

## What is SARE?

Since 1988, the Sustainable Agriculture Research & Education (SARE) program has been the go-to USDA grants and outreach program for farmers, ranchers, researchers and educators who want to develop innovations that improve farm profitability, protect water and land, and revitalize communities. To date, SARE has awarded over \$406 million to more than 8,803 initiatives.

### SARE is grassroots with far-reaching impact

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

### SARE communicates results

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



[www.sare.org](http://www.sare.org)

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

# 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.

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 [projects.sare.org](http://projects.sare.org) and search for project number [FS20-322](#).

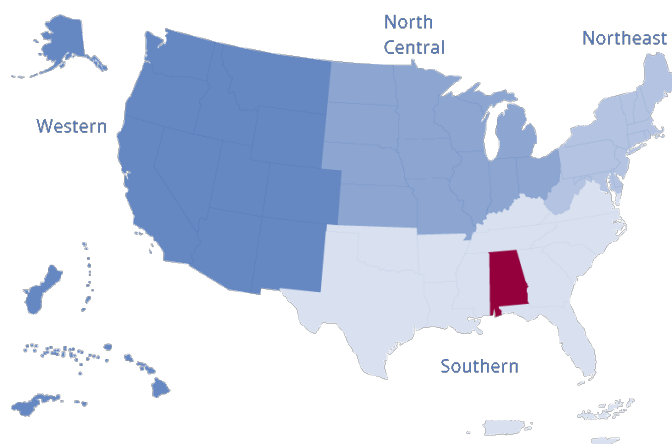
## SARE in Alabama

[southern.sare.org/state-profiles/alabama/](http://southern.sare.org/state-profiles/alabama/)

**\$1,953,369**  
**in total funding**

**22 grant project**  
(since 1988)

For a complete list of grant projects state by state, go to [www.sare.org/state-summaries](http://www.sare.org/state-summaries)



# SARE in Alabama

## Grants awarded 2019-2024

Total awards: **22 grants**

- 5 Farmer/Rancher
- 4 Research and Education
- 3 Professional Development Program
- 2 On Farm Research/Partnership
- 5 Graduate Student
- 3 Education Only

Total funding: **\$1,953,369**

\$65,122	Farmer/Rancher
\$1,383,700	Research and Education
\$236,436	Professional Development Program
\$36,581	On Farm Research/Partnership
\$82,123	Graduate Student
\$149,407	Education Only

Find a complete list of projects on page 3.

## Farmer and rancher impacts 2019-2024

SARE grantees have reported the following impacts from their projects:

**4,926 farmers participated in a SARE-funded project**

**1,441 farmers reported a change in knowledge, awareness, skills or attitude**

**617 farmers changed a practice**



Learn about local impacts at:  
[southern.sare.org/sare-in-your-state/alabama/](https://southern.sare.org/sare-in-your-state/alabama/)

## Contact Your SARE State Coordinator

SARE sustainable ag coordinators run state-level educational programs for Extension and other ag professionals, and many help grant applicants and recipients with planning and outreach. Visit [southern.sare.org/state-profiles/alabama/](https://southern.sare.org/state-profiles/alabama/) to learn more.

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For detailed information on SARE projects, go to  
**[www.SARE.org](https://www.SARE.org)**

SARE is funded by the USDA's National Institute of Food and Agriculture (NIFA).

This report includes summaries of competitive grant programs only. Some competitive grant programs that are no longer offered may be included or excluded from the totals in this report depending on the grant program and SARE region.



# AGRICULTURE PROJECTS FUNDED IN ALABAMA

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

Alabama has been awarded \$5,559,431 grants to support 98 projects, including but not limited to, 23 research and/or education projects, 13 professional development projects and 24 producer-led projects. Alabama has also received additional SARE support through multi-state projects.

## RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
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	Dr. William Smith Auburn University Dr. Leanne Dillard Auburn University Dr. Isaac Mirahki Auburn University Dr. Aghata E. Moreira da Silva Auburn University Dr. James Muir Texas A&M AgriLife Research Dr. Jose D. Pereira-Neto Auburn University
LS23-383	Grazing diversified cover crops as an alternative to improve land-use efficiency and sustainability in the Southeast	\$380,000	Dr. Leanne Dillard Auburn University Dr. Ana Caroline Cerqueira de Melo Vasco Auburn University Dr. Jose Dubeux, Jr. University of Florida - NFREC Dr. Kim Mullenix Auburn University Dr. William Smith Auburn University Dr. Marnin Wolfe Auburn University
LS23-385	Reducing the Environmental Impact of Beef Production Through the Use of Naturally Occurring Secondary Plant Metabolites in Southeastern Forage Systems	\$383,996	Dr. William Smith Auburn University Dr. Todd Callaway University of Georgia Dr. Leanne Dillard Auburn University Dr. James Muir Texas A&M AgriLife Research Dr. Kim Mullenix Auburn University/Alabama Cooperative Ex

LS19-307	Biofertilization of Bermudagrass: A step toward sustainable forage production	\$221,115	Dr.Leanne Dillard Auburn University
LS18-289	Development and Implementation of Ecologically Sound, System-based Tactics for Managing Pests and Insect-vectored Diseases in Cucurbit Production in the Southeast	\$270,000	Dr.Henry Fadamiro Auburn University
LS11-242	Adoption of Sustainable Farming and Ranching Practices among African-American Farmers: Helping and Hindering Factors and the Role of the 2008 Farm Bill	\$126,770	Heather Gray Federation of Southern Cooperatives/Land Assistant Fund Heather Gray Federation of Southern Cooperatives
LS10-234	Enhancing the Economic Stability of Select Limited Resource Farms through the Establishment of Micropropagated Pecan Orchards Integrated with Crops and Animals	\$15,000	Dr.Leonard Githinji Tuskegee University
LS10-237	Understanding Small Landowners' Perspectives in Adoption of Goat-Agroforestry Land Management System	\$27,961	Dr.Buddhi Gyawali Kentucky State University
LS09-218	A farmer-researcher collaborative effort to design no-till systems appropriate for small-scale organic producers in Alabama and the Deep South	\$250,000	Joseph Kloepper Auburn University Dr.Jan Garrett Auburn university
LS09-223	Nutrient optimization for sustainable goat production systems in the southeastern U.S.	\$170,000	Dr.Sandra Solaiman Tuskegee University
LS08-207	Enhancing the long-term sustainability and profitability of small, limited resource farmers in the Black Belt South through marketing research - education	\$122,000	Dr.Tasha Hargrove Tuskegee University
LS08-209	Producing, processing and marketing forage-finished beef for consumers in the southeastern United States	\$151,000	Chris Kerth Auburn University, Department of Animal Sciences Chris Kerth Texas A&M University

LS05-174	Understanding Plant-Soil-Livestock Interactions: A Key to Enhanced Sustainability in Southern-Pine Silvopasture Systems	\$120,000	Mary Goodman Auburn University
LS05-181	The use of renewable energy to improve the sustainability of Southeastern U.S. pond aquaculture: technical, economic, and industry evaluations of solar power options	\$14,850	Barrett Temple-Vaughan Tuskegee University
LS03-183	Barriers to the Adoption of Sustainable Agricultural Practices: Working Farmer and Change Agent Perspectives	\$50,000	Robin Fazio Sonrisa Farm
LS02-137	Participatory Implementation of Sustainable Vegetable Systems for Small and Limited Resource Farmers	\$161,280	Joseph Kloepper Auburn University
LS02-141	Sustainable Year-Round Forage System for Goat Production in the Southern USA	\$178,120	Dr. Sandra Solaiman Tuskegee University
LS98-092	Development of Sustainable Cropping Systems for Canola on Limited-Resource Farms in Alabama	\$124,488	Udai R. Bishnoi Alabama A&M University
LS94-062	Intercropping Small Grains and Lupin for Sustainable On-Farm Utilization	\$143,151	Edzard Van Santen Auburn University
LS93-051	Warm-Season Forage Grasses as Rotations for Sustaining Profitable Peanut Production	\$183,000	Rodrigo Rodriguez-Kabana Auburn University, Plant Pathology
LS93-053	Sustainable Whole Farm Grain/Silage Production Systems for the Southeast	\$240,639	D. Wayne Reeves USDA-ARS,
LS91-033	Reference Manual of LISA Resource Management Strategy Budgets for the Mid-South Region	\$50,000	Larry A. Johnson Tennessee Valley Authority Agricultural Institute
LS91-034	Total Resource Budgeting of LISA Related Management Strategies	\$19,500	Jerry R. Crews Auburn University

#### PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
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SPDP24-024	Little USA Community Solar Campus Agrivoltaics Training and Curriculum Development	\$79,965	Jack Podell 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	Dr.Frank Abrahamsen Tuskegee University Dr.Leanne Dillard Auburn University Dr.Nar Gurung Tuskegee University George Hunter Tuskegee University Dr.Chuck Okere Tuskegee University
SPDP21-04	Development of a Forage Establishment and Management Curriculum for Extension Agents and Mentor Farmers	\$77,469	Dr.Leanne Dillard Auburn University Dr.Michelle Elmore Auburn University Ken Kelley Auburn University Katelyn Kesheimer Dr.Kim Mullenix Auburn University/Alabama Cooperative Ex Dr.Rishi Prasad Auburn University Dr.Soren Rodning Auburn University Max Runge Auburn University Dr.David Russell Auburn University Dr.Jason Sawyer Auburn University Dr.Liliane Severino da Silva Clemson University Dr.Sonja Thomas Auburn University
ES18-143	Cattle and Small Ruminant IPM Educational Materials: A systems approach that will lead to a sustainable future	\$79,900	Kelly Palmer Auburn University
ES16-129	The Systems 360° Initiative: Curriculum development and delivery of land management educational tools for Alabama cattle producers	\$74,298	Dr.Kim Mullenix Auburn University/Alabama Cooperative Ex
ES13-114	Trainer's Training in Agroforestry Practices in the Southeastern Region: 1890 Agroforestry Consortium Initiative	\$99,540	Dr.Uma Karki Tuskegee University

ES12-111	Tuskegee University Goat Production Training Programs	\$71,164	Olga Bolden-Tiller Tuskegee University
ES12-112	Expanding the Expertise of Agricultural Professionals to Serve New Constituents: Practical Training on Organic Horticulture and High Tunnels	\$99,736	Jim Lukens Southern Sustainable Agriculture Working Group
ES11-107	Training for sustainable year-round forage production and grazing/browsing management in the Southern Region	\$69,843	Dr.Uma Karki Tuskegee University
ES10-102	Organic Agriculture Hands-on Training and Educational Materials for Extension Professionals in the Southeast	\$98,850	Dr.Leonard Githinji Tuskegee University
ES09-099	Developing Successful Organic Horticulture Farms: Practical Training for Agricultural Professionals	\$62,915	Jean Mills Southern SAWG
ES00-050	We can do something about fire ants -Training Professionals and Developing Teaching Materials in Sustainable Fire Ant Management	\$40,155	Kathy Flanders Auburn University
LST94-005	Sustainable Cotton Production for the South	\$10,000	Elizabeth Ann Guertal Auburn University

#### FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FS24-361	Hawthorn Heritage:Cultivating Native Varieties for Sustainable Forestry and Agriculture	\$16,305	Ted Gilbert Carmoni Partners
FS24-362	Lettuce season extension for warmer climates	\$8,225	Margaret Ann Snow Snow's Bend Farm
FS22-343	Project Urban Mushrooms on Mimosa Wood	\$14,951	Maria Dominique Villanueva Fountain Heights Farms
FS21-333	Development of the East Alabama Black Belt Farmers' Market and the Black Belt Brand of Sustainable Agricultural Products	\$13,060	Collie Graddick East Alabama Black Belt Farmers' Cooperative



FS20-322	Increasing Sustainability of Crawfish and Low Salinity Shrimp Production in West Alabama	\$12,581	DAVID CODDINGTON GREENE PRAIRIE AQUAFARM
FS17-302	Soil Effects of Animal Grazing for Selected Summer Crops in the Southern United States	\$9,955	Franklin Randle Farmer
FS17-304	Use of Probiotics to Increase Survival and Sustainable Yield of Inland Farmed Shrimp	\$14,869	DAVID CODDINGTON GREENE PRAIRIE AQUAFARM
FS13-272	Increasing Sustainability of Goats Production through Management of Gastrointestinal Nematodes	\$10,000	Samuel Fairley Farmer
FS13-275	Insect Exclusion Using Woven Shade Cloth	\$9,320	Will Mastin Local Appetite Growers LLC
FS09-235	Water Catchment Systems for Mobile and Permanent Farm Structures	\$9,970	Lima Santiago
FS08-224	Organic Strawberry Production: Extending the Season with Low Tunnels	\$10,000	Carol Garrett Auburn University Jan Garrett
FS08-226	Native-Grass Prairie Restoration and Soil Remediation Program	\$9,995	Fitz Hudson
FS07-215	Diversify Production Methods of Medicinal Herb Crops with Tissue Culture	\$9,946	Mary Janis
FS06-201	Evaluating Poultry Breeds Suitable for Pastured Production	\$7,988	Bill Findley Rough House Farm
FS06-202	Small Scale Rabbit, Production, and Marketing Project	\$10,000	Jeanette Grayson
FS05-187	Soil Building and Fertility through Cover Cropping among Limited Resource Farmers	\$11,968	John Brown Selma-Dallas Small Farmers Association
FS05-195	Alternative techniques for harvesting inland saltwater shrimp	\$6,557	DAVID CODDINGTON GREENE PRAIRIE AQUAFARM



FS02-159	Improving Stocking and Insect Control Procedures to Increase Survival of Saltwater Shrimp Post-larvae in Inland Ponds	\$6,667	DAVID CODDINGTON GREENE PRAIRIE AQUAFARM
FS00-122	Using Caged Filter-Feeding Fish to Increase Production and Profits from Fertile Catfish Ponds	\$3,282	William R. Odom, Jr.
FS98-080	Establishment of a Grazing Management School for Producers	\$9,760	Kenneth Rogers
FS97-049	Crop Production Systems for Nonchemical Control of Reniform Nematodes	\$8,892	Richard Edgar
FS97-052	Sustainable Pumpkin Production in the Southeast	\$4,655	Dwight James
FS97-064	Evaluation of a Low-Cost Innovative Ensiling System for Small- to Medium-Sized Dairy Operations	\$10,000	David and Leianne Wright Canebrake Farms
FS94-011	Clover Clippings as Replacement for Chicken Litter in Compost	\$6,160	Jean Mills Southern SAWG

#### GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GS23-293	Evaluating the Potential to Breed Kura Clover for a Southeastern U.S. Adapted Living Mulch System	\$16,363	Dr.Marnin Wolfe Auburn University Francis Manze Auburn University
GS22-257	Farmer Profitability and Willingness to Accept Payment to Adopt Cover Crops in Alabama	\$16,500	Dr.Wendiam Sawadgo Auburn University Derick Adu Auburn University
GS22-265	Supporting Peach Growers with a Phenological Approach for Best Management Practices	\$16,281	Melba Salazar-Gutierrez Auburn University Adriana Cifuentes Carvajal Auburn University
GS21-246	Supporting an Emerging Industry: Developing a broccoli crop model to guide growers with sustainable decision-making	\$16,479	Andre da Silva Auburn University Marcos de Barros Auburn University
GS20-220	Novel Bio Sensor Derived from Cotton Biomass to Monitor Real-Time Soil Moisture and Nitrate	\$16,500	Byungjin Min Tuskegee University Naresh Shahi Tuskegee University

GS16-165	Development of Sustainable Seaweed Aquaculture on Alabama's Gulf Coast	\$9,392	Dr. William Walton Auburn University Pandora Wadsworth Auburn University
GS11-098	Dewatering Aquaculture Effluent For The Hydroponic Production of Pak Choi ( <i>Brassica rapa chinensis</i> ) and Production of Vegetable Seedlings	\$9,932	Dr. Jesse Chappell Auburn University Jason Danaher Auburn University
GS08-069	Effects of Forage-finished Beef on Cool- or Warm-Season Forages	\$9,685	Chris Kerth Auburn University, Department of Animal Sciences Clint Rowe Auburn University, Department of Animal Sciences
GS05-049	Organic mulches and high residue no-till for collard production in Alabama	\$10,000	Wes Wood Auburn University Dept of Agronomy and Soils Michael Mulvaney Auburn University, Dept. of Agronomy and Soils
GS04-036	Assessing the Viability of the Inland Shrimp Farming as a Viable Enterprise in Alabama	\$9,901	Ntam Baharanyi Tuskegee University Barrett Temple-Vaughan Tuskegee University Anthony Deanes Tuskegee University
GS04-037	Evaluating the Efficacy of Tasco-14® Supplementation on Carcass and Performance Characteristics of Cattle Finished on Winter Annual Forages as a Sustainable Alternative finishing system in the Southeast	\$9,814	Chris Kerth Auburn University, Department of Animal Sciences Kirk Braden Auburn University
GS04-042	Determination of Microbiological Hazards and Critical Control Points in Regional Rabbit Processing Facilities	\$10,000	Leonard Williams Alabama A&M University Cornelius Howard Alabama A&M University
GS03-023	Aphids as Beneficial Insects? Using a Fire Ant - Aphid Interaction for the Sustainable Management of Insect Pests in Southern Cotton	\$7,040	Micky Eubanks Auburn University John Styrsky Auburn University

#### ON FARM RESEARCH/PARTNERSHIP GRANTS

Project #	Project Title	SARE Support	Project Leaders
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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	Dr.byeng min Tuskegee university
OS20-136	Validation of a Spotted Wing Drosophila Growing Degree Day Model for the Southeast for Sustainable Blueberry Production	\$16,581	Dr.Edgar Vinson, III Department of Horticulture, Auburn University & Alabama Cooperative Extension System
OS18-117	Evaluation of High-residue Cover Crop Systems and Biodegradable Mulches for Weed Control in Vegetable Production in Alabama	\$14,977	Steve Li Auburn University
OS14-088	On-Farm Evaluation and Use of Sunn Hemp (Crotalaria juncea L.) legume to Improve Sustainable Meat Goat Production and Health in Southern USA	\$15,000	Dr.Byeng ryeI Min Tuskegee University
OS13-071	Comparison of on-farm winter feeding strategies for sustainable meat goat production	\$14,500	Dr.Nar Gurung Tuskegee University
OS11-059	Sustainable goat farming: Pasture enhancement and diet selection by goats	\$14,493	Dr.Uma Karki Tuskegee University
OS08-040	Sustainable Irrigation Methods for Alternative Crop Production	\$15,000	Dr.Elina Coneva Auburn University
OS04-018	Recirculating Production Pond Inflows to Increase Production and Reduce Effluents on Small-Scale Fish Farms	\$14,145	David Cline Alabama Cooperative Extension System
OS02-003	Central Alabama Soil Quality Improvement for Cotton Growers	\$2,116	Leonard Kuykendall AL Cooperative Extension System/Autauga County
OS02-004	Incorporation of Triticale/Clover into Existing Grazing Management Systems to Enhance Beef Cattle Production Sustainability	\$967	Perry Mobley

#### SUSTAINABLE COMMUNITY INNOVATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
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CS10-083	United Cherokee Ani-Yun-Wiya Nation Blackberry Development Project (UCANBD Project)	\$10,000	Judy Dixon United Cherokee Ani-Yun-Wiya Nation Gina Williamson United Cherokee Ani-Yun-Wiya Nation
CS09-074	Producers/Buyers Cooperative: Linking Family Farms and Institutions	\$10,000	Kathryn Strickland Food Bank of North Alabama
CS08-067	The Alabama Blackbelt Community Food System Project	\$10,000	Andrew Williams The United Christian Community Association
CS08-068	Training for Sustainable Community Development: Phase IIIb	\$5,000	Dr.Robert Zabawa Tuskegee University
CS07-060	Training for Sustainable Community Development: Phase III	\$10,000	Dr.Robert Zabawa Tuskegee University
CS06-046	Training for Sustainable Community Development: Phase II	\$10,000	Dr.Robert Zabawa Tuskegee University Dr.Tasha Hargrove Tuskegee University
CS06-051	The Clean Food Network	\$40,000	Dove Stackhouse ASAN (Alabama Sustainable Agricultural Network)
CS05-037	Agritourism and Agribusiness Entrepreneur Training, Assistance and Product Marketing in the Eastern Alabama Black Belt	\$9,956	Barrett Temple-Vaughan Tuskegee University
CS05-039	Partnerships for Sustainable Communities	\$10,000	Dr.Robert Zabawa Tuskegee University
CS04-019	Sustainable Agriculture for Future Economics (SAFE)	\$10,000	Wendy Allen Mobile Bay National Estuary Program
CS04-032	Developing a Marketing Network for Central Alabama	\$10,000	Karen Wynne Alabama Sustainable Agriculture Network
CS03-016	Taylor Community Supported Agriculture Project	\$10,000	Evelyn Williams The United Christian Community Association, Inc.

#### EDUCATION ONLY GRANTS

Project #	Project Title	SARE Support	Project Leaders
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EDS22-42	Southern Farmer Leadership Fellowship for Farmer-led Racial Equity and Sustainability Projects in the South	\$49,767	Emmanuel Adolfo Alzuphar National Young Farmers Coalition Katherine Un National Young Farmers Coalition
EDS20-24	Building Grassroots Infrastructure for Peer-to-Peer Learning and Support for Sustainable Farmers in Alabama	\$49,992	Alice Evans Alabama Sustainable Agriculture Network
EDS19-11	Regional Educational Campaign for High Tunnel Vegetable Producers, Limited Resource, and Veteran Farms via On-Farm Pest Exclusion and Natural Enemy Demonstrations, Publications, and Self-help Tools	\$49,648	Dr.Ayanava Majumdar Alabama Cooperative Extension System, Auburn University

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**Total funding from the USDA SARE program to  
Alabama  
\$5,559,431**

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For further information on projects, contact 770-412-4787 or [ssare@uga.edu](mailto:ssare@uga.edu).  
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