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 $332 million to more than 7,748 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.

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

$2,979,005 in total funding

54 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: 54 grants
- 16 Research and Education
- 6 Professional Development Program
- 19 Farmer/Rancher
- 9 Graduate Student
- 4 On Farm Research/Partnership

Total funding: $2,979,005
- $1,927,576 Research and Education
- $425,624 Professional Development Program
- $203,556 Farmer/Rancher
- $200,168 Graduate Student
- $222,082 On Farm Research/Partnership

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.

Caitlin Youngquist
University of Wyoming
(307) 347-3431
cyoungqu@uwyo.edu

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 $2,979,005 grants to support 53 projects, including but not limited to, 15 research and/or education projects, 6 professional development projects and 19 producer-led projects. Wyoming has also received additional SARE support through multi-state projects.

### RESEARCH AND EDUCATION GRANTS

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

**Project #:** SW95-007  
**Project Title:** Sustainable Rangeland Based Beef Cattle Production Systems  
**SARE Support:** $155,260  
**Project Leaders:** Michael A. Smith  
University of Wyoming

### Legume Cover Crops in Fallow as an Integrated Crop/Livestock Alternative in the Northern and Central Great Plains

**Project #:** SW94-006  
**Project Title:** Legume Cover Crops in Fallow as an Integrated Crop/Livestock Alternative in the Northern and Central Great Plains  
**SARE Support:** $160,000  
**Project Leaders:** James Krall  
University of Wyoming

### Western Integrated Ranch/Farm Education

**Project #:** SW94-034  
**Project Title:** Western Integrated Ranch/Farm Education  
**SARE Support:** $90,000  
**Project Leaders:** John Hewlett  
University of Wyoming, Department of Agricultural Economics

### Brassica Utilization in Sugar Beet Rotations for Biological Control of Cyst Nematode

**Project #:** LW91-022  
**Project Title:** Brassica Utilization in Sugar Beet Rotations for Biological Control of Cyst Nematode  
**SARE Support:** $47,000  
**Project Leaders:** David Koch  
University of Wyoming

## PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
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<th>Project Leaders</th>
</tr>
</thead>
</table>
| WPDP21-024   | Rancher to Consumer Meat Connection                        | $75,648      | Scott Cotton  
University of Wyoming  
Cody Gifford  
University of Wyoming |
| EW10-020     | Ranch Sustainability Assessment: Economic, Ecological, & Social Indicator Monitoring | $85,000      | Dr. John Tanaka  
University of Wyoming |
| EW10-012     | Equipping Extension Educators to Address Producer Needs in Energy Education | $99,596      | Sarah Hamlen  
MSU Extension |
| 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

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| FW21-383     | Trout Creek Pumpkin Patch: adding new revenue streams on a traditional cow/calf ranch | $14,750      | Clint Wagon  
Wagon Ranch |
| FW09-319     | Enhancing Rural Agricultural Family and Community Development in Wyoming Through Sustainable Biofuel Crop Production | $49,873      | Donn Randall  
Wyoming Business Council |
| 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 |
| 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 |
| FW06-021     | Management of Iron Deficiency in Bean with Annual Ryegrass Interplantings | $9,505       | Mike Ridenour |
| 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 |
**GRADUATE STUDENT GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GW18-170  | Evaluation of Pulse Crops for Dryland Production                               | $25,000      | Dr. Carrie Eberle  
University of Wyoming  
Amberle Filley  
University of Wyoming |
| 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 |
### ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
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<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW21-363</td>
<td>Kernza® in Wyoming: Evaluating Perennial Grains to Revitalize Wyoming Dryland Agriculture</td>
<td>$74,804</td>
<td>Dr. Jay Norton University of Wyoming</td>
</tr>
</tbody>
</table>
| 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**

$2,979,005
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).