA-ARS-Poisonous Plant Research Laboratory Clint Stonecipher US Department of Agriculture - Agricultural Research Service - Poisonous Plant Research Laboratory Ben Green USDA-ARS-Poisonous Plant Research Laboratory Eric Thacker Utah State University
OW19-340	Growing and Marketing Ancient Grains in Wyoming	\$49,995	Dr. Caitlin Youngquist University of Wyoming
OW10-313	Residual Feed Intake - Producer Adoption and Genetic Selection Potential	\$47,292	Dr. Kristi Cammack University of Wyoming

**Total funding from the USDA SARE program to
Wyoming
\$2,813,803**



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).