

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 8,543 initiatives.

SARE is grassroots with far-reaching impact

Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

SARE communicates results

SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining an online library of practical publications, grantee-produced information products and other educational materials.



www.sare.org

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

California

Project Highlight: *Potter Valley Tribe's Native Mushroom Cultivation from Waste Byproduct Substrate for Food Sovereignty*

The Potter Valley Tribe in Ft. Bragg, California, began a small operation prior to their SARE project growing various mushrooms with the objectives of food sovereignty, sustainable agriculture, income, and education. Food sovereignty for Native Americans acts as a resurgence of culture, bolstering health, economic development, and native nationhood. The Tribe notes that mushrooms have long been an important feature in Northern Californian diets but are rarely cultivated on Tribal lands.

This Western SARE project experimented with growing on spent coffee grounds, hardwood sawdust from sawmills, and other less frequently utilized local 'waste' byproducts such as hemp production. The Tribe aimed to develop their own methodology for production rather than purchasing spawn from other growers. This would increase food sovereignty and diversify the Tribe's revenue.

Their outreach and education brought in over 40 new participants in the project, including elders and youth, representing eight different tribes. They came together to continue educating tribal youth in mushroom cultivation, cooking, and gathering. The Potter Valley Tribe also created five instructional videos and Mushroom Manual with step-by-step instructions, as well as developed a mushroom cultivation lab.

Three additional tribes will begin their own mushroom operations after becoming inspired by the success of the Potter Valley Tribe project.

For more information on this project, see sare.org/projects, and search for project number [RGR20-010](https://www.sare.org/projects/2019-2020/RGR20-010).

SARE in California

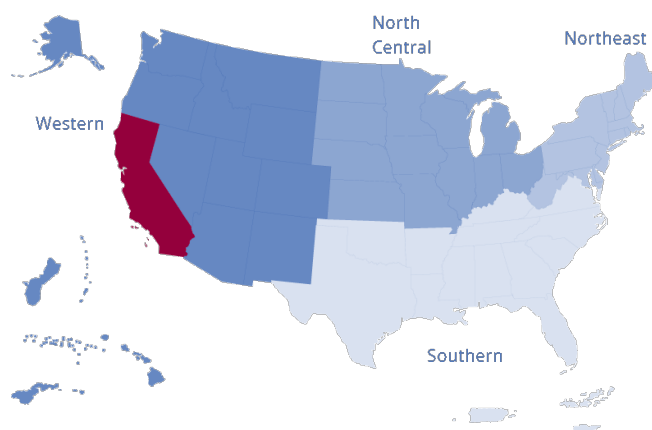
western.sare.org/sare-in-your-state/california

\$15,979,321
in total funding

249 grant projects

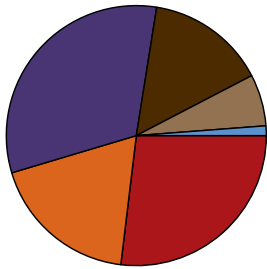
(since 1988)

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



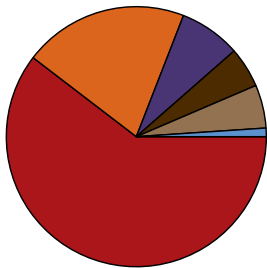
SARE Grants in California

Total awards: 249 grants



67 Research and Education
46 Professional Development Program
80 Farmer/Rancher
37 Graduate Student
16 On Farm
3 Research/Partnership
3 Research to Grass Roots

Total funding: \$15,979,321



\$9,651,474 Research and Education
\$3,277,482 Professional Development Program
\$1,220,042 Farmer/Rancher
\$801,983 Graduate Student
\$858,926 On Farm
\$169,413 Research/Partnership
\$169,413 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/california

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/california to learn more.

Sonja Brodt
University of California Sustainable
Agriculture Research & Education
Program
(530) 754-8547
sbbrodt@ucdavis.edu

Jeffery Stackhouse
UCCE Livestock Advisor
(707) 445-7351
jwstackhouse@ucanr.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 CALIFORNIA

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

California has been awarded \$15,979,321 grants to support 241 projects, including but not limited to, 59 research and/or education projects, 46 professional development projects and 80 producer-led projects. California has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
SW23-949	Sustainability outcomes of integrated sheep vineyards systems	\$347,696	Dr.Amelie Gaudin University of California, Davis Dr.Elizabeth Forrester UC Davis Viticulture and Enology Dr.Brittney K Goodrich Cooperative Extension at the University of California, Davis Dr.Jonathan Lundgren Ecdysis Foundation
SW22-931	Quantifying the Indirect Costs of Gray Wolf - Cattle Interactions	\$296,080	Tina Saitone University of California, Davis Dr.Kenneth Tate University of California Davis
SW22-932	Effects of colostrum storage and housing style on health and welfare of pre-weaning calves in conventional and organic dairy farms	\$339,038	Dr.Jose Peralta, DVM PhD College of Veterinary Medicine, Western University of Health Sciences Betsy Karle University of California, Agriculture and Natural Resources Dr.Manel Lopez-Bejar, DVM PhD College of Veterinary Medicine, Western University of Health Sci Dr.Brian Oakley, PhD College of Veterinary Medicine, Western University of Health Sci Dr.James Reynolds, DVM College of Veterinary Medicine, Western University of Health Sci
SW22-933	Integrated field and satellite based decision support system for climate-resilient and sustainable ranches and rangelands across California	\$348,561	Yufang Jin University of California, Davis Royce Larsen University of California, ANR Dr.Leslie Roche UC Davis Matthew Shapero University of California Davis, ANR Steven Steven Ostoja USDA, Agricultural Research Service
SW20-912	Use of Almond Hull and Shell as Organic Matter Amendments in Advanced Orchard Management	\$349,807	Dr.Sat Darshan Khalsa University of California Davis Dr.Patrick Brown University of California Davis Dr.Amelie Gaudin University of California, Davis

SW20-913	Effective Management of Thousand Cankers Disease of Walnut through Disruption of Insect Vector Behavior	\$349,770	Dr.Richard Bostock University of California Dr.Daniel Kluepfel USDA - ARS, Crops Pathology and Genetics Research Unit Dr.Steven Seybold USDA Forest Service
SW20-919	Biointensive no-till farming in California: farmer-driven research and education on soil health, water efficiency and economic resiliency	\$251,036	Dr.Timothy Bowles University of California Berkeley Amanda Hodson University of California, Davis Sara Tiffany Community Alliance with Family Farmers
SW19-902	Potential Economic and Nitrogen Benefits of Fababean as a Double Purpose Cash and Cover Crop in Northern California	\$348,772	Dr.Hossein Zakeri California State University- Chico
SW19-908	Quantifying the effects of rangeland conversion on ecosystem functions: Linking land use systems to enhance farm profitability	\$349,327	Fadzayi Elizabeth Mashiri University of California
SW18-063	Quantifying the frequency and effects of secondary exposure to rodenticides in barn owls	\$249,546	Dr.Joshua Hull UC Davis
SW17-060	UAS (Unmanned Aerial System)-guided releases of predatory mites for management of spider mites in strawberry	\$249,878	Dr.Elvira de Lange University of California Davis
SW14-011	Farming for Native Bees	\$247,649	Dr.Gordon Frankie UC Berkeley
SW12-110	The interaction of rangeland management and environmental conditions in regulating forage quality - quantity and other ecosystem services	\$265,414	Valerie Eviner UC Davis
SW11-116	Integrated rotation systems for soil borne disease, weed and fertility management in strawberry/vegetable production	\$218,424	Joji Muramoto University of California, Santa Cruz
SW10-013	Control of Bacterial Wilt Disease of Ginger through an Integrated Pest Management Program	\$289,245	Dr.Susan Miyasaka University of Hawaii
SW10-801	A San Joaquin Valley Quilt: Stitching Together a Region's Prosperity, Nutrition and Sustainability	\$14,935	Daniel O'Connell Sequoia Riverlands Trust
SW10-803	Sierra CRAFT	\$30,653	Bill Bennett High Sierra RC&D Council, Inc.
SW10-810	Developing regional distribution networks to enhance farmer prosperity: Retail value chains	\$24,906	Dr.Gail Feenstra UC SAREP/ASI
SW08-060	Triple-cropping Dairy Forage Production Systems Through Conservation Tillage in California's San Joaquin Valley	\$118,100	Dr.Jeff Mitchell University of California, Davis
SW07-022	Using Nectar Cover Cropping in Vineyards for Sustainable Pest Management	\$178,300	Mark Huddle University of California Dr.Nic Irvin University of California

SW06-033	Toward a Broader Vision of Sustainability: Social Equity in Sustainable Agriculture	\$10,000	Ron Strohlic California Institute for Rural Studies
SW06-038	Grazing Strategies to Control Medusahead in California	\$138,539	Dr.Emilio Laca UC Davis
SW06-091	Alternaria Control Using Biocontrol Yeast in Organic Pistachio Production Systems	\$110,286	Dr.Dan Parfitt UC Davis
SW05-078	Smart Energy Management in Agriculture	\$68,208	Karyn Wolf Lynn Ecological Farming Association
SW04-058	Fresh, From Our Family to Yours: Direct Marketing Education for Producers	\$98,395	Molly Johnson PlacerGROWN
SW04-121	Farmland Tenure: A Tool Kit	\$103,130	Steve Schwartz California FarmLink
SW04-127	Educational Workshops on Organic Dairy Management	\$39,377	Ken Andersen University of California Cooperative Extension
SW03-037	Confirmation of Riparian Friendly Grazing Project Results and Development of Achievable, Site Specific Reference Conditions for Grazed Riparian Areas	\$93,184	Dr.Kenneth Tate University of California Davis
SW02-008	Evaluation of the Effects of Vineyard Floor Management Practices on Soil Microbiology	\$27,496	Richard Smith University of California Cooperative Extension
SW02-020	Management of Vine Mealybugs in California's San Joaquin Valley Through the Integration of Chemical and Biological Controls	\$117,286	Kent Daane Division of Insect Biology, UC Berkeley Walter Bentley UC Statewide IPM Project
SW02-034	Development and Dissemination of a Cowpea Cultivar for Cover Crops	\$43,686	Dr.Milt McGiffen, Jr. University of California
SW02-035	Control of Western Tarnished Plant Bug (WTPB) <i>Lygus hesperus</i> Knight in Organic Strawberry Production Systems Using Trap Crops and Tractor-mounted Vacuums	\$31,280	Dr.Sean Swezey Center for Agroecology and Sustainable Food System
SW01-044	Riparian Friendly Grazing Project	\$24,714	Dr.Kenneth Tate University of California Davis
SW01-057	Transition to Organic Vegetable Production by Large-Scale Conventional Farmers	\$123,399	Louise Jackson UC Davis
SW99-008	The Transition from Conventional to Low-Input or Organic Farming Systems: Soil Biology, Soil Chemistry, Soil Physics, Energy Utilization, Economics, and Risk	\$153,962	Steven Temple University of California
SW99-009	Rotations with Broccoli - A Sustainable Alternative to Soil Chemical Fumigants	\$145,750	Krishna Subbarao University of California, Davis
SW98-044	Cropping Systems for Intensive Desert Vegetable Production	\$130,672	Charles Sanchez University of Arizona Dr.Milt McGiffen, Jr. University of California

SW97-021	Reducing Insecticide Use on Celery Through Low Input Pest Management Strategies	\$100,000	John T. Trumble University of California, Department of Entomology
SW97-045	Decomposition and Nutrient Release Dynamics of Cover Crop Materials	\$41,064	Dr. Jeff Mitchell University of California, Davis
SW97-049	Development and Implementation of Trap Cropping Strategies for Control of Hemipteran Pests in Pistachio Orchards	\$79,858	Kent Daane Division of Insect Biology, UC Berkeley
SW96-012	The Transition from Conventional to Low-input or Organic Farming Systems: Soil Biology, Soil Chemistry, Soil Physics, Energy Utilization, Economics and Risk	\$100,000	Steven Temple University of California
SW96-016	Tillage Practices for Improving Nitrogen Cycling and Soil Quality	\$102,000	Louise Jackson UC Davis
SW96-021	Controlled Grazing on Foothill Rangelands	\$40,750	Roger Ingram University of California Cooperative Extension
SW95-012	A Cover Crop System for Sustainable Grape Production in California - Beyond the Transition Phase	\$122,559	Frank G. Zalom University of California
SW95-019	Development of a Farm-Wide System for Control of Many of the Principal Lepidopterous Pests of Grapes and Tree Fruits Based on Disruption of Premating Pheromone Communication Between Male and Female Moths	\$120,770	Harry H. Shorey University of California
SW95-024	Managing Soil Biota in Low-Input and Organic Farming Systems to Enhance Soil Fertility	\$175,000	Kate Scow University of California, Dept. of Land, Air, and Water Resources
SW94-017	The Transition from Conventional to Low-input or Organic Farming Systems: Soil Biology, Soil Chemistry, Soil Physics, Energy Utilization, Economics and Risk	\$186,666	Steven Temple University of California
SW94-022	Western Region Community Supported Agriculture (CSA) Conference	\$23,991	Jered Lawson CSA West
SW94-037	Sierra County Alternative Agriculture Project	\$12,000	Kim Joos Sierra County Economic Council
SW94-054	Farming in the 21st Century: A Documentary Photography Project	\$27,000	Cynthia L. Vagnetti
LW91-026	Prune Refuges and Cover Crops to Facilitate Low-Input Production of California's Raisin, Table, and Wine Grapes	\$120,402	Frank G. Zalom University of California
LW91-028	A Multidisciplinary Approach to Evaluate and Aid the Transition From Conventional to Low-Input Pest Management Systems in Stone Fruits	\$299,814	Kent Daane Division of Insect Biology, UC Berkeley

LW91-030	Assisting Resource-Poor, Small-Scale Farmers with Adoption of Low-Input Technologies through a Client Participation Program of Cooperative Research and Extension at the Rural Development Center Near Salinas, California	\$59,992	Paul Gersper University of California
LWD91-001	California Sustainable Agriculture Working Group	\$6,500	Ronald E. Voss University of California, Vegetable Research & Information Center
LW89-013	Application of Low-Volume Water Systems to the Cultural and Biological Control of Root Diseases	\$325,160	Milton N. Schroth University of California
LW89-018	A Comparison of Conventional, Low-Input and Organic Farming Systems: The Transition Phase and Long-Term Viability	\$600,000	Steven Temple University of California
LW89-020	Cover Crop Information for Researchers and Farmers	\$90,000	Robert Bugg University of California
LW89-021	Information Delivery Systems for Use in Implementation of Lisa (SARE) Research and Technology	\$182,000	Ronald E. Voss University of California, Vegetable Research & Information Center
LW88-003	Comparative Study of Established Organic and Conventional Tomato Production Systems in California	\$509,447	Carol Shennan University of California, Santa Cruz

RESEARCH TO GRASS ROOTS GRANTS

Project #	Project Title	SARE Support	Project Leaders
WRGR22-007	Extending compost-induced disease suppressive soils to small-scale Latinx farmers	\$82,713	Aysha Peterson Resource Conservation District of Monterey County
RGR20-006	Building on Farmer Experience to Increase Cover Crops Adoption in Orchards and Vineyards	\$74,594	Dr. Sonja Brodt UC SAREP Lucas Patzek Napa County Resource Conservation District
RGR20-010	Potter Valley Tribe's Native Mushroom Cultivation from Waste Byproduct Substrate for Food Sovereignty	\$12,106	Jade Frolic Metamimicry Salvador Rosales, Sr. Potter Valley Tribe Salvador Rosales, Jr. Potter Valley Tribe Gregg Young Potter Valley Tribe

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
WPDP23-009	Enhancing Farmer-to-Farmer Education for Farm Sustainability and Community Resilience	\$99,957	Jeneba Kilgore Agroecology Commons Jeneba Kilgore Agroecology Commons Brooke Porter Agroecology Commons
WPDP23-001	Producing Online Courses with Farmers & Researchers so Ag Professionals Can Access Sustainable Viticulture Education On-Demand	\$99,695	Elizabeth Vukmanic Vineyard Team

WPDP23-010	“Getting Comfortable in the Weeds: How to Serve California Agriculture” - A Partnership with California FarmLink and CAMEO	\$98,485	Asia Hampton California FarmLink Poppy Davis California FarmLink Stephanie Stevens California FarmLink
WPDP23-013	A Workshop Series on Robotics, Automation, and Drone Technologies for Sustainable Agriculture	\$98,942	Dr.Ali Moghimi University of California, Davis
WPDP22-015	Water Resource Enhancement and Climate Change Mitigation Through Strategic Agricultural Land Protection, Land Access, and Land Transitions	\$99,965	Kara Heckert American Farmland Trust Jeff Schreiber American Farmland Trust Stacy Shutts American Farmland Trust
WPDP22-022	Advancing Knowledge of Soil Health Assessment and Management Through California’s North Coast Soil Hub	\$78,167	Emilie Winfield Marin Resource Conservation District Keith Abeles Sonoma Resource Conservation District William Hart Gold Ridge Resource Conservation District Erica Lundquist USDA-NRCS Ukiah Field Office Sanjai Parikh University of California Davis Lucas Patzek Napa County Resource Conservation District Dr.Kerri Steenwerth USDA/University of California Davis
WPDP22-023	Closing the Regenerative Agriculture Economy Loop on Small Farms: A Training program for Agricultural Professionals and Curriculum for Small Farmers	\$99,807	David Blume Whiskey Hill Farm/Blume Distillation Tom Harvey Whiskey Hill Farm Ronnie Lipschutz Sustainable Systems Research Foundation
WPDP22-003	Scaling Regenerative Agriculture in California through NRCS and RCD Conservation Planner Training	\$99,917	Eliza Milio San Mateo Resource Conservation District Adria Arko San Mateo Resource Conservation District Jim Howard USDA Natural Resources Conservation Service Kevin Watt TomKat Ranch Educational Foundation / Left Coast Grass-Fed
WPDP21-009	Building Capacity to Reduce Human-Wildlife Conflict	\$79,037	Tracy Schohr UC Cooperative Extension Laura Snell UC Cooperative Extension
WPDP21-022	Empowering Agricultural Professionals to Support Beneficial Birds and Discourage Pest Birds	\$93,851	Jo Ann Baumgartner Wild Farm Alliance Shelly Connor Wild Farm Alliance
WPDP21-005	Farming Through Wildfire Season: Preparation, Resilience & Recovery	\$74,108	Evan Wiig Community Alliance with Family Farmers Natalia Pinzón Jiménez Rhizobia, LLC
PDP20-009	Filling the Gap - Exposing Agricultural Professionals to New and Innovative Small-Farm Tools	\$74,982	Omar Rodriguez National Center for Appropriate Technology

WPDP19-25	Growing Successful Agricultural Businesses	\$74,984	Carolina Martinez California Association for Micro Enterprise Opportunity Carla Holland San Diego Small Business Development Center
WPDP19-12	From Classroom to the Field: Soil Health Bottom Line: Expanding Adoption of Healthy Soils Practices by Quantifying the Economic and Environmental Benefits to Growers	\$75,000	Kara Heckert American Farmland Trust Anelkis Royce American Farmland Trust Anelkis Royce American Farmland Trust
EW18-024	Organic Soil Health Education Resources for Agricultural Professionals in the Western Region	\$74,138	Brise Tencer Organic Farming Research Foundation
EW17-012	Growing California Agritourism Communities	\$73,010	Dr.Gail Feenstra UC SAREP/ASI
EW17-014	Building Knowledge of Cover Cropping Techniques for Increased Adoption Rates	\$52,172	Trina Walley East Stanislaus Resource Conservation District
EW16-018	Facilitating Food Safety for Small, Sustainable Farms	\$55,000	nathan harkleroad ALBA Kaley Grimland ALBA
EW16-015	Harmonizing Organic Standards and Food Safety Metrics	\$74,970	Dave Runsten Community Alliance with Family Farmers
EW16-026	Assessment of Soil Biology and Plant Available Nitrogen for Soil Health and Water Quality	\$49,690	Hunter Francis CAFES Center for Sustainability
EW14-036	Supporting Farmer Training Programs- in the Western States through Professional Development and Collaboration	\$29,977	nathan harkleroad ALBA
EW13-008	High Residue Farming in the Irrigated Far West	\$26,400	Andrew McGuire Washington State University Extension
EW13-022	Development and training of a national spray application work group	\$57,862	Gwen-Alyn Hoheisel Washington State University
EW13-025	Building Tools and Technical Capacity to Improve Irrigation and Nutrient Management on California's Central Coast	\$39,564	Pamela Krone-Davis Monterey Bay Sanctuary Foundation
EW13-027	Application of Lessons Learned from NRCS Rangeland CEAP: A site-specific, Low Cost System for Medusahead Control	\$68,469	Jeremy James University of California
EW12-017	Training Manuals and Professional Development Activities for Teaching Organic Farming and Marketing	\$98,782	Dr.Daniel Press University of California Santa Cruz Ann Lindsey University of California Santa Cruz
EW12-033	FARMING STRATEGIES FOR COPING WITH CLIMATE CHANGE	\$19,000	Renata Brillinger California Climate & Agriculture Network
EW11-029	Cal Poly Professional Development Compost Training and Establishment of the Cal Poly Compost Project	\$57,582	Hunter Francis CAFES Center for Sustainability

EW10-004	Capacity Building Workshops: Developing Regional Agritourism Networks for Agricultural Sustainability and Education	\$59,558	Penny Leff UC Sustainable Agriculture Research and Education Program (UC SAREP)
EW10-005	Understanding the Climate Benefits of Sustainable Agriculture	\$11,905	Jeanne Merrill CA Climate & Agriculture Network (CalCAN) Renata Brillinger California Climate & Agriculture Network
EW09-004	Ecology and Management of Grazing, An Online Course	\$84,826	Melvin George University of California
EW04-012	Adding Value to Grassfed Beef Niche Marketing Efforts	\$60,000	Cynthia Daley California State University, Chico
EW03-004	Field Course for Agricultural Professionals on the Common Goals and Strategies of USDA's National organic Standards and Resource Conservation Programs	\$60,000	Rex Dufour National Center for Appropriate Technology (NCAT)
EW03-007	Extending Hedgerow Systems in California Agriculture	\$60,000	Mark Cady Community Alliance with Family Farmers
EW02-005	Organic Farming Principles, Practices, and Materials: Resources for Western Region Extension and USDA Professionals	\$101,907	Dr. Sean Swezey Center for Agroecology and Sustainable Food System David Chaney SAREP
EW01-010	Training and Education Outreach to NRCS and University of California CES staff to Convey Animal Nutrition	\$81,950	Thomas Wehri CA Association Resource Conservation Districts
EW01-013	Promotion of Intergenerational Farm Transfers for Agricultural Sustainability and Farmland Production	\$56,000	Steve Schwartz California FarmLink
EW00-012	Sharing Resources to Help Connect Farmers to Direct Marketing Niches	\$96,578	David Chaney SAREP
EW98-001	Broadening the Audience: Providing Sustainable Agriculture Education for Pest Control Advisers and Agricultural Consultants in California and Oregon	\$80,100	David Chaney SAREP
EW97-002	Sustainable Range - Pasture Livestock - Dairy Production Training For Resource Professionals	\$29,000	Roger Ingram University of California Cooperative Extension
EW96-005	Multidisciplinary On-Site Training in Sustainable Agriculture Education	\$97,432	Steven Temple University of California
EW96-009	Sustainable Agriculture Curriculum Development Project for Extension Professionals in California's San Joaquin Valley and Central Coast Regions	\$98,773	David Chaney SAREP
EW96-010	Sustainable Arid Land Grazing Systems: Training for Managers of Public Land and Reserves	\$29,000	William Olkowski Bio-Integral Resource Center (South)
EW96-011	Professional Training in Biologically Integrated Orchard Systems	\$155,940	Jill Klein Com. Alliance w/ Family Farmers/BIOS Training Prop. for SARE

EW95-015	A Consortium-Based Sustainable Agriculture Training Program (SATP) Curriculum Plan	\$20,000	Dr. Sean Swezey Center for Agroecology and Sustainable Food System
EW94-003	Multidisciplinary On-Site Training in Sustainable Agriculture Education	\$71,000	Steven Temple University of California

FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FW23-417	Farming while green and Brown: A case study of beginning farmers of color in California	\$24,999	Dilip Sharma Three Feathers Farm
FW23-418	Research and Sustainable Integrated Pest Management Implementation on an Organic Central Coast Cut Flower Farm to Reduce Losses From Key Pests.	\$24,897	Kelly Brown Do Right Flower Farm
FW23-419	Finding Goldilocks: a survey of the factors limiting natural oak recruitment.	\$20,005	Alex Palmerlee Far View Ranch Inc.
FW23-421	Testing virtual fence systems for fire fuel management	\$23,309	Jack Anderson Cuyama Lamb LLC
FW23-423	Examining the environmental, social, and economics of utilizing livestock and summer cover crops in annual cropping systems	\$24,753	Ted Kingsley Kingsley Farms
FW23-433	Assessing the economic and social viability of transitioning to Winter CSA production as an adaptation strategy to climate change - Seasons 2 and 3	\$24,600	Caitlin Hachmyer Red H Farm
FW23-435	Evaluating feasibility of solarization for organic small-scale farmers in coastal California	\$14,400	Maria de los Angeles Carrillo La Buena Tierra
FW22-388	Implementing Whole Farm Cycling of Nutrients and Carbon with Orchard Waste in Walnut & Cherry Production in Central Valley CA	\$24,961	Franz Eilers John Eilers Farms
FW22-392	Assessing the economic and social viability of transitioning to Winter CSA production as an adaptation strategy to climate change impacts	\$24,950	Caitlin Hachmyer Red H Farm
FW22-395	Analyzing Crop Profitability And Financial Metrics On Flower Farms	\$27,462	Helen Larkin Lennie Larkin Consulting
FW22-401	Rehydrating Toro Creek with Sustainable Agriculture: Traceland Farm Demonstration Project	\$24,997	Jesse Trace Traceland
FW22-402	Testing new perennial intermediate wheatgrass for sustainable agriculture in California	\$25,000	Charlie Chen Meristem LLC
FW22-408	Improving cost-effective testing and actionable understanding of holistic soil and plant nutrition for agroecological farmers	\$24,834	benjamin Fahrer Deep Medicine Circle
FW21-376	Evaluating Different Value-added Grains for Lassen County	\$25,000	Thomas Traphagan Sunset Ranch

FW21-377	The effects of biochar soil amendments on industrial hemp yields	\$25,000	Tony De Veyra Fifth World Llc
FW21-379	Increasing food yields from urban and peri-urban farms through deployment of small-scale agricultural technologies	\$25,000	David Blume Whiskey Hill Farm/Blume Distillation
FW21-385	Increased Profitability for Small Farms in Silicon Valley Through Year-Round Production of Baby Greens	\$23,204	Sam Thorp Spade and Plow Organics LLC
FW21-386	Improving Soil Health with biochar and compost application in North Coast Vineyards	\$24,583	Dr.Michael Sipiora Treasury Wine EStates
FW21-387	Using Flavonoid and Polyphenol Testing of Honey to Improve Consumer Education	\$25,000	Alisha Taff Rock Front Ranch
FW20-364	Adding value to grassfed cattle operations by restoring rangeland health with targeted grazing on California's Central Coast	\$19,673	Elizabeth Reikowski Willow Creek Land and Cattle, LLC
FW20-365	Mitigating on-farm toxins using fungi: a case study on two farms.	\$19,881	Christopher Tchudi TurkeyTail Farm
FW19-346	Grazing of annual brassicas to extend grazing season in summer-dry pastures in Northern California	\$19,109	Cody Wood Willamette Valley Lamb
FW19-355	Drill-seeding blue oak acorns: a new method for restoration in California's rangelands.	\$19,920	Alex Palmerlee Far View Ranch Inc.
FW18-027	Farm-to-Glass: Performance Testing Different Varieties of Malting Barley	\$19,908	Bob Adams Bob Adams
FW18-042	Converting tree nut byproducts into gourmet mushrooms and mulches	\$19,952	Charlie Chen Nature Prize LLC
FW18-044	Examining the practical on-ranch application and benefits of low-stress herding and stockmanship techniques	\$19,980	Michael Williams Diamond W Cattle Company
FW17-054	Honeybee Regeneration Project	\$19,851	Aidan Wing Aidan Wing
FW16-033	Sorrel Pesto: The Positive Implications of Sorrel as a Substitute for Basil in Pesto Production	\$19,710	David Ceaser Green Skies Vertical Farm
FW16-034	Sustainable Irrigation Demonstration Project: Demonstrating Irrigation Efficiency in California Winegrapes through Advanced Practices and Technologies	\$19,180	Jason Melvin Zabala Vineyards
FW16-036	Improving Water Use Efficiency in Conventional and Organic Almonds through Data Driven Irrigation	\$19,878	Pat Ricchiuti P R Farms, Inc.
FW15-029	High Desert High Tunnels	\$5,183	Laurie Wayne Locavore Farms

FW14-024	Vines And Ovines: Benefits of Target Grazing to Sheep and Vineyard Industries	\$14,991	Jaime Irwin Kaos Sheep Outfit
FW11-037	Use of Wood Ash as Soil Amendment on Annual Rangelands	\$28,995	Mel Thompson Sierra Farms Glenn Nader University of California Cooperative Extension
FW10-037	Woolgathering on the Farm	\$7,165	Sophie Sheppard Woolgathering
FW08-030	Creating and Marketing Value-Added Orchard Products	\$15,000	Nicholas Salle Salle Orchards Billie Jean Salle Salle Orchards
FW08-047	Sierra Nevada Small Farm Progress Days	\$27,370	Dan Macon
FW08-311	Restoring Plant Diversity and Soil Health in Napa and Sonoma Vineyards: scaling up an agroecologically based pest management strategy	\$30,000	Houston Wilson UC Berkeley -- ESPM Miguel Altieri University of California, Berkeley
FW08-312	Effects of Aleutian Geese on Humboldt County Pastures	\$28,540	Alan Bower University of California Davis
FW08-315	Vines and Ovines: Using Trained Sheep for Vineyard Floor Grazing	\$29,193	Morgan Doran University of California
FW08-324	Placer Ag Futures Project	\$25,670	Bill Bennett High Sierra RC&D Council, Inc. Kay Joy Barge High Sierra Resource
FW07-303	Farm Direct Distribution	\$25,444	Brigitte Moran Marin Farmers Market Association
FW07-311	Building on Organic Knowledge: On-Farm Transfer of a Trap Cropping Method to Control Lygus Bug in Conventional Strawberry Production	\$14,864	Dr.Sean Swezey Center for Agroecology and Sustainable Food System
FW07-324	Management Challenges for Dairy Goat Sustainability	\$15,360	Deborah Giraud University of California
FW06-304	Using Molasses as an Attractant for Concentrating Grazing on Medusahead	\$3,479	Morgan Doran University of California
FW06-308	Conservation Tillage Forage Production in California's San Joaquin Valley	\$9,400	Dr.Jeff Mitchell University of California, Davis
FW05-020	Goats in the Chaparral	\$19,990	Bill Burrows
FW05-026	Sustaining an Agricultural Region: Capay Valley Grown	\$14,980	Judith Redmond Full Belly Farm
FW05-030	Evaluation of abalone effluent for reclamation	\$7,685	Douglas Bush The Cultured Abalone

FW04-024	A pilot project for zero discharge farming	\$3,250	Alan Haight Riverhill Farm
FW04-028	Organic Vineyard/Orchard Weed and Grass Management Using Miniature Sheep	\$7,472	Deborah Walton Canvas Ranch
FW04-111	Marketing Locally Grown	\$10,000	Mary Ann Vasconcellos
FW03-007	Integrated Pest Management and Sustainable Grape Production in Sonoma County	\$13,000	Nick Frey Sonoma County Grape Growers Assn.
FW03-009	Unconventional Conversion: Cultivating Sustainability in Citrus and Avocado Orchards	\$7,500	Zachary Griffin
FW03-010	Increasing Adoption of Sustainable Practices in Central Coast Vineyards	\$13,000	Kris Beal Vineyard Team
FW03-013	Can Llamas Be an Effective Tool for Predator Control?	\$6,500	Jill Hackett Howe Creek Ranch
FW03-015	Pastured Pork: Economics of Intensive Grazing in the Western United States	\$6,550	John Currey CR Pigs
FW03-105	Bay Area Agricultural Cooperative	\$13,000	John Lagier Lagier Ranches
FW03-107	Marin Organics Cooperative Marketing Program	\$13,500	Warren Weber Star Route Farms
FW03-318	Conservation of Groundwater Resources in the Mojave High Desert Region through Producer Education of Irrigation Management	\$6,285	Grant Poole University of California Cooperative Extension
FW02-211	Marin Organic's Cooperative Marketing Outreach	\$9,191	Warren Weber Star Route Farms
FW02-213	Establishing a Market for Sustainable Agricultural Products in Sierra Nevada Foothill Counties	\$12,900	Ed Rich
FW01-089	Symphyllans: A growing menace. A look into its detection, damage, and control in a small-scale Biointensive Community Supported Agriculture Project.	\$6,270	Michelle Vesser Small Farm / Specialty Crops
FW00-005	Production of Strawberry Plants using Sterile Soil Amendments	\$5,000	Allen Albaugh
FW00-008	Tracking Costs and Returns in a Transition to Grass-Based Dairying	\$1,139	Dean Martin
FW00-010	Soil Solarization for Weed and Disease Control in Specialty Crops	\$4,975	Mike Smith
FW00-021	Water Use of Wine Grapes in the Granitic Soils of the Fair Play Wine Region in the Sierra Foothills	\$10,000	Brian Fitzpatrick

FW00-080	Moving From Selling Through Intermediaries to Direct Marketing Using Cause Related Marketing Strategy	\$4,447	Maria Ines Catalan
FW00-210	Test Marketing Pasture Produced Artisan Cheeses	\$7,910	Tim Pedrozo
FW00-299	Good Humus Produce Farm to School Project	\$5,300	Annie Main
FW99-073	Converting Dairy Waste into More Usable Products through Vermiculture	\$4,300	Charmaine Harris
FW99-108	Central Coast Vineyard Team Positive Points System Evaluation and Education Program	\$10,000	Dana Merrill
FW98-009	Soil Solarization as a Methyl Bromide Alternative in Strawberries	\$4,000	Touxia Thauxaochay
FW98-012	Solarization for Small Farm "Specialty Crops"	\$4,000	Mike Smith
FW98-072	Goats as a Source of Weed and Brush Control in Forest Plantations	\$5,000	Allen Albaugh
FW97-011	Feasibility of Soil Solarization for Strawberry Production on the Central Coast of California	\$5,000	Larry Galper
FW97-012	Individual Confinement Rearing vs. Pasture-Based Group Rearing of Dairy Calves	\$3,248	Jim Wackerman
FW97-016	Vermicomposting Demonstration Project	\$5,000	Dave Renner Diamond Point Dairy
FW97-030	Pheromone Foggers for Pesticide Replacement	\$5,000	Willis Thompson
FW96-053	Farming, Agriculture, and Resource Management for Sustainability (F.A.R.M.S.)	\$5,000	Craig McNamara Sierra Orchards
FW95-089	Monitoring Program for Biologically Integrated Orchard Systems (BIOS) in Walnuts	\$5,000	Liza Lewis Community Alliance with Family Farmers Foundation

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GW23-247	Optimizing crop rotations for soil health and plant disease management in California processing tomatoes	\$29,999	Dr.Cassandra Swett UC Davis Myles Collinson UC Davis
GW23-249	Integrating cover crops and organic matter amendments for whole orchard regenerative management	\$29,811	Dr.Sat Darshan Khalsa University of California Davis Dr.Patrick Brown University of California Davis Sydney Cho UC Davis

GW23-254	Assessing compost application and grazing management in California rangelands: Impacts on soil microbial ecology and drought resilience	\$29,608	Dr.Leslie Roche UC Davis AVA-ROSE BEECH UC Davis
GW21-224	Hopes of dry land: Managing soils to improve fruit yield and quality in dry farm tomatoes	\$25,243	Dr.Timothy Bowles University of California Berkeley Yvonne Socolar UC Berkeley
GW21-227	What is a Healthy Soil for Wine Grape Production? Assessing Soil Health Across California Vineyards	\$30,000	Dr.Cristina Lazcano University of California Davis Dr.Mallika Nocco University of California, Davis Dr.Kerri Steenwerth USDA/University of California Davis Noelymar Gonzalez-Maldonado University of California Davis
GW20-203	Grazing for change: Connecting soil health and ranch viability using adaptive multi-paddock grazing	\$24,867	Dr.Timothy Bowles University of California Berkeley Lynn Huntsinger, PhD University of California, Berkeley Paige Stanley University of California, Berkeley Paige Stanley University of California, Berkeley
GW20-207	Cover crops to enhance control of leaffooted bug, Leptoglossus zonatus, in California tree nut crops	\$24,796	Dr.Houston Wilson University of California, Riverside Dr.Kent Daane University of California, Berkeley Rob Straser University of California, Riverside
GW20-216	Network analysis of organic seed systems: a systems-level analysis for resilience	\$24,997	Mark Lubell University of California, Davis Liza Wood University of California, Davis Jared Zystro Organic Seed Alliance Liza Wood University of California, Davis
GW19-191	Systems approaches to co-manage disease, water and soil health for sustainable processing tomato production in the Western region	\$25,000	Dr.Cassandra Swett UC Davis Justine Beaulieu UC Davis
GW19-193	Conventional vs. regenerative almond orchards, with regards to invertebrate biomass and biodiversity, soil health, food safety, and profitability	\$25,000	Dr.Jonathan Lundgren, PhD Ecdysis Foundation Dr.Patty Oikawa California State University East Bay Dr.Erica Wildy California State University East Bay Thomas Fenster University of California, Davis
GW19-194	Sustainable orchard intensification: Cover crops and management intensity	\$24,944	Bradley Hanson University of California, Davis Steven Haring University of California, Davis
GW19-200	Natural pest control in a working agricultural landscape: Investigating the impact of rodent control on beneficial hawks and owls	\$24,997	Dr.Joshua Hull UC Davis Dr.Sara Kross Columbia University Breanna Martinico UC Davis
GW18-062	Development of New Selection Tools and Crop Varieties for Sustainable Agriculture	\$24,443	Paul Gepts University of California - Davis Travis Parker University of California - Davis

GW18-020	New Ranchers, New Needs: Why are first-generational ranchers deciding against traditional climate adaptation strategies?	\$24,982	Dr.Leslie Roche UC Davis Katherine Munden-Dixon University of California - Davis
GW18-041	Insect Discovery and Breeding as Tools for Sustainable Solutions to Organic Waste Management	\$24,942	Dr.Christian Nansen University of California, Davis Trevor Fowles University of California - Davis
GW18-142	Cover Crop Systems for Almond Orchards: Exploring Benefits and Tradeoffs to Inform Management	\$24,852	William Horwath University of California, Davis Cynthia Creze University of California, Davis
GW18-126	Increasing the sustainability of dairy cattle by providing genetic tools to reduce lameness, improving welfare and production	\$23,623	Dr.Anita Oberbauer University of California, Davis Ellen Lai University of California, Davis
GW17-032	Management of Fusarium Wilt of Strawberry through Crop Rotation	\$24,999	Dr.Thomas Gordon UC Davis Dept. Plant Pathology Peter Henry University of California at Davis
GW16-044	A Collaborative Approach to Integrated Pest Management of Tadpole Shrimp in California Rice Fields.	\$24,928	Larry Godfrey University of California, Davis Joanna Bloese University of California, Davis
GW13-011	Compost-Induced Disease Suppressive Soils for Control of Verticillium Wilt of Strawberry	\$24,992	Tom Gordon UC Davis Margaret Lloyd UC Davis
GW13-018	Best management practices that promote sustainable crop pollination: the role of crop rotations and tillage depth	\$24,954	Neal Williams University of California, Davis Katharina Ullmann University of California, Davis
GW12-024	Ecosystem Services in Hedgerow Restorations: Pollination Function and Nesting Habitat	\$17,882	Dr.Claire Kremen University of California, Berkeley Hillary Sardinas UC Berkeley
GW11-001	Pastured Poultry/Crop Systems and Their Effect on Food Safety, Farm Economy, and Soil Quality	\$24,807	Dr.Kathleen Hilimire University of California, Santa Cruz Stephen R. Gliessman University of California
GW11-012	Facilitating Integrated Weed Management in California Rice: Predicting E. spp. and C. difformis emergence across heterogeneous growing environments	\$17,120	Dr.Chris van Kessel University of California, Davis Dr.Mark Lundy University of California Cooperative Extension
GW10-010	Irrigation Alternatives for Sustainable Water Use of Processing Tomatoes	\$25,000	Louise Jackson UC Davis Felipe Barrios Masias University of Nevada, Reno
GW09-018	Promoting Native Bumblebees in Agricultural systems for conservation and ecosystem service	\$20,074	Dr.Claire Kremen University of California, Berkeley Dr.Alexandra Harmon-Threatt University of Illinois, Urbana-Champaign
GW08-015	Screening for non-host rotation crops of Colletotrichum acutatum for strawberry nurseries in California	\$19,535	W. Douglas Gubler University of California, Davis Joseph Jertberg UC Davis Plant Pathology Department
GW08-018	Solarization and steam heat combined to control weeds in straberry	\$19,974	Steve Fennimore University of California, Davis Celeste Gilbert University of California, Davis

GW07-003	Sustainable Landscapes: Investigating the Landscape Scale Effects of Riparian Habitat on Natural Pest Control	\$17,950	Suzanne Langridge University of California
GW07-006	Risk, Rate, and Impact of Medusahead Invasion of California Savannas	\$19,971	Dr.Emilio Laca UC Davis Corey Cherr University of California, Davis
GW07-012	Managing Soil Food Webs for Enriched and Suppressive Soils: Effects of Cover Crop Diversity and Quality	\$19,235	Tianna Dupont University of California at Davis
GW06-004	Linking C and N Cycling to Microbial Community Function in Cover Crop Systems	\$9,995	Angela Yin Yee Kong University of California, Davis
GW06-007	Pest Control Services from Natural Habitat	\$9,650	Rebecca Chaplin University of California, Berkeley
GW06-016	Investigating the Effect of Hedgerows to Enhance Natural Biological Control	\$10,000	Tara Pisani Gareau University of California, Santa Cruz
GW06-017	Understanding N Fixation by Legume Cover Crops in Organic Vegetable Systems	\$10,000	Carol Shennan University of California, Santa Cruz Katie Monsen University of California Santa Cruz
GW06-029	Sheep Grazing as a Tool for Vernal Pool Stewardship	\$8,813	J. Hall Cushman Sonoma State University Joan Schwan Sonoma State University
GW06-030	Developing a Management Plan for Reducing Thrips-induced Damage on Timothy Hay	\$10,000	Larry Godfrey University of California, Davis Daniel Marcum University of California Domic Reisig University of California, Davis

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
OW23-376	INTEGRATING COVER CROPS AND SHEEP GRAZING IN ALMOND ORCHARDS	\$75,000	Julie Finzel The Regents of the University of California, Agriculture and Natural Resources
OW23-384	Adaptation of Warm Season Perennial Grasses for Forage Quality, and Resilience High Temperatures in California Irrigated Pastures	\$74,975	Theresa Becchetti University of California Ag and Natural Resources
OW22-373	Targeted Grazing for Fuel Load Reduction	\$74,811	Dr.Stephanie Larson University of California Cooperative Extension
OW20-360	Solarization and Biosolarization: Harnessing the Sun and Organic Matter to Control Weeds	\$49,956	Martin Guerena National Center for Appropriate Technology
OW19-339	Collaboration to demonstrate the potential use and value of electronic identification and DNA testing in the sheep industry	\$50,000	Julie Finzel The Regents of the University of California, Agriculture and Natural Resources Dr.Alison Van Eenennaam UCANR
OW19-345	Effects of Occultation on Weed Pressure, Labor Costs, Product Quality, and Yield in Sustainable Vegetable Production in Northern California	\$49,994	Dave Runsten Community Alliance with Family Farmers Kali Feiereisel Community Alliance With Family Farmers

OW19-349	Amador Rangeland Soil Health Research and Education Project	\$49,139	Amanda Watson Amador Resource Conservation District
OW19-351	A Collaborative Beneficial Insect and Pheromone Mating Disruption Demonstration Project	\$50,000	Dr. Stephanie Bolton Lodi Winegrape Commission
OW18-013	Early Weaning of Beef Calves: A Drought Management Strategy on Annual Rangelands	\$41,184	Dan Macon University of California Cooperative Extension
OW17-043	Beginning-farmer Research and Instruction on Growing in High Tunnels	\$49,999	nathan harkleroad ALBA
OW17-054	Advancing sustainable nitrogen management in strawberries through participatory research and education	\$49,937	Sacha Lozano Resource Conservation District of Santa Cruz County
OW16-013	Irrigated Pastureland Enhancement Program	\$49,774	Dr. Leslie Roche UC Davis Dan Macon UC Cooperative Extension
OW14-032	Selecting and Managing Vineyard Cover Crops to Reduce Consumption of Net Basin Water	\$49,467	Fritz Westover Vineyard Team Kris Beal Vineyard Team
OW13-062	Empowering Socially-Disadvantaged Farmers to Investigate Nitrogen Management in High-Value Vegetable Crops	\$45,527	nathan harkleroad ALBA
OW12-008	Water Management in Sonoma County Grape Production	\$49,200	Karen Thomas Sonoma County Winegrape Commission
OW11-318	Pomo Tribal Supported Agriculture Program	\$49,963	Rachel Whetstone Hopland Band of Pomo Indians Terri McCartney Coordinator

**Total funding from the USDA SARE program to
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\$15,979,321**



For further information on projects, contact Western SARE at (406) 994-4789 or wsare@montana.edu.

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