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 $332 million to more than 7,724 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...

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

$6,602,355 in total funding

116 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: 116 grants
- 28 Research and Education
- 18 Professional Development Program
- 51 Farmer/Rancher
- 8 Graduate Student
- 11 On Farm Research/Partnership

Total funding: $6,602,355
- $3,783,714 Research and Education
- $1,312,047 Professional Development Program
- $775,568 Farmer/Rancher
- $193,938 Graduate Student
- $537,088 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.

Amjad Ahmad
University of Hawaii at Manoa
(808) 956-7985
alobady@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.
Hawaii has been awarded $6,602,355 grants to support 115 projects, including but not limited to, 27 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.

### RESEARCH AND EDUCATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>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>SW14-026</td>
<td>High nutrient solution fertilizers derived from local organic inputs for field and greenhouse application in the tropics</td>
<td>$170,466</td>
<td>Dr. Amjad Ahmad University of Hawaii at Manoa</td>
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<tr>
<td>SW12-040</td>
<td>Low-input integrated management of tomato viruses in Hawaii</td>
<td>$297,296</td>
<td>Dr. Mark Wright University of Hawaii</td>
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<tr>
<td>SW12-114</td>
<td>Secondary Effects of Behavior-based Pasture Management</td>
<td>$37,125</td>
<td>Matthew Stevenson University of Hawaii</td>
</tr>
<tr>
<td>SW11-052</td>
<td>Developing sustainable pest management strategies against major pests of papaya in Hawaii</td>
<td>$148,174</td>
<td>Dr. Leyla Kaufman University of Hawaii at Manoa</td>
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<tr>
<td>SW11-055</td>
<td>Reducing Pacific Island Growers’ Reliance on Off-island Fertilizer Sources Through Improved Awareness and Efficient Use of Local</td>
<td>$284,070</td>
<td>Dr. Theodore Radovich University of Hawaii, Manoa</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Amount</td>
<td>Principal Investigator(s)</td>
</tr>
<tr>
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<td>------------------------------------------------------------------------</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 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 Deeniki  
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 |
| SW03-055 | Development of a Sustainable Polyculture and Marketing System for Exotic Tropical Fruits | $156,800 | Richard Bowen  
Department of Nat Res and Envir Mngt |
| SW01-066 | Nature Farming at Wheeler Elementary                                   | $13,460  | Joe Lee  
Wheeler Elementary School |
| SW99-005 | Survival of Taro: Agronomic and Pathological Research For Sustainable Production | $146,700 | Janice Uchida  
Dept. of Plant Pathology, University of Hawaii |
| SW99-022 | Adaptation of a Natural Farming System to Vegetable Farm Production in Hawaii. | $85,134  | Clyde Fukuyama  
HARC |
| SW97-001 | Management of Soil-borne Plant Parasitic Nematodes for Sustainable Production of Field Grown Tomatoes and Cucumbers by Cover Cropping | $21,900  | John McHugh  
Waikele Farms |
| SW96-003 | Evaluation of a Perennial Vegetable, Asparagus, as a New Commercial Crop for Hawaiian Farmers | $49,595  | Susan Schenck  
Hawaiian 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>
<tbody>
<tr>
<td>WPDP19-21</td>
<td>Building Competencies in Hawaii’s Agricultural Professionals and Stakeholders in Under Represented Agricultural Communities Through Collaborative Partnerships. State of Hawaii.</td>
<td>$75,000</td>
<td>Joshua Silva&lt;br&gt;University of Hawaii at Manoa, College of Tropical Agriculture&lt;br&gt;Jari Sugano&lt;br&gt;University of Hawaii, TPSS&lt;br&gt;Michelle Gorham&lt;br&gt;West Oahu Soil and Water Conservation District&lt;br&gt;Dr. Koon-Hui Wang&lt;br&gt;University of Hawaii</td>
</tr>
<tr>
<td>WPDP19-24</td>
<td>Co-Managing Food Safety and Land Stewardship on Hawaii Farms</td>
<td>$74,715</td>
<td>Dave Elliott&lt;br&gt;Oahu RC&amp;D&lt;br&gt;Hannah Hubanks&lt;br&gt;Oahu RC&amp;D&lt;br&gt;Jean Brokish&lt;br&gt;Oahu Resource Conservation and Development Council</td>
</tr>
<tr>
<td>EW18-023</td>
<td>Capacity building for Cooperative Extension in Micronesia to reduce Pacific Island food system vulnerability to climate variability</td>
<td>$74,858</td>
<td>Clay Trauernicht&lt;br&gt;University of Hawaii</td>
</tr>
<tr>
<td>EW17-004</td>
<td>Breadfruit Agroforestry for Pacific Island Revitalization</td>
<td>$73,689</td>
<td>Craig Elevitch&lt;br&gt;Permanent Agriculture Resources</td>
</tr>
<tr>
<td>EW16-008</td>
<td>Agroforestry Design for Sustainable Production Systems in the U.S.-Affiliated Pacific Islands</td>
<td>$73,970</td>
<td>Craig Elevitch&lt;br&gt;Permanent Agriculture Resources</td>
</tr>
<tr>
<td>EW13-010</td>
<td>Pollinator Use and Management: Training in Sustainable Practices for Ag Professionals</td>
<td>$65,386</td>
<td>Dr. Ethel Villalobos&lt;br&gt;University of Hawaii</td>
</tr>
<tr>
<td>EW11-014</td>
<td>Hawai‘i Community-Based Food Security</td>
<td>$58,520</td>
<td>Craig Elevitch&lt;br&gt;Hawaii Homegrown Food Network</td>
</tr>
<tr>
<td>EW08-013</td>
<td>Promoting Adaptive Management With ‘Tropic Sun’ sunn hemp (Crotolaria juncea) in Hawaii for Ecological Strategies in Weed Control, Nematode Suppression and Nutrient Management</td>
<td>$53,768</td>
<td>Dr. James Leary&lt;br&gt;University of Hawaii at Manoa&lt;br&gt;Dr. Brent Sipes&lt;br&gt;University of Hawaii</td>
</tr>
<tr>
<td>EW07-004</td>
<td>New Crops for Pacific Island Agroforestry</td>
<td>$80,000</td>
<td>Craig Elevitch&lt;br&gt;Permanent Agriculture Resources&lt;br&gt;Craig Elevitch&lt;br&gt;Hawaii Homegrown Food Network</td>
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<tr>
<td>EW05-009</td>
<td>Pacific Island Agroforestry Workshops and Field Visits</td>
<td>$59,777</td>
<td>Craig Elevitch&lt;br&gt;Permanent Agriculture Resources</td>
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<tr>
<td>EW03-002</td>
<td>New Farmers: Choosing the Road Less Traveled</td>
<td>$90,000</td>
<td>Samir El-Swaify&lt;br&gt;University of Hawaii MANOA</td>
</tr>
</tbody>
</table>
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

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**FARMER/RANCHER GRANTS**

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<tr>
<th>Project #</th>
<th>Project Title</th>
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<th>Project Leaders</th>
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<tbody>
<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>
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<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>
<tr>
<td>FW21-381</td>
<td>Evaluating the Potential of Cover Crops to Mitigate the Impact of Phytophthora in Macadamia Orchards</td>
<td>$24,574</td>
<td>Andrew Trump  Island Harvest Inc.</td>
</tr>
<tr>
<td>FW21-384</td>
<td>Regenerating Hawaii’s Soils - A Battalion of Hawaii’s Indigenous Microbes – Optimization and timeline to microbially regenerate our degraded soil.</td>
<td>$25,000</td>
<td>Regina Enea  HAWAII AGRICULTURAL SOLUTIONS LLC</td>
</tr>
<tr>
<td>FW20-366</td>
<td>Integration of Multifunctional Dairy Water Buffalo (Bubalus bubalis) into a Whole Farm System in Hawaii: economic, ecological and social benefits.</td>
<td>$19,178</td>
<td>Donald Heacock  Kauai Organic Agroecosystems (KOA)</td>
</tr>
<tr>
<td>FW20-368</td>
<td>Mamaki - Fertilization and branch bending trials for continuous leaf flush and soil fertility</td>
<td>$20,000</td>
<td>Dr. Ming Wei Koh  Mamaki Ola</td>
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<tr>
<td>FW20-370</td>
<td>Establishing “Bush Tucker” in Hawaii</td>
<td>$22,870</td>
<td>Ken Love  Hawaii Tropical Fruit Growers</td>
</tr>
<tr>
<td>FW19-339</td>
<td>Demonstrating Viability of Cooperative Swine Aggregator Using Inoculated Deep Litter System</td>
<td>$25,000</td>
<td>Atto Assi  Ohana Coffee Farm &amp; Assi Piggery</td>
</tr>
</tbody>
</table>
Different Poultry Housing Options for Chickens to Determine Fastest Growth Rate
Nicole Correa
Double D Farm and Ranch L.L.C.

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

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

A Living Mulch Income Enhancer
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)?
Kyle Fisher
Graze and Sprout Farm

The Mango Loa Project
Umi Martin
Umi Martin

Establishing Profitable Durian Crops in Hawaii
Ken Love
Hawaii Tropical Fruit Growers

Malama Kou Kino
Melanie Holt
Real Farm

Producing Triploid Oysters
David Nisbet
Goosepoint Oyster Co.

Grapes for tropical Hawaii
Ken Love
Hawaii Tropical Fruit Growers

Organic Varroa Management & Beekeeper Education in Hawaii
Richard Spiegel
Volcano Island Honey Co.

Relocating swarms for pollination: How feral bees can be integrated into sustainable farming strategies
Jennifer Bach
Honeybee Education Program

Use of Cover Crops with Medicinal Herbs in North Hawaii
Dr. Katherine Pomeroy
Kohala Medicinal Herb Farm

No Chill Stone Fruit for Hawaii
Ken Love
Hawaii Tropical Fruit Growers

Integrating Existing Crop and Livestock Enterprises on a Native Hawaiian Homestead Farm
Conrad Aquino
Alton Arakaki
UH-College of Tropical Agriculture and Human Resources, Cooperative Extension Service

Project Fresh: Mountain View Community Gardens
Neena Roumell
Eden Earthworks

Maximizing the Utilization of Bamboo in the Hawaiian Islands
Rich von Wellsheim
Whispering Winds Bamboo
<table>
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<tr>
<th>Project Code</th>
<th>Project Title</th>
<th>Funding (USD)</th>
<th>Recipient(s)</th>
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<tbody>
<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>
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<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>
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<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>
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<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>
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<td>FW03-018</td>
<td>Recovery of Tropical Pasture Systems</td>
<td>$6,875</td>
<td>Dwayne Cypriano</td>
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<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>
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<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>
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<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>
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<tr>
<td>FW02-040</td>
<td>Increasing Sustainable Agricultural Production in High Polynesian Islands</td>
<td>$7,500</td>
<td>Ivona Ballard, Whutnusamoa</td>
</tr>
<tr>
<td>FW01-021</td>
<td>Increasing the value of products from small family farms by enriching the culinary experience of the local consumers</td>
<td>$4,000</td>
<td>Glenn Shinsato, Univ of HI</td>
</tr>
<tr>
<td>FW00-077</td>
<td>Rejuvenation of a 60 Year Old Lychee Orchard by Pruning and Fertilizer Applications to Maximize Production</td>
<td>$4,000</td>
<td>Elisabeth Ladoux</td>
</tr>
<tr>
<td>FW00-335</td>
<td>An On-Farm Educational Approach to Directly Marketing “the Other White Meat”</td>
<td>$9,900</td>
<td>Daphne McKeehan</td>
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<tr>
<td>FW99-056</td>
<td>Hot Water Immersion Unit for Disinfection of Hawaii-Grown Lychee and Longan</td>
<td>$5,000</td>
<td>Michael Strong</td>
</tr>
</tbody>
</table>
**Project #** | **Project Title** | **SARE Support** | **Project Leaders**
--- | --- | --- | ---
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  
Emi8thyroff  
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  
Philip Waisen  
University of Hawaii  
Roshan Paudel  
University of Hawaii
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 Deeniki  
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  Philip Waisen  University of Hawaii

GW18-014  Conditioning Sheep to Avoid Koa Foliage: An opportunity for productive silvopastures in Hawaii.  $24,920  Rebecca Ryals  University of Hawaii - Manoa  Nicholas Krueger  University of Hawaii - Manoa

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

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| OW20-354   | Healthy Soils Hawaiʻi: Building Better Soil on Agricultural Lands through Soil Health Planning | $49,557      | Dave Elliott  
Oahu RC&D  
Hannah Hubanks  
Oahu RC&D |
| OW19-344   | 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 |
| OW18-017   | Pest reduction on agricultural lands due to Hawaiian short-eared owls       | $49,755      | Dr.Melissa Price  
University of Hawaii |
| OW17-037   | Successful Cacao Establishment through Improved Soil Management             | $49,789      | Dave Elliott  
Oahu RC&D |
| OW16-022   | Cover Crop Cocktails: Evaluating Costs and Benefits of Mixed-Species Plantings | $41,606      | Dave Elliott  
Oahu RC&D |
| OW15-019   | Sustainable Pest Management Approaches for High Tunnel Screenhouse Production in the Tropics | $49,989      | Dr.Koon-Hui Wang  
University of Hawaii |
| OW13-034   | 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 |
| OW12-041   | Effectiveness of Beauveria bassiana on coffee berry borer in different agroclimatic zones | $49,403      | Dr.Elsie Burbano Greco  
University of Hawaii at Manoa |
| OW11-308   | Control of coffee berry borer and increase of coffee yields using Surround WP (kaolin) | $47,648      | Dr.Shawn Steiman  
Coffea 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
$6,602,355

For further information on projects, contact Western SARE at (435) 797-2257 or wsare@usu.edu. Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).