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 $333 million to more than 7,794 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.

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

$4,250,673 in total funding

69 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: 69 grants

- 23 Research and Education
- 8 Professional Development Program
- 31 Farmer/Rancher
- 4 On Farm Research/Partnership
- 3 Graduate Student

Total funding: $4,250,673

- $3,202,871 Research and Education
- $551,098 Professional Development Program
- $264,787 Farmer/Rancher
- $151,960 On Farm Research/Partnership
- $79,957 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

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/idaho to learn more.

Carmen Willmore
University of Idaho Extension
(208) 886-2406
cwillmore@uidaho.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.
Idaho has been awarded $4,250,673 grants to support 66 projects, including but not limited to, 20 research and/or education projects, 8 professional development projects and 31 producer-led projects. Idaho has also received additional SARE support through multi-state projects.

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| SW21-922  | Soil health and profitability implications of including brown mustard and its products in an integrated wireworm management system | $349,919     | Dr.Arash Rashed  
               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  
               Dr.Kurtis Schroeder  
               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 |
| SW06-039  | ‘Living on the Land’ Stewardship Education Program Expansion                                             | $160,204     | Stephanie Etter  
               University of Idaho Extension |
| 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 |
| 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 |
| SW05-067  | Assessment and Demonstration of the Sustainability of Long vs. Short Potato Rotations                    | $179,403     | Bryan Hopkins  
               University of Idaho |
| 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 |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| 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  
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                                      |
| 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                                      |
| LW91-029  | Development of Sustainable Potato Production Systems for the Pacific North West | $330,000     | Jeffrey C. Stark  
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                                      |

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| EW18-018  | Supporting outcome-based management on private & public rangelands: training agricultural professionals on monitoring techniques | $72,519      | Dr. Jason Karl  
University of Idaho                                      |
| EW18-028  | Idaho Qualitative Soil Health Initiative and Training                       | $15,724      | Jessica Harrold  
Ada Soil & Water Conservation District  
Josie Erskine  
Ada Soil & Water Conservation District  |
| EW05-012  | Forage and Pasture Educational Program for Extension, FSA, and NRCS in the Pacific Northwest | $90,000      | Glenn Shewmaker  
University of Idaho                                      |
| EW04-014  | Building Knowledge of Sustainable Rangeland Management Using Information Technology | $91,847      | Karen Launchbaugh  
University of Idaho                                      |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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</thead>
<tbody>
<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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<tr>
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<tr>
<td>FW17-039</td>
<td>Saving Water and Improving Soil Health Through LESA, Cover Crops, No-Till,</td>
<td>$20,000</td>
<td>Pat Purdy</td>
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<tr>
<td></td>
<td>and Management Intensive Grazing</td>
<td></td>
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</tr>
<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</td>
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<td></td>
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<td>Alderspring Ranch</td>
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<tr>
<td>FW11-032</td>
<td>Goat Meat is Great!</td>
<td>$7,799</td>
<td>Evelyn Simon</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>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</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>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</td>
<td>$15,000</td>
<td>Ariel Agenbroad</td>
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<tr>
<td></td>
<td>in Southwest Idaho</td>
<td></td>
<td>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</td>
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<tr>
<td></td>
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<td>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>
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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</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Lazy M Suris</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Deborah Berman</td>
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<td></td>
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<td>Lazy M Suris</td>
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<tr>
<td>FW06-042</td>
<td>Harvest Frequency, Yield and Economics of Summer Squash</td>
<td>$4,730</td>
<td>Karen Strickler</td>
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<tr>
<td>FW06-036</td>
<td>Winter and Summer Greenhouse Production for Small-scale Growers</td>
<td>$6,235</td>
<td>Brad Jaeckel</td>
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<td></td>
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<td>Orchard Farm</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>
</tr>
<tr>
<td>Project Code</td>
<td>Title</td>
<td>Cost</td>
<td>Principal Investigator</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</td>
</tr>
<tr>
<td>FW03-307</td>
<td>Ovine Browsing for Brush Control of Forested Environments</td>
<td>$7,500</td>
<td>Jeff Nauman</td>
</tr>
<tr>
<td>FW01-039</td>
<td>Noxious Weed Grazing with Goats</td>
<td>$7,000</td>
<td>Bonnie Jensen</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</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</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>
<tr>
<td>FW99-012</td>
<td>Automated On-Farm Irrigation Water Diversion Gate</td>
<td>$3,890</td>
<td>George Davis</td>
</tr>
<tr>
<td>FW99-076</td>
<td>On-Site Rearing of Beneficial Predatory Mite Species</td>
<td>$4,200</td>
<td>Richard Nathanson</td>
</tr>
<tr>
<td>FW98-099</td>
<td>Wiersema Dairy Agroforestry Project</td>
<td>$5,000</td>
<td>Jim Wiersema</td>
</tr>
<tr>
<td>FW98-097</td>
<td>Fear and Loathing in the Potato Patch: Controlling Nematodes with Rape Seed Meal and Green Manures</td>
<td>$9,910</td>
<td>John O'Connor</td>
</tr>
<tr>
<td>FW97-024</td>
<td>Systems Thinking in a Range Environment</td>
<td>$5,000</td>
<td>Jay Black</td>
</tr>
<tr>
<td>FW97-044</td>
<td>Paradise Time Controlled Grazing</td>
<td>$5,000</td>
<td>Mark Pratt</td>
</tr>
<tr>
<td>FW97-049</td>
<td>Non-Irrigated Alfalfa Performance Trial, Benewah County, Idaho</td>
<td>$3,500</td>
<td>Christina Crawford</td>
</tr>
<tr>
<td>FW96-060</td>
<td>Economic Viability of Greenhouse Solarization</td>
<td>$2,450</td>
<td>Larry Higgins</td>
</tr>
<tr>
<td>FW95-025</td>
<td>Biological Control in Idaho Alfalfa Seed Fields</td>
<td>$5,000</td>
<td>Larry Sorenson</td>
</tr>
<tr>
<td>FW95-034</td>
<td>Row Spacing Effect on Weed Suppression</td>
<td>$530</td>
<td>Lee Griffiths</td>
</tr>
<tr>
<td>FW95-046</td>
<td>Developing an Idaho-Based Marketing Cooperative for Sustainability and Locally Grown Produce</td>
<td>$4,622</td>
<td>Janie Burns</td>
</tr>
</tbody>
</table>
### Graduate Student Grants

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| 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>
| OW15-032  | Madison County Healthy Soil Initiative                                       | $50,000      | Robbie Taylor  
Madison SWCD |
| OW13-043  | Extension of Local Food Production in Idaho Using High Tunnel Technology     | $49,999      | Dr. Stephen Love  
University of Idaho |
| OW13-017B | Reference strips and precision sensors for increased nitrogen use efficiency in wheat production | $1,961       | Dr. Olga Walsh  
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 |

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**Total funding from the USDA SARE program to Idaho**

$4,250,673

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).