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 $354 million to more than 8,043 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...

Oregon

Project Highlight: Insect Pathogens Control Clover Pest

Red clover seed is produced commercially in western Oregon and Washington, and one of its major pests is the clover root borer. The clover root borer develops underground in the roots of red clover and controlling it has proven to be very difficult. Growers once used toxic organochlorine insecticides to battle the borer, but they have been banned from use. Since then, growers have seen a return of the root borer and typically manage it by rotating fields every two years.

With SARE funding, Oregon State University graduate student Anis Lestari studied whether insect pathogens, in particular naturally occurring fungi, have potential as biocontrol agents for controlling the root borer. Lestari collected clover root borers from four local Willamette Valley farms and isolated and identified pathogens associated with adults and larvae. She compared their virulence against the pest with commercially available microbial products and found that entomopathogenic fungi (a fungus that can act as a parasite) have the potential for use as a biological control of the clover root borer in western Oregon red clover fields.

More research and validation are needed before official recommendations can be made, but Lestari’s promising results show that a sustainable method for controlling the clover root borer is possible.

For more information on this project, see sare.org/projects, and search for project number GW15-018.

SARE in Oregon

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

$12,030,403 in total funding

189 grant projects

(since 1988)

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

Total awards: 189 grants

- 47 Research and Education
- 27 Professional Development Program
- 69 Farmer/Rancher
- 26 On Farm Research/Partnership
- 17 Graduate Student
- 3 Research to Grass Roots

Total funding: $12,030,403

- $7,231,264 Research and Education
- $2,030,516 Professional Development Program
- $812,144 Farmer/Rancher
- $1,359,977 On Farm Research/Partnership
- $397,229 Graduate Student
- $199,273 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/oregon

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/oregon to learn more.

Shayan Ghajar
Oregon State University
(541) 737-6131
shayan.ghajar@oregonstate.edu

Maud Powell
OSU Extension
(541) 776-7371
maud.powell@oregonstate.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.
Oregon has been awarded $12,030,403 grants to support 186 projects, including but not limited to, 44 research and/or education projects, 27 professional development projects and 69 producer-led projects. Oregon 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>
</table>
| SW21-928  | Bridging the communication gap: toward a more informed public understanding of sustainable farming | $348,841     | Clare Sullivan  
Oregon State University  
Katie Murray  
Oregon State University  
Michael Rozyne  
Red Tomato  
Julie Sweetland  
FrameWorks Institute |
| SW20-914  | Model-Assisted Forest Stand Delineation to Make Forest Assessment, Valuation, and Management Planning More Accessible | $349,981     | David Diaz  
Ecotrust  
Nils Christoffersen  
Wallowa Resources  
Dr.Gregory Ettl  
University of Washington, School of Environmental and Forest Sci  
Kirk Hanson  
Northwest Natural Resource Group |
| SW20-917  | Production and marketing of dry-farmed tomatoes in Oregon                     | $349,875     | Dr.ALEXANDRA STONE  
Oregon State University |
| SW19-903  | Bee Protection Protocols for Oregon Vegetable and Clover Seed.                | $349,971     | Dr.Andony Melathopoulos  
Oregon State University |
Oregon State University |
| SW18-041  | Sustaining Oregon broccoli production                                         | $229,804     | James Myers  
Oregon State University |
| SW16-010  | Impacts of Chaff Collection or Chaff Plus Straw Collection at Harvest to Improve Weed Control | $250,000     | Dr.Judit Barroso  
Oregon State University |
| SW16-070  | Soil solarization as a tool to control weeds and soilborne pathogens in tree seedling nurseries in the Pacific Northwest | $247,329     | Dr.Jennifer Parke  
Oregon State University |
| SW15-021  | Diagnosis and Management of a New Disease of Cucurbits in Oregon              | $145,291     | Dr.ALEXANDRA STONE  
Oregon State University |
| SW15-058  | Understanding Pest and Disease Transmission Dynamics and Effects of Agrochemicals on Honey Bee Colonies Pollinating Crops in the Western States | $248,025     | Dr.Ramesh Sagili  
Oregon State University |
SW13-017  Integrating research and practice in systems management of organic vegetable farms  $277,430  Dr.ALEXANDRA STONE  Oregon State University

SW12-037  A Collaborative Phenology Modeling System to Enhance Crop Management on Vegetable Farms  $203,610  Nick Andrews  Oregon State University

SW10-103  Developing a Decision Support Tool for Ventenata IPM in the Inland Northwest  $169,297  Dr.Timothy Prather  University of Idaho

SW10-143  Growing a Sustainable Portland Metropolitan Foodshed  $223,014  Dr.Sheila Martin  Portland State University, IMS

SW09-031  Bean Mold Management Tools and Rotational Systems Management Planning  $184,084  Dr.ALEXANDRA STONE  Oregon State University

SW09-062  Integrating Beetle Habitat into Pacific Northwest Farming Systems  $206,002  John Lambrinos  Dept. of Horticulture, Oregon State University

SW09-703  Expanding Small-scale Grain Production in Southwestern Oregon  $24,402  Maud Powell  OSU Extension  Shelley Elkovich  OSU Extension Small Farms

SW08-056  Enhancement of pollination by native bees in blueberries and cranberries  $183,271  Dr.Sujaya Rao  Oregon State University

SW08-121  Sustainable Solutions to IYSV on Onion Via Grower-Research Partnerships  $177,527  Clinton Shock  Oregon State University

SW05-061  Alternative proteins for organic meat and milk production  $63,565  Mike Gamroth  Oregon State University

SW05-077  Farmers facilitating the adoption of new meadowfoam establishment practices  $67,078  George Hoffman  Oregon State University

SW05-091  Integrated Soil and Crop Management for Organic Potato Production  $196,067  Dr.Dan Sullivan  Oregon State University  Lane Selman  Dept of Horticulture

SW04-072  Managing Cover Crop and Conservation Tillage Systems To Enhance Vegetable Crop Yields, Economic Returns and Environmental Quality  $182,438  John Luna  Oregon State University

SW03-033  Management of Garden Symphylans (Scutigerella immaculata Newport) with Crop Rotation Tactics and Improved Sampling Methods  $160,132  Jon Umble  Oregon State University

SW02-017  The Use of Straw Mulch to Enhance Predator Populations Along with Biopesticides to Control Onion Thrips in Dry Bulb Onions  $73,800  Lynn Jensen  Oregon State University

SW02-050  "MagNet": A Positive Pull Toward Integrated Pest Management in Root Crop Production.  $134,829  Amy Dreves  Oregon State University; Dept of Horticulture

SW02-052  Changing Meadowfoam Planting Dates and Planting Method to Reduce Input Costs, Pest Pressure, and Increase Yields.  $100,726  Dr.Gary Jolliff  Oregon State University
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<td>Farmer/Scientist Partnership for Integrated Cropping Systems</td>
<td>$184,662</td>
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<td>SW00-00C</td>
<td>Sustainable Agriculture Learning Initiative</td>
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<td>SW00-016</td>
<td>Orchard floor management practicies for improving soil quality and optimizing nitrogen uptake efficiency</td>
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<td>SW00-024</td>
<td>Farmers Growing the Market with TFA-Approved</td>
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<td>The Food Alliance</td>
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<td>SW00-039</td>
<td>Control of Botrytis by Compost Tea Applications on Grapes in Oregon Vineyards</td>
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<td>Sunbow Farm/Soil Foodweb Inc; Elaine Ingham; Soil Foodweb Inc; Southern Cross University; Sustainable Studies Institute</td>
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<td>SW00-047</td>
<td>Control of Eastern Filbert Blight</td>
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<td>Department of Botany and Plant Pathology</td>
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<td>SW99-061</td>
<td>Enhancing Biological Control With Insectary Plantings</td>
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<td>SW99-063</td>
<td>Participatory Evaluation of Farmer Based Soil Quality Assessment Cards</td>
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<td>SW96-013</td>
<td>Implementation and Assessment of Economic and Environmental Impact of a Weather Monitoring/Pest and Disease Risk Assessment Network in Commercial Pear Production in Oregon</td>
<td>$58,290</td>
<td>Franz Niederholzer</td>
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<td>SW95-025</td>
<td>Influences of Alternative Vegetable Systems on Arthropods/Soil Biological Dynamics and Soil Quality Trajectory</td>
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<td>Development and Demonstration of Integrated Vegetable Production Systems for the Maritime Pacific Northwest</td>
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<td>LWD93-007</td>
<td>Development of Sustainable Crop and Livestock Production Systems for Land in the Conservation Reserve Program</td>
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<td>LW92-031</td>
<td>Grazing Strategies for Sustainable Ranching Systems in Western Semi-Arid Zones</td>
<td>$237,738</td>
<td>Ludwig M. Eisgruber</td>
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<td>LWE92-001</td>
<td>On-Farm Demonstration of Integrated Vegetable Production Systems for the Maritime Pacific Northwest</td>
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<td>LW88-001</td>
<td>Evaluation and Design of Low-Input Sustainable Vegetable/Small Grain and Small Fruit Systems of Western Oregon and Washington</td>
<td>$404,105</td>
<td>Richard Dick&lt;br&gt; Oregon State University</td>
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<td>WRGR22-002</td>
<td>Establishing a beginning dry farming curriculum and accelerator program</td>
<td>$99,901</td>
<td>Amy Garrett&lt;br&gt; Oregon State University Small Farms Extension&lt;br&gt; Matthew Davis&lt;br&gt; Oregon State University&lt;br&gt; Dr. Lucas Nebert&lt;br&gt; Oregon State University</td>
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<td>RGR20-011</td>
<td>Spring Season Extension Efficiency in Cool, Short Season Climates</td>
<td>$68,486</td>
<td>Nicole Sanchez&lt;br&gt; Oregon State University</td>
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<td>WRGR19-03</td>
<td>Regenerative Agriculture: connecting soil health, native bee habitat, and climate resilience through on-farm management strategies</td>
<td>$30,886</td>
<td>Elise Higley&lt;br&gt; Our Family Farms</td>
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**RESEARCH TO GRASS ROOTS GRANTS**

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

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<th>Project #</th>
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<td>WPDP22-020</td>
<td>Irrigation Technology and Management (ITM) Professional Development Project</td>
<td>$99,982</td>
<td>Todd Peplin&lt;br&gt; Deschutes Soil and Water Conservation District</td>
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<td>WPDP22-001</td>
<td>Growing Agricultural Service Providers’ Program Outcomes with Producer Co-Educators</td>
<td>$84,995</td>
<td>Mary Halbleib&lt;br&gt; Oregon State University&lt;br&gt; Colette DePhelps&lt;br&gt; University of Idaho Extension</td>
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<td>PDP20-019</td>
<td>Planning and Programming the 2021 National Farm Viability Conference in Oregon</td>
<td>$73,119</td>
<td>Chris Schreiner&lt;br&gt; Oregon Tilth</td>
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<td>ENE19-158</td>
<td>The Soil Life Short Course: Empowering Ag Professionals to Recognize, Quantify, and Conserve Beneficial Soil Animals</td>
<td>$114,618</td>
<td>Eric Lee-Mader&lt;br&gt; Eric Lee-Mader&lt;br&gt; Stephanie Frischie&lt;br&gt; The Xerces Society</td>
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<td>EW18-015</td>
<td>OSU Land Steward Program Professional Development Project</td>
<td>$73,199</td>
<td>Rachel Werling&lt;br&gt; Oregon State University</td>
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<td>EW17-019</td>
<td>Western Region Pesticide Risk Reduction through Professional Development for Western State IPM Programs</td>
<td>$69,299</td>
<td>Paul Jepson&lt;br&gt; Oregon State University</td>
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<td>EW16-010</td>
<td>Redefining Learner-centered Education to Build High Impact IPM Partnerships</td>
<td>$67,802</td>
<td>Mary Halbleib&lt;br&gt; Oregon State University</td>
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<td>EW16-027</td>
<td>Sustainable Grazing Management in Riparian and Wetland Pasture</td>
<td>$15,237</td>
<td>Caley Sowers&lt;br&gt; Coos Soil and Water Conservation District</td>
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<td>ES16-128</td>
<td>The Conservation Biological Control Short Course</td>
<td>$74,651</td>
<td>Eric Mader&lt;br&gt; The Xerces Society</td>
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<td>ENE15-137</td>
<td>The Conservation Biological Control Short Course</td>
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<td>Eric Mader&lt;br&gt; The Xerces Society</td>
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EW15-014  Collaborative Approaches to Increase the Integration of Functional Agricultural Biodiversity in Western Farming Systems  $67,699  Gwendolyn Ellen  Agricultural Biodiversity Consulting

EW15-020  Growing the Field for Organic Conservation: Training on NRCS CAP 138 and NOP Conservation Standards  $73,447  Sarah Brown  Oregon Tilth

EW14-031  Training IPM Professionals in Rural Areas: A Model to Achieve Sustainable Knowledge  $74,755  Dr. Silvia Rondon  Oregon State University

EW14-035  The Conservation Biological Control Short Course  $72,050  Eric Mader  The Xerces Society

EW12-031  Organic Conservation Training for Western Region Conservation Professionals  $98,288  Sarah Brown  Oregon Tilth

EW11-015  Creating Sustainable Agriculture Farmer-to-Farmer Networks through Professional Trainings and an Agricultural Educator Toolkit  $99,590  Melissa Matthewson  Oregon State University Extension

EW11-021  The Soil Quality Network  $56,992  Teresa Matteson  Benton Soil and Water Conservation District

EW10-018  Western Pollinator Conservation Planning Short Course  $90,006  Eric Mader  The Xerces Society

EW09-001  Empowering Ag Professionals through a Beneficial and Pest Insect Train-the-Trainer Short Course Program for Oregon, Washington, & Idaho  $95,635  Mary Corp  Oregon State University

EW08-001  Tri-State Organic Certification and Conservation Planning Cross-Training  $86,137  Chris Schreiner  Oregon Tilth

EW07-018  Conserving the Three P’s: Habitat Conservation Practices for Beneficial Predators, Parasites, and Pollinators  $51,165  Mace Vaughan  The Xerces Society

EW06-010  Organic Seed Production: Materials, Training, and a Seed Database.  $98,755  Brian Baker  Organic Materials Review Institute

EW06-012  Hands-On Workshops: Alternative Marketing Approaches and Distribution Channels  $60,000  Larry Lev  Oregon State University

EW05-006  Rhizosphere Ecology in Changing Cropping Systems  $7,348  Sandy Macnab  Oregon State University Extension, Sherman County

EW00-011  Western Integrated Nutrient Management Education Program  $84,750  Mary Staben  Oregon State University

EW97-004  Developing an Educational Program for Teaching Science-based Concepts of Grass Regrowth for Improved Grazing Management  $65,000  David B. Hannaway  Oregon State University

EW94-008  Pacific Northwest Sustainable Agriculture Systems Training Program  $78,000  John Luna  Oregon State University
<table>
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| FW22-391  | Effects of using ducks as biological control to manage weeds and pests within an orchard crop system | $20,442      | Peng Sun
Golden Sun Farm & Nursery LLC                      |
| FW22-397  | Determining if Comfrey Fermented Plant Juice is a viable alternative to traditional purchased fertilizers | $24,963      | Sarahlee Lawrence
Rainshadow Organics                                    |
| FW22-405  | No/low-till practices as a water conservation tool on small-scale vegetable farms East of the Cascades | $29,896      | Katie Swanson
Sweet Union Farm, LLC                                   |
| FW21-380  | Mushroom Farming Research and Education to Bring Greater Equity and Diversity to the Food System | $25,000      | Bashira Muhammad
Zoom Out Mycology                                         |
| FW20-358  | Improving Irrigated Pasture Productivity and Soil Biodiversity in Oregon's High Desert | $20,000      | John Shine
Shine Brothers Ranch                                     |
| FW20-369  | Effects of multi-species rotational grazing on soil microbial communities       | $20,000      | Thomas Gillett
Black Tansy Farm, LLC                                    |
| FW19-351  | Effects of Subsurface Micro-irrigation on Water Use Efficiency and Hazelnut Tree Growth | $19,767      | Darrel Smith
ZD Farms of Oregon                                       |
| FW19-356  | Farmer/Rancher Sustainable Soil with Biochar                                   | $19,952      | Gary Betts
Yellow Dog Farm                                           |
| FW18-048  | Potential for Shake and Catch Harvesting of Hazelnuts                            | $19,532      | Taylor Larson
My Brothers' Farm                                         |
| FW18-013  | Economic viability of fodder beets as winter forage for cattle in Eastern Oregon | $19,419      | Cody Wood
Willamette Valley Lamb                                    |
| FW16-031  | Understanding On-Farm Costs of Production                                      | $9,400       | Sarah Brown
Diggin' Roots Farm                                        |
| FW15-018  | Growing a Regional Seed Producers network in the Rogue Valley, Oregon           | $23,203      | Eric George
Southern Oregon Seed Growers Association                  |
| FW15-054  | Evaluating Market Opportunities of Conventional vs. GMO-free Broilers           | $4,003       | Jared Pruch
Cascade Pacific RC&D                                      |
| FW14-013  | Innovative CSA Marketing Tools                                                  | $24,299      | Thomas Powell
Wolf Gulch Farm                                            |
| FW14-019  | Improving Orchard Management through Multi-Species Cover Crop Mo                | $18,340      | Mike Omeg
Orchard View Inc                                           |
| FW10-029  | Development of a Northwest Farm Stay Website                                   | $28,934      | Scottie Jones
Leaping Lamb Farm                                          |
| FW10-032  | Organic Wheat Intercropping Trials and Outreach                                | $15,000      | Sarahlee Lawrence
Rainshadow Organics                                       |
| FW09-038  | Rodent Control in Orchards Using Raptors                                        | $11,066      | Mike Omeg
Orchard View Inc                                           |
Building a Local Food Cooperative Through an Interactive Website $15,000 Sarahlee Lawrence  
Rainshadow Organics

Managing Solitary Cavity Nesting Bees for Cane Fruit in Oregon $14,985 Don Strurm  
Sturm's Berry Farm Inc.  
Dr. Karen Strickler  
Pollinator Paradise

Increasing Grower Adoption of Adaptive Cover Cropping Systems: Effects on Vegetable Production and Nitrogen Cycling $50,000 Nick Andrews  
Oregon State University

Butcher Waste as Biofuel $14,885 Kelly and Ross McGarva

Butcher Waste Composting for Field Fertility $13,750 Kelly and Ross McGarva

Using Season Extending Techniques to Diversify Traditional Agricultural Economy and Improve Quality and Quantity of Fresh Food Supply in Remote NE Oregon Valley $12,475 June Colony  
Lostine Longwool

Augmentation of Mite Predators on Apples and Grapes $25,000 Lyla Lampson  
Lampson Research and Consulting

Costs, Comparisons, and Effectiveness Using Chlorophyll Sensing Sprayers in a Chemical Fallow Operation $6,950 William Jepsen

Determine Whether Small Farm Poultry Production Can Be Boosted when Combined with Red Worm (Eisenia fetida) Vermiculture $10,000 Chrissie Zaerpoor  
Kookoalan Farm  
Koorosh Zaerpoor  
Kookoalan Farm

Estimating Nitrogen Contribution from Cover Crops in Organic Vegetable and Cane Berry Farms $19,325 Nick Andrews  
Oregon State University

Sheep vs. Weeds: Biological Control Agents to Combat Noxious Weeds $4,570 Cameron Gillespie  
Gillespie Grazing Co.  
Sabrina Gillespie  
Gillespie Grazing Co.

Coastal Oregon Nitrogen Recovery $20,000 Don Smith  
Producer

Farm Internship Curriculum and Handbook $20,000 Thomas Powell  
Wolf Gulch Farm

Environmentally Sound Irrigation and Fertility Systems for Sweet Cherry Crops in the Pacific Northwest $19,585 Clark Seavert  
Mid-Columbia Agricultural Research Center

Sustainable Ditch Stabilization $4,246 James VanLeeuwen

Split-Season Rotation Grazing Study $6,647 Robert Lozano

Silvo-Pasture with Hybrid Poplar and Sheep $7,053 Richard Shuren  
Greenwood Resources
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<td>Recycle Used Gestation Crates into Group-Housed Sow Feeding Stalls</td>
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| FW04-026 | Effectiveness of Three Methods of Removing Stumps to Control Annosus Root Rot in Christmas Tree Plantations | $5,130  | Jim Puffer
                     |                                               |         | Yule Tree Farms                                             |
| FW04-027 | Pumpkin Seed as a Natural Alternative to Chemical Dewormers in Sheep            | $14,990 | Mac Stewart
                     |                                               |         | Magruder Farms
                     |                                               |         | Margaret Magruder
                     |                                               |         | Magruder Farms
                     |                                               |         | Alice Royle                                                  |
| FW04-108 | Hillsdale Winter Harvest Farmers Market                                      | $14,950 | Kimberly Moore
                     |                                               |         | Deep Roots Moore                                            |
                     |                                               |         | Aaron Bolster
                     |                                               |         | Deep Roots Farm                                             |
| FW04-118 | Virtual Focus Group to Measure Most Efficient Use of Marketing Resources      | $6,863  | Mehrten Homer
                     |                                               |         | Painted Hills Natural Beef                                   |
| FW04-317 | Sustainable Ranching Program                                                  | $13,352 | Pat Larson
                     |                                               |         | Oregon Cattlemen's Association                               |
| FW03-023 | Can a Summer Cover Crop of Sudan-sorghum Reduce the Detrimental Effects of Tillage in Fall-planted Garlic? | $9,629  | Laura Masterson
                     |                                               |         | 47th Avenue Farm                                             |
| FW02-204 | Poplar Cotton Fiber Production: A market Opportunity in Oregon               | $7,480  | Ray Ethell                                                   |
| FW02-206 | Imperial Stock Ranch Heritage Lamb/Fiber Marketing                            | $7,000  | Jeanne Carver                                                |
| FW01-040 | Alternative Uses for Raw Wool: Feasibility Study/Marketing Strategy          | $13,500 | Margaret Magruder
                     |                                               |         | Magruder Farms                                              |
| FW01-049 | Measuring the Interest for Marketing Pastured Poultry at Farmer’s Markets     | $6,500  | Aaron Silverman
                     |                                               |         | Greener Pastures Producers Group                             |
| FW00-034 | Russian Honey Bee Queens Resistant to Varroa in Oregon                       | $9,125  | Chuck Hunt                                                   |
| FW00-051 | Low Stress Stockmanship Clinic for Jackson County, Oregon                     | $5,075  | John Dimick
                     |                                               |         | Jackson County Stockman's Assoc.                            |
| FW00-235 | Veneta Cooperative Farm Stand                                                 | $5,063  | Gwendolyn Ellen
                     |                                               |         | Agricultural Biodiversity Consulting                        |
| FW00-256 | Agritourism-Sustainable Agriculture with Cash and Information Flow            | $8,000  | Catherine Grant                                              |
| FW99-005 | Integrated Strip-Till Systems for Vegetable Production in Western Oregon      | $7,786  | Rob Heater                                                   |
| FW99-071 | Improving the Sustainability of Pasture and Livestock Management through the Development of a Grazing Network in Lane County, Oregon | $3,101  | Paul Atkinson}
<table>
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<tr>
<td>FW98-074</td>
<td>Clover Creek Ranch Early Weaning Comparison</td>
<td>$2,658</td>
<td>Ron Jones</td>
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<td>FW97-002</td>
<td>Reducing Foxtail in Permanent Pastures</td>
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<td>Kathleen Panner</td>
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<td>FW97-007</td>
<td>Using Truffles to Enhance Douglas Fir Production On A Small Family Farm</td>
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<td>Tim Grant</td>
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<td>FW97-020</td>
<td>The Use of Goats to Control Juniper, Sage &amp; Rabbit Brush</td>
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<td>Ann R. Snyder</td>
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<td>FW97-035</td>
<td>Constructed Wetland for Waste Water Treatment</td>
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<td>FW97-041</td>
<td>Biological Control of Pear Pests</td>
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<td>George Ing</td>
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<td>FW96-003</td>
<td>Low Tillage Weed Control</td>
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<td>Jim Fullmer</td>
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<td>FW96-013</td>
<td>Use of Aerated Compost Teas for Control of Foliar Diseases of Spinach, Lettuce and Broccoli and to Promote Plant Vigor and Quality</td>
<td>$2,620</td>
<td>William Booth Horto Road Organics</td>
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<td>FW96-019</td>
<td>Use of Aerated Compost Teas as a Preventative Foliar Fungicide on Grape Vines Vitus vinifera</td>
<td>$2,930</td>
<td>Dave Michul King Estate Vineyards</td>
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<td>FW96-026</td>
<td>The Effect of Aerated Compost Teas on Disease Control in Blueberries and Tomatoes</td>
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<td>FW96-037</td>
<td>Grazing Sheep in New Forest Plantings</td>
<td>$1,575</td>
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<td>FW96-059</td>
<td>School Cafeteria Compost System for Soil Amendment Production</td>
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<td>FW96-068</td>
<td>Organic Mulch for Weed Control in Rhubarb</td>
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<td>FW95-027</td>
<td>Parasite and Nutrient Management of Composted Manure</td>
<td>$1,225</td>
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<td>FW95-050</td>
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<td>FW95-072</td>
<td>Demonstration and Implementation of Integrated Fruit Production on Anjou Pears</td>
<td>$5,000</td>
<td>Thom Nelson Hood River Grower - Shipper Association</td>
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<td>FW95-075</td>
<td>Evaluating Methods to Enhance Microbial Degradation of Residual Soil Contaminants</td>
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<td>J. J. Haapala</td>
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<td>Project Code</td>
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| GW21-219     | Assessment of UV-C Radiation as an Integrative Pest Management Tool for the Management of Grape Powdery Mildew and Botrytis Bunch Rot | $30,000      | Walt Mahaffee  
            USDA ARS  
            Alexander Wong  
            Oregon State University |
| GW21-223     | Restore into the future: post-fire rangeland restoration in the Great Basin | $29,994      | Lauren Hallett  
            University of Oregon  
            Lina Batas  
            University of Oregon  
            Dr. Matt Streisfeld  
            University of Oregon  
            Lina Batas  
            University of Oregon |
| GW21-225     | Cover Crops for Enhancing Cherry Orchard Habitat for Beneficial Invertebrates | $30,000      | Dr. Sandy DeBano  
            Oregon State University  
            Dr. Christopher Adams  
            Oregon State University Mid-Columbia Agricultural Research and Extension  
            Scott Mitchell  
            Oregon State University |
| GW21-229     | Breeding Snap Beans For Organic Agriculture: Quantification And Application Of Key Traits | $23,914      | James Myers  
            Oregon State University  
            Hayley Park  
            Oregon State University  
            Hayley Park  
            Oregon State University |
| GW19-188     | Enhancing Pollinator Habitat in Pacific Northwest Croplands Using DNA Metabarcoding Techniques | $25,000      | Dr. Sandy DeBano  
            Oregon State University  
            Katherine Arstingstall  
            Oregon State University |
| GW19-189     | Potato Virus Y: Testing New Potential Resistance Genes to an Enduring Threat to Potato Production | $25,000      | Dr. Aymeric Goyer  
            Oregon State University  
            Max Combest  
            Oregon State University |
| GW19-195     | Pacific Flatheaded Borer: An old pest is new again in Oregon’s rapidly expanding hazelnut industry | $24,825      | Dr. Nik Wiman  
            Oregon State University  
            Anthony Mugica  
            Oregon State University |
| GW18-027     | Determining the Impacts of Dormant Pruning Methods and Nitrogen Fertilization on Pinot Noir Bud Fruitfulness and Yield | $22,786      | Dr. Patricia Skinkis  
            Oregon State University  
            Miranda Ulmer  
            Oregon State University (former, at the time of the project), currently Colorado State University |
| GW18-157     | Diagnosis and control of winter squash storage rots in western Oregon | $25,000      | Dr. Kenneth Johnson  
            Oregon State University  
            Hannah Rivedal  
            Oregon State University |
| GW16-016     | Effects of Grassland Restoration on Native Bee and Spider Communities in a Pacific Northwestern Agroecosystem | $24,999      | Dr. Sandy DeBano  
            Oregon State University  
            Lauren Smith  
            Oregon State University |
| GW15-018     | Managing A Challenging Subterranean Clover Pest: Sustainable Control Using Insect Pathogens | $12,859      | Dr. Sujaya Rao  
            Oregon State University  
            Anis Lestari  
            Oregon State University |
| GW15-034     | Increasing the Marketability of Pacific Northwest Potatoes | $24,401      | Dr. Aymeric Goyer  
            Oregon State University  
            Bruce Robinson  
            Oregon State University |
| GW13-014     | Reducing Drosophila suzukii Management Challenges: An Alternative to Insecticide Cover Sprays | $24,750      | Dr. Wei Yang  
            Oregon State University  
            Jimmy Klick  
            Oregon State University |
<table>
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<th>Project #</th>
<th>Project Title</th>
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<th>Project Leaders</th>
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</table>
| GW12-022   | Late season and overwintering management of the large raspberry aphid          | $19,193      | Danielle Lightle  
Oregon State University  
Jana Lee  
USDA ARS |
| GW09-008   | Enhancing the integration of mite biological control in western United States vineyard management programs | $25,000      | Angela Gadino  
Oregon State University |
| GW08-014   | Pollination by Bumble Bees for Enhanced Clover Seed Production                 | $19,977      | Dr.Sujaya Rao  
Oregon State University  
Kimberly Skyrm  
Oregon State University |
| GW06-010   | Assessment of Riparian Management Practices in Northeastern Oregon            | $9,531       | David Wooster  
Oregon State University  
Dr.Sujaya Rao  
Oregon State University  
Melissa Scherr  
Oregon State University |

**ON FARM RESEARCH/PARTNERSHIP GRANTS**

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<th>Project #</th>
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| OW22-369   | Dry Farm Melon Production in Oregon                                           | $74,583      | Dr.ALEXANDRA STONE  
Oregon State University  
Andy Gallagher  
Red Hill Soil  
Amy Garrett  
Oregon State University Small Farms Extension  
Lane Selman  
Oregon State University |
| OW22-370   | Clover seed weevil management in white clover seed production systems         | $74,996      | Dr.Navneet Kaur  
Oregon State University  
Nicole Anderson  
Oregon State University  
Seth Dorman  
USDA-ARS  
Christy Tanner  
Oregon State University  
Dr.Dani Lightle  
Oregon State University  
Dani Lightle  
Oregon State University |
| OW22-371   | Bee Friendly Farming for Oregon Wine Grapes                                   | $74,902      | Dr.Andony Melathopoulos  
Oregon State University |
| OW21-364   | Optimizing vole trapping strategies in annual and perennial cropping systems | $74,364      | Nick Andrews  
Oregon State University  
Dr.Dana Sanchez  
Oregon State University |
| OW21-365   | Overseeding novel forages in Oregon as a model for enhancing perennial grass pastures in the Pacific Northwest | $75,000      | Dr.Serkan Ates  
Oregon State University  
Fara Brummer  
Oregon State University  
Dr.David Hannaway  
Oregon State University  
Ian McGregor, M.S.  
Oregon State University, Klamath Basin Research and Extension Ce  
Guojie Wang  
Oregon State University - Eastern Oregon Agricultural Research C |
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<th>Project Code</th>
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<tr>
<td>OW21-366</td>
<td>Establishing a participatory research network for drought-tolerant</td>
<td>$74,990</td>
<td>Dr. Lucas Nebert&lt;br&gt;Oregon State University&lt;br&gt;Amy Garrett&lt;br&gt;Oregon State University Small Farms Extension&lt;br&gt;James Myers&lt;br&gt;Oregon State University&lt;br&gt;Dr. Lucas Nebert&lt;br&gt;Oregon State University</td>
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<td>corn production in the Pacific Northwest</td>
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<td>OW21-367</td>
<td>Analyzing Production Costs of Organic Hazelnuts in Oregon</td>
<td>$73,124</td>
<td>Tanya Murray&lt;br&gt;Oregon Tilth</td>
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<td>OW20-356</td>
<td>Investigating techniques for successful overwintering of honey bee</td>
<td>$49,796</td>
<td>Dr. Ramesh Sagili&lt;br&gt;Oregon State University&lt;br&gt;Ellen Topitzhofer&lt;br&gt;Oregon State University</td>
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<td>queens in bulk</td>
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<td>OW19-347</td>
<td>Sustaining winter wheat production using biochar amendments in</td>
<td>$49,973</td>
<td>Stephen Machado&lt;br&gt;Oregon State University&lt;br&gt;Dr. Rakesh Awale&lt;br&gt;Oregon State University,</td>
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<td>OW19-348</td>
<td>Enhancing Vegetable Farm Resilience through Dryland Production</td>
<td>$49,997</td>
<td>Dr. Alexandra Stone&lt;br&gt;Oregon State University</td>
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<td>OW18-019</td>
<td>Expanding the Adoption of Under-Trellis Cultivators in Vineyards to</td>
<td>$49,991</td>
<td>Marcelo Moretti&lt;br&gt;Oregon State University</td>
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<td>Reduce Herbicide Input</td>
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<td>OW18-020</td>
<td>Investigating the feasibility of berry production in Central Oregon</td>
<td>$49,998</td>
<td>Clare Sullivan&lt;br&gt;Oregon State University</td>
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<td>under protected and unprotected culture</td>
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<td>OW17-008</td>
<td>Training Seed Producers and Increasing Local Markets for Seed</td>
<td>$49,750</td>
<td>Maud Powell&lt;br&gt;OSU Extension</td>
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<td>OW17-024</td>
<td>Resistant, resilient and long storing garlic varieties for organic</td>
<td>$49,971</td>
<td>Dr. Alexandra Stone&lt;br&gt;Oregon State University</td>
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<td>OW16-338</td>
<td>Improving Water Saving Techniques and Fruit Quality in Oregon</td>
<td>$20,548</td>
<td>Karen Peterson&lt;br&gt;A to Z Wineworks</td>
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<td>OW16-008</td>
<td>Winter squash: extending the season and expanding the uses</td>
<td>$49,958</td>
<td>Dr. Alexandra Stone&lt;br&gt;Oregon State University</td>
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<td>OW16-028</td>
<td>Evaluating cover crops for mature hazelnut orchards in the</td>
<td>$49,997</td>
<td>Dr. Nik Wiman&lt;br&gt;Oregon State University</td>
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<td>Willamette Valley, Oregon</td>
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<td>OW16-038</td>
<td>Restoring Rangeland Quality with Soil Health Enhancement</td>
<td>$44,450</td>
<td>Debbie Wood&lt;br&gt;Crooked River Weed Management Area</td>
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<td>OW15-005</td>
<td>Integrated Clubroot Control Strategies for PNW Brassica Producers</td>
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<td>Dr. Dan Sullivan&lt;br&gt;Oregon State University</td>
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<td>OW15-007</td>
<td>Interseeding to improve winter cover crop establishment and efficiency in processed vegetable production in the Willamette Valley</td>
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<td>Dr. Ed Peachey&lt;br&gt;Oregon State University</td>
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<td>Natural Fertilizer Market Assessment Project</td>
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<td>OW13-055</td>
<td>Assessing the Impacts of Mob Grazing in Southern Oregon</td>
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<td>Angela Boudro</td>
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<td>OW12-034</td>
<td>Management of Fusarium Wilt of Cucurbits with Vetch Cover Cropping and Grafted Transplants</td>
<td>$49,158</td>
<td>Dr. ALEXANDRA STONE</td>
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<td>GW10-327</td>
<td>Establishing Economic Threshold and Epidemiology for Nosema Ceranae, A Relatively New Species of Microsporidian Parasite in the Honey Bee for PNW</td>
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<td>Dr. Ramesh Sagili</td>
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<td>Protecting Water Quality and Promoting Economic Efficiency at Agricultural Composting Facilities</td>
<td>$49,115</td>
<td>Nick Andrews</td>
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<td>FW06-324</td>
<td>Banking on Beetles in Oregon</td>
<td>$19,068</td>
<td>Gwendolyn Ellen</td>
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**Total funding from the USDA SARE program to Oregon**

$12,030,403

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).