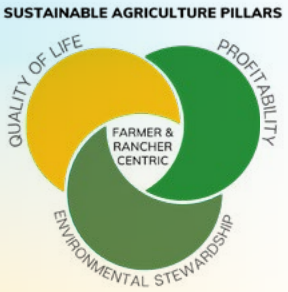
Southern Harvest

The annual report of SARE-funded grant projects in the Southern region of the United States

Index 2022-24

SOUTHERN SARE
Sustainable Agriculture Research & Education



Instructions on how to use the QR codes throughout the booklet:

QR codes at the top left/right of the page opens the webpage associated with the page title. QR codes next to information, or the hyperlinked text, open the webpage related to that information.

To use a QR code, open your mobile device's camera app, **cover any codes around the one you need to scan**, carefully hover your mobile device over the QR code until you see a link appear. Lightly touch the link that appears on screen. It will open a webpage on our site.

Scan the QR code below to view the most current updates of the grant awards and this booklet.

Some of Southern SARE Recent Outreach Highlights

We increased efforts to demographics we had not been reaching successfully before, including an increase in BIPOC grant applications and awards.

The number of women applying and receiving funding is growing.

Substantial attention was given by American farmers to sustainability metrics on large-scale farms.

Expansion of the Model State Program funding resulted in more institutions working together to increase SSARE's impact state and region wide.

Access to grant and non-grant funding as well as SARE educational resources increased to farmers and NGOs in locations with limited awareness prior to 2022.

About Southern SARE & This Publication

Southern SARE's Vision

is an enduring American agriculture of the highest quality.
This agriculture is profitable, protects the nation's land and water,
and is a force for a rewarding way of life for farmers and ranchers
whose quality products and operations sustain their communities and society.

Southern Sustainable Agriculture Research and Education (SSARE) is one of four regional SARE programs funded by the USDA National Institute of Food and Agriculture. SSARE serves all states and island protectorates from **Oklahoma, Texas, Arkansas, Louisiana, Kentucky, Tennessee, Mississippi, Alabama, Virginia, North and South Carolina** over to **Georgia, Florida,** up along to through then down the Atlantic to **Puerto Rico** and the **Virgin Islands** in the Caribbean Sea. Southern SARE is administered by our host institution the University of Georgia, an 1862 land grant; Fort Valley State University, an 1890 land grant and the Kerr Center for Sustainable Agriculture, a non-profit in Oklahoma. One outreach staff member also works through research faculty employment at University of Kentucky, an 1862 land grant institution.

SARE's nationwide mission is to advance, to the whole of American agriculture, innovations that improve profitability, stewardship, and quality of life by investing in groundbreaking research and education. SSARE has been **fostering sustainable agriculture production and marketing efforts for over three decades**, primarily through grant programs for farmers/ranchers, researchers, NGOs, government agencies and graduate students to address key issues affecting the sustainability of agriculture throughout our region.

SSARE funds several different **competitive grant programs**; each type of grant benefits a specific target audience. Each year, SSARE invites applicants to submit proposals for various grant opportunities. SARE grants are open to **farmers/ranchers, researchers, educators, graduate students, government agencies, community groups, non-profit organizations, non-governmental organization (NGO), and agribusinesses. Other funding** is also available to individuals and groups through non-grant programs like travel scholarships and conference/event sponsorships.

To date, SSARE has funded approximately **9,447 grants**, totalling over **$450 million**. In 2022-24, **nearly $89 million** and **1,270 grants** were awarded across the six grant programs in the Southern region for **Research & Education, Professional Development Program, Graduate Student, On-Farm Research, Producer and Education grants**. Other funding opportunities available are events/conference sponsorships, travel scholarships and the sustainable agriculture leadership program. Search all projects by Commodities or Practices as indicated by the project coordinator.

About this Publication

This publication provides a **list of recent and presently funded SSARE projects** throughout the Southern region including **summaries of competitive grant and non-grant programs**. The report also **highlights the impacts of funded programs and educational resources**. Some competitive grant programs that are no longer offered may be excluded from the totals in this report.

To find a complete list of projects funded in each state, visit the Southern SARE website and search the Projects Database.

SSARE Grants & Other Funding in 2022-24

Competitive research grants are the primary tools of the SARE program. The overall objective of SARE is to position agricultural communities so the most sustainable approaches available permeate U.S. agriculture. The result is food, fiber and animal products are sustainably produced in healthy communities in an environment where farmers are respected, rewarded and encouraged to innovate.

38 Research and Education Grants (R&E - $13,738,417)
Research and Education Grants encourage a systems approach to sustainable agriculture. They are mainly designed for teams of interdisciplinary researchers.

25 Professional Development Program Grants (PDP - $1,847,950) ssare.org/pdp
Professional Development Program Grants further education and outreach strategies for professionals and educators who work directly with farmers and ranchers.

32 On-Farm Research Grants (OFRG - $819,350) ssare.org/onfarm
On-Farm Research Grants provide opportunities for agriculture professionals working directly with farmers and ranchers on sustainable agriculture efforts.

63 Graduate Student Grants (GRAD - $1,068,506) ssare.org/graduate
Graduate Student Grants are for Masters and PhD students enrolled in a graduate program at an accredited institution who want to research sustainable agriculture.

39 Producer Grants (PROD - $614,795) ssare.org/producer
Producer Grants enable farmers and ranchers to test a sustainable agriculture idea using a field trial, on-farm demonstration, marketing initiative, or other technique.

40 Education Grants (ED - $1,765,798) ssare.org/education
Education Grants allow applicants to conduct education and outreach activities to benefit the greater sustainable agriculture community and promote efforts in farmer innovations, community resilience, business success, diversification, and best management practices.

Other Funding

Event/Conference Sponsorships ssare.org/sponsorships
Regional sponsorship support for conferences, field days, workshops and other educational events organized by universities, community organizations, NGOs, mentor farmers and other ag professionals. These must take place in the Southern region and the main purpose should further sustainable agriculture for the benefit of farmers, NGOs, community organizations, researchers and other ag professionals.

Travel Scholarships ssare.org/travel fund travel to conferences where information may be imparted or gained for sustainable agriculture. Individuals requesting travel scholarship funds for personal attendance to an event to gain knowledge/skill for use in training others.

Sustainable Agriculture Leadership Program ssare.org/agleadership
Operated by SSARE's Equity and Prosperity Committee, this funding champions the leadership contributions of these groups and individuals by providing a small amount of sponsorship funds to support sustainable agriculture education and training activities throughout the Southern region. The purpose of the program is to enhance the resiliency, strength and vivacity of farmer and ranchers, particularly historically underserved audiences.

History of Southern SARE Grants (1988-2024)

LOCATION	R&E	PDP	OFRG	GRADUATE	PRODUCER	EDUCATION	TOTAL
AL	$3,801,459 (24)	$942,837 (13)	$127,779 (10)	$201,200 (15)	$235,106 (24)	$149,407 (3)	$4,365,544 (89)
AR	$5,802,477 (36)	$1,283,398 (18)	$209,458 (13)	$234,284 (21)	$105,200 (10)	$331,967 (7)	$7,966,784 (105)
FL	$6,892,504 (37)	$730,956 (11)	$562,667 (33)	$1,120,826 (84)	$300,335 (29)	$182,268 (4)	$9,789,556 (198)
GA	$11,079,975 (59)	$623,896 (9)	$255,468 (14)	$347,044 (26)	$337,850 (35)	$584,465 (13)	$13,228,698 (156)
KY	$2,783,968 (16)	$1,614,759 (24)	$216,846 (15)	$79,398 (7)	$244,946 (29)	$89,000 (2)	$5,028,917 (93)
LA	$1,194,833 (11)	$271,966 (5)	$44,177 (2)	$129,333 (11)	$97,207 (9)	0	$1,737,516 (38)
MS	$2,216,348 (12)	$1,196,353 (15)	$64,775 (3)	$61,754 (5)	$122,783 (11)	$122,615 (3)	$3,784,628 (49)
NC	$11,881,107 (70)	$2,793,789 (36)	$312,333 (18)	$480,892 (43)	$476,915 (61)	$548,709 (11)	$16,493,745 (248)
OK	$3,463,190 (16)	$710,963 (8)	$113,934 (8)	$19,969 (2)	$147,429 (14)	$0 (0)	$4,455,485 (58)
PR	$814,821 (6)	$218,683 (5)	$42,473 (3)	$48,491 (3)	$116,529 (11)	$340,126 (8)	$1,581,123 (36)
SC	$4,070,096 (20)	$799,675 (13)	$142,377 (10)	$131,247 (10)	$197,885 (21)	$135,500 (3)	$5,476,780 (77)
TN	$2,766,386 (15)	$509,816 (7)	$114,772 (7)	$250,125 (20)	$253,377 (25)	$216,222 (5)	$4,110,698 (79)
TX	$9,360,820 (42)	$969,272 (13)	$447,983 (24)	$476,014 (35)	$307,035 (29)	$178,599 (4)	$11,739,723 (147)
VA	$4,584,615 (23)	$756,489 (10)	$269,940 (18)	$388,887 (30)	$525,157 (53)	$149,885 (3)	$6,674,973 (137)
USVI	$53,632,543 (5)	$87,833 (1)	$64,183 (3)	0	$41,019 (3)	$99,999 (2)	$53,925,577 (14)
TOTAL	$124,345,142 (392)	$13,510,685 (188)	$2,989,165 (181)	$3,969,464 (312)	$3,508,773 (364)	$3,128,762 (68)	$151,451,991 (1,524)

ALL GRANT AWARDS BY STATE IN 2022 - 2024

2022

LOCATION	AWARDS	PROJECTS
AL	$117,499	5
AR	$442,481	2
FL	$549,871	10
GA	$458,755	7
KY	$19,979	1
LA	$0	0
MS	$117,617	3
NC	$415,914	6
OK	$0	0
PR	$109,999	2
SC	$1,276,796	8
TN	$65,767	4
TX	$2,040,404	13
VA	$610,645	10
USVI	$69,236	2
Total:	**$6,294,963**	**73**

2023

LOCATION	AWARDS	PROJECTS
AL	$859,361	4
AR	$196,933	6
FL	$950,974	12
GA	$925,831	9
KY	$483,661	5
LA	$117,219	3
MS	$372,000	1
NC	$569,213	7
OK	$0	0
PR	$103,490	3
SC	$563,440	7
TN	$931,566	8
TX	$245,812	8
VA	$164,734	6
USVI	$19,930	1
Total:	**$6,504,164**	**80**

2024

LOCATION	AWARDS	PROJECTS
AL	$546,397	6
AR	$413,564	2
FL	$709,995	13
GA	$761,005	15
KY	$0	0
LA	$0	0
MS	$923,776	5
NC	$1,248,204	13
OK	$423,537	2
PR	$104,070	4
SC	$399,974	1
TN	$574,214	5
TX	$717,454	11
VA	$153,511	5
USVI	$79,989	2
Total:	**$7,055,690**	**84**

State/Territory Awards Summary for 2022-24

Alabama was awarded $1,523,257 grants to support 15 projects, including but not limited to, 3 research and/or education, 2 professional development, 1 on-farm, 5 graduate student, 3 producer, and 1 education.

Arkansas was awarded $1,052,978 grants to support 10 projects, including but not limited to, 2 research and/or education, 1 professional development, 1 on-farm, 1 graduate student, 1 producer, and 4 education.

Florida was awarded $1,052,978 grants to support 35 projects, including but not limited to, 4 research and/or education, 1 professional development, 4 on-farm, 21 graduate student, 3 producer, and 2 education.

Georgia was awarded $2,152,191 grants to support 32 projects, including but not limited to, 4 research and/or education, 2 professional development, 4 on-farm, 8 graduate, 7 producer and 6 education.

Kentucky was awarded $503,640 grants to support 6 projects, including but not limited to, 1 research and/or education, 2 on-farm, 2 producer and 1 education.

Louisiana was awarded $117,219 grants to support 3 projects, including but not limited to, 1 research and/or education, 1 on-farm, and 1 producer-led.

Mississippi was awarded $1,413,393 grants to support 9 projects, including but not limited to, 3 research and/or education, 1 education, 2 professional development, 1 graduate student, and 2 on-farm.

North Carolina was awarded $2,233,331 grants to support 26 projects, including but not limited to, 4 research and/or education, 6 professional development, 1 graduate student, 4 on-farm, 5 producer, and 6 education.

Oklahoma was awarded $423,537 grants to support 2 projects, including but not limited to, 1 research and/or education and 1 producer.

Puerto Rico was awarded $317,559 grants to support 9 projects, including but not limited to, 1 professional development, 2 graduate student, 1 producer, and 5 education.

South Carolina was awarded $2,240,210 grants to support 16 projects, including but not limited to, 5 research and/or education, 2 professional development, 4 graduate student, 2 producer, and 3 education

Tennessee was awarded $317,559 grants to support 17 projects, including but not limited to, 3 research and/or education, 1 professional development, 1 on-farm, 6 graduate student, 1 producer and 5 education.

Texas was awarded $3,003,670 grants to support 32 projects, including 6 research and/or education, 4 professional development, 6 on-farm, 9 graduate student, 4 producer and 3 education.

The Virgin Islands of the United States were awarded $169,155 grants to support 5 projects, including 2 on-farm, 1 producer and 2 education.

Virginia was awarded $317,559 grants to support 23 projects, including 1 research and/or education, 3 professional development, 4 on-farm, 5 graduate student, 7 producer and 1 education.

Each location also had non-competitive awards that fund the activities of the SARE state coordinator(s). For a complete list of awards by state, visit projects.sare.org/state-fact-sheets.

Project Impacts

These details from grantee reports shows how SARE's funding and resources support family farms, promote conservation, and strengthen communities through sustainable agriculture strategies. Learn about local impacts at southern.sare.org/sare-in-your-state.

237 PROJECTS COMPLETED

7,275 FARMERS/RANCHERS REACHED
2,908 received SARE and other SA* resources
10,004 participated in grants
443 participated in research
3,643 reported KASA* changes
607 changed a practice

2,130 AG SERVICE PROVIDERS
382 reported KASA changes
2,505 received SARE and other SA resources
68 used KASA in their activities
239 intend to use KASA
188 new working collaborations

OTHER PARTICIPANTS (PDP)
2,542 Others
490 Farmers
96 Extension
387 NRCS
219 Agencies
192 Non-profits
182 Researchers

EDUCATIONAL ACTIVITIES
1,008 Consultations
98 Online trainings
182 Travel scholarships
1,811 Curricula
325 Webinars / Talks / Presentations
203 Workshops/Field days
275 On-farm demonstrations
78 Published press articles, newsletters
151 Tours
85 Other
13 Journal articles
4 Study circles/Focus groups

KASA (Knowledge, Awareness, Skill or Attitude changes)
SA (Sustainable Agriculture)

Resources & Education

Most SARE Outreach publications including all learning products and those published by grantees are available online as free downloads. Many are also available in print and may be ordered online at sare.org/resources or by **telephone at (301) 779-1007**. Free materials (bulletins, topic briefs and promotional materials) are available in quantity at no cost to agricultural educators. Discounts are available for books ordered in quantity.

A list of SARE Outreach publications available in print is available at sare.org/available-in-print.

New Products All new products (including multimedia products and those not available in print) recently produced by SARE Outreach: sare.org/whats-new. New products released within the last 12 months include the book Farming with Soil Life, the bulletins Best Practices for the Sustainable Urban Farm, Resilient Farmers, Ranchers and Communities: Social Sustainability in Agriculture, Transitioning to Organic Production, and What is Sustainable Agriculture?, a series of project profiles on managing stress, and an episode of America's Heartland featuring farmer leaders in sustainability and SARE.

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Individual USB drives do not qualify for our standard quantity discounts, but they can also be purchased in lots of 10 at a discount at sare.org/usb10.

What is Sustainable Agriculture?
Visit sare.org/vid/sustainable-agriculture to watch the video, download a free pdf or order print copies at this page: sare.org/what-is-sustainable-agriculture

¿Qué es la Agricultura Sostenible?
sare.org/que-es-la-agricultura-sostenible

¿Qué es la Agricultura Sustentable? (con Video) sare.org/vid/agricultura-sostenible
Qué puede haver para que su finca o rancho sea más sustentable? No hay una respuesta simple, pero la serie de animación de 8 episodios de SARE "Qué es la agricultura sostenible" destaca algunas prácticas comunes usadas por productores en todo el país para mejorar la rentabilidad, calidad de vida y el manejo ambiental.

Cultivos de Cobertura para Rotaciones de Cultivos Sustentables
An abbreviated, Spanish language translation of SARE's Cover Crops for Sustainable Crop Rotations topic brief. It is also available in English and Chinese. sare.org/cultivos-de-cobertura-para-rotaciones-de-cultivossustentables

Resources & Education

Growing New Markets for Specialty Crops Podcast Episodes
This series of episodes of Voices from the Field is part of a series co-produced by ATTRA and SARE that explores the different ways farmers are working to create new local markets for specialty and niche crops. Each partner episode will address a different production system or crop–from endives to small-grain value chains–and will feature farmers sharing their production and marketing strategies, challenges and successes along the way. **sare.org/growing-new-markets-for-specialty-crops**

Best Practices for the Sustainable Urban Farm
sare.org/best-practices-for-the-sustainable-urban-farm

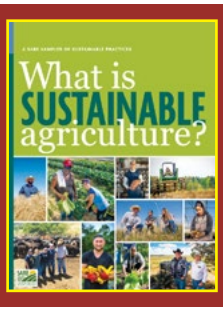
Transitioning to Organic Production
Farmers and ranchers decide to pursue organic certification for many personal, financial and environmental reasons. This publication introduces you to requirements of the USDA National Organic Program. It outlines many of the key strategies producers use to make their three-year transition to organic production a successful one. It discusses the practice areas common to all organic systems. **sare.org/transitioning-to-organic-production**

Resilient Farmers, Ranchers and Communities: Social Sustainability in Agriculture
The purpose of this bulletin is to draw special attention to social sustainability in ag. It describes how we can think of social sustainability, outlines some of the most pressing personal and social challenges facing all of us who are engaged in agriculture, and offers some suggestions for how we, like Badjie and Hoyte, can begin to make ourselves, our employees, our families and our communities more prosperous, resilient and sustainable. **sare.org/social-sustainability-in-agriculture** or call (301) 779-1007.

Managing Stress
Farming and ranching are stressful businesses. One key metric of a farm's sustainability is its capacity to provide a quality of life that meets one of our most basic human needs - good mental health. Visit this page for resources and highlights of successful SARE-funded projects that are using innovative strategies to help farmers and ranchers manage stress. **sare.org/managing-stress**

Scaling Up Your Vegetable Farm for Wholesale Markets
For direct market farmers, expanding your operation to capture local and regional wholesale markets can represent an opportunity. But such a shift brings with it many changes to how you run your farm because the expectations that wholesale buyers have is much different than your direct market customers. Scaling Up Your Vegetable Farm for Wholesale Markets guides you through the likely changes you'll need to take into consideration when planning to branch out into wholesale markets. These include business planning, working with wholesale buyers, and areas of production that range from increasing yield and produce quality, to harvest and postharvest handling, food safety and more. **sare.org/scaling-up-your-vegetable-farm-for-wholesale-markets**

Pest Exclusion Systems for Pest Management in Vegetable Production Across the Southeast This bulletin provides data and information from on-farm demonstrations on the use of pest exclusion systems. Pest exclusion systems use shade cloths as a barrier around high tunnels, low tunnels and hoop houses to exclude insect pests. **ssare.org/pest-exclusion-systems**



ALABAMA

Alabama Project Highlight: Alabama Farmer Helping to Diversify State's Aquaculture Production with Crawfish

David Coddington has successfully owned and operated Greene Prairie Aquafarms in Boligee, Alabama, for twenty-one years. Coddington has done so with the help of the Southern SARE Producer grant that he used to study what proper pond salinity acclimation for shrimp is best to protect them from insect predation. This research allowed Coddington's shrimp farm to thrive for years until a sharp decrease in demand for shrimp had significantly cut Coddington's profits. The statewide shift in the aquaculture industry motivated him to raise crawfish to see if they could potentially be a more profitable alternative to shrimp.

David Coddington and his son, Joel, pull a short-neck trap from a pond at Greene Prairie Aquafarm to check for crawfish preliminary data from a SSARE Producer Grant has shown that short-neck traps are easier to manage than long-neck traps.

To answer this question, Coddington obtained another SARE grant to begin a new study, "Increasing Sustainability of Crawfish and Low Salinity Shrimp Production in West Alabama." This grant helped Coddington analyze how pond depth, salinity and various feeding methods impact the yield of crawfish. In this project, Coddington worked alongside Auburn Alabama Fish Farming Center Extension specialist Luke Roy and farmer Jesse James. Together, they developed an enterprise budget between traditional and deep-water crawfish systems and determined the best feeding methods. In addition, they analyzed the use of short-neck and long-neck traps for harvesting efficacy and impacts on yield to create the best practices that create the most sustainable and profitable aquaculture farm possible.

For more information on this project, see sare.org/projects and search for project number FS20-322.

Research and Education Grants

LS24-398 Integrating tannin-rich legumes into tall fescue pastures to strengthen the sustainability of beef cattle production in the southern United States, $398,589, Auburn University

LS23-383 Grazing diversified cover crops as an alternative to improve land-use efficiency and sustainability in the Southeast, $380,000, Auburn University, University of Florida

LS23-385 Reducing the Environmental Impact of Beef Production Through the Use of Naturally Occurring Secondary Plant Metabolites in Southeastern Forage Systems, $383,996, Auburn University, University of Georgia, Texas A&M AgriLife Research

Professional Development Program

SPDP24-024 Little USA Community Solar Campus Agrivoltaics Training and Curriculum Development, $79,965, Little USA Community Solar Campus

SPDP23-018 Sustainable Marketing Strategies to Enhance the Value of Weaned Beef Calves Marketed by Socially and Economically Disadvantaged Small Producers, $79,002, Tuskegee University, Auburn University

On-Farm Research Grants

OS22-154 Harvest Management and Genotype Effects on Sunn Hemp Forage as Cover Crop to Improve Sustainable Beef Cattle Production in Southeastern USA, $20,000, Tuskeegee University

OS20-136 Validation of a Spotted Wing Drosophila Growing Degree Day Model for the Southeast for Sustainable Blueberry Production, $16,581, Auburn University & Alabama Cooperative Extension System

Graduate Student Grants

GS24-298 Harnessing Indigenous Plant Growth Promoting Rhizobacteria for Virus Management and Soil Restoration in Southeastern Crop Systems, $21,387, Auburn University

GS24-315 Developing Southeastern adapted White Lupin (*Lupinus albus*) varieties as a multi-purpose cover crop and a grain legume, $21,926, Auburn University

GS23-293 Evaluating the Potential to Breed Kura Clover for a Southeastern U.S. Adapted Living Mulch System, $16,363, Auburn University

GS22-257 Farmer Profitability and Willingness to Accept Payment to Adopt Cover Crops in Alabama, $16,500, Auburn University

GS22-265 Supporting Peach Growers with a Phenological Approach for Best Management Practices, $16,281, Auburn University

Producer Grants

FS24-361 Hawthorn Heritage: Cultivating Native Varieties for Sustainable Forestry and Agriculture, $16,305, Carmoni Partners

FS24-362 Lettuce season extension for warmer climates, $8,225, Snow's Bend Farm

FS22-343 Project Urban Mushrooms on Mimosa Wood, $14,951, Fountain Heights Farms

Education Only

EDS22-42 Southern Farmer Leadership Fellowship for Farmer-led Racial Equity and Sustainability Projects in the South, $49,767, National Young Farmers Coalition

ARKANSAS

Arkansas Project Highlight: Using Mineral Clay to Manage Pests and Increase Fruit Quality and Yield in Blackberries

Researchers at the University of Arkansas studied the impacts of kaolin clay on managing blackberry production. The University of Arkansas obtained a SARE grant to determine whether the use of mineral particle films such as kaolin clay helped protect plants from solar injury and enhanced primocane fruit production. For years, blackberries had been an important fruit crop for farmers across Arkansas. Recently, a new species of blackberries, primocane, changed the way farmers are growing berries. Primocane blackberries have shown to extend the fruiting season by months over traditional plant varieties, making them a much more profitable option for farmers. However, this species doesn't come without its pest and production challenges, which University of Arkansas researchers tried to solve with a naturally occurring soil mineral, kaolin clay. Kaolin clay is a naturally occurring mineral that is touted for its pest repellant features and its ability to reduce sunburn on crops, which made it a potentially viable option for protecting primocane blackberries.

A delayed dormant application of Sulforix was applied to both IPM treatments (IPM with and without Surround)

University of Arkansas entomologist Donn Johnson said they collected field data and assessed the effectiveness of the kaolin clay whitewash on pest control. Experiment sites were established on two commercial farms in northern and central Arkansas, including Sta-N-Step Farm near Fayetteville and Gillam Farms near Judsonia. Various amounts of the kaolin clay whitewash were applied to the sites to evaluate its effects on blackberry production. These sites helped to determine whether this whitewash was an effective and sustainable solution for blackberry farmers looking to increase production.

For more information on this project, see sare.org/projects and search for project number LS16-274.

Research and Education Grants

LS24-389 The State of Sustainable Meat Processing - What Laws and Policies Make a Difference? $363,569, University of Arkansas

LS22-363 Grazing with the Fun Guy (Fungi) – Small Ruminant Worm Control, $371,000, USDA, Agricultural Research Service, Fort Valley State University, Louisiana State University

Professional Development Program

SPDP22-08 Sustainable Practices for Strawberry Production: Field Demonstration and Virtual Training Program for the Southeast, $71,481, University of Arkansas Cooperative Extension

On-Farm Research Grants

OS23-170 Fish in the Fields: Increasing Sustainability of Existing Rice Farming Practices with Supplemental Aquaculture, $30,000, University of Arkansas, Fayetteville

Graduate Student Grants

GS23-294 Investigating the Potential Influence of Ganoderma lucidium on Gastrointestinal Functionality and Immune Status of Goats, $16,500, University of Arkansas at Pine Bluff

GS21-250 Utility of Native Floral Plantings Between Tree Rows for Conservation and Management of Wild Bees and Other Beneficial Insects in Tree Fruit Orchards, $14,817, University of Arkansas

Producer Grants

FS23-346 Effects of Vermicast Extract and Cover Cropping on the Soil Food Web and Crop Health as Compared to Beds Treated with Conventionally Applied Compost, $8,433, Samaritan Community Center

Education Only

EDS24-066 Farm Foundations Short Course for Beginning Farmers of Specialty Crops, $49,995, University of Arkansas

EDS23-051 Humane Handling Educational Resources for Farmers, Ranchers, and Small Processors, $46,000, University of Arkansas Law School

EDS23-052 Cultivating Sustainable K-12 Agricultural Sciences Pathways through CommUniversity Partnerships, $46,000, University of Arkansas System Division of Agriculture, Arkansas Lighthouse Academies

EDS23-055 Innovative Urban Ag Conference, $50,000, The Sustainability Project

TRAVEL SCHOLARSHIPS fund travel to conferences where information may be imparted or gained for sustainable agriculture. Individuals requesting travel scholarship funds for personal attendance to an event to gain knowledge/skill for use in training others.

FLORIDA

Florida Project Highlight: Using Flowering Plants on Strawberry Field Edges to Enhance Natural Enemies and Pollinators and Improve Pest Control and Fruit Quality

Researchers at the University of Florida investigated if using wildflower plantings along strawberry field edges would help with sustainable pest management. Over the last few years, Florida strawberry growers faced criticism due to suspected and documented cases of insecticide resistance. To help combat this, the University of Florida obtained a SARE grant to determine if using wildflower plantings can help to sustainably manage pests and reduce reliance on insecticides. Researchers found that these flowering plants could serve as a resource for conserving natural enemies and other beneficial insects while reducing pests.

One row of alyssum replaced a row of strawberry in the raised bed and the row of Spanish needles was in the bed shoulder.

To study this, University researchers planted two native flowering plants, sweet alyssum and Spanish needles, on the edge of strawberry fields on an organic strawberry farm in Hillsborough County, FL. Researchers monitored thrips and minute pirate bug populations in the rows closest to the flowering plants. These experiments measured the presence of natural enemies to determine if the plants could be used as an alternative method for pest management and provided greater levels of pollination than in strawberry fields without flowering plants. The project sought to address the issue of poor or lacking habitat for beneficial insects in agriculture while meeting the goal of making the whole of strawberry production in Florida more productive, sustainable, and beneficial to the environment, public health and communities.

For more information on this project, see sare.org/projects and search for project number OS16-098.

Research and Education Grants

LS24-394 Advancing Sustainable Management of Cercospora Early Blight in Celery Production by Integrating Biocontrol and UAV Technology, $399,993, University of Florida

LS23-380 Passionfruit: Laying the Groundwork for an Emerging Specialty Fruit Crop in Florida, $383,000, University of Florida, University of The Virgin Islands, Florida A&M University.

LS23-381 Establishing domestic vanilla cultivation in southern Florida, Puerto Rico, and the US Virgin Islands, $383,000, University of Florida, Univ. of the Virgin Islands

LS22-370 Using rootstocks to increase blueberry farming sustainability in the Southeast, $371,000, University of Florida, Florida A&M University, University of Georgia

Professional Development Program

SPDP24-029 Growing Urban Agriculture Resilience and Development (GUARD): Professional Development Program for Urban Agriculture Educators in the Southeast, $79,763, University of Florida

On-Farm Research Grants

OS24-176 Regenerative Agriculture: Effects of Cover Crop and Mycorrhizal Inoculation on Salt Stress Mitigation in Floridian Tomato Cultivars, $29,946, Florida International University

OS24-177 On-farm companion planting and bioinoculants for enhancing biological control of two-spotted spider mites in strawberries, $29,268, University of Florida

OS23-164 On-farm Development of Innovative Compost-based Tabletop Systems for Improving Local Strawberry Production in Florida, $29,997, University of Florida

OS22-153 Enhancing Stink Bug Biological Control for Increased Sustainability of Rice Production in Florida, $19,982, University of Florida

Graduate Student Grants

GS24-300 Developing management strategies for the invasive snail *Bulimulus bonariensis* using behavioral traits and biological control, $11,810, University of Florida

GS24-302 Are Cover Crop Combinations Effective at Managing Plant-parasitic Nematodes in Potato Production? $21,830, University of Florida

GS24-303 Leveraging Genomics-enabled Breeding to Improve Resistance to Powdery Mildew in Summer Squash for Southeastern U.S., $21,997, University of Florida

GS24-306 Assessing Leadership Development and Social Network Needs of Small-Scale Farmers in Florida, $20,636, University of Florida

GS24-308 Harnessing Semiochemicals: An Integrated and Sustainable Approach to Manage Pepper Weevil Infestations, $14,504, University of Florida

GS24-309 Sustainable Intensification of Sugarcane

FLORIDA PROJECTS CONTINUED

Production: Integrating Molecular, Physiological and Agronomic Practices for Enhanced Tillering and Ratooning, $20,000, University of Florida

GS24-310 Understanding Farmers' Perception of Integrated Crop Livestock System Through Participatory Modeling Approach, $21,998, University of Florida

GS23-276 Heat Stress and Its Influence on Subtropical Annual Crops and Their Pollinators: Implications for agriculture in an era of climate change, $16,338, Florida International University

GS23-277 Sowing Seeds Abroad: Exploring the Lived Experiences of African Immigrant Farmers in the United States, $8,074, University of Florida

GS23-278 Genetic Analysis and Breeding as Tools for Sustainable Management of Neopestalotiopsis sp. Outbreaks in Strawberry, $13,660, University of Florida

GS23-279 Toward an Optimum Legume Proportion in Legume-grass Pastures: From radiation use efficiency to animal performance, $15,029, University of Florida

GS23-281 Intercropping Cassava and Legumes for Local Food Security in Florida and Puerto Rico, $11,459, University of Florida

GS23-284 Examining Carbon-Farming Practices to Address Soil Sustainability in the Everglades Agricultural Area, South Florida, $16,500, University of Florida

GS23-285 Cultivar and Soil Amendment Effects on Peanut (*Arachis hypogaea* L.) Grown with Organic Practices in Florida, $16,500, University of Florida

GS23-290 Optimizing Planting Density to Increase the Sustainability of Blueberry Farms, $16,417, University of Florida

GS22-254 Integration of Root-knot Nematode Resistant Pepper Cultivars into an Organic and Sustainable Production System in Florida, $16,232, University of Florida

GS22-255 Beetle Herding: Development of Strategies to Optimize Biological Control of Air Potato Using Attractants, $12,921, University of Florida

GS22-256 Sustainable Strategies to Alleviate Heat Stress in Lettuce, $16,392, University of Florida

GS22-262 How Do Soil Microbes Respond to Chickpea Replacing a Bare Fallow Period in Southeastern Row Crop Agroecosystems? $16,484, University of Florida

GS22-267 Improving Blueberry Farming Sustainability Through Better Fertilizer Timing, $15,620, University of Florida

GS22-268 Identifying the Microbial-mediated Strategies for Optimum Phosphorus Uptake in Bahiagrass and Rhizoma Peanut Mixture, $16,454, University of Florida

Producer Grants

FS24-364 Helping Florida Queen Producers to Select for Mite-resistant Stock by Using Genetic Marker Assisted Selection, $20,000, Always Summer Herbs

FS22-339 Methodology to enhance nutrition and economics of microalgae use as live feeds in marine aquaculture, $14,985, Live Advantage Bait LLC

Education Only

EDS23-046 Local Food Needs Local Seed: Increasing Production and Use of Locally Adapted Seed with a Farm to Community Network, $41,000, Working Food

ON-FARM RESEARCH GRANTS provide opportunities for agriculture professionals working directly with farmers and ranchers on sustainable agriculture efforts.

GRANT SCHEDULE
September: On-Farm Research Grant Calls for Proposals are released.
December: On-Farm Research Grants are due.
March: On-Farm Research Grants are awarded.

Proposals open September and grants are awarded in February the following calendar year. Project maximums are $30,000 for 2-year projects.

GEORGIA

Georgia Project Highlight: Effects of Imidacloprid Soil Drench Applications on Nesting Blue Orchard Mason Bees

Christine Fortuin, a postdoctoral researcher at the University of Georgia, studied the impact that pesticides containing imidacloprid had on the health of Blue Orchard Mason bees. Blue Orchard Mason bees are one of the few bees native to North America that can be a managed pollinator for orchard crops like apples, cherries, and blueberries. Mason bees also have a much higher pollination rate than other pollinators, making them crucial to sustainable agriculture. Mason bees get their name because they do not build a wax-comb hive but instead use mud to build their nests within naturally existing holes. Fortuin and other scientists hypothesized that the mud is a potential source of harmful exposure to pesticide residue.

Fig. 1:
A) Flight cages enclosing rabbiteye bluebery shrubs
B) Nest block containing paper tubes
C) Marked female O. lignaria at nest tube entrance
D) Insect cages used for mortality assessment

To study this, Fortuin obtained a SARE grant to assess the impact of imidacloprid-treated soil on adult female Mason bees. The study created experimental zones in Athens, Georgia, where groups of female bees were exposed to soil containing varying levels of imidacloprid residue. These zones were then monitored to determine if any differences could be detected in their nesting patterns, overall health, viability of offspring and soil preference. Fortuin's research showed that under the right conditions, adult bees can be seriously impacted by exposure to imidacloprid residue. This project showed that wild bees can be impacted by neonicotinoid pesticide residues and therefore that the soil pathway should be considered by regulatory bodies when setting the safety guidelines for pesticide use.

For more information on this project, see sare.org/projects and search for project number GS18-182.

Research and Education Grants

LS24-397 Increasing the Sustainability of Blueberry Production with Cover Crops, $396,364, University of Georgia

LS23-386 Building-in Soil and Market Diversity for Greater Farm and Community Wellbeing, $378,000, University of Georgia

LS23-387 Labor Demands and Hiring Practices of Southern Cattle-Dairy Farmers Under H-2A Program's Current Guidelines and Proposed Modifications, $345,000, University of Georgia, North Carolina State University, Texas A & M University, University of Wisconsin - River Falls

LS22-368 Managing Markets: Assessing the Relationship Between Farmers Market Management and Farmers' Economic Viability and Quality of Life, $300,000, Emory University, Louisiana State University

Professional Development Program

SPDP24-027 Increasing Access to Updated Regional Resources For Beginning and Diversified Farms in the Southeast, $24,300, Georgia Mountains Farmers Network

SPDP23-023 Funding, Fundamentals, and Fellowship: The MANRRS Grantsmanship Training Program, $72,700, Minorities in Agriculture, Natural Resources, and Related Sciences

On-Farm Research Grants

OS24-172 Boosting Native Pollinator and Beneficial Insect Abundance from Spring to Fall Across Multiple Crops Using Water, Nesting, and Wildflower Enrichments, $30,000, Georgia Gwinnett College

OS24-173 Aroniaberry: new small fruit and alternative crop for Georgia, $27,910, University of Georgia

OS23-166 Saffron: A new high-value crop for underserved farmers in Southern US, $29,233, Rodale Institute

OS22-150 Boosting Blueberry Patch Production and Native Bee Abundances Using Wildflower Patches, $20,000, Georgia Gwinnett College

Graduate Student Grants

GS24-301 MoCoBot: Developing a Low-Cost Night-time Mollusk Control Robot for Strawberry Growers, $21,964, Kennesaw State University

GS24-312 Development of novel management tool to mitigate spotted wilt disease, $22,000, University of Georgia

GS24-314 Investigate the ecology and management of blueberry flower thrips in Georgia, $17,891, University of Georgia

GS24-316 Development of an Autonomous Laser-Based Robotic System for Sustainable Weed Management in

GEORGIA PROJECTS CONTINUED

Vidalia Onions, $21,465, University of Georgia

GS23-286 Investigating the Inoculation of Peach with an Entomopathogenic Fungus as a Potential Biocontrol Tactic Against Tree Boring Pests, $15,408, University of Georgia

GS23-275 Is Locally Sourced Biochar and Poultry Litter the Solution to Improving Soil Health and Sustainably Produce Tomatoes in South Georgia, $16,500, University of Georgia

GS22-269 Exploration and Evaluation of the Native Parasitoids of Invasive Spotted-wing Drosophila, Drosophila suzukii for Biological Control, $13,354, University of Georgia

GS22-264 Social Valuation of Forest-based Ecosystem Services of Female Forest Landowners in Georgia, United States, $15,081, University of Georgia

Producer Grants

FS24-371 Using Banker Plant Systems for the Management of Aphids on Greenhouse Crops, $19,384, Woodland Gardens LLC

FS24-372 Village Farmacy and Herb Collector, $20,000, Southern Sky Center for Diverse Arts and Culture

FS24-365 Understanding Nutrient Increases in Beef as it Correlates with Changes in Soil Respiration, and its Commercial Implications, $14,137, Tosta Family Farm

FS22-344 Enriching Vermicast through the Use of Bokashi-Fermented Food Waste Inputs, $15,000, Trefoil Gardens

FS23-349 Research for the Validation of Regenerative Citrus, $14,843, Squeeze Citrus LLC

Education Only

EDS24-061 Sustainable Agriculture for Food, the Environment, and Economic opportunities (SAFE), $49,845, Kennesaw State University

EDS24-063 Sustaining the Farmer to Sustain the Farm: Stress Management Education for Farmer Resilience and Wellbeing, $49,681, University of Georgia

EDS24-070 Empowering Dairy Farms through Technology Education, $27,047, University of Georgia

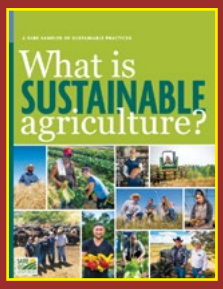
EDS23-050 Urban Agricultural Work/Study Experience for Young Urban Adults, $44,997, Gardens for Growing Community, Inc.

EDS22-39 Tractor, Small Engine, and Hand Tool Selection, Use, Maintenance, and Repair for Small to Mid-Scale Sustainable Farms, $45,320, Georgia Organics

EDS22-36 Organic For All - Whole Systems Organic Agriculture for Farmers of Color, $50,000, IFOAM- North America (International Federation of Organic Agricultural Movements- North America)

“I have been associated with Southern SARE in some form or fashion for over a decade. I’m extremely proud of how Southern SARE has empowered me to expand our outreach to farmers and ranchers of color. From our Administrative Council to our program director and staff to our Equity and Prosperity Committee, Southern SARE has committed to diversity and inclusion in our program. And this commitment has borne fruit in deeper relationships with underserved groups in the South.”

Brennan Washington
Southeast Outreach Coordinator
SSARE 1890 Land Grant Liaison



KENTUCKY

Kentucky Project Highlight: Adding Livestock Farm Diversification with Yaks

Since 2013, Greg Dike has raised yaks on his farm in Morehead, Kentucky. Dike has raised yaks as an alternative to beef cattle production due to the challenges associated with beef production. In recent years, yaks have increased in popularity due to their gentle demeanor, lean meat, high quality fiber and small environmental impact. Yaks have become so popular that Dike, who mainly raises yaks for breeding, couldn't keep up with the demand from farmers who wanted to start their own herds.

Audacious-Born 3-9-23 F-scaled

To solve this problem, Dike obtained a Southern SARE Producer grant to research the best methods for yak reproduction. Dike partnered with researchers at Morehead State University (Philip Prater and animal science professor Patricia Harrelson) and University of Kentucky (beef cattle specialist Jeffery Lehmkuhler and Menifee County Extension agent Mary McCarty) to determine the best technology for breeding yaks. Dike and his research partners were also interested in developing a program that could be used for educating small-acreage farmers and beef producers on the potential benefits of introducing yaks and AI to their operations. Together, the researchers investigated the performance of yaks within forage-based systems with the goal of developing on-farm data collection for yaks, evaluating seasonal growth patterns of yaks raised in the Southeast, and assessing the potential for yak meat market development. This project opened up the opportunity for more producers to participate, thereby creating a more profitable and sustainable meat market.

For more information on this project, see sare.org/projects and search for project number FS21-335.

Research and Education Grants

LS23-384 Evaluation of Soil Solarization as a Sustainable Management Method for Pests, Pathogens, and Weeds in Southeastern High Tunnels, $383,000, University of Kentucky, University of Tennesee

On-Farm Research Grants

OS22-157 Yaks Add Farm Diversification, $19,979, University of Kentucky

OS23-161 Urban BIPOC Farms Mentoring Program, $29,966, Kentucky Black Farmer Cooperative

Producer Grants

FS23-352 Improving Yak Artificial Insemination Conception Rate and Providing Data for Informed Decision-making for Improving Farm Sustainability, $15,000, Cave Run Area HfH

FS23-357 Explore Average Daily Gain of Warm Season Perennial Grasses for Commercial Meat Goats, $14,700, Action Jackson Farms

"Native cover crops are easier to establish than their non-native counter parts and promote the presence of less pests and diseases and compete less with the main crop for soil resources like moisture," said Johnson."

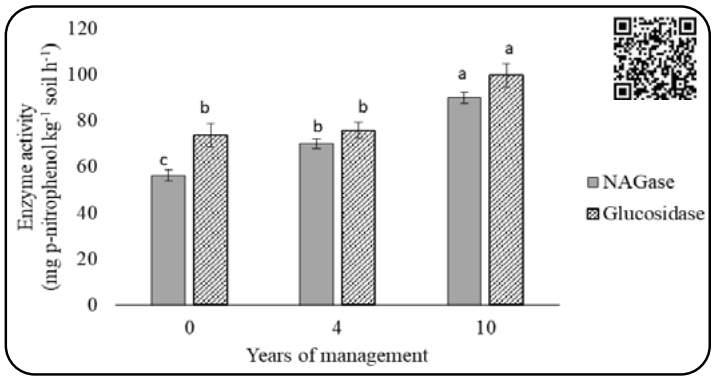
Paul Vincelli
Scientist-at-Large
SSARE 1862 Land Grant Liaison

CONFERENCE & EVENT SPONSORSHIPS are for regional/national conferences, field days, workshops and other educational activities organized by universities, community organizations, NGOs, mentor farmers and other ag professionals. Located in the Southern region, the main purpose should further sustainable agriculture for the benefit of farmers, NGOs, community organizations, researchers and other ag professionals.

LOUISIANA

Louisiana Project Highlight: Cover Crops Incorporated into Rotational Grazing Improves Soil Health

Researchers at Louisiana State University (LSU) tried to improve soil quality by planting a diverse mix of winter cover crops. For years, farmers have utilized various fertilizers and grazing techniques to try and make their soil as healthy and productive as possible. Recent research by LSU soil microbiologist Lisa Fultz suggested that farmers could build healthy soil by incorporating a diverse mixture of annual grasses, legumes and crucifer species overseeded into a long-term commercial grazing operation.



Enzyme activity of NAGase and Glucosidase according to years of management.
Lowercase letters indicate differences within enzymes across years of management.

To test this strategy, Fultz, along with LSU graduate student Kathleen Bridges, obtained a SARE grant to fund a study on farms in Baton Rouge, Louisiana. Fultz and Bridges compared the effects that the use of a winter annual mix of grasses (annual ryegrass, triticale, oats), legumes (hairy vetch), clover (crimson clover), and crucifers (radish and turnips), and rotational grazing had on soil health at any given time. According to the study, overseeding a diverse cool-season cover crop mix into a rotationally grazed warm-season grass pasture improved soil health, especially when the system was managed over a longer period. When winter annuals were incorporated, soil organic matter improved, nitrate concentrations decreased, carbon concentrations stabilized, and soil microbial enzyme activity increased. All of these are indicators of a healthy soil environment, making winter cover crops a viable opportunity for livestock producers to make their farms more economically and environmentally sustainable.

For more information on this project, see sare.org/projects and search for project number GS16-158.

Research and Education Grants

LS23-378 Spatio-temporal distribution and management of Drosophila suzukii in Louisiana mayhaw, $75,000, Louisiana State University Agricultural Center

On-Farm Research Grants

OS23-163 From Field to Cup: Sustainable Soil Fertility Management for Quality Tea Production, $29,869, Louisiana State University

Producer Grants

FS23-351 Use of Sunn Hemp as Weed Suppression and Technique for Reducing Tillage to Allow Marketable Summer Crop Production and No/low Tillage Field Prep, $12,350, River Queen Greens

GRADUATE STUDENT GRANTS are for Masters and PhD students enrolled in a graduate program at an accredited institution who want to research sustainable agriculture.

GRANT SCHEDULE
February: Graduate Student Grants Call for Proposals is released.
May: Graduate Student Grant proposals are due.
August: Graduate Student Grants announced.

Proposals open in February and grants are awarded in August each calendar year. Graduate Student Grant project maximums are $22,000 for two-year projects. SSARE recommends two-year projects; it is difficult to extrapolate usable, replicable, practicable data from one-year research paid by reimbursement of allowable project expenses.

MISSISSIPPI

Mississippi Project Highlight: Reducing Water Usage and Energy Costs Through Improved Irrigation Management

Will Hart's farm has been in his family for generations, producing corn and soybeans in the Mississippi Delta. However, water supply had declined in the nearby aquifer which negatively affected agricultural productivity and profitability. Over 90 percent of the irrigation water is withdrawn from the Mississippi River Valley Alluvial Aquifer, which created a water security concern for nearby producers. To combat this, Mississippi State University (MSU) assembled a team of researchers to create a program to educate producers on irrigation application efficiency and scheduling techniques.

With the help of a SARE Professional Development Program grant, MSU Extension professor Curt Lacy led a team of professionals to create an educational program to inform farmers on techniques that would maintain or improve yields with lower cost or less water use. This program equipped producers with the technical expertise and equipment necessary to assist those who want to adopt water-saving technologies. The knowledge provided by the program saved farmers money with streamlined pumping time and saved water and inputs, while farms produced comparable or better crop yields. This program helped Mississippi crop farmers, like Will Hart, use irrigation management tools to save water while staying profitable.

For more information on this project, see sare.org/projects and search for project number ES16-127.

Research and Education Grants

LS24-393 Northern Mississippi FoodRx, $399,969, The University of Mississippi

LS24-396 Allelopathic cover crops, roller crimping, and soil steaming as an integrated non-chemical weed management strategy in tomato, $399,956, Mississippi State University; University of Arkansas; Rodale Institute Southeast Organic Center

LS23-377 Characterizing the myology (muscle profile) of meat goat carcasses to improve value-added processing and retail consumption in farm-to-fork marketing, $372,000, Mississippi State University, Tuskegee University

Professional Development Program

SPDP24-028 Farm to Freezer: An immersive train-the-trainer program for extension agents, producers, and processors in the SE farm-direct beef and goat industries, $79,820, Mississippi State University

SPDP22-16 Training Agriculture Professionals and Educators to Support Diversified Vegetable Farmers with Cost Analysis, $75,000, Oregon Tilth, Mississippi Small Farm and Agribusiness Center at Alcorn State University, Alabama Cooperative Extension, Auburn University, Tuskegee University, Sustainable Food Center, Louisiana Central, Florida Agricultural and Mechanical University Cooperative Extension, Sprout New Orleans, Carter Farms

On-Farm Research Grants

OS24-180 Kiko Buck Test in the Southeast. Helping farmers to have a sustainable meat goat business, $29,999, Mississippi State University

OS22-155 Enhancing Soil Organic Carbon Storage using Cover Crops in the Mississippi Delta, $19,779, Mississippi State University

Graduate Student Grants

GS24-304 Grounded Values: An Exploration of Soil Ethics in Puerto Rican Coffee Farmers, $22,000, Mississippi State University

GS24-311 Empowering African-American Farmers: Addressing Mississippi's "Black Agrarianism" Sustainability Challenges through Voice and Representation, $14,032, Mississippi State University

Education Only

EDS22-35 Small Farm IPM Training Workshop For Underserved Communities, $22,838, Alcorn State University

Provides funds to support sustainable agriculture education and training activities enhancing the resiliency, strength and vivacity of farmer and ranchers, particularly historically underserved audiences throughout the Southern region.

NORTH CAROLINA

North Carolina Project Highlight: North Carolina Researchers Find New Ways to Control Pest Mites in Tomatoes

For years, the two-spotted spider mite posed a serious threat to the health and productivity of tomato crops throughout the Southern U.S. Producers have attempted to manage these mites with chemical pesticides, however, chemical treatments were not entirely effective and can pose other health risks. A naturally occurring predatory mite, Phytoseiulus persimilis, has shown to be effective at managing two-spotted spider mites. However, there is a concern with relying on Phytoseiulus persimilis mites since they are typically found in late August and September, which is weeks after spider mite populations are most intense.

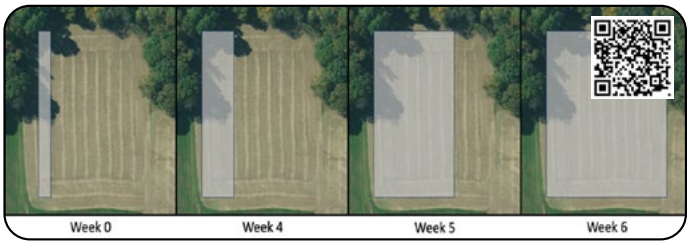


Fig. 4. Spread of P. persimilis (shaded areas) from the release area on the left side (Week O)across a 2.5 ha tomato field over a 6-wk period. Woodleaf, NC. 2019.

To combat this, James Walgenback, a researcher at North Carolina State University, studied how the early release of Phytoseiulus persimilis could be used to manage two-spotted spider mites. With the help of a Southern SARE grant, Walgenback investigated how early-season release strategies of Phytoseiulus persimilis can be used to control two-spotted spider mites in the tomato fields of North Carolina. Walgenback's research indicated that releasing Phytoseiulus persimilis early helped to maximize the efficiency of the treatment and gave producers the opportunity to make their farms more economically and environmentally sustainable.

For more information on this project, see sare.org/projects and search for project number LS17-284.

Research and Education Grants

LS24-390 A Coordinated Farm-to-Institution Supply Chain Approach to Increase Market Access and Community Food Security, $399,923, NC State University

LS24-400 Research, Education, and Network Development to Support Southeastern Seed Production, $319,053, The Utopian Seed Project

LS23-382 Connections in Direct Markets: Assessing the feedback loop between consumer values and farmer's marketing strategies, $383,000, Appalachian Sustainable Agriculture Project (ASAP), University of North Carolina, Culture Value

LS22-365 Regional Evaluation of Cucumber High Tunnel Trellising Systems, $156,729, Carolina Farm Stewardship Association

Professional Development Program

SPDP24-025 Developing a Training Program on Surviving Disasters Through Risk Management Preparation and Best Management Practices for Farm Families, $112,502, Cooperative Extension at N.C. A&T

SPDP24-030 Training master beekeepers to improve honey bee management through local queen production, $80,000, North Carolina State University

SPDP24-032 Cultivating Sustainable Farm Law Leadership in the Southern Region, $78,030, Farm Commons

SPDP23-019 Messages for Messengers: Growing Conservation Leaders in North Carolina, $89,314, National Wildlife Federation, North Carolina Association of Soil and Water Conservation Districts

SPDP22-12 Grant-writing training for extension agents and service providers to support underserved farmers, $79,996, North Carolina A&T State University, NC State University

SPDP22-13 Land Summit Professional Development, $59,195, North Carolina State University at Raleigh

On-Farm Research Grants

OS24-171 Designing Ecologically Beneficial Habitat for Diverse Farming Systems, $30,000, NC State University

OS24-174 Integrated Sustainable Technologies for Enhancing Farm Productivity, $29,801, Appalachian State University

OS23-169 Exploring Local Carbon Sources and Cover Crops Used for Anaerobic Soil Disinfestation for Management of Soilborne Pathogens of Tomatoes in NC, USA, $30,000, NC State University

OS22-159 Researching *Colocasia esculenta* (aka Taro) in the Southeast as a Sustainable and Alternate Crop, $20,000, The Utopian Seed Project

Graduate Student Grants

GS24-307 Development of biosurveillance technology for more sustainable disease management strategies for cucurbit downy mildew (*Pseudoperonospora cubensis*), $21,853, NC State University

Producer Grants

NORTH CAROLINA PROJECTS CONTINUED

FS24-360 Payback period from high tunnel rainwater catchment for vegetable crops in urban farming, $10,000, Natural & Local LLC

FS24-363 Practical Silvopasture Implementation: A study of the ecological, nutrition, and food system impacts of crop-livestock integration, $19,947, Bearwallow Valley Farms

FS23-355 Characterizing Chestnut Cure; as a Function of Time, Temp & RH, Based on Nut Size, Color and Shape, $15,000, Mountain Grown Chestnuts

FS23-356 Ecofriendly Management of Silvopastures for Pigs, $14,974, Farmasea LLC

FS23-358 Researching Species of Plants Best Effective for Lay Hedges/Living Fencing in the US Southeast, and Their Efficacy to Increase Sustainability, $14,925, Flute Song Farm LLC

Education Only

EDS24-060 Developing Resilient Agricultural Research and Education System to Enhance Sustainability, $49,478, NC A&T

EDS24-064 Cultivating Connections: Strengthening Sustainable Agriculture through Statewide Farmers Market Manager Conferences and Regional Networking Gatherings, $49,066, North Carolina Farmers Market Network

EDS24-065 Empowering Farm Owners to Create Employee Stake in Farm Business Success, $48,566, Farm Commons

EDS23-056 Ergonomics and Assistive Technology Program for Farmworkers in North Carolina, $22,000, NC AgrAbility

EDS22-32 North Carolina Small Ruminant Improvement Program, $49,996, North Carolina State University

EDS22-40 Advancing Conservation through Educating and Empowering Women Farmers and Landowners in the Southeast, $49,998, American Farmland Trust, Black Family Land Trust, Inc., Kentucky State University

“The SSARE Education Grant really gave us the resources to make these videos as inclusive as possible. The project travelled across 12 states and interviewed over 50 farmers, community gardeners, seed savers, seed growers and seed advocates. This would never have been possible without funding and we are extremely grateful.”

Chris Smith
SSARE Grantee
The Utopian Seed Project

EDUCATION GRANTS allow applicants to conduct education and outreach activities for the benefit of the greater sustainable ag community, and promote efforts in farmer innovations, community resilience, business success, ag diversification, and best management practices.

GRANT SCHEDULE
May: Education Grant Call for Proposals is released.
August: Education Grant proposals are due.
February: Education Grants announced.

Education Grant project maximums are $50,000, limited to two (2) years.
Education Grants are paid by reimbursement of allowable project expenses.

OKLAHOMA

Oklahoma Project Highlight: Row Cover Use Methods for Cucurbit Pest and Pollinator Management

Researchers at Oklahoma State University (OSU) studied row cover strategies to determine how to produce the most productive plants possible. For years, Oklahoma farmers had used row covers on their vegetable crops to protect them from pests. While the row cover method has been effective at keeping squash bugs and other harmful pests out, research shows that the timing of row cover removal can impact the pollination process, which could have detrimental effects on subsequent crop yields.


Just before row covers are installed

To solve this problem, Jim Shrefler and a team of researchers at OSU studied the best row cover management practices for maximizing squash yields. Shrefler and his team received a SARE grant to conduct a two-year experiment to analyze pest and pollinator incidences and to measure squash yields using various row cover treatments at three farm locations in Oklahoma. The goal was to determine the best row cover management practices to provide ideal pest protection and help producers achieve the most productive plants possible.

For more information on this project, see sare.org/projects and search for project number OS14-091.

Research and Education Grants

LS24-392 Development of highly productive protected cultivation of tomato in Southern U.S., $398,537, Langston University

Producer Grants

FS24-373 Enhancing Profit Margins for Pawnee Corn Growers: Innovative Strategies for Value-Added Product Development and Marketing, $25,000, Pawnee Seed Preservation Society

The Kerr Center for Sustainable Agriculture

Since 1965, the Kerr Center has been an effective advocate for Oklahoma farmers and ranchers, for rural communities, and for a healthy, sustainable food system, from gate to plate.

"Expansion of the Model State Program funding is having a positive impact on the work in all southern states.

It has resulted in more institutions working together to increase SARE's impact state and region wide."

David Redhage
PDP Coordinator
President, Kerr Center for Sustainable Agriculture

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS further education and outreach strategies for professionals and educators who work directly with farmers and ranchers.

GRANT SCHEDULE

July: Calls for pre-proposals are released
August: Pre-proposals are due.
October: Selected pre-proposals are invited to submit full proposals.
November: Full proposals are due.
February: Full proposals are funded.

There is no funding cap for projects. To fund a broad portfolio of projects, priority is given to those less than $80,000. Projects can either be for one year or two years paid by reimbursement of allowable project expenses.

PUERTO RICO

Puerto Rico Project Highlight: Finding Common Ground with Farmers and Policymakers on Urban Agriculture Development in Puerto Rico

For years, socioeconomic, political, and institutional boundaries among urban communities have created an unsustainable food system in Puerto Rico. The island does not have enough farmable land to support its 3.6 million people, which is why the country imports 85% of the food it consumes. This has contributed to mass food insecurity, with 45% of Puerto Rico's population living below the poverty level. Maria Calixta Ortiz and a team of researchers at Ana G. Méndez University in San Juan tried to address this problem by developing a guide to urban agriculture that they hoped would guide the socioeconomic development of urban farming communities.

Volunteers in the Capetillo Urban Forest

To create this guide, Ortiz and a group of researchers obtained a Southern SARE grant to conduct a study, and they found that urban community gardens served an important social, economic and environmental function in the community by satisfying the demand for local foods while utilizing empty urban spaces. According to Ortiz, local governments failed to recognize the benefits that urban agriculture initiatives can bring to the island, and potential farmers lacked the resources to pursue these initiatives on their own. That is why Ortiz and her colleagues created "Guideline for the Development of Community-Based Urban Orchards in Puerto Rico" which strengthened urban agriculture on the island by providing recommendations for policymakers, municipalities, and other local officials to better work with small-scale urban farmers. This guide brought light to the potential social and economic benefits of urban agriculture and helped Puerto Rico begin to build a sustainable food system.

For more information on this project, see sare.org/projects and search for project number LS14-263.

Professional Development Program

SPDP22-14 Learning to Teach Farmers about Agricultural Interpretation to Foster Sustainability and Food Security, $59,999, VISITRICO

Graduate Student Grants

GS23-287 The Taino: Can The Indigenous Agricultural Methods of Puerto Rico Feed the Island and Potentially Mitigate Climate Change? $16,491, Florida International University

Producer Grants

FS24-370 Roots of Resilience: Mulching for Higher Yields in Breadfruit Agroforestry and Island Food Sovereignty, $19,595, Future Acres Urban Farming

Education Only

EDS24-058 From the Classroom to the Farm: Exploring Integrated Pest Management & Climate Change for Farmers and Agricultural Educators in Puerto Rico, $25,089, University of Puerto Rico

EDS24-068 PR-GOSHEPI-PHASE II. Hands-on Training in Best Management Practices for Sustainable Small, $38,970, University of Puerto Rico

EDS23-044 Tai Lamb Meat Marketing and Promotion Educational Program (TAILAM-EP), $45,999, Tai Institute of Sustentable Livestock Research LLC

EDS23-053 Education and Conservation Practices for a Sustainable Agriculture in Puerto Rico, $41,000, University of Puerto Rico

EDS22-41 An Agro-Ecological Incubator and Educational Programs for Beginner Farmers in Western Puerto Rico, $50,000, Plenitud PR, Voz Activa, Pueblo Crítico

"Our concerted efforts and strategic outcomes resulting from numerous research activities, community engagements, educational programs, and infrastructure assessments, culminated in a robust framework for ongoing sustainable agritourism development."

Dr. Patrick Holladay
SSARE Grantee
Professor of Tourism Management
Troy University

SOUTH CAROLINA

South Carolina Project Highlight: Summer Cover Crops for Organic No-Till Broccoli

Rachel Klein, the farm manager at Wild Hope Farm, studied various cover crop combinations to determine how to maximize the farm's production of organic, no-till broccoli. Wild Hope Farm has been using a wide range of cover crops for years to keep their broccoli plants as fruitful as possible. To help further increase productivity, Klein received a Southern SARE Producer grant to test out how different combinations of cover crops impact the success of their crops.

Summer Cover Crops for Roller-Crimped No-till Fall Planted Broccoli

In the study, "Summer Cover Crops for Organic No-Till Broccoli," Klein and the other workers at Wild Hope Farm implemented five summer cover crop treatments in a no-till broccoli field. To determine which cover crop treatment is most beneficial, Klein and her team measured weed suppression, total yields and total labor hours for each treatment. The study found that sunn hemp is a viable cover crop option for producers to significantly increase their production of broccoli as well as the overall ecological and financial sustainability of the farm.

For more information on this project, see sare.org/projects and search for project number FS20-326.

Research and Education Grants

LS24-395 Empirical assessment of grain sorghum resiliency, productivity, and profitability in the southeastern USA, $399,974, Clemson University

LS23-379 Flipping the cages on sustainable aquaculture: A study on oyster aquaculture technique and policy to reduce pathogens, $358,557, Sea Grant Consortium, South Carolina Department of Natural Resources Marine Resources Research Institute, College of Charleston

LS22-374 Cover crop inter-seeding in organic corn production to reduce resource inputs and soil disturbance and enhance pest control and farm profitability $371,000, Clemson University, University of Georgia, Temple University, South Carolina State University

LS22-369 Establishing an Organic Watermelon Industry in South Carolina $369,999, Clemson University, CREC, USDA-ARS

LS22-366 Development of Sustainable Strategies for Managing Bacterial Diseases and Improving Tree Health in the Peach Production System, $371,000, Clemson U.

Professional Development Program

SPDP23-021 Indigo and Companion Food Crops: Opportunities for Limited Resource Farmers in the Lowcountry of South Carolina and Georgia, $79,500, International Center for Indigo Culture, Marshview Community Organic Farm, Save Our Land Ourselves, South Carolina State University

SPDP22-15 Training Educators in the Southern Region Using Aquaponics as a Sustainable Agriculture Solution, $71,322, Clemson U., Carolina Farm Stewardship Assoc.

Graduate Student Grants

GS23-283 Potential of Cover Crop Influence on Water Repellency and the Sustainability of Southern U.S. Soils, $12,042, Clemson University

GS23-274 Enhancing the Biological Control of the Diamondback Moth (*Plutella xylostella*) Through Habitat Management for Sustainable Brassica Production, $12,341, Clemson University

GS22-263 Development and Phenotypic Evaluation of a *Brassica oleracea* Leafy Greens Diversity Panel, $16,500, Clemson University

GS22-259 PRECISION: leveraging deeP REinforCement learnIng algorithm for Sustainable IrrigatiON scheduling, $16,500, Clemson University

Producer Grants

FS23-350 The Effectiveness in Attracting Oyster Spat on PVC versus Bamboo Stakes for Reef Restoration in the North Edisto River, $15,000, Barrier Island Oyster Co.

FS22-341 Does reduction of nitrate inputs in pasture land treated with *Chlorella vulgaris* result in cost savings and healthier soil and grass, $10,975, Sweetgrass Garden Co-op

Education Only

EDS23-047 Young Tree Farmers Camp, $46,000, Center for Heirs' Property Preservation

EDS23-054 Gullah/Geechee Heir Property Initiative: Sustaining Heir Property in the Lowcountry Through Sustainable Agriculture, $40,000, Gullah Geechee Initiative Foundation

EDS22-43 Wholesale Market Success For Limited Resource Gullah Farmers, $49,500, Gullah Farmers Cooperative Association

TENNESSEE

Tennessee Project Highlight: Soil SMARTS (Specific Management and Resources Training for Sustainability) for Soil Health in Tennessee

Agents using soil health test kits during training

Researchers at Tennessee State University developed a curriculum and training manual to teach producers about sustainable practices they could implement to increase the health of their soil. In the past decade, awareness of the benefits of healthy soil has increased but a lack of technical and financial information on beneficial soil management practices has limited adoption in Tennessee. While some producers have engaged in soil health activities, there was a need to circulate this knowledge to more farmers about how to measure and improve soil health. To accomplish this, Jason de Koff at Tennessee State University worked with professionals from the University of Tennessee to obtain a Professional Development Program Grant from the Southern SARE program. With this grant, de Koff and his team developed the Soil SMARTS program, a soil health curriculum designed to provide farmers with the hands-on instruction they need to improve their soil. The program provided participants with an abundance of training resources, including materials from the USDA NRCS, modules on the economics of soil health and cover crops, a soil health test kit and access to demonstration plots planted in each region of the state to compare management practices. With this knowledge, producers learned how to improve crop productivity and increase the economic and environmental sustainability of their farms.

For more information on this project, see sare.org/projects and search for project number ES18-141.

Research and Education Grants

LS24-391 Improving Soil Health and Cropping Systems Sustainability through Cover Crops: An Integrated Research, Education, and Support Approach, $399,984, Middle Tennessee State University

LS23-376 Alley cropping agroforestry as a climate change resiliency strategy for vegetable production in the southeastern US, $367,000, University of Tennessee, Knoxville, Memphis Tilth

LS23-388 An Approach to Building a Sustainable Small Flock Poultry Operation Through Improvement in Nutrition, Food safety, and Marketing, $377,000, Tennessee State University, University of Tennessee, University of Georgia

Professional Development Program

SPDP23-022 Sustaining Small Flock Poultry Producers Utilizing a Train-the-trainer Model on Identified Poultry Needs, $79,998, Tennessee State University, The University of Tennessee Institute of Agriculture

On-Farm Research Grants

OS22-160 Development of Novel Directed Optical Energy Weed Management Robotics Platform for Sustainable Soybean Farming, $20,000, Middle Tennessee State University

Graduate Student Grants

GS23-296 Identifying Genetic Sources of High Nutritive Value in a Panel of American Southern Pea (*Vigna unguiculata* L. Walp.) Germplasm, $16,368, Tennessee State University

GS23-289 Enhancing Sustainability and Productivity of Organic Wheat-Soybean Double-Crop Systems in the Southeastern USA, $16,200, University of Tennessee

GS23-288 Ambrosia Beetles and *Phytophthora cinnamomi* Management Using Plant Defense Elicitors Under Flood Stress Condition, $16,500, Tennessee State University

GS23-282 Role of Local Trichoderma spp. Isolates in Reducing Tomato Fusarium Wilt and Increasing Phosphorus Uptake, $16,500, The University of Tennessee Institute of Agriculture

GS22-271 Novel Energy Efficient UVC Autonomous Robotics Platform for Sustainable Strawberry Fungal Management, $16,496, Middle Tennessee State University

GS22-266 Optimizing Anaerobic/Biological Soil Disinfestation Amendment Composition Through Soil Fermentation Experiments, $16,500, University of Tennessee

Producer Grants

FS22-342 Improving the Cost-Efficacy of Silvopasture Establishment in the Southeast, $12,771, Lick Skillet Farm

Education Only

EDS24-057 Soil SMaRTS 2: Virtual farm tours for enhanced and inclusive learning about soil health, $44,864, Tennessee State University

TENNESSEE PROJECTS CONTINUED

EDS24-062 Increasing Sustainable Agriculture and Economic Viability of Farms in Tennessee Through Education, $39,702, Tennessee Local Food

EDS24-067 Southeast Tennessee Collaborative Regional Alliance for Farmer Training (SETN CRAFT), $49,144, Crabtree Farms

EDS24-071 River Friendly Farms Grazing School, $40,512, Cumberland River Compact

EDS23-049 Beyond Agri-Curious:Training New Farmers in the Business of Farming, $42,000, Cumberland River Compact

RESEARCH & EDUCATION GRANTS encourage a systems approach to sustainable agriculture mainly designed for teams of interdisciplinary researchers.

GRANT SCHEDULE
March: Research and Education Grants Call for Pre-proposals are released.
June: Research and Education pre-proposals are due.
August: Selected pre-proposals invited to submit full proposals.
November: Full proposals are due.
February: Full proposals are awarded.

Grants require 2-steps: A pre-proposal and a full proposal for those invited by the review committee to submit. Research Grant project maximums are $400,000, limited to three (3) years paid by reimbursement of allowable project expenses.

PRODUCER GRANTS enable farmers and ranchers to test a sustainable agriculture idea using a field trial, on-farm demonstration, marketing initiative, or other technique.

GRANT SCHEDULE
September: Calls for Producer Grant Proposals are released.
November: Producer Grant Proposals due.
March: Producer Grants awarded.

Proposals open in September and grants are awarded February the following year. Producer Grant project maximums are $20,000 for an individual farmer or rancher, and $25,000 for a farmer organization. Project duration is for 2 years. It is difficult to extrapolate useable, practicable data from one-year projects paid by reimbursement of allowable project expenses.

TEXAS

Texas Project Highlight: Texas A&M Researchers Identify Ideal Cover Crop Species for Southeast Texas

For years, farmers and ranchers across the Southeast have seen numerous benefits from incorporating cover crops on their farms; however, several factors have limited their adoption in Southern Texas. Many farmers in Texas rely on heavy cultivation and believe that the use of cover crops takes nutrients and moisture from their cash crops. However, research showed that cover crops can be a useful tool to increase production, build soil organic matter, recycle nutrients, and prevent erosion and suppress weeds. To test this, Spencer Samuelson, a field scientist for Corteva Agriscience and recent graduate from Texas A&M University, studied the effects of cover crops on soil health.

Texas A&M University Video

In a study funded by Southern SARE, Samuelson and Muthu Bagavathiannan, an associate professor at Texas A&M University, tested 26 different cover crop species in multiple locations across Southeast Texas. They used a randomized block experimental design that allowed them to assess different combinations of cover crops, planting times and termination dates while also measuring the impact of cover crops on soil moisture levels and pest pressure. The results showed that proper cover crop selection is imperative for achieving high crop yields in Southeast Texas. Samuelson's research allowed producers to see how using cover crops is an opportunity to increase yields while improving soil health.

For more information on this project, see sare.org/projects and search for project number GS18-179.

Research and Education Grants

LS24-399 Fostering climate-friendly sustainable farming through integration of biochar and cover crops in Texas and Florida, $399,220, Texas A&M University

LS22-375 Sheep integration for diverse and resilient organic cotton systems, $370,998, USDA, Texas A&M AgriLife Extension, Angelo State University, Texas Tech University, Texas A&M University

LS22-373 Converting to alternative annual and perennial forage based systems for sustainable grazing in semi-arid environments, $371,000, Texan A&M AgriLife Research / Soil and Crop Sciences, Texas A&M AgriLife Extension Service

LS22-372 Sustainable Soil Resource Management and Produce Marketing on Resource-limited Urban Farms, $371,000, Texas Christian University, CoAct, Healthy Tarrant County Collaboration (HTCC)

LS22-371 Evaluating Cover Crops for Weed Reduction throughout the Southern States, $360,000, National Center for Appropriate Technology, Southeastern African American Farmers Organic Network (SAAFON), Operation Spring Plant (OSP)

LS22-364 Development of Sustainable Organic Rice Ratoon Production Systems in the Southern US, $340,000, Texas A&M AgriLife Research

Professional Development Program

SPDP24-026 Supporting a Central Texas Sustainable Farm Incubator Collaborative, $77,032, Farmshare Austin

SPDP23-017 Modernizing Our Roots: Sustainable range and pasture result demonstrations to encourage local education and adoption, $78,924, Texas A&M AgriLife Extension Service, Department of Rangeland, Wildlife, and Fisheries Management, Prairie View A&M University

SPDP22-10 Certificate Program for Sustainable Cotton Production for County Agents, $30,349, Texas A&M University - Department of Soil & Crop Sciences

SPDP22-09 Carbon Farm Planning to Promote Sustainable Agriculture in Texas, $79,309, National Center for Appropriate Technology, Carbon Cycle Institute

On-Farm Research Grants

OS24-178 Evaluating a Non-antibiotic Treatment of Mastitis in Organic Dairy Cows, $29,938, Texas A&M University

OS24-179 Evaluating the impact of cover crop type and termination timing on soil nitrogen storage and nitrogen loss from fields, $29,647, University of Texas Rio Grande Valley

TEXAS PROJECTS CONTINUED

OS24-181 Huitlacoche delicacy: turning the lost corn crop into a high-value delicacy vegetable, $30,000, Texas A&M AgriLife Research

OS23-165 Hi-A Corn and Management Practices for Nutritional and Food and Feed, $29,998, Texas A&M AgriLife Research

OS23-162 Assessing Impacts of Grazing Management on Pollinator Conservation in Rangeland, $30,000, University of North Texas

OS22-156 Promoting Water Sustainable Agriculture by Combining In-situ Soil Moisture and Remote Sensing Data for Irrigation Scheduling, $19,987, Texas A&M University

Graduate Student Grants

GS24-297 Developing Soil Carbon Balance (SCB) in a Long-Term Row Crop Production System, $21,991, Texas A&M University

GS24-299 Covering Ground: Southern Native Leguminous Summer Tepary Beans to Boost Productivity of Organic Spinach, $22,000, Texas A&M University

GS24-313 Impact of early life experiences on the efficacy and behavior of livestock guardian dogs, $21,997, Texas A&M University

GS23-295 Development of Active Root System Architecture of Upland Cotton for Improved Sub-surface Water Uptake During Drought Conditions, $15,900, Texas Tech University

GS23-292 Effect of Waste Milk Application on Reclaimed CRP Grassland Health and Ecosystem Services, $14,874, Texas Tech University Natural Resources Management

GS23-280 Plants Attracting Killers: Using Resistance Traits that Attract Insect Predators to Suppress Sorghum Aphids, $16,116, Texas A&M University

GS22-273 Native Texas Perennial Bunchgrass for Bioenergy Feedstock and Ruminant Nutrition, $14,432, Tarleton State

GS22-261 Climate Change Impacts on the U.S. Livestock Sector and Possible Adaptations, $16,500, Texas A&M University

GS22-260 Quantifying the Risks of Pesticide Exposure to Squash Bee Behavior and Pollination Services, $16,500, University of Texas at Austin

Producer Grants

FS24-369 Chicken Changes: Mobile meat birds for soil health study, $19,988, McGarva Ranch Pasture Division

FS24-376 Regenerating South Texas Plains with Poultry-Inoculated Biochar, $15,717, Smith Pastures, LLC

FS23-348 Increasing Financial Sustainability on the Farm by Employing Moringa as a Drought Tolerant, Cost-Reducing Lamb Feed Supplement, $15,000, Padilla Farm LLC DBA Yahweh's All Natural Farm and Garden

FS22-338 New Design of Two Queen Horizontal Honey Bee Hive Bases for Commercial and Small Scale Beekeeping Operations, $14,662, Texas Honey Company

Education Only

EDS24-059 Learning on the Land: A Texas Farm-Based Education Handbook, $49,932, Texas Center for Local Food; Farmshare Austin; Hope Full Farm; Green Gate Farms; Sentli Center for Regenerative Agriculture

EDS23-048 Field day trainings to enhance sheep health and productivity $45,000, Texas A&M AgriLife Extension

EDS22-38 Development and Implementation of the Agriculture Community Education (ACE) On-line Learning Modules for Northeast Texas Limited Resource Producers, $35,667, Northeast Texas Community College

VIRGIN ISLANDS OF THE U.S.

Virgin Islands Project Highlight: Lemon Grass (*Cymbopogon citratus*) of the Two Main Strands East Indian Lemon Grass (*Cymbopogon flexuosus*) or West Indian Lemon Grass (*Cymbopogon citratus*): Which one yields the greatest amount of essential oil?


Building a Lemongrass Distiller

The essential oil industry has been rapidly growing and has caused an increase in the market for lemongrass. While India currently produces 80 percent of lemongrass oil, farmers in the U.S. Virgin Islands have seen this industry growth as an opportunity for producers to profit on lemongrass. To make profit cultivating a crop, it is important to choose the best of the breed. The one unknown factor in the selection of strands of lemongrass is which type produces the greatest quantity of essential oil. Until recently, there was no data that demonstrated the difference in the quantity of production of lemongrass oil between breeds; however, farmers in St. Thomas and St. Croix teamed up to find what strand of lemongrass produced the highest yield of essential oil.

Participating producers obtained a SARE producer grant to develop an experiment where they could plot and compare West Indian and East Indian lemongrass. With the results from the experiment, the producers created a pamphlet to allow farmers to produce and sell lemongrass most effectively. This research helped farmers discover how lemongrass is used in many different industries, which allowed farmers the opportunity to change their economic base by producing lemongrass.

For more information on this project, see sare.org/projects and search for project number FS19-316.

On-Farm Research Grants

OS24-175 Assessing arsenic and soil salinization risk of Sargassum used in crop growth, agricultural compost, and upland waste piles in the US Virgin Islands, $29,990, University of the Virgin Islands

OS22-151 Potential Grasses as Alternative Forage Crops for the Virgin Islands, $19,236, University of the Virgin Islands

Producer Grants

FS23-354 Impact of Landscape Fabric on Selected Cultivars Suitability to a Subtropical Climate for the USVI Farm to School Program, $19,930, Virgin Islands Farmer Alliance

Education Only

EDS24-069 The use of Vetiver Grass to improve sustainable agriculture in the Virgin Islands, $49,999, UVI Agricultural Extension; Virgin Islands Department of Agriculture; USDA/NRCS; We Grow Food, Inc.; Mr. Burton

EDS22-33 Launching Virtual and Live Youth Sustainable Educational Agriculture Program, $50,000, The Center for Educational Growth

“Support from the Southern SARE Program through the PDP State Program helped the University of the Virgin Islands School of Agriculture Cooperative Extension Service to increase knowledge and awareness regarding the Certified Naturally Grown Program. It also helped to educate our local farmers and community members on measures to safeguard and enhance the health and wellness of farm along with measures to improve farm safety practices.”

USVI Commissioner of Ag
Former SARE State Coordinator

VIRGINIA

Virginia Project Highlight: Breeding and Evaluation of Butternut Squash Varieties for Southeast Organic Farms


Small Block Trial Harvest

Virginia farmer Edmund Frost was on a mission to develop the ideal butternut squash: a disease-resistant prolific producer of consistent shape and size with unparalleled taste. For a decade, Frost had received funding from Southern SARE grant programs to help him achieve this goal. Over several years, Frost had tested a variety of butternut seed characteristics including taste, fruit shape, crop productivity and resistance to diseases. His research revolutionized butternut squash production by creating new and better breeds.

Frost's most recent project, "Breeding and Evaluation of Butternut Squash Varieties for Southeast Organic Farms," focused on disease resistance to increase crop resilience and durability. To have healthy and sustainable seed production, all the elements of a seed system are important: production, variety trials, selection work that improves and maintains existing varieties, and breeding new varieties. Frost hoped his breeding research would help to accomplish this to create the most vibrant seed system possible.

For more information on this project, see sare.org/projects and search for project numbers FS20-325, FS16-291 or FS13-273.

Research and Education Grants

LS22-367 Biological Recycling of Agricultural residues with Mushroom for Multidimensional Use, $371,000, Virginia State University

Professional Development Program

SPDP24-031 Training on Accessible Apiculture for People and Veterans with Disabilities thru Virtual and Onsite training, $75,589, Accessible Beekeeping

SPDP23-020 Expanding the Agroforestry Regional Knowledge (ARK) Exchange Network in Virginia, $79,957, Virginia Tech Department of Agricultural, Leadership, and Community Education, Virginia State University, Appalachian Sustainable Development

SPDP22-11 Advancing Comprehensive, Peer-to-Peer Soil Health Training across Virginia, $74,903, Virginia Tech, Virginia State University

On-Farm Research Grants

OS23-168 Killing Perennial Weeds Using Light Blocking Tarps, $7,871, Virginia Cooperative Extension

OS23-167 Development of a Safer Vehicle for Draft Animal Use, $27,959, Agrarian Veterinary Services

OS22-158 Evaluation of Current Virginia Peanut Cultivars and Advanced Breeding Lines for Southern Corn Rootworm Resistance, $20,000, Virginia Tech

OS22-152 Adjustable Farrier Stocks for Draft Power, $19,000, Agrarian Veterinary Services

Graduate Student Grants

GS24-305 The Role of Cropping System Complexity in Soil Organic Matter Formation and Nutrient Availability, $21,142, Virginia Tech

GS23-291 Virginia Orchard IPPM: Native wildflower plot to provide alternative forage, habitat, and refuge for bee pollinators, $16,500, Virginia Tech

GS22-272 Improving Vegetable Soybean Seedling Emergence Through Novel Organic Seed Treatments, $14,998, Virginia Tech

GS22-270 The Role of Black Farmer Organizers in Promoting Healthy and Sustainable Local Community Food Access, $15,258, Virginia Tech

GS22-258 Climate Change and the Sustainability of Deciduous Fruit and Nuts in the Southern States, $16,500, Virginia Tech

Producer Grants

FS24-366 A Comparison of the Microbiome Population Induced by Different Microbial Foods for the Production of a Safe and Effective Aerated Compost Tea, $18,699, Nicky Schauder, Permaculture Gardens LLC

FS24-368 Progress Towards a Dwarf Edible Winter Pea for Companion Planting with Wheat, $18,486, Jason Myers-Benner, Tangly Woods

FS24-375 Investigating production capabilities and uses of Black Soldier Fly Larvae (BSFL) for organic waste

VIRGINIA PROJECTS CONTINUED

processing in the urban environment, $19,737, Dave Littere, Future Acres Urban Farming

FS23-353 Effects of Aerated Compost Tea on Swiss Chard, Kale & Lettuce Production in Virginia, $12,447. Permaculture Gardens LLC

FS23-347 Summer and Winter Squash Research and Breeding for the Southeast, $20,000, Common Wealth Seed Growers / Twin Oaks Seed Farm

FS22-340 Small Grains on Very Small Farms, $13,987, Great Day Gardens

FS22-345 Effects of Using a Native Legume as a Cover Crop in Small Scale Vegetable Production, $15,000, NANIH Farm and Garden, Inc.

Education Only

EDS22-37 Empowering Farmers, Farmers Market Managers, and Gleaners to Safely Address Local Hunger and Food Insecurity, $49,999, Virginia Tech, Society of St. Andrew

"I gained insights into the working relationships and the strategies employed by Black farmer organizers in mitigating food access issues. In addition, I was able to build networks with multiple Black farmers who are utilizing various sustainable agricultural practices and are also using their farms as spaces to create affinity groups."

Nicole I. Nunoo
Graduate Student Grant Awardee
Virginia Tech

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