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, grantee-produced information products and other educational materials.

SARE
Sustainable Agriculture Research & Education

www.sare.org

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

Puerto Rico

Project Highlight: *Cover Crops Improve Soil in Plantain Crops*

Cover crops bring many benefits to farming systems, from protecting the soil against erosion to suppressing weeds to improving yields and profitability through healthier soil. In Puerto Rico, a team of researchers, educators and service providers used a SARE grant to start bringing these benefits to one of the island's main crops, the plantain.

Starting In 2013, the research team conducted on-farm experiments to identify cover crops species that could be intercropped with plantains to improve soil health. They focused on jack beans, sunnhemp and sorghum, planted as cover crops both individually and as mixes. The team collected soil samples to measure soil fertility, microbial activity and other indicators of soil health, and they made some important discoveries that should help Puerto Rico farmers make informed decisions about using cover crops. Jack beans established most successfully and showed the most promise overall, whereas rodents and heavy rains impacted the sorghum, and the sunnhemp performed well but was more susceptible to weather conditions than the jack beans.

Most importantly, the cover crop trials revealed an economic benefit. To achieve yields of high-quality plantains by market standards, no nematicides were needed and fungicide applications were reduced 78 percent—representing a cost savings to the farmer.

For more information on this project, see sare.org/projects, and search for project number FS13-271.

SARE in Puerto Rico

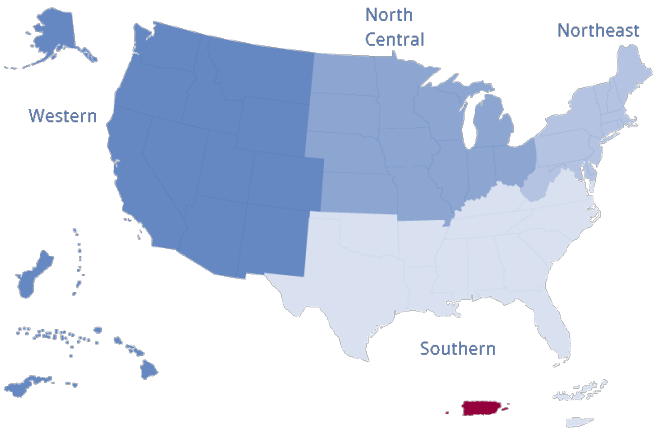
southern.sare.org/sare-in-your-state/puerto-rico

$1,487,053 in total funding

33 grant projects

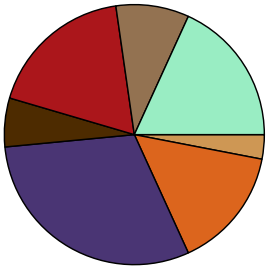
(since 1988)

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



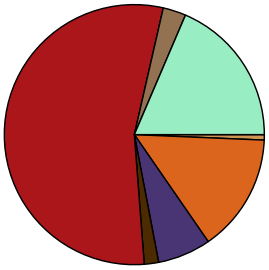
SARE Grants in Puerto Rico

Total awards: 33 grants



1 Sustainable Community Innovation
5 Professional Development Program
10 Farmer/Rancher
2 Graduate Student
6 Research and Education
3 On Farm Research/Partnership
6 Education Only

Total funding: $1,487,053



$10,000
Sustainable Community Innovation
$218,683
Professional Development Program
$98,518
Farmer/Rancher
$26,491
Graduate Student
$814,821
Research and Education
$42,473
On Farm Research/Partnership
$276,067
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/puerto-rico

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/puerto rico to learn more.

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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 offrered may be included or excluded from the totals in this report depending on the grant program and SARE region.

AGRICULTURE PROJECTS FUNDED IN PUERTO RICO

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

Puerto Rico has been awarded $1,487,053 grants to support 33 projects, including but not limited to, 6 research and/or education projects, 5 professional development projects and 10 producer-led projects. Puerto Rico has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
LS14-263	Multisectoral and Transdisciplinary Coalition to Spearhead the Development of a Cohesive Network of Local Limited-resources Urban Community Farmers for Sustainable Agriculture Using the Capital City of Puerto Rico as Case Study	$250,000	Dr.Maria Calixta Ortiz Universidad Ana G. Méndez
LS10-231	Weed management alternatives for organic coffee agroforestry systems of Puerto Rico	$150,000	Mariangie Ramos University of Puerto Rico at Utuado
LS08-212	Integrating tropical legumes with condensed tannins into ruminant grass-based diets for sustainable production	$100,000	Dr.Elide Valencia University of Puerto Rico, Mayaguez
LS04-162	Developing legume shade trees for Sustainable coffee production in Puerto Rico	$195,298	Eduardo Schröder University of Puerto Rico
LS00-111	Structures of Sustainability: A Regenerative Model for Community Agriculture Development	$19,678	Vivian Carro-Figueroa University of Puerto Rico Agric. Experiment Sta.
LS95-072	Agronomic & Economic Benefits of Intercropping Bean with Banana	$99,845	Lii-chyuan Liu University of Puerto Rico, College of Agricultural Sciences

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
SPDP22-14	Learning to Teach Farmers about Agricultural Interpretation to Foster Sustainability and Food Security	$59,999	Camille Collazo Ortiz Yes Dr.Robinson Rodriguez University of Puerto Rico, Mayaguez Campus, School of Agricultur
ES20-152	Soil Nutrient Management in Tropical Soils	$69,335	Dr.Daniel Bair University of Puerto Rico, Mayaguez Dr.Miguel Muñoz University of Puerto Rico, Mayaguez Mario Rodriguez USDA-NRCS Caribbean Area
ES19-149	Agroforestry Management for Tropical and Subtropical Agroforestry Systems: Management guide and practical workshops	$53,609	Andre Sanfiorenzo University of Puerto Rico at Utuado
ES97-035	Integrated Strategic Plan for Sustainable Agriculture	$25,740	Hipólito O'Farrill-Nieves University of Puerto Rico Agric. Ext. Service

ES97-033	Alternative Sustainable Practices for Selected Crops in Puerto Rico	$10,000	Miguel F. Monroig University of Puerto Rico

FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FS21-334	Case Study for American Heritage Hogs in Puerto Rico	$14,885	Chris Ghosio
FS20-324	Building Soil and Plant Health with Compost and Compost Teas	$12,443	Gabriela Medina Finca La Jiba
FS17-298	Weed Suppression by Compost Mulch in Plantains	$8,436	Reed Hepperly Hepperly Enterprises
FS13-271	Cover Crops for Improving Recalcitrant Soil Organic Matter and Soil Biota Management in Plantain Production Systems in Puerto Rico	$10,000	Duamed Colon-Carrion Agro Tropical, Inc.
FS07-213	Recycling Mushroom Spent Compost	$8,027	Reed Hepperly Hepperly Enterprises
FS05-193	Organic Farming in the Tropics with Legume Groundcover	$8,107	Luis Miguel Rico
FS03-172	Puerto Rico Shade Grown Coffee Project	$9,956	Luis Miguel Rico
FS99-098	Demonstrating the Benefits of Agroforestry Practices on Family Farms	$6,704	Andre Sanfiorenzo
FS99-095	Breaking the Herbicide Habit: Integrating Cover Crops with Herbicide Application	$9,960	Rebecca Perez-Rossello
FS95-028	Improving Tropical Soils by Utilizing Organic Wastes	$10,000	Andre Sanfiorenzo

GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GS23-287	The Taino: Can The Indigenous Agricultural Methods of Puerto Rico Feed the Island and Potentially Mitigate Climate Change?	$16,491	Dr.Krishnaswamy Jayachandran Florida International University Joseph Navarro Florida International University
GS08-070	The fate of the finca: Smallholders in the Hispanic Caribbean	$10,000	Gregory Knapp University of Texas at Austin Katia R. Aviles-Vazquez The University of Texas at Austin

ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
OS20-134	Case study for Heritage American Guinea Hogs in Puerto Rico	$12,549	Julie North N/A
OS07-033	Precious Indigenous Woods For Coffee Shade	$14,967	Jose Aponte El Caribe RC&D

OS05-027	Coffee Seedlings in Forestry Tubes	$14,957	Steven Welker USDA NRCS - El Atlantico RC&D

SUSTAINABLE COMMUNITY INNOVATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
CS05-038	Puerto Rico PIG Project	$10,000	Steven Welker USDA NRCS - El Atlantico RC&D

EDUCATION ONLY GRANTS

Project #	Project Title	SARE Support	Project Leaders
EDS23-053	Education and Conservation Practices for a Sustainable Agriculture in Puerto Rico	$41,000	Nicolás M. Cartagena University of Puerto Rico Dr.Anibal II Ruiz-Lugo Puerto Rico Agricultural Extension Service, University of Puerto
EDS23-044	Tai Lamb Meat Marketing and Promotion Educational Program (TAILAM-EP)	$45,999	Neftali Lluch, PE Tai Institute of Sustentable Livestock Research LLC Dr.John Fernandez University of Puerto Rico Abner Rodriguez University of Puerto Rico
EDS22-41	An Agro-Ecological Incubator and Educational Programs for Beginner Farmers in Western Puerto Rico	$50,000	Rebekah Sanchez Cruz Plentitud PR Dr.Bryan Brunner Agricultural Experiment Station Paula Paoli Garrido Plenitud PR
EDS21-29	Puerto Rico Goat and Sheep Educational Program Initiative (PR-GOSHEPI)	$48,036	Abner Rodriguez University of Puerto Rico Dr.John Fernandez University of Puerto Rico
EDS20-23	Agro-Ecological Education for New Farmers in the Central Western Region of Puerto Rico	$49,992	Paula Paoli Garrido Plenitud PR Bryan Brunner Montes University of Puerto Rico, Mayagüez Owen Ingley Plenitud PR Samantha Lopez Plenitud PR Gina Malley Campos Plenitud PR Rebekah Sanchez Cruz Plentitud PR
EDS20-22	Agroecosystem Sustainable Guides	$41,040	Silmarie Crespo ECO-Services Gabriela Medina Finca La Jiba

Total funding from the USDA SARE program to Puerto Rico
$1,487,053

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).