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 8,542 initiatives.

SARE is grassroots with far-reaching impact
Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

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

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

Florida

Project Highlight: Grafted Specialty Tomatoes More Resilient

Demand for organic heirloom and specialty tomatoes grown in high tunnels is rising, making them high-value crops. Unfortunately, growers of such tomatoes in Florida face challenges in managing soil-borne diseases. Due to Fusarium wilt, one farm faced the complete crop failure of a tomato popular in the local market. University of Florida researcher Xin Zhao partnered with the farm, Frog Song Organics, to see if grafting with resistant rootstocks would control soil-borne diseases in organic high tunnel production systems.

Their experiment compared grafted and non-grafted specialty tomatoes for soil-borne disease resistance, yield and fruit quality. They found that grafting was an effective tool for managing Fusarium wilt and improving the overall health of tomato plants. Yields significantly improved in grafted tomato production compared with non-grafted controls. Even with higher production costs associated with the grafting, the grafted plants resulted in increased net profits.

One hundred professionals and 450 farmers learned of the rewarding research findings at workshops and presentations. Zhao views this on-farm research project as a successful demonstration of technology transfer through a collaborative and productive partnership with local growers to address production issues.

For more information on this project, see sare.org/projects, and search for project number OS13-083.

SARE in Florida
southern.sare.org/sare-in-your-state/florida

$9,166,856 in total funding
192 grant projects (since 1988)

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

Total awards: 192 grants
- 36 Research and Education
- 7 Sustainable Community Innovation
- 10 Professional Development Program
- 27 Farmer/Rancher
- 77 Graduate Student
- 31 On Farm Research/Partnership
- 4 Education Only

Total funding: $9,166,856
- $6,492,511 Research and Education
- $651,193 Sustainable Community Innovation
- $262,085 Professional Development Program
- $988,050 Farmer/Rancher
- $503,453 Graduate Student
- $182,268 On Farm Research/Partnership
- $87,296 Education Only

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: southern.sare.org/sare-in-your-state/florida

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 southern.sare.org/state-pages/florida to learn more.

Gilbert Queeley
Florida A&M University
(850) 412-5255
gilbert.queeley@famu.edu

Marilyn (Mickie) Swisher
University of Florida
(352) 273-3538
mesw@ufl.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 FLORIDA

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

Florida has been awarded $9,166,856 grants to support 190 projects, including but not limited to, 34 research and/or education projects, 10 professional development projects and 27 producer-led projects. Florida has also received additional SARE support through multi-state projects.

## RESEARCH AND EDUCATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| LS23-380  | Passionfruit: Laying the Groundwork for an Emerging Specialty Fruit Crop in Florida | $383,000     | Dr. Ali Sarkhosh  
University of Florida  
Mark Bailey  
University of Florida Cooperative Extension Service  
Dr. Jonathan Crane  
University of Florida/Tropical Research and Education Center  
Stafford Crossman  
University of The Virgin Islands  
David Dinkins  
University of Florida, Institute of Food and Agricultural Sciences  
Dr. Islam El-Sharkawy  
Florida A&M University  
Vanessa Forbes  
University of the Virgin Islands  
Tatiana Sanchez  
UF/IFAS Extension Alachua County  
Dr. Steven Sargent  
University of Florida/Horticultural Sciences Department  
Brandon White  
University of Florida, Institute of Food and Agricultural Sciences |
| LS23-381  | Establishing domestic vanilla cultivation in southern Florida, Puerto Rico, and the US Virgin Islands | $383,000     | Dr. Xingbo Wu  
University of Florida  
Dr. Paul Bayman  
Vanilla Castañoer LLC  
Trent Blare  
Dr. Thomas Zimmerman  
University of the Virgin Islands |
| LS22-370  | Using rootstocks to increase blueberry farming sustainability in the South East | $371,000     | Dr. Gerardo Nunez  
University of Florida  
Dr. John Diaz  
University of Florida  
Dr. Islam El-Sharkawy  
Florida A&M University  
Gabriel Maltais-Landry  
University of Florida  
Dr. Zilfina Rubio Ames  
University of Georgia  
Ariel Singerman  
University of Florida |
Evaluating the Dual-Purpose of Chickpea: A Cash and Cover Crop for Agricultural Production Systems in the Southeast

The Use of Cyanobacteria Biofertilizers to Increase Crop Productivity, Improve Soil Health, and Agricultural Sustainability in Florida

Specialty Pumpkin: Laying the Groundwork for an Emerging Crop and Lucrative Products

Optimizing Nutrient and Water Management for Organic Mixed Vegetable Production Systems

Enhancing Hedgerow Systems in Fruit Tree Production to Improve Beneficial Insect Diversity and Abundance

Enhancing Seed Production of Regionally Adapted Crops in the Southeastern Farmer Seed System

Managing Plant-parasitic Nematodes and Promoting Beneficial Soil Organisms Through Sod-based Crop Rotation

Shade and Ground Cover Growing Systems for Tea Production in Florida
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Title</th>
<th>Amount</th>
<th>Principal Investigator(s)</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS16-270</td>
<td>Cover Crop Diversity through Evaluation and Increase from Breeder Stocks and Germplasm Repositories</td>
<td>$201,249</td>
<td>Dr. Carlene Chase</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS11-244</td>
<td>Taking advantage of pest thrips ecology to increase sustainability of vegetable crop production</td>
<td>$235,000</td>
<td>Dr. Stuart Reitz</td>
<td>USDA-ARS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Stephen Hight</td>
<td>USDA-ARS</td>
</tr>
<tr>
<td>LS10-228</td>
<td>Educating and Training Future Farmers, Researchers and Extension Personnel in Sustainable Agriculture</td>
<td>$245,000</td>
<td>Rosalie Koenig</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS10-233</td>
<td>Integrated Use of Grafting Technology to Improve Disease Resistance and Fruit Yield in Specialty Melon Production</td>
<td>$223,000</td>
<td>Dr. Xin Zhao</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS10-235</td>
<td>Preparing Small Scale Limited Resource Vegetable Farmers for Organic Farming in North Florida</td>
<td>$15,000</td>
<td>Dr. Odemari Mbuya</td>
<td>Florida A&amp;M University</td>
</tr>
<tr>
<td>LS09-216</td>
<td>Improving the quality of life for Southern organic farmers and farm workers</td>
<td>$190,000</td>
<td>Leah Cohen</td>
<td>Florida Organic Growers</td>
</tr>
<tr>
<td>LS08-205</td>
<td>Selecting a sunn hemp cover crop genotype for weed suppression and seed production</td>
<td>$170,000</td>
<td>Dr. Carlene Chase</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS07-199</td>
<td>Integrating plant essential oils and kaolin for the sustainable management of thrips and tomato spotted wilt on tomato</td>
<td>$185,000</td>
<td>Dr. Stuart Reitz</td>
<td>USDA-ARS</td>
</tr>
<tr>
<td>LS06-187</td>
<td>Silicon soil amendments for enhancing disease resistance while improving overall crop health for cucurbits in organic farming systems</td>
<td>$180,000</td>
<td>Dr. Robert McGovern</td>
<td>UF-IFAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amanda Gevens</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS06-192</td>
<td>Biorational approaches for management of bacterial wilt and bacterial spot on tomato</td>
<td>$150,000</td>
<td>Dr. Jeffrey Jones</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS05-170</td>
<td>Integrated Management of Purple and Yellow Nutsedge in Organic Vegetable Production</td>
<td>$125,000</td>
<td>Dr. Carlene Chase</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS04-168</td>
<td>Development of Florida Native Plants as Farmscaping Cover Crops and Value-added Crops for Limited-Resource Farmers in Central Florida</td>
<td>$15,000</td>
<td>Robert Kluson</td>
<td>Florida Native Solutions, Inc.</td>
</tr>
<tr>
<td>LS03-148</td>
<td>Development of sustainable vegetable production systems for south Florida and Virginia based on use of cover crops and precision irrigation</td>
<td>$179,776</td>
<td>Waldemar Klassen</td>
<td>Tropical Research and Education Center</td>
</tr>
<tr>
<td>LS02-136</td>
<td>Enhancing the Economic and Environmental Competitiveness of Small Farms Through Agroforestry</td>
<td>$189,600</td>
<td>Shibu Jose</td>
<td>University of Florida</td>
</tr>
<tr>
<td>LS02-140</td>
<td>A System Approach for Improved Integration of Green Manure in Commercial Vegetable Production Systems</td>
<td>$171,800</td>
<td>Johannes Scholberg</td>
<td>Agronomy Department, University of Florida</td>
</tr>
<tr>
<td>LS00-118</td>
<td>Management of Small Rural Holdings as Economic and Ecological Units</td>
<td>$21,406</td>
<td>David Zimet</td>
<td>North Florida Research and Extension Center Inst.</td>
</tr>
</tbody>
</table>
LS99-101  Developing Effective Methods to Assess the Impact of Community Food Security Programs on Purchases of Local Farm Produce in Three Southern Communities  $20,000  Ellen Huntley  Florida Organic Growers


AS95-019  Biological Control Methods for Citrus Rust Mites and Spider Mites on Florida Citrus Utilizing Predaceous Arthropods as Part of IPM  $75,000  Carl C. Childers  IFAS Citrus Research

LS92-046  Development of Cropping Systems for Nematode Management on Agronomic and Horticultural Crops  $155,000  D.W. Dickson  University of Florida  R. McSorley  Dept. of Entomology & Nematology, U of Florida  Rodrigo Rodriguez-Kabana  Auburn University, Plant Pathology

LS91-031  Biological Control and its Economics in the Southern United States  $49,970  J. Howard Frank  University of Florida, Entomology and Nematology

LS91-042  Intensive Short Course on Grant Preparation for Future Applicants to the LISA Competitive Grants Program  $39,000  Carl Barfield  University of Florida

LS90-021  An Educational Program in Low-input Sustainable Agriculture Production Technology and Philosophy  $18,000  Stephen A. Ford  University of Florida

### 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>
| SPDP21-03 | Bridging the Food Supply and Sustainable Agriculture Systems with the Nonprofit Sector  | $77,867      | Dr. Kimberly Wiley  
University of Florida  
Dr. Jennifer Jones  
University of Florida  
Dr. Marilyn Swisher  
University of Florida |
| ES09-097  | Moving nursery producers toward sustainable production practices             | $76,237      | Gary Knox  
University of Florida |
| ES03-067  | What Service Providers Must Know About Organic Rules and Regulations         | $133,762     | Rosalie Koenig  
University of Florida |
| ES01-054  | Growing with the Community: A Hands-on Training Design for Agricultural Educators, Farmers and Community Leaders | $49,735      | Ellen Huntley  
Florida Organic Growers |
| ES01-055  | Delivery of Biological Control Information and Technology in Florida         | $49,199      | James Cuda  
University of Florida |
| ES01-056  | Training in production and utilization of composted waste materials in warm, humid climates to improve soils for horticultural cropping systems | $47,896      | Monica Ozores-Hampton  
University of Florida/SWFREC |
| ES97-030  | Integrated Production of Sustainable Crops for Small Farmers in North Florida | $8,375       | Gary Knox  
University of Florida |
### 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>FS22-339</td>
<td>Methodology to enhance nutrition and economics of microalgae use as live feeds in marine aquaculture</td>
<td>$14,985</td>
<td>Nicole Kirchhoff, PhD Live Advantage Bait LLC</td>
</tr>
<tr>
<td>FS20-323</td>
<td>Evaluating Mobile Slaughter Access for Producers and Local Partners</td>
<td>$10,700</td>
<td>Sheila Austin Red Boot Goat Farm</td>
</tr>
<tr>
<td>FS19-314</td>
<td>Season Extension and Increased Economic Sustainability for South Florida Growers: Using high tunnels to extend tomato production</td>
<td>$9,665</td>
<td>Moses Kashem St. Simon's Farm; Urban Vegetable Project Produce Sales LLC</td>
</tr>
<tr>
<td>FS19-319</td>
<td>Sweet Potatoes and Their Vines: A nutritional and sustainable alternative for food and livestock feed</td>
<td>$9,926</td>
<td>April Singleton L&amp;B Farm</td>
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<tr>
<td>FS10-248</td>
<td>Florida Meat Goat Study</td>
<td>$9,996</td>
<td>Rita Pruette Granny Smith Farms</td>
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<tr>
<td>FS06-209</td>
<td>Developing Model CSA Software for Multi-cropping and Harvesting</td>
<td>$9,800</td>
<td>Margaret Pikarsky Bee Heaven Farm</td>
</tr>
<tr>
<td>FS03-176</td>
<td>Developing Guidelines for Farmers to Market Directly to Consumers at Community Farmers’ Markets</td>
<td>$14,000</td>
<td>Sharon Yeago Alachua County Farmers’ Market, Inc.</td>
</tr>
<tr>
<td>FS02-149</td>
<td>Ultraviolet Light absorbing films and nets for insect and disease control in an organic greenhouse</td>
<td>$8,010</td>
<td>Jim Gibbons</td>
</tr>
<tr>
<td>FS01-129</td>
<td>Development of Multi-Herd Management software for small farmers</td>
<td>$9,949</td>
<td>Dee Blaha</td>
</tr>
<tr>
<td>FS01-135</td>
<td>Soil Fertility improvement in Fruit Orchards by Windrowing Urban Plant Debris and Poultry Litter</td>
<td>$8,644</td>
<td>William Graves, IV Tetley Groves, Inc.</td>
</tr>
<tr>
<td>FS01-138</td>
<td>Developing a model to increase support for organic farming research at Land Grant Institutions</td>
<td>$14,999</td>
<td>Marty Mesh FL Certified Organic Growers and Consumers (FOG)</td>
</tr>
<tr>
<td>FS01-139</td>
<td>Composted Yard Waste as a Replacement for Pine Bark Mulch in Blueberry Production</td>
<td>$9,800</td>
<td>Richard Nogaj Harvest for Humanity</td>
</tr>
<tr>
<td>Project #</td>
<td>Project Title</td>
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<td>Project Leaders</td>
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<tr>
<td>FS01-140</td>
<td>Using companion plants to increase biological control for thrips in pepper crops</td>
<td>$9,300</td>
<td>Chuck Obern</td>
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<tr>
<td>FS00-112</td>
<td>Practical Evaluation of Vermicompost on Horticultural Crops</td>
<td>$9,820</td>
<td>Cynthia L. Connolly</td>
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<tr>
<td>FS00-121</td>
<td>Marketing to the Department of Defense Food Service</td>
<td>$15,000</td>
<td>Glyen Holmes</td>
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<tr>
<td>FS00-125</td>
<td>Does Compost Use Affect Post-Harvest Quality of Vegetables?</td>
<td>$9,960</td>
<td>Nancy Roe</td>
</tr>
<tr>
<td>FS00-127</td>
<td>Alternative Production Methods for Increasing Sustainability of North Florida Strawberry Producers</td>
<td>$9,964</td>
<td>Larry Gillard</td>
</tr>
<tr>
<td>FS99-089</td>
<td>Developing a Model for Successful Direct Marketing in Southern Communities</td>
<td>$7,020</td>
<td>Trace Giornelli</td>
</tr>
<tr>
<td>FS99-094</td>
<td>Developing an Organically Approved Soil Mix for Use in Vegetable Transplant Production</td>
<td>$7,660</td>
<td>Rosalie Koenig</td>
</tr>
<tr>
<td>FS98-067</td>
<td>Feasibility of Indoor Culture and Production of Ornamental Goldfish</td>
<td>$2,216</td>
<td>Robert Draughon</td>
</tr>
<tr>
<td>FS97-057</td>
<td>Effect of Limited Environmental Controls on Shiitake Mushroom Production in the Southern Coastal Plain</td>
<td>$9,990</td>
<td>Charles McRae</td>
</tr>
<tr>
<td>FS95-025</td>
<td>Development of Potting Soil Mixes from Local Wastes</td>
<td>$9,600</td>
<td>Steve Garrison</td>
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<tr>
<td>FS95-026</td>
<td>Testing the Efficacy of Alternative Methods of Whitefly Control in Organic Vegetable Production</td>
<td>$5,200</td>
<td>Rosalie Koenig</td>
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<tr>
<td>FS95-030</td>
<td>Management of Artificial and Restored Wetlands to Improve Water Quality</td>
<td>$10,000</td>
<td>A. Glenn Simpson</td>
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<tr>
<td>FS94-019</td>
<td>Biological Control of Flower Thrips in Pepper Fields</td>
<td>$9,950</td>
<td>Ted &amp; Trudy Winsberg</td>
</tr>
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</table>

**GRADUATE STUDENT GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tbody>
<tr>
<td>GS23-276</td>
<td>Heat stress and its influence on subtropical annual crops and their pollinators: implications for agriculture in an era of climate change</td>
<td>$16,358</td>
<td>Dr.Krishnaswamy Jayachandran Florida International University Blaire Kleiman Florida International University</td>
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<tr>
<td>GS23-277</td>
<td>Sowing Seeds Abroad: Exploring the Lived Experiences of African Immigrant Farmers in the United States.</td>
<td>$8,074</td>
<td>Dr.Matthew Benge University of Florida Willis Ochieng University of Florida</td>
</tr>
</tbody>
</table>

Toward an optimum legume proportion in legume-grass pastures: from radiation use efficiency to animal performance

Intercropping Cassava and Legumes for Local Food Security in Florida and Puerto Rico

Examining Carbon-Farming Practices to Address Soil Sustainability in the Everglades Agricultural Area, South Florida

Cultivar and Soil Amendment Effects on Peanut (Arachis hypogaea L.) Grown with Organic Practices in Florida

Optimizing Planting Density to Increase the Sustainability of Blueberry Farms

Integration of Root-knot Nematode Resistant Pepper Cultivars into an Organic and Sustainable Production System in Florida

Beetle Herding: Development of Strategies to Optimize Biological Control of Air Potato Using Attractants

Sustainable Strategies to Alleviate Heat Stress in Lettuce

How Do Soil Microbes Respond to Chickpea Replacing a Bare Fallow Period in Southeastern Row Crop Agroecosystems?

Improving Blueberry Farming Sustainability Through Better Fertilizer Timing

Identifying the Microbial-mediated Strategies for Optimum Phosphorus Uptake in Bahiagrass and Rhizoma Peanut Mixture

Examining Field Crop Farmers’ Climate Change Perceptions, Adaptation Strategies, and Resilience in Florida: A spatial econometric approach

Agricultural Water Resource Management in Puerto Rico and the U.S. Virgin Islands

Sustainable Management Practices for Vanilla Cultivation
Quantifying and Understanding Factors Affecting Tissue Nitrate Accumulation in Organic Celery

Dr. Xin Zhao
University of Florida
Zachary Ray
University of Florida

Arbuscular Mycorrhizal Fungal Associations in Tea Under Sustainable Production Systems in Florida

Dr. Bala Rathinasabapathi
University of Florida
Caitlin Clarke
University of Florida

What’s the Buzz? Assessing Efficacy, Synergisms, and Sustainability of Pollinators in Southern Highbush Blueberry (Vaccinium corymbosum L.)

Dr. Rachel Mallinger
University of Florida
John Ternest
University of Florida Department of Entomology and Nematology

Small-scale Farmer Networks in Florida: Understanding and measuring their impacts and exploring the role of extension in their success

Paul Monaghan
University of Florida
Jose Perez
University of Florida

Forecasting Pasture Productivity from Satellite Imagery for Use in Adaptive Grazing Management

Chris Wilson
University of Florida
Hunter Smith
University of Florida

Translating Grazing: Calculating Nitrogen Credits from Cool-Season Integrated Crop Livestock Systems

Dr. Marcelo Wallau
University of Florida
Kacey Aukema
University of Florida

Assessing Anaerobic Soil Disinfestation for Improving Weed and Soilborne Disease Management in High-tunnel and Open-field Salad Green Production

Dr. Xin Zhao
University of Florida
Isaac Vincent
University of Florida

Agroecological Intensification of Warm-season Pastures for Improved Productivity and Quality and Ecosystem Services

Chris Wilson
University of Florida
Hannah Rusch
University of Florida

Intercropping for Pest Control in Organic Kale in Northern Florida

Nora Underwood
Florida State University
Penelope Ales
Florida State University

Determining How the Ubiquitous Fungi Mortierella Regulates Belowground N Dynamics Under Different Crop Rotation Systems

Dr. Hui-Ling Liao
University of Florida
Kaile Zhang
University of Florida

Deploying Oak Mulch to Contain and Suppress HLB Disease in Citrus

Lorenzo Rossi, Ph.D.
University of Florida
Lukas Hallman
UF/IFAS

Evaluating Local Food Hubs as Alternative Food Systems to Preserve Specialty Crop Producers and Build Resilient Communities in North Central Florida

Dr. Jonathan Watson
University of Florida
BHAGATVEER SANGHA
University of Florida

Development of Push-pull System for Ambrosia Beetles, Vectors of Laurel Wilt Disease in Florida Avocado

Dr. Xavier Martini
University of Florida
Derrick Conover
University of Florida

Sustainable Strategies to Combat the Papaya Ringspot Virus

Dr. Alan Chambers
University of Florida TREC
Sarah Brewer
University of Florida
Developing Efficient Probiotics for Microbiota of Diarrhea-Resistant Livestock

$16,266
Dr. Kwangcheol Jeong
University of Florida
Peixin Fan
University of Florida

Toward the Development of a Push-Pull Strategy to Control Whiteflies in Florida Vegetables

$9,308
Dr. Xavier Martini
University of Florida
Nicholas Johnston
University of Florida, North Florida Research and Education Center

Evaluation of Cladosporium cladosporioides and Its Extracts for the Management of Pathogenic Bipolaris Species

$14,332
Dr. Erica Goss
University of Florida
Ashish Adhikari
University of Florida, Plant Pathology

Evaluation of Biostimulants to Manage Silverleaf Whitefly (Hemiptera: Aleyrodidae) in Tomatoes in Florida

$16,500
Muhammad Haseeb
Center for Biological Control, College of Agriculture and Food Sciences, Florida A&M University
Jermaine Perier
Florida A&M University

Innovations in Spotted Wing Drosophila (Drosophila suzukii Matsumura) Monitoring and Attract-and-Kill for Development of More Targeted IPM Programs

$16,344
Dr. Oscar Liburd
University of Florida
Gabrielle LaTora
University of Georgia

Developing Attract and Reward Strategy to Control Thrips and Whiteflies in Florida Tomato

$10,316
Dr. Xavier Martini
University of Florida
Iris Strzyzewski
University of Florida NFREC

Elucidating the Effects of Organic vs. Conventional Cropping Practice and Rhizobia Inoculation on Peanut Yield and Rhizosphere Microbial Diversity

$16,496
Dr. Jianping Wang
University of Florida
Dev Paudel
University of Florida

Integrated Weed Management for Long-Term Nutsedge Control and Its Economic Impact in Florida Vegetable Production

$15,361
Peter Dittmar
University of Florida
Ranjeet Randhawa
University of Florida

Identifying Marketing Opportunities Under the New Organic Transitional Certification Program

$16,492
Zhifeng Gao
University of Florida
Xuqi Chen
University of Florida

Companion Planting of Native Insectary Plants to Benefit Crop Plants: The promotion of beneficial insects in agricultural communities via trophic resource enhancement

$10,332
Dr. Suzanne Koptur
Florida International University
Andrea Salas
Florida International University

Development of an Integrated Pest and Disease Management Program Utilizing Companion Plants and Inundative Biological Control for Organic Squash Production

$16,245
Dr. Oscar Liburd
University of Florida
Lorena Lopez
Virginia Tech

Effects of Herbivore-Induced Plant Volatiles in Various Maturity Stages of Pepper on the Attractiveness of Orius insidiosus

$9,787
Dr. Xavier Martini
University of Florida
Edward Traczyk
University of Florida

Genetic Markers for Resistance to Gastrointestinal Nematode Infections for a Sustainable Florida Native Sheep Production

$16,500
Raluca Mateescu
University of Florida
Zaira Magdalena Estrada Reyes
University of Florida

Overcoming Microclimate Challenges to Improve Organic Spinach Production in Florida

$16,495
Dr. Xin Zhao
University of Florida
Craig Frey
University of Florida
<table>
<thead>
<tr>
<th>Project ID</th>
<th>Title</th>
<th>Funding</th>
<th>Principal Investigators</th>
</tr>
</thead>
</table>
| GS15-141  | Creating successful Farm to School Programs in Florida: A County-wide  | $11,000 | Ray Bucklin  
University of Florida  
Dr. Jonathan Watson  
University of Florida |
|           | Feasibility Study of Direct, Local Procurement                        |         |                                                                                         |
| GS15-145  | Sustainable Management Strategies for Management of Key Insect and     | $10,121 | Dr. Oscar Liburd  
University of Florida  
Lorena Lopez  
Virginia Tech |
|           | Nematode Pests in Squash Cropping Systems                               |         |                                                                                         |
| GS15-146  | Investigating New Management Approaches for Picture-Winged Flies in   | $7,432  | Dr. Gregg Nuessly  
University of Florida/IFAS/EREC  
Dr. David Owens  
University of Delaware |
|           | Sweet Corn                                                            |         |                                                                                         |
| GS15-149  | Natural essential oil compounds with heat treatment to control stem-end| $10,948 | Dr. Mark Ritenour  
University of Florida  
Jiaqi Yan  
University of Florida |
|           | rot on grapefruit during postharvest handling and marketing           |         |                                                                                         |
| GS15-151  | Legume Proportion of Grass-Legume Mixtures Affects Greenhouse Gas      | $11,000 | Dr. Lynn Sollenberger  
University of Florida  
Dr. Jose Dubeux, Jr.  
University of Florida - NFREC  
Marta Kohmann  
University of Florida |
|           | Emissions from Animals Grazing Pasture                                 |         |                                                                                         |
| GS14-129  | Potential use of seeded peanuts as warm-season legumes in the U.S.     | $10,687 | Dr. Jose Dubeux, Jr.  
University of Florida - NFREC  
Edwin Mozley  
University of Florida |
|           | southern Coastal Plains                                                |         |                                                                                         |
| GS14-134  | Effect of Nematode Suppression Using Cover Crops Resistant to Nematodes| $10,429 | Dr. Patricio Munoz  
University of Florida  
Lin Xing  
University of Florida |
|           | on Peanut Production                                                   |         |                                                                                         |
| GS14-137  | Impacts of land use intensification on soil organic carbon stocks, soil | $10,982 | Dr. Maria Silveira  
University of Florida  
Sutie Xu  
University of Florida |
|           | carbon fractions and microbial activities in subtropical grazing land  |         |                                                                                         |
|           | ecosystems                                                             |         |                                                                                         |
| GS13-119  | Nitrogen dynamics of cover crops with sorghum for increased           | $10,997 | Dr. John Erickson  
University of Florida  
Jeffrey Fedenko  
University of Florida |
|           | sustainability                                                          |         |                                                                                         |
| GS12-114  | Developing an integrated pest management program for a newly           | $10,837 | Dr. Oscar Liburd  
University of Florida  
Lindsy Iglesias  
University of Florida |
|           | introduced pest in Florida blueberries: the spotted wing              |         |                                                                                         |
|           | drosophila, Drosophila suzukii                                        |         |                                                                                         |
| GS12-117  | Assessment of long-term management impact on soil C dynamics in        | $10,879 | Dr. Maria Silveira  
University of Florida  
Julius Adewopo  
University of Florida |
|           | subtropical grasslands                                                 |         |                                                                                         |
| GS11-100  | Efficacy of Entomopathogenic Fungi in Controlling the Small Hive Beetle;| $9,996  | Lambert Kanga  
Florida A&M University  
Saundra Wheeler  
Penn State University |
|           | a Destructive and Invasive Pest of Honey Bee Colonies                  |         |                                                                                         |
| GS11-101  | Understanding olfactory cues in host location and dispersal range of   | $9,828  | Dr. Norman Leppla  
University of Florida  
Dr. Erika Machtinger  
Pennsylvania State University |
|           | the filth fly parasitoid Spalangia cameroni (Hymenoptera:Pteromalidae) |         |                                                                                         |
|           | to improve the use as sustainable biological control agents for fly   |         |                                                                                         |
|           | control on livestock operations                                        |         |                                                                                         |
| GS11-105  | Strategies for Increasing Rhizoma Peanut Contribution to Productivity  | $9,978  | Dr. Kim Mullenix  
Auburn University/Alabama Cooperative Ex  
Dr. Lynn Sollenberger  
University of Florida |
|           | and Ecosystem Services of Low-Input Pasture Systems                   |         |                                                                                         |
Do Human-modified Landscapes Affect Solitary Bee Diversity, Foraging, and Reproduction in Northern Florida?

Dr. Katie Sieving
Wildlife Ecology / UF
Rosalyn Johnson
University of Florida

Improving nutrient retention with biochar

Dr. Danielle Treadwell
University of Florida
Seth Friedman
Univ of Florida

Integrated Use of Grafting Technology to Improve Disease Resistance, Yield and Fruit Quality in Organic Heirloom Tomato Production

Dr. Danielle Treadwell
University of Florida
Charles Barrett
University of Florida

Enhancing nitrogen and water use efficiency in tomato production by using grafting technique

Dr. Xin Zhao
University of Florida
Desire Djidonou
Horticultural Science Uvi Florida

The Smells and Sounds of a Subterranean Sessid: Mating disruption and acoustic detection of grape root borer

Dr. Oscar Liburd
University of Florida
William Sanders
University of Florida

Bioenergy and Biofertilizer for Small-Farm Enterprises

Dr. Ann C. Wilkie
University of Florida-IFAS
Ryan E. Graunke
University of Florida-IFAS

Comprehensive evaluation of windbreaks of fast-growing trees

Donald L Rockwood
University of Florida
Bijay Tamang
University of Florida

Optimizing buckwheat use as a weed suppressive cover crop for sustainable cropping systems in Florida

Dr. Carlene Chase
University of Florida
Pei-wen Huang
University of Florida

Reducing nutrient loss below the root zone of drip-irrigated vegetables using low-pressure, increased irrigation time

Bee Ling Poh
University of Florida
Eric Simonne
University of Florida

Are bluebirds good for farms, and are farms good for bluebirds?

Dr. Katie Sieving
Wildlife Ecology / UF
John Deluca
Dept. of Wildlife Ecology and Conservation, UF

Development of an IPM Program for Control of Flower-Thrips in Blueberries in Southeastern United States

Dr. Oscar Liburd
University of Florida
Hector Arevalo
University of Florida

Potential for nitrate-nitrogen leaching in a silvopastoral system compared with open pasture and loblolly pine plantation

Ann Blount
Susan Bambo
University of Florida

Developing a System to Produce Organic Plug Transplants for Organic Strawberry Production

Daniel Cantliffe
University of Florida
Ashwin Paranjpe
University of Florida

Analysis of a Biological Control Strategy and its Potential in a Pest Management Program in Florida Cabbage

Dr. Stuart Reitz
USDA-ARS
Nathan Herrick
USDA-ARS-CMAVE

Chemical Ecology of Microtheca ochroloma

Susan Webb
University of Florida
Dr. Marilyn Swisher
University of Florida
Kristen Bowers
USDA-ARS-CMAVE
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS23-164</td>
<td>On-farm Development of Innovative Compost-based Tabletop Systems for Improving Local Strawberry Production in Florida</td>
<td>$29,997</td>
<td>Dr. Xin Zhao, University of Florida</td>
</tr>
<tr>
<td>OS22-153</td>
<td>Enhancing Stink Bug Biological Control for Increased Sustainability of Rice Production in Florida</td>
<td>$19,982</td>
<td>Dr. Julien Beuzelin, University of Florida, Institute of Food and Agricultural Sciences Everglades Research and Education Center</td>
</tr>
<tr>
<td>OS21-142</td>
<td>Bridging the Fall Forage Gap with Stockpiled Limpograss Along the Southern Gulf Coast</td>
<td>$19,981</td>
<td>Dr. Jose Dubeux, Jr., University of Florida - NFREC</td>
</tr>
<tr>
<td>OS21-146</td>
<td>Evaluating Sorrel (Hibiscus sabdariffa) Varieties for Production in Florida</td>
<td>$19,708</td>
<td>Dr. Norma Samuel, UF/IFAS Extension</td>
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<tr>
<td>OS21-147</td>
<td>Development of a Push-Pull System in Avocado Groves in South Florida</td>
<td>$19,923</td>
<td>Dr. Xavier Martini, University of Florida</td>
</tr>
<tr>
<td>OS21-148</td>
<td>Plant Sap Analysis as a Tool to Optimize Fertilizer Application for Sustainable Citrus Production</td>
<td>$20,000</td>
<td>Lorenzo Rossi, Ph.D., University of Florida</td>
</tr>
<tr>
<td>OS20-132</td>
<td>Fertilizer Mismanagement Impacts on Pasture Health</td>
<td>$19,828</td>
<td>Cheryl Mackowiak, University of Florida</td>
</tr>
<tr>
<td>OS20-135</td>
<td>On-farm Evaluation of an Innovative Anaerobic Soil Disinfestation Practice for Improving Organic Carrot Production in North Florida</td>
<td>$19,995</td>
<td>Dr. Xin Zhao, University of Florida</td>
</tr>
<tr>
<td>OS20-137</td>
<td>Combining Non-crop Habitat and Semiochemical Lures to Increase Natural Enemy Recruitment and Retention in Florida Vegetable Crops</td>
<td>$18,164</td>
<td>Dr. Xavier Martini, University of Florida</td>
</tr>
<tr>
<td>OS18-113</td>
<td>Trap Assisted Scouting for Asian Cockroach Management in Florida</td>
<td>$14,782</td>
<td>Dr. Julien Beuzelin, University of Florida, Institute of Food and Agricultural Sciences Everglades Research and Education Center</td>
</tr>
<tr>
<td>OS18-114</td>
<td>Assisting Vegetable Growers in Florida with Soil Health Evaluation Associated with Cover Cropping/Green Manure Practice During Summer</td>
<td>$15,000</td>
<td>Jehangir Bhadha, University of Florida, Institute of Food and Agricultural Sciences Everglades Research and Education Center</td>
</tr>
<tr>
<td>OS17-104</td>
<td>Evaluating the Effect of Biological Control and Planting Mixed Varieties to Manage Whitefly and Aphid Pests in Organic Squash</td>
<td>$14,821</td>
<td>Dr. Oscar Liburd, University of Florida</td>
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<td>Principal Investigator(s)</td>
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<tr>
<td>OS17-106</td>
<td>Developing Sustainable and New Alternative Non-chemical Weed Control Strategies for Container Nursery Growers</td>
<td>$15,000</td>
<td>Dr. Stephen Christopher Marble, University of Florida/Institute of Food and Agricultural Sciences</td>
</tr>
<tr>
<td>OS17-110</td>
<td>Farmers’ Evaluation of Cover Crop Effects on Sandy Soils in the Suwannee River Basin in North Florida</td>
<td>$14,744</td>
<td>Kevin Athearn, University of Florida</td>
</tr>
<tr>
<td>OS16-098</td>
<td>Using Flowering Plants on Strawberry Field Edges to Enhance Natural Enemies and Pollinators and Improve Pest Control and Fruit Quality</td>
<td>$14,996</td>
<td>Justin Renkema, University of Florida</td>
</tr>
<tr>
<td>OS14-086</td>
<td>Use of non-native invasive tree logs for commercial mushroom production on small farms</td>
<td>$14,984</td>
<td>Dr. Stephen Hight, USDA-ARS</td>
</tr>
<tr>
<td>OS13-075</td>
<td>Large Scale Recycling of Used Potting Media with Solarization</td>
<td>$3,161</td>
<td>Shawn Steed, UF/IFAS Extension</td>
</tr>
<tr>
<td>OS13-078</td>
<td>Novel approaches to establish rhizome peanut (Arachis glabrata Benth) on bahiagrass (Paspalum notatum Flugge) pasture: from research to on-farm application</td>
<td>$14,945</td>
<td>Dr. Jose Dubeux, Jr., University of Florida - NFREC</td>
</tr>
<tr>
<td>OS13-079</td>
<td>Establishing and Evaluating Selected Cover Crops on Small Farms to Increase the Impact of Beneficial Arthropods on Crop Pests</td>
<td>$14,984</td>
<td>Robert Hochmuth, University of Florida</td>
</tr>
<tr>
<td>OS13-082</td>
<td>Propagation of edible Pecan Truffle (Tuber lyonii) in pecan nurseries</td>
<td>$14,978</td>
<td>Dr. Matthew Smith, University of Florida</td>
</tr>
<tr>
<td>OS13-083</td>
<td>Grafting heirloom tomatoes for organic high tunnel production to improve season extension, disease control, and fruit yield: A partnership with local growers for technology transfer</td>
<td>$14,999</td>
<td>Dr. Xin Zhao, University of Florida</td>
</tr>
<tr>
<td>OS12-063</td>
<td>Offseason Management for Organic High Tunnels for Improved Pest Suppression and Soil Health</td>
<td>$14,967</td>
<td>Dr. Carlene Chase, University of Florida</td>
</tr>
<tr>
<td>OS11-060</td>
<td>Investigating various tactics of intercropping buckwheat with squash to increase natural enemy populations, reduce pest and disease pressure and increase yield</td>
<td>$14,978</td>
<td>Dr. Oscar Liburd, University of Florida</td>
</tr>
<tr>
<td>OS10-054</td>
<td>Evaluating compost and lime effects on soil organic matter, soil microbial communities and the control of Fusarium wilt in commercial tomato grown in Florida’s sandy soils</td>
<td>$14,955</td>
<td>Amy Shober, University of Florida</td>
</tr>
<tr>
<td>OS10-056</td>
<td>Improving Cover Crop Management in Florida Row, Vegetable and Organic Citrus Systems</td>
<td>$14,940</td>
<td>Dr. Danielle Treadwell, University of Florida</td>
</tr>
<tr>
<td>OS08-043</td>
<td>Monitoring Nutrient Availability and Leaching Below the Root Zone in Organic Vegetable Production</td>
<td>$14,900</td>
<td>Dr. Danielle Treadwell, University of Florida, Bee Ling Poh, University of Florida, Eric Simonne, University of Florida</td>
</tr>
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</tr>
<tr>
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<td>------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>OS06-029</td>
<td>Development and implementation of a trap cropping system to suppress stink bugs in the southern Coastal Plain</td>
<td>$15,000</td>
<td>Dr. Russell Mizell, III NFREC-Quincy, University of Florida</td>
</tr>
<tr>
<td>OS05-026</td>
<td>Optimization of Irrigation Practices in Organic and Sustainable Vegetable Production with Soluble Dye as an Educational Tool</td>
<td>$14,663</td>
<td>Eric Simonne University of Florida</td>
</tr>
<tr>
<td>OS04-022</td>
<td>A Low Cost Trapping System for Control of the Small Hive Beetle Aethina Tumida Murray, A Pest of Honey Bee Colonies</td>
<td>$15,000</td>
<td>Peter Teal USDA-ARS/CMAVE</td>
</tr>
<tr>
<td>OS03-015</td>
<td>Performance of Various Forage Combinations Under Thinned Pine Canopies in North Florida</td>
<td>$14,982</td>
<td>Ann Blount</td>
</tr>
<tr>
<td>OS03-017</td>
<td>Soil Water Movement in Vegetables Grown with Plasticulture</td>
<td>$14,096</td>
<td>Eric Simmone Univ. of Florida IFAS</td>
</tr>
</tbody>
</table>

**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS15-094</td>
<td>Who’s Connected? Sustainable Producers in the North Central Florida Food System</td>
<td>$34,665</td>
<td>Dr. Kathryn Stofer University of Florida</td>
</tr>
<tr>
<td>CS09-072</td>
<td>Wildwood Growers’ Market - Starting a Local Food System</td>
<td>$7,910</td>
<td>Susan Kelly UF/IFAS Sumter Co. Extension</td>
</tr>
<tr>
<td>CS06-044</td>
<td>Florida Farm Link – Building the Foundation of a Sustainable Community Food System by Connecting Sustainable Agriculture to Economic Development Initiatives</td>
<td>$9,521</td>
<td>Laura Morton NRCS/Florida West Coast RC&amp;D</td>
</tr>
<tr>
<td>CS04-023</td>
<td>Youth as Community Organizers</td>
<td>$10,000</td>
<td>Ellen Huntley Florida Organic Growers</td>
</tr>
<tr>
<td>CS04-028</td>
<td>Farming and Conservation Easements: A Win-Win Partnership</td>
<td>$10,000</td>
<td>Mark Hostetler University of Florida</td>
</tr>
<tr>
<td>CS03-010</td>
<td>&quot;Santa Rosa Fresh&quot; Marketing Assistance</td>
<td>$10,000</td>
<td>Paula Davis Santa Rosa County Joan Hughes TEAM Santa Rosa EDC</td>
</tr>
<tr>
<td>CS02-008</td>
<td>Test Marketing of New Label in Southwest Florida for USA Grown/Living Wage Produce</td>
<td>$5,200</td>
<td>Richard Nogaj Harvest for Humanity</td>
</tr>
</tbody>
</table>

**EDUCATION ONLY GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS23-046</td>
<td>Local Food Needs Local Seed: Increasing Production and Use of Locally Adapted Seed with a Farm to Community Network</td>
<td>$41,000</td>
<td>Melissa DeSa Working Food</td>
</tr>
<tr>
<td>EDS22-34</td>
<td>Community Apiary - Providing Experiential Education and Access for Novice Beekeepers in an Urban Setting</td>
<td>$49,801</td>
<td>Ju’Coby Pittman Clara White Mission Octavious Carr The Herban Bee Mallory Schott Clara White Harvest Farms</td>
</tr>
</tbody>
</table>
EDS19-10  Harnessing Microbes for Sustainable Food Production  $44,468  Masanori Fujimoto
University of Florida

EDS18-08  Educational Materials for Cover Crop Adoption and Use in the Subtropics and Tropics $46,999  Dr.Danielle Treadwell
University of Florida

Total funding from the USDA SARE program to Florida
$9,166,856

For further information on projects, contact 770-412-4787 or ssare@uga.edu.
Sustainable Agriculture Research and Education (SARE) is funded by USDA's National Institute of Food and Agriculture (NIFA).