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 $389 million to more than 8,519 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, granteeproduced information products and other educational materials.

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

Idaho

Project Highlight: High Tunnels Extend Local Food Production

In 2010, Idaho’s farmers, researchers and educators launched a collaborative effort to achieve the goal of having 20 percent of the state’s food produced locally by 2020. At the same time, a survey of local food vendors revealed that the single largest roadblock to making this goal a reality is Idaho’s short growing season.

This prompted the University of Idaho’s Stephen Love to organize a team of horticulture specialists to expand farmers’ use of high tunnels in the state. Funded by a SARE grant, the team collaborated with three experienced high tunnel growers in different parts of the state to evaluate high tunnel designs and the profitability of growing various crops in them.

The experience at the three farms gave the team important information to share with growers around the state. On one farm, eggplants grown inside the tunnels were superior economically to ones grown outside, but for cucumbers the results were mixed. On another farm, there was a clear advantage to growing tomatoes, garlic and peppers in high tunnels. The third farm showed that medicinal crops otherwise unsuited to Idaho’s climate can be grown in high tunnels. It also evaluated structures specially designed by engineering students to withstand harsh winter conditions.

For more information on this project, see sare.org/projects, and search for project number OW13-043.

SARE in Idaho

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

$5,744,533
in total funding

80 grant projects

(since 1988)

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

Total awards: 80 grants
- 27 Research and Education
- 10 Professional Development Program
- 33 Farmer/Rancher
- 5 On Farm Research/Partnership
- 5 Graduate Student

Total funding: $5,744,533
- $4,323,362 Research and Education
  - $739,754 Professional Development Program
  - $314,557 Farmer/Rancher
  - $226,960 On Farm Research/Partnership
  - $139,900 Graduate Student

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/idaho

Contact Your SARE State Coordinator

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cwillmore@uidaho.edu

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.
Idaho has been awarded $5,744,533 grants to support 77 projects, including but not limited to, 24 research and/or education projects, 10 professional development projects and 33 producer-led projects. Idaho 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>SW23-946</td>
<td>Evaluating benefits of neonatal calf gut-originated probiotics, as direct-fed microbial (DFMs), during the weaning transition to improve calf health</td>
<td>$349,875</td>
<td>Dr. Denise Konetchy, DVM University of Idaho Dr. Amin Ahmadzadeh, PhD University of Idaho Dr. Bruna Calvo Agustinho, PhD University of Idaho Dr. Leluo Guan, PhD University of Alberta Dr. Anne Laarman, PhD University of Alberta Pedram Rezamand University of Idaho Dr. Hernan Tejeda University of Idaho</td>
</tr>
<tr>
<td>SW23-944</td>
<td>Seeds underhoof: can the soil seed bank facilitate restoration of sheep-grazed, cheatgrass-invaded rangelands?</td>
<td>$71,104</td>
<td>Dr. Kelly Hopping Boise State University Kerry Byrne Department of Environmental Science and Management, Cal Poly Humboldt</td>
</tr>
<tr>
<td>SW22-938</td>
<td>Targeted grazing by sheep to control invasive species and reduce wildfire risk on western rangelands</td>
<td>$349,815</td>
<td>Dr. Kelly Hopping Boise State University Sergio Arispe, PhD Oregon State University Marie-Anne de Graaff Boise State University April Hulet Brigham Young University Renee Kehler U. S. Forest Service</td>
</tr>
</tbody>
</table>
SW22-940 Pacific Northwest Cover Crop Decision Aid System $349,697 Dr. Sanford Eigenbrode University of Idaho Dr. Subodh Adhikari University of Idaho Ryan Boylan Palouse Conservation District Tracy Ericksen The Ericksens Garry Esser Esser Farms Dr. Douglas Finkelnburg University of Idaho Mark Greene Sheryl Haggen-Zacharison Zacharison farm Dr. Patrick Hatzenbuehler University of Idaho Jodi Johnson-Maynard University of Idaho Lucas Sheneman University of Idaho Chloe Wardropper University of Idaho Frank Wolf Lester Wolf Farms Clint Zenner Zenner Family Farm

SW21-922 Soil health and profitability implications of including brown mustard and its products in an integrated wireworm management system $349,919 Dr. Kurtis Schroeder University of Idaho Dr. Arash Rashed University of Idaho Dr. Erik Wenninger University of Idaho Dr. Jae Ryu University of Idaho Gordon Gallup Mark Greene Dr. Jeremy Hansen USDA-ARS Dr. Patrick Hatzenbuehler University of Idaho Hans Hayden Dr. Inna Popova University of Idaho Wayne Westberg

SW18-015 On-farm evaluation and demonstration of advanced manure solidliquid separation technologies for a sustainable dairy industry in Idaho $287,466 Dr. Lide Chen University of Idaho

SW16-031 Optimizing Water and Nitrogen Use for Sustainable Wheat Production $249,939 Dr. Olga Walsh University of Idaho

SW11-122 Incorporating Cover Crops and Green Manure in High-Desert Organic and Conventional Farming Systems $47,628 Lauren Golden University of Idaho

SW06-083 Black Soldier Fly Larvae as a Tool for Managing Animal Waste and Providing a Food Source for the Aquaculture Industry $117,682 Sophie St-Hilaire Idaho State University

SW06-039 ‘Living on the Land’ Stewardship Education Program Expansion $160,204 Stephanie Etter University of Idaho Extension
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| SW05-142 | Assessment and Demonstration of the Sustainability of Long vs. Short Potato Rotations | $135,756     | Amanda Shiffler  
               University of Idaho  
               Dr.Bryan Hopkins  
               BYU                                      |
| SW05-067 | Assessment and Demonstration of the Sustainability of Long vs. Short Potato Rotations | $179,403     | Bryan Hopkins  
               University of Idaho                                      |
| SW05-039 | Using farmer-rancher input to develop and implement experiential educational opportunities for beginning farmers and ranchers | $160,056     | Cinda Williams  
               University of Idaho Extension                                      |
| SW03-021 | Integrated Residue Management Systems for Sustained Seed Yield of Kentucky Bluegrass Without Burning | $294,243     | Donald Thill  
               University of Idaho                                      |
| SW02-038 | On-Farm Versus Agricultural Experiment Station Evaluation and Improvement of Intrinsic Characteristics of Landrace Common Bean Cultivars for Sustainable Farming Systems in the Twenty-First Century | $167,717     | Shree Singh  
               University of Idaho                                      |
| SW02-037 | Promoting Sustainable Potato Cropping Systems                                      | $158,477     | Bryan Hopkins  
               University of Idaho                                      |
| SW02-004 | Reducing Nitrogen and Phosphorus Excretions from Dairies in Gooding and Jerome Counties, Idaho | $145,672     | Alexander Hristov  
               University of Idaho                                      |
| SW00-042 | Exploration and Implementation of Sustainable Ag Practices and Outreach on the Fort Hall Indian Reservation for the Protection of Groundwater | $103,913     | Jennifer Miller  
               NCAP  
               John Helsel  
               Shoshone-Bannock Tribes                                      |
| SW97-010 | Management, Impact and Economics of Beef Cattle Grazing in Mountain Riparian Ecosystems | $105,400     | Patrick A. Momont  
               Univ. of ID, Dept. of Animal & Vet. Sci.                                      |
| SW95-021 | Brassica Green Manure Systems for Weed, Nematode, and Disease Control in Potatoes | $112,580     | Charlotte Eberlein  
               University of Idaho                                      |
| LW91-029 | Development of Sustainable Potato Production Systems for the Pacific North West | $330,000     | Jeffrey C. Stark  
               University of Idaho                                      |
| LWD91-002 | An Economic Evaluation of the MSU Crop Rotations On-Farm Research, Demonstration Legume, Cereal Rotations Compared with Conventional Rotations | $23,675      | Edgar Michalson  
               University of Idaho                                      |
| LW91-027 | Development of Winter Wheat Cover Crop Systems for Weed Control in Potatoes | $42,141      | Charlotte Eberlein  
               University of Idaho                                      |
| LW89-015 | Total Resource Budgeting of LISA (SARE) Farm Enterprises | $31,000      | Paul Patterson  
               University of Idaho                                      |
### FARMER/RANCHER GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW22-393</td>
<td>Cardboard layering deep compost mulch for weed suppression, soil health, and profitability</td>
<td>$24,920</td>
<td>Jonah Sloven</td>
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<tr>
<td></td>
<td></td>
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<td>Sweet Hollow Farm</td>
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<tr>
<td>FW22-407</td>
<td>Building a holistic, biologically rich, healthy vineyard in order to produce a wine with higher nutrient density and superb flavor</td>
<td>$24,850</td>
<td>Ron Bitner, Phd</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bitner Vineyards</td>
</tr>
<tr>
<td>FW17-039</td>
<td>Saving Water and Improving Soil Health Through LESA, Cover Crops, No-Till, and Management Intensive Grazing</td>
<td>$20,000</td>
<td>Pat Purdy</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Pat Purdy</td>
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<tr>
<td>FW17-055</td>
<td>No-till potatoes into cover crop, using mod. conv. planter</td>
<td>$20,000</td>
<td>Jeff Parkinson</td>
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<td>Jeff Parkinson</td>
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<tr>
<td>ID</td>
<td>Project Title</td>
<td>Funding</td>
<td>Principal Investigator(s)</td>
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<tr>
<td>FW16-042</td>
<td>A Rangeland Stock Handling Concept: Inherding on the Hat Creek Grazing Allotment, Ellis Idaho</td>
<td>$19,423</td>
<td>Glenn Elzinga,Aiderspring Ranch</td>
</tr>
<tr>
<td>FW11-032</td>
<td>Goat Meat is Great!</td>
<td>$7,799</td>
<td>Evelyn Simon, Simon Boers</td>
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<tr>
<td>FW10-039</td>
<td>Pokey Creek Farm Elderberry Exploration</td>
<td>$14,877</td>
<td>Cinda Williams, University of Idaho Extension, Greg and Leah Sempel, Ashley McFarland, University of Idaho Extension</td>
</tr>
<tr>
<td>FW08-322</td>
<td>A Multi-Faceted Approach to Managing Powdery Mildew on Organic Table Grapes in Southwest Idaho</td>
<td>$15,000</td>
<td>Ariel Agenbroad, University of Idaho Extension</td>
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<tr>
<td>FW08-318</td>
<td>IBC Technical Services to Farmer’s/Ranchers for Online Markets in South Central Idaho</td>
<td>$29,997</td>
<td>Judy Hall, Idaho’s Bounty Co-op</td>
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<tr>
<td>FW08-031</td>
<td>What Good Are Pasture-Raised Ducks to Whole Farm Systems?</td>
<td>$14,942</td>
<td>Mary Rohlfing</td>
</tr>
<tr>
<td>FW06-042</td>
<td>Harvest Frequency, Yield and Economics of Summer Squash</td>
<td>$4,730</td>
<td>Karen Strickler</td>
</tr>
<tr>
<td>FW06-036</td>
<td>Winter and Summer Greenhouse Production for Small-scale Growers</td>
<td>$6,235</td>
<td>Brad Jaeckel, Orchard Farm</td>
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<tr>
<td>FW06-015</td>
<td>Extending Forage Season with Multi-functional Browse Islands</td>
<td>$8,560</td>
<td>Juvia Judd, Lazy M Suris, Deborah Berman, Lazy M Suris</td>
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<tr>
<td>FW05-007</td>
<td>Controlling Common Tansy with Sheep</td>
<td>$3,422</td>
<td>Kimberly McConnaghy</td>
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<tr>
<td>FW04-203</td>
<td>Optimizing Spatial &amp; Temporal Aspects of Designs for Small-Scale Diverse Farms</td>
<td>$5,500</td>
<td>Bridget Betta Bunzel, Bunzel Organics</td>
</tr>
<tr>
<td>FW03-307</td>
<td>Ovine Browsing for Brush Control of Forested Environments</td>
<td>$7,500</td>
<td>Jeff Nauman, Idaho Department of Lands</td>
</tr>
<tr>
<td>FW01-056</td>
<td>Farmers Educating Farmers: Developing a Soil Quality Indicator Guide</td>
<td>$10,500</td>
<td>Kyle Wilson, Natural Resource Conservation Agency</td>
</tr>
<tr>
<td>FW01-039</td>
<td>Noxious Weed Grazing with Goats</td>
<td>$7,000</td>
<td>Bonnie Jensen, Lemhi County Ext.</td>
</tr>
<tr>
<td>FW01-025</td>
<td>Developing a Sustainable Market for Small Farms in a Rural Community</td>
<td>$7,385</td>
<td>Diane Green, Grentree Naturals</td>
</tr>
<tr>
<td>FW00-259</td>
<td>The Farm to Fork Exchange</td>
<td>$4,625</td>
<td>Nate Jones</td>
</tr>
<tr>
<td>FW00-052</td>
<td>Low Stress Stockmanship School for Lemhi County, ID</td>
<td>$5,450</td>
<td>Wally Butler</td>
</tr>
</tbody>
</table>
FW99-076  On-Site Rearing of Beneficial Predatory Mite Species  $4,200  Richard Nathanson

FW99-012  Automated On-Farm Irrigation Water Diversion Gate  $3,890  George Davis

FW98-099  Wiersema Dairy Agroforestry Project  $5,000  Jim Wiersema

FW98-097  Fear and Loathing in the Potato Patch: Controlling Nematodes with Rape Seed Meal and Green Manures  $9,910  John O'Connor

FW97-024  Systems Thinking in a Range Environment  $5,000  Jay Black

FW97-049  Non-Irrigated Alfalfa Performance Trial, Benewah County, Idaho  $3,500  Christina Crawford

FW97-044  Paradise Time Controlled Grazing  $5,000  Mark Pratt

FW96-060  Economic Viability of Greenhouse Solarization  $2,450  Larry Higgins

FW95-080  Squash Bug Management Through Introduction of Game Birds  $2,740  Jill Kohler

FW95-046  Developing an Idaho-Based Marketing Cooperative for Sustainability and Locally Grown Produce  $4,622  Janie Burns

FW95-034  Row Spacing Effect on Weed Suppression  $530  Lee Griffiths

FW95-025  Biological Control in Idaho Alfalfa Seed Fields  $5,000  Larry Sorenson

GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GW23-256  | Nematicide Development from Solanum sisymbriifolium for Sustainable Eradication of Globodera pallida in Idaho | $29,943      | Louise-Marie Dandurand  
 University of Idaho  
 Lindsay Schulz  
 University of Idaho |
| GW23-250  | Cereal Cover Crops for Weed Control in Organic and Conventional Dry Bean Production Systems | $30,000      | Albert Adjesiwor  
 University of Idaho  
 Prayusha Bhattacharai  
 University of Idaho |
| GW21-222  | Trap Crops and Crop Rotation for Eradication of the Pale Cyst Nematode in Idaho | $29,966      | Louise-Marie Dandurand  
 University of Idaho  
 Paige Hickman  
 University of Idaho |
| GW20-217  | The effects of cover crops on soil arthropod communities in the Inland Pacific Northwest | $24,993      | Dr. Sanford Eigenbrode  
 University of Idaho  
 Dane Elmquist (PI: Eigenbrode)  
 University of Idaho |
GW20-206  Evaluating the effectiveness of mustard species and their concentrated extracts in reducing losses to wireworms in the Pacific Northwest, USA. $24,998  Dr. Arash Rashed  University of Idaho  Reed Findlay  University of Idaho  Atoosa Nikoukar/ PI Rashed  University of Idaho

ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| OW23-382  | Precipitated Calcium Carbonate to RemEDIATE Acidic Eastern Idaho Soils | $75,000       | Dr. Jared Spackman  University of Idaho  
Jared Gibbons  University of Idaho  
Justin Hatch  University of Idaho  
Tom Jacobsen  University of Idaho  
Joseph Sagers  University of Idaho |
| OW15-032  | Madison County Healthy Soil Initiative                 | $50,000       | Robbie Taylor  Madison SWCD |
| OW13-017B | Reference strips and precision sensors for increased nitrogen use efficiency in wheat production | $1,961        | Dr. Olga Walsh  University of Idaho |
| OW13-043  | Extension of Local Food Production in Idaho Using High Tunnel Technology | $49,999       | Dr. Stephen Love  University of Idaho |
| OW10-301  | Using Aquaponics with Renewable Energy Resources to Create Sustainable Food Systems while Reducing Nutrient, Energy, and Water Costs | $50,000       | Matt Johnson  Sustain Pro Management  
Harry Ako  University of Hawaii |

Total funding from the USDA SARE program to Idaho  
$5,744,533

For further information on projects, contact Western SARE at (406) 994-4789 or wsare@montana.edu. 
Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).