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 $359 million to more than 8,143 initiatives.

SARE is grassroots with far-reaching impact

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

SARE communicates results

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

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

Project Highlight: Finding Success with Local Fertilizers

Because they rely on imported food, Hawaii and the other Pacific Islands face food insecurity issues. Pacific Island farmers also rely on expensive imported fertilizers with prices that continue to increase substantially. The issue is so important that participants in a 2008 Western SARE listening session in Hawaii ranked replacing imported fertilizers with local resources as the highest research, education and development priority. Local organic sources of nutrients have promise—including compost, tankage (rendered animal products), biochar and seaweeds—but more research is needed on their use.

Three SARE-funded projects on locally produced organic fertilizers are taking a step in that direction. One project evaluated quality, maturity, nitrogen-release pattern and crop growth for 10 composts through a series of lab, greenhouse and on-farm trials. It led to an increased demand for locally produced tankage and a reported increase in taro and sweet potato yields and quality when using invasive algae as a fertilizer.

The second project followed up on the promise of tankage but using it as a solution for fertigation. There was some benefit from using this recipe compared to imported liquid organic fertilizer. The third project is continuing the momentum by evaluating biochar combined with compost.

For more information on these projects, see sare.org/projects, and search for project numbers SW11-055, SW14-026 and SW16-021.

SARE in Hawaii

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

$7,453,049 in total funding

122 grant projects

(since 1988)

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

Total awards: 122 grants
- 30 Research and Education
- 18 Professional Development Program
- 51 Farmer/Rancher
- 11 Graduate Student
- 12 On Farm Research/Partnership

Total funding: $7,453,049
- $4,470,541 Research and Education
- $1,312,047 Professional Development Program
- $775,568 Farmer/Rancher
- $282,807 Graduate Student
- $612,086 On Farm Research/Partnership

Find a complete list of projects on page 3.

SARE's Impact

53 percent of producers report using a new production technique after reading a SARE publication.

79 percent of producers said they improved soil quality through their SARE project.

64 percent of producers said their SARE project helped them achieve higher sales.

Learn about local impacts at: western.sare.org/sare-in-your-state/hawaii

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/hawaii to learn more.

Sharon Motomura Wages  
University of Hawaii  
(808) 969-8250  
smotomur@hawaii.edu

Jensen Uyeda  
University of Hawaii at Manoa  
(808) 384-7110  
juyeda@hawaii.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 HAWAII
by USDA’s Sustainable Agriculture Research and Education (SARE) Program

Hawaii has been awarded $7,453,049 grants to support 121 projects, including but not limited to, 29 research and/or education projects, 18 professional development projects and 51 producer-led projects. Hawaii 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>
<tbody>
<tr>
<td>SW22-935</td>
<td>Wildlife Impacts on Agroecosystems and Culture: Achieving Integrated Pest Management of Invasive Ungulates in Hawaii</td>
<td>$349,979</td>
<td>Dr. Melissa Price University of Hawaii Kyle Caires University of Hawaii Derek Risch University of Hawaii Stephanie Shwiff USDA National Wildlife Research Center, Dept of Economics John Steensma Steensma Dairy Dr. Mark Thorne University of Hawaii at Manoa</td>
</tr>
<tr>
<td>SW22-936</td>
<td>Entomopathogenic Bombs – Sweet Potato Weevils Be Gone</td>
<td>$336,848</td>
<td>Dr. Brent Sipes University of Hawaii Roshan Manandhar University of Hawaii Dr. Koon-Hui Wang University of Hawaii</td>
</tr>
<tr>
<td>SW21-920</td>
<td>Economic Evaluation of Beef Cattle Production Models and Marketing Alternatives in Hawaii</td>
<td>$51,386</td>
<td>Dr. Mark Thorne University of Hawaii at Manoa Dr. Dillon Feuz Utah State University</td>
</tr>
<tr>
<td>SW20-911</td>
<td>Instant biofumigation using natural products from papaya seed waste for sustainable management of soil-borne plant pathogens</td>
<td>$349,995</td>
<td>Dr. Wei Wen Su University of Hawaii at Manoa, College of Tropical Ag &amp; Human Resources (CTAHR) Dr. Stuart Nakamoto Nakamoto U. of Hawaii Manoa, Human Nutrition, Food, and Animal Sciences Dr. Koon-Hui Wang University of Hawaii Dr. Tao Yan Dept. of Civil &amp; Environ. Engineering, University of Hawaii at M</td>
</tr>
<tr>
<td>SW17-050</td>
<td>Assessing and Sharing Breadfruit Management Practices</td>
<td>$220,811</td>
<td>Dr. Noa Lincoln University of Hawaii at Manoa</td>
</tr>
<tr>
<td>SW16-021</td>
<td>Improving Nitrogen Synchronization of Local Fertilizers, Soil Fertility, and Crop Quality with Biochar Application</td>
<td>$259,816</td>
<td>Dr. Nguyen Hue University of Hawaii at Manoa</td>
</tr>
<tr>
<td>SW16-023</td>
<td>Development of Individual Free-Choice Mineral Supplementation Program for Sustainable Grazing Management of Hawaii’s Rangelands</td>
<td>$332,601</td>
<td>Dr. Mark Thorne University of Hawaii at Manoa</td>
</tr>
<tr>
<td>Project No.</td>
<td>Title</td>
<td>Amount</td>
<td>Principal Investigator(s)</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
| SW14-026   | High nutrient solution fertilizers derived from local organic inputs for field and greenhouse application in the tropics | $170,466 | Dr. Amjad Ahmad  
University of Hawaii at Manoa |
| SW12-040   | Low-input integrated management of tomato viruses in Hawaii           | $297,296 | Dr. Mark Wright  
University of Hawaii |
| SW12-114   | Secondary Effects of Behavior-based Pasture Management                | $37,125  | Matthew Stevenson  
University of Hawaii |
| SW11-052   | Developing sustainable pest management strategies against major pests of papaya in Hawaii | $148,174 | Dr. Leyla Kaufman  
University of Hawaii at Manoa |
| SW11-055   | Reducing Pacific Island Growers’ Reliance on Off-island Fertilizer Sources Through Improved Awareness and Efficient Use of Local | $284,070 | Dr. Theodore Radovich  
University of Hawaii, Manoa |
| SW09-102   | Voluntary Long-Term Protection of Agricultural Land in Hawaii         | $82,814  | Dr. Christopher Lepczyk  
University of Hawaii at Manoa |
| SW09-502   | Sustaining Molokai Native Hawaiian Family Farms                      | $47,420  | Alton Arakaki  
UH-College of Tropical Agriculture and Human Resources, Cooperative Extension Service  
Glenn Teves  
UH CTAHR Cooperative Extension Service |
| SW08-037   | Sunn hemp and its allelopathic compounds for vegetable production in Hawaii and beyond | $156,105 | Dr. Inga Zasada  
USDA-ARS Horticultural Crops Research Lab  
Dr. Koon-Hui Wang  
University of Hawaii  
Dr. Cerruti R. R. Hooks  
University of Maryland  
Dr. Ming Li Wang  
USDA-ARS, PGRCU  
Jari Sugano  
University of Hawaii, TPSS  
Dr. Mark Wright  
University of Hawaii |
| SW07-073   | Enhancing Phytonutrient Content, Yield and Quality of Vegetables with Compost Tea in the Tropics | $162,500 | Dr. Theodore Radovich  
University of Hawaii, Manoa |
| SW07-501   | Innovative SARE Coordinator Program: Virtual Field Days to Improve Farmer-Researcher-Extension Linkages | $25,000  | Jonathan Deenik  
University of Hawaii at Manoa |
| SW07-604   | Improving and extending the superhero status of the sunn hemp to other growers in need of help | $10,000  | Dr. Cerruti R. R. Hooks  
University of Maryland  
Dr. Koon-Hui Wang  
University of Hawaii |
| SW04-064   | Management of Banana Bunchy Top in Hawaii                            | $90,458  | Dr. Cerruti R. R. Hooks  
University of Maryland |
| SW03-003   | Cropping Systems to Control Tropical Soil-Borne Pests in Dryland-Grown Taro | $257,827 | Dr. Susan Miyasaka  
University of Hawaii |
| SW03-010   | Neem and Papaya Fruit Extracts and Ferric Phosphate for Control of Golden Apple Snail in Wetland Taro: Efficacy Testing | $31,831  | Lance Santo  
Hawaii Agriculture Research Center  
Mel Jackson  
Hawaii Agriculture Research Center |
**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>
| WPDP19-21| Building Competencies in Hawaii’s Agricultural Professionals and Stakeholders in Under Represented Agricultural Communities Through Collaborative Partnerships. State of Hawaii. | $75,000      | Joshua Silva  
University of Hawaii at Manoa, College of Tropical Agriculture  
Jari Sugano  
University of Hawaii, TPSS  
Michelle Gorham  
West Oahu Soil and Water Conservation District  
Dr.Koon-Hui Wang  
University of Hawaii |
| WPDP19-24| Co-Managing Food Safety and Land Stewardship on Hawaii Farms                   | $74,715      | Dave Elliott  
Oahu RC&D  
Hannah Hubanks  
Oahu RC&D  
Jean Brokish  
Oahu Resource Conservation and Development Council |
| EW18-023 | Capacity building for Cooperative Extension in Micronesia to reduce Pacific Island food system vulnerability to climate variability | $74,858      | Clay Trauernicht  
University of Hawaii |
| EW17-004 | Breadfruit Agroforestry for Pacific Island Revitalization                      | $73,689      | Craig Elevitch  
Permanent Agriculture Resources |
| EW16-008 | Agroforestry Design for Sustainable Production Systems in the U.S.-Affiliated Pacific Islands | $73,970      | Craig Elevitch  
Permanent Agriculture Resources |
| EW13-010 | Pollinator Use and Management: Training in Sustainable Practices for Ag Professionals | $65,386      | Dr.Ethel Villalobos  
University of Hawaii |
EW11-014 Hawai'i Community-Based Food Security $58,520 Craig Elevitch Hawaii Homegrown Food Network

EW08-013 Promoting Adaptive Management With 'Tropic Sun' sunn hemp (Crotolaria juncea) in Hawaii for Ecological Strategies in Weed Control, Nematode Suppression and Nutrient Management $53,768 Dr. James Leary University of Hawaii at Manoa Dr. Brent Sipes University of Hawaii

EW07-004 New Crops for Pacific Island Agroforestry $80,000 Craig Elevitch Permanent Agriculture Resources Craig Elevitch Hawaii Homegrown Food Network

EW05-009 Pacific Island Agroforestry Workshops and Field Visits $59,777 Craig Elevitch Permanent Agriculture Resources

EW03-002 New Farmers: Choosing the Road Less Traveled $90,000 Samir El-Swaify University of Hawaii MANOA

EW02-001 Species Profiles for Pacific Island Agroforestry $94,971 Craig Elevitch Permanent Agriculture Resources

EW00-026 Sustainable Pest Control for the Tropics $78,090 Richard Bowen Department of Nat Res and Envir Mngt

EW98-004 Agroforestry Handbooks for Pacific Islands $57,885 Craig Elevitch Permanent Agriculture Resources

EW98-012 Covering New Ground: Tropical Cover Crops for Improving Soil Quality $84,500 Richard Bowen Department of Nat Res and Envir Mngt

EW97-003 Tools for Sustainability: Sustainable Agriculture Video Training Tapes for the Pacific Islands Region $64,295 John Craven Common Heritage

EW96-014 Continuation - "Training Agents" in On-Farm Implementation of Sustainable Management Systems for Tropical Agriculture in Hawaii and the Pacific Region $63,623 Po-Yung Lai University of Hawaii

EW94-014 Training "Agents" in On-Farm Implementation of Sustainable Management Systems for Tropical Agriculture in Hawaii and the Pacific Region $89,000 Po-Yung Lai University of Hawaii

FARMER/RANCHER GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW22-409</td>
<td>Improving Livelihoods of Farmers in Hawaii by Creating a Honey Marketing Model</td>
<td>$25,000</td>
<td>Susan Collins Bird and Bee Hawaii</td>
</tr>
<tr>
<td>FW21-375</td>
<td>The Mango Loa Project phase two: Improving Hawaii's mango industry by incorporating high density orchard management systems</td>
<td>$16,533</td>
<td>Umi Martin Umi Martin</td>
</tr>
<tr>
<td>FW21-378</td>
<td>Growing Table Grape Varieties for Subtropical Hawaii Using Organic Practices</td>
<td>$25,000</td>
<td>Gerry Herbert Kawanui Farm</td>
</tr>
</tbody>
</table>
Evaluating the Potential of Cover Crops to Mitigate the Impact of Phytophthora in Macadamia Orchards
$24,574 Andrew Trump
Island Harvest Inc.

Integration of Multifunctional Dairy Water Buffalo (Bubalus bubalis) into a Whole Farm System in Hawaii: economic, ecological and social benefits.
$19,178 Donald Heacock
Kauai Organic Agroecosystems (KOA)

Mamaki - Fertilization and branch bending trials for continuous leaf flush and soil fertility
$20,000 Dr. Ming Wei Koh
Center for Getting Things Started

Establishing "Bush Tucker" in Hawaii
$22,870 Ken Love
Hawaii Tropical Fruit Growers

Demonstrating Viability of Cooperative Swine Aggregator Using Inoculated Deep Litter System
$25,000 Atto Assi
Ohana Coffee Farm & Assi Piggery

Different Poultry Housing Options for Chickens to Determine Fastest Growth Rate
$13,700 Nicole Correa
Double D Farm and Ranch L.L.C.

Performance of novel clonal cacao accessions in Hawaii under sustainable farming conditions
$20,000 Dr. Pierre Broun
Ninole Cacao LLC

Comparing Bird Deterrent Strategies to Increase Sustainability and Production of Fruit Crops in Hawaii
$18,620 Paul De Filippi
Mauka Vista Farms LLC

A Living Mulch Income Enhancer
$19,092 Kevin Chan
Kevin Chan

Can Intensive Rotational Grazing in combination with Indigenous Microorganism Application improve soil condition (i.e., soil carbon, minerals, and microbial life)?
$19,953 Kyle Fisher
Graze and Sprout Farm

The Mango Loa Project
$19,878 Umi Martin
Umi Martin

Establishing Profitable Durian Crops in Hawaii
$28,192 Ken Love
Hawaii Tropical Fruit Growers

Malama Kou Kino
$20,000 Melanie Holt
Real Farm

Producing Triploid Oysters
$24,992 David Nisbet
Goosepoint Oyster Co.

Grapes for tropical Hawaii
$17,370 Ken Love
Hawaii Tropical Fruit Growers

Organic Varroa Management - Beekeeper Education in Hawaii
$15,000 Richard Spiegel
Volcano Island Honey Co.

Relocating swarms for pollination: How feral bees can be integrated into sustainable farming strategies
$29,975 Jennifer Bach
Honeybee Education Program
<table>
<thead>
<tr>
<th>Proposal Number</th>
<th>Project Title</th>
<th>Amount</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW10-056</td>
<td>Use of Cover Crops with Medicinal Herbs in North Hawaii</td>
<td>$20,117</td>
<td>Dr. Katherine Pomeroy, Kohala Medicinal Herb Farm</td>
</tr>
<tr>
<td>FW09-002</td>
<td>No Chill Stone Fruit for Hawaii</td>
<td>$9,528</td>
<td>Ken Love, Hawaii Tropical Fruit Growers</td>
</tr>
<tr>
<td>FW09-004</td>
<td>Integrating Existing Crop and Livestock Enterprises on a Native Hawaiian Homestead Farm</td>
<td>$12,580</td>
<td>Conrad Aquino, Alton Arakaki, UH-College of Tropical Agriculture and Human Resources, Cooperative Extension Service</td>
</tr>
<tr>
<td>FW09-012</td>
<td>Project Fresh: Mountain View Community Gardens</td>
<td>$30,000</td>
<td>Neena Roumell, Eden Earthworks</td>
</tr>
<tr>
<td>FW09-025</td>
<td>Maximizing the Utilization of Bamboo in the Hawaiian Islands</td>
<td>$14,460</td>
<td>Rich von Wellsheim, Whispering Winds Bamboo</td>
</tr>
<tr>
<td>FW09-027</td>
<td>Evaluating New Windbreaks and Cover Crops for Tropical Fruit Crops</td>
<td>$12,206</td>
<td>Jane Teves, Puakala Farms, Jane Teves, Puakala Farms</td>
</tr>
<tr>
<td>FW09-308</td>
<td>Quantifying Secondary Compounds in Common Pasture Vegetation for Behavior Based Grazing Management in Hawaii</td>
<td>$41,760</td>
<td>Dr. Mark Thorne, University of Hawaii at Manoa</td>
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<tr>
<td>FW09-311</td>
<td>Diversifying Hawai’i Aquaculture with Clam and Oyster Culture</td>
<td>$50,000</td>
<td>Dr. Maria Haws, Pacific Aquaculture and Coastal Resources Center, Maria Haws, Pacific Aquaculture &amp; Coastal Resources Center</td>
</tr>
<tr>
<td>FW08-049</td>
<td>Healthy Foundation, Healthy Bees, Making Organic Wax Foundation for Beekeepers</td>
<td>$13,999</td>
<td>Richard Spiegel, Volcano Island Honey Co.</td>
</tr>
<tr>
<td>FW07-034</td>
<td>Choosing the Best Figs for Hawaii</td>
<td>$25,000</td>
<td>Ken Love, Hawaii Tropical Fruit Growers</td>
</tr>
<tr>
<td>FW05-314</td>
<td>A Superhero without a Cape: Using the Cover Crop Sunn Hemp to Feed the Soil, Suppress Nematodes and Smother Weeds</td>
<td>$7,716</td>
<td>Hooks Cerruti, University of Hawaii</td>
</tr>
<tr>
<td>FW04-011</td>
<td>Conversion of Fish Processing Waste to Fish/Animal Feed, Chum and Fertilizer</td>
<td>$6,695</td>
<td>Takumi Shirakawa, Shirakawa Farm</td>
</tr>
<tr>
<td>FW03-018</td>
<td>Recovery of Tropical Pasture Systems</td>
<td>$6,875</td>
<td>Dwayne Cypriano</td>
</tr>
<tr>
<td>FW03-025</td>
<td>DDT Removal Using Biodynamic Agricultural Methods</td>
<td>$6,932</td>
<td>Marie Mauger, Spirit of the Earth Farm</td>
</tr>
<tr>
<td>FW03-205</td>
<td>Field Management/Mulch Project</td>
<td>$5,232</td>
<td>Fernand Severi</td>
</tr>
<tr>
<td>FW03-206</td>
<td>Grow Your Own Sustainable Barn</td>
<td>$7,396</td>
<td>Robert Layer</td>
</tr>
<tr>
<td>FW02-008</td>
<td>Increasing Marketable Production of Exotic Tropical Fruit with Protective Covering</td>
<td>$12,850</td>
<td>Ken Love, Hawaii Tropical Fruit Growers</td>
</tr>
</tbody>
</table>
**Project #** | **Project Title** | **SARE Support** | **Project Leaders**
---|---|---|---
FW02-040 | Increasing Sustainable Agricultural Production in High Polynesian Islands | $7,500 | Ivona Ballard Whutnutsamo
FW01-021 | Increasing the value of products from small family farms by enriching the culinary experience of the local consumers | $4,000 | Glenn Shinsato Univ of HI
FW00-077 | Rejuvenation of a 60 Year Old Lychee Orchard by Pruning and Fertilizer Applications to Maximize Production | $4,000 | Elisabeth Ladoux
FW00-335 | An On-Farm Educational Approach to Directly Marketing "the Other White Meat" | $9,900 | Daphne McKeehan
FW99-056 | Hot Water Immersion Unit for Disinfestation of Hawaii-Grown Lychee and Longan | $5,000 | Michael Strong
FW99-059 | Flower Induction of Rambutan | $2,100 | Liloa Willard
FW99-066 | Lone Palm Sprouts Water Recapture and Recycle System | $5,000 | Davide Rotstein
FW98-004 | The Conversion of Agricultural Waste into Plant and Fish Food | $3,400 | Robert Gann
FW98-062 | Free Range Pork Production | $5,390 | Samuel Okami
FW98-063 | Total Utilization of Swine Waste for Crop and Hog Productivity | $4,985 | Rondald McKeehan
FW98-075 | High Quality Perennial Forage Peanut (Arachis pintal) Pastures for Sustainable Cattle Production in Hawaii | $5,000 | Zach Gibson
FW97-004 | Sustainable Alternatives To Herbicide for Weed Control: Using Cover Crops To Combat Panicum repens and Panicum maximum In Lowland, Eastern Hawaii | $3,500 | Paul Acciavatti Wailea Spring Farm
FW97-017 | Growing Ring-Spot Virus-Free Papayas Using Anti-transpirants and Other Sustainable Techniques | $4,000 | Jon Biloon
FW96-049 | Sustainable Greenhouse Tomato Production: Evaluating Alternatives to Pesticide Use for Controlling Tomato Pinworm Larvae in Hawaii | $3,520 | Shari Tresky Mariah Farm

**GRADUATE STUDENT GRANTS**

**Project #** | **Project Title** | **SARE Support** | **Project Leaders**
---|---|---|---
GW22-233 | Examining the biofumigation and innate potential of ground papaya seeds to induce host plant resistance against soil-borne pathogens in Hawaii | $29,348 | Dr.Koon-Hui Wang University of Hawaii Lauren Braley University of Hawaii, Manoa
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GW22-234  | The evolution and importance of Natural Varroa Resistance in Hawaii’s Honeybees | $30,000      | Dr.Ethel Villalobos University of Hawaii                   
|           |                                                                                |              | Stephen Martin University of Salford                        
|           |                                                                                |              | Kevin Sander University of Hawaii at Manoa                   |
| GW22-242  | Designing a Regenerative Systems Approach for Sustainable Turmeric Production  | $29,521      | Dr.Theodore Radovich University of Hawaii, Manoa           
|           |                                                                                |              | Alina Iliadis University of Hawaii                          |
| GW20-211  | A key to sustainable Hawaiian agricultural production resides with the endemic sandalwood species | $24,997      | Dr.Travis Idol University of Hawaii                         
|           |                                                                                |              | Emily Thyroff University of Hawai’i Mānoa                   
|           |                                                                                |              | Emily Thyroff University of Hawai’i                          |
| GW20-212  | Evaluate sorghum and sorghum-sudangrass hybrids as soil builders and microbial enhancer crops in the tropic. | $25,000      | Dr.Koon-Hui Wang University of Hawaii                       |
|           |                                                                                |              | Dr.Amjad Ahmad University of Hawaii at Manoa                
|           |                                                                                |              | Roshan Paudel University of Hawaii                           
|           |                                                                                |              | Joshua Silva University of Hawaii at Manoa, College of Tropical Agriculture a |
|           |                                                                                |              | Dr.Philip Waisen University of California Agriculture and Natural Resources Division |
| GW19-201  | A Hawai’i Soil Health Index to Guide Farmer Adoption of Sustainable Management Practices | $23,036      | Jamie (Jayme) Barton, M.A. Hawaii Agriculture Research Center |
|           |                                                                                |              | Dr.Susan Crow University of Hawaii Manoa                    |
|           |                                                                                |              | Jonathan Deenik University of Hawaii at Manoa               |
|           |                                                                                |              | Elaine Vizka University of Hawaii at Manoa                   |
| GW18-026  | Cover Crop "5-in-1 Approach" for Nematode Management Using Mustard and Oil Radish | $24,998      | Dr.Koon-Hui Wang University of Hawaii                       |
|           |                                                                                |              | Dr.Philip Waisen University of California Agriculture and Natural Resources Division |
| GW18-014  | Conditioning Sheep to Avoid Koa Foilage: An opportunity for productive silvopasteres in Hawaii. | $24,920      | Rebecca Ryals University of Hawaii - Manoa                  |
|           |                                                                                |              | Nicholas Krueger University of Hawaii                      |
| GW18-104  | Conservation Biological Control of Coffee Berry Borer by Applying Nitrogen Fixing Tree Mulch to Enhance Indigenous Entomopathogenic Nematodes | $24,948      | Dr.Brent Sipes University of Hawaii                         |
|           |                                                                                |              | Dr.Brent Sipes University of Hawaii                         |
| GW18-187  | Quantifying the Environmental Impact of Doubling Hawaii’s Local Food Supply | $21,119      | Dr.Kimberly Carlson University of Hawaii                    |
|           |                                                                                |              | Tanya Torres University of Hawaii                          |
| GW14-007  | Evaluating the Potential of Oyster Mushroom Compost Waste for Plant-Parasitic Nematode Management | $24,920      | Dr.Koon-Hui Wang University of Hawaii                       |
|           |                                                                                |              | Shelby Ching University of Hawaii at Manoa                  |

**ON FARM RESEARCH/PARTNERSHIP GRANTS**
Mitigation of Breadfruit Orchard Establishment Challenges in Hawai‘i: Assessing Best Practices to Address Weed Management and Ungulate Control

$74,998

Dana Shapiro
Hawaii Ulu Cooperative

Kyle Jackson
Hawaii ‘Ulu Cooperative

Healthy Soils Hawai‘i: Building Better Soil on Agricultural Lands through Soil Health Planning

$49,557

Dave Elliott
Oahu RC&D

Hannah Hubanks
Oahu RC&D

Breadfruit Disease Identification and Varietal Resistance in Hawai‘i

$49,971

Dr. Noa Lincoln
University of Hawaii at Manoa

Eli Isele
University of Hawaii

Dana Shapiro
Hawaii Ulu Producers Cooperative

Janice Uchida
Dept. of Plant Pathology, University of Hawaii

Pest reduction on agricultural lands due to Hawaiian short-eared owls

$49,755

Dr. Melissa Price
University of Hawaii

Successful Cacao Establishment through Improved Soil Management

$49,789

Dave Elliott
Oahu RC&D

Cover Crop Cocktails: Evaluating Costs and Benefits of Mixed-Species Plantings

$41,606

Dave Elliott
Oahu RC&D

Sustainable Pest Management Approaches for High Tunnel Screenhouse Production in the Tropics

$49,989

Dr. Koon-Hui Wang
University of Hawaii

Enhancing the sustainability of grass-fed beef production in Hawaii via carcass and meat quality improvement

$49,948

Dr. Yong soo Kim
University of Hawaii

Effectiveness of Beauveria bassiana on coffee berry borer in different agroclimatic zones

$49,403

Dr. Elsie Burbano Greco
University of Hawaii at Manoa

Control of coffee berry borer and increase of coffee yields using Surround WP (kaolin)

$47,648

Dr. Shawn Steiman
Coffee Consulting

Training Livestock to Eat Weeds in the Tropical Pacific and Evaluating the Effects on Meat Quality for Stronger Ranch Profits

$49,610

Matthew Stevenson
University of Hawaii

Master Farmer Workshop Series

$49,812

Dave Elliott
Oahu RC&D

Total funding from the USDA SARE program to Hawaii

$7,453,049

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).