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 $360 million to more than 8,174 initiatives.

SARE is grassroots with far-reaching impact

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

SARE communicates results

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

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

Alabama

Project Highlight: Physical Pest Exclusion with Shade Cloth

Insect pressure is one of the major challenges of vegetable production in the Deep South, where the weather is warm and humid. Repeated applications of pesticides are expensive and time consuming for the farmer, unappealing to many consumers and potentially harmful to the environment. Yet pest damage significantly lowers the value of fresh market produce, presenting growers with a difficult problem to solve.

Seeking a good alternative to repeated pesticide applications, Fairhope, Ala., farmer Will Mastin used a SARE grant to experiment with physical pest exclusion inside an existing high tunnel. Working with an Alabama Extension entomologist, Mastin outfitted a high tunnel with a woven mesh fabric and compared tomato production inside the tunnel to the open field. In one season, the result was impressive: In the tunnel, only 10-20 percent of tomatoes were lost to pests, whereas in the field losses were 80-100 percent.

Pest exclusion with shade cloth holds promise for Alabama growers as Mastin has identified areas to continue exploring. Air temperature is one issue, because it gets hot inside the tunnel when airflow is diminished. Another is the most effective way of including beneficial insects, since they cannot get into the tunnel on their own.

For more information on this project, see sare.org/projects, and search for project number FS13-275.

SARE in Alabama

www.sare.org/sare-in-your-state/alabama

$4,196,986 in total funding

91 grant projects

(since 1988)

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

Total awards: 91 grants
- 24 Research and Education
- 12 Sustainable Community Innovation
- 11 Professional Development Program
- 22 Farmer/Rancher
- 12 Graduate Student
- 10 On Farm Research/Partnership

Total funding: $4,196,986
- $2,788,281 Research and Education
- $144,956 Sustainable Community Innovation
- $783,870 Professional Development Program
- $210,576 Farmer/Rancher
- $141,524 Graduate Student
- $127,779 On Farm Research/Partnership

Find a complete list of projects on page 3.

SARE's Impact

53 percent of producers report using a new production technique after reading a SARE publication.

79 percent of producers said they improved soil quality through their SARE project.

64 percent of producers said their SARE project helped them achieve higher sales.

Learn about local impacts at: 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-pages/alabama to learn more.

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For detailed information on SARE projects, go to www.SARE.org

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

This report includes summaries of competitive grant programs only. Some competitive grant programs that are no longer offered may be included or excluded from the totals in this report depending on the grant program and SARE region.
Alabama has been awarded $4,196,986 grants to support 90 projects, including but not limited to, 23 research and/or education projects, 11 professional development projects and 22 producer-led projects. Alabama has also received additional SARE support through multi-state projects.

**RESEARCH AND EDUCATION GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| LS22-386  | Southern Farmer Leadership Fellowship for Farmer-led Racial Equity and Sustainability Projects in the South                                                                                              | $49,767      | Olivia Cleveland  
National Young Farmers Coalition  
Katherine Un  
National Young Farmers Coalition |
| LS20-331  | Building Grassroots Infrastructure for Peer-to-Peer Learning and Support for Sustainable Farmers in Alabama                                                                                           | $49,992      | Alice Evans  
Alabama Sustainable Agriculture Network |
Alabama Cooperative Extension System, Auburn University |
| 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 |
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

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

Understanding Plant-Soil-Livestock Interactions: A Key to Enhanced Sustainability in Southern-Pine Silvopasture Systems

$120,000
Mary Goodman
Auburn University

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

Barriers to the Adoption of Sustainable Agricultural Practices: Working Farmer and Change Agent Perspectives

$50,000
Robin Fazio
Sonrisa Farm

Participatory Implementation of Sustainable Vegetable Systems for Small and Limited Resource Farmers

$161,280
Joseph Kloepper
Auburn University

Sustainable Year-Round Forage System for Goat Production in the Southern USA

$178,120
Dr. Sandra Solaiman
Tuskegee University

Development of Sustainable Cropping Systems for Canola on Limited-Resource Farms in Alabama

$124,488
Udai R. Bishnoi
Alabama A&M University

Intercropping Small Grains and Lupin for Sustainable On-Farm Utilization

$143,151
Edzard Van Santen
Auburn University

Warm-Season Forage Grasses as Rotations for Sustaining Profitable Peanut Production

$183,000
Rodrigo Rodriguez-Kabana
Auburn University-Kabana

Sustainable Whole Farm Grain/Silage Production Systems for the Southeast

$240,639
D. Wayne Reeves
USDA-ARS,

Reference Manual of LISA Resource Management Strategy Budgets for the Mid-South Region

$50,000
Larry A. Johnson
Tennessee Valley Authority Agricultural Institute

Total Resource Budgeting of LISA Related Management Strategies

$19,500
Jerry R. Crews
Auburn University

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPDP21-04</td>
<td>Development of a Forage Establishment and Management Curriculum for Extension Agents and Mentor Farmers</td>
<td>$77,469</td>
<td>Dr. Leanne Dillard Auburn University, Dr. Michelle Elmore Auburn University, Ken Kelley Auburn University, Katelyn Kesheimer Auburn University, Dr. Kim Mullenix Auburn University/Alabama Cooperative Extension, 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</td>
</tr>
<tr>
<td>ES18-143</td>
<td>Cattle and Small Ruminant IPM Educational Materials: A systems approach that will lead to sustainable future</td>
<td>$79,900</td>
<td>Kelly Palmer Auburn University</td>
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<tr>
<td>ES16-129</td>
<td>The Systems 360° Initiative: Curriculum development and delivery of land management educational tools for Alabama cattle producers</td>
<td>$74,298</td>
<td>Dr. Kim Mullenix Auburn University/Alabama Cooperative Extension</td>
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<tr>
<td>ES13-114</td>
<td>Trainer’s Training in Agroforestry Practices in the Southeastern Region: 1890 Agroforestry Consortium Initiative</td>
<td>$99,540</td>
<td>Dr. Uma Karki Tuskegee University</td>
</tr>
<tr>
<td>ES12-111</td>
<td>Tuskegee University Goat Production Training Programs</td>
<td>$71,164</td>
<td>Olga Bolden-Tiller Tuskegee University</td>
</tr>
<tr>
<td>ES12-112</td>
<td>Expanding the Expertise of Agricultural Professionals to Serve New Constituents: Practical Training on Organic Horticulture and High Tunnels</td>
<td>$99,736</td>
<td>Jim Lukens Southern Sustainable Agriculture Working Group</td>
</tr>
<tr>
<td>ES11-107</td>
<td>Training for sustainable year-round forage production and grazing/browsing management in the Southern Region</td>
<td>$69,843</td>
<td>Dr. Uma Karki Tuskegee University</td>
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<tr>
<td>ES10-102</td>
<td>Organic Agriculture Hands-on Training and Educational Materials for Extension Professionals in the Southeast</td>
<td>$98,850</td>
<td>Dr. Leonard Githinji Tuskegee University</td>
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<tr>
<td>ES09-099</td>
<td>Developing Successful Organic Horticulture Farms: Practical Training for Agricultural Professionals</td>
<td>$62,915</td>
<td>Jean Mills Southern SAWG</td>
</tr>
<tr>
<td>ES00-050</td>
<td>We can do something about fire ants — Training Professionals and Developing Teaching Materials in Sustainable Fire Ant Management</td>
<td>$40,155</td>
<td>Kathy Flanders Auburn University</td>
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<tr>
<td>LST94-005</td>
<td>Sustainable Cotton Production for the South</td>
<td>$10,000</td>
<td>Elizabeth Ann Guertal Auburn University</td>
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<tr>
<td>Project Code</td>
<td>Project Title</td>
<td>Grant Amount</td>
<td>PI/Institution</td>
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<tr>
<td>FS22-343</td>
<td>Project Urban Mushrooms on Mimosa Wood</td>
<td>$14,951</td>
<td>Maria Dominique Villanueva Fountain Heights Farms</td>
</tr>
<tr>
<td>FS21-333</td>
<td>Development of the East Alabama Black Belt Farmers' Market and the Black Belt Brand of Sustainable Agricultural Products</td>
<td>$13,060</td>
<td>Collie Graddick East Alabama Black Belt Farmers' Cooperative</td>
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<tr>
<td>FS20-322</td>
<td>Increasing Sustainability of Crawfish and Low Salinity Shrimp Production in West Alabama</td>
<td>$12,581</td>
<td>DAVID CODDINGTON GREENE PRAIRIE AQUAFARM</td>
</tr>
<tr>
<td>FS17-302</td>
<td>Soil Effects of Animal Grazing for Selected Summer Crops in the Southern United States</td>
<td>$9,955</td>
<td>Franklin Randle Farmer</td>
</tr>
<tr>
<td>FS17-304</td>
<td>Use of Probiotics to Increase Survival and Sustainable Yield of Inland Farmed Shrimp</td>
<td>$14,869</td>
<td>DAVID CODDINGTON GREENE PRAIRIE AQUAFARM</td>
</tr>
<tr>
<td>FS13-272</td>
<td>Increasing Sustainability of Goats Production through Management of Gastrointestinal Nematodes</td>
<td>$10,000</td>
<td>Samuel Fairley Farmer</td>
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<tr>
<td>FS13-275</td>
<td>Insect Exclusion Using Woven Shade Cloth</td>
<td>$9,320</td>
<td>Will Mastin Local Appetite Growers LLC</td>
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<tr>
<td>FS09-235</td>
<td>Water Catchment Systems for Mobile and Permanent Farm Structures</td>
<td>$9,970</td>
<td>Lima Santiago</td>
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<tr>
<td>FS08-224</td>
<td>Organic Strawberry Production: Extending the Season with Low Tunnels</td>
<td>$10,000</td>
<td>Carol Garrett Auburn University Jan Garrett</td>
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<tr>
<td>FS08-226</td>
<td>Native-Grass Prairie Restoration and Soil Remediation Program</td>
<td>$9,995</td>
<td>Fitz Hudson</td>
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<tr>
<td>FS07-215</td>
<td>Diversify Production Methods of Medicinal Herb Crops with Tissue Culture</td>
<td>$9,946</td>
<td>Mary Janis</td>
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<tr>
<td>FS06-201</td>
<td>Evaluating Poultry Breeds Suitable for Pastured Production</td>
<td>$7,988</td>
<td>Bill Findley Rough House Farm</td>
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<tr>
<td>FS06-202</td>
<td>Small Scale Rabbit, Production, and Marketing Project</td>
<td>$10,000</td>
<td>Jeanette Grayson</td>
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<tr>
<td>FS05-187</td>
<td>Soil Building and Fertility through Cover Cropping among Limited Resource Farmers</td>
<td>$11,968</td>
<td>John Brown Selma-Dallas Small Farmers Association</td>
</tr>
<tr>
<td>FS05-195</td>
<td>Alternative techniques for harvesting inland saltwater shrimp</td>
<td>$6,557</td>
<td>DAVID CODDINGTON GREENE PRAIRIE AQUAFARM</td>
</tr>
<tr>
<td>FS02-159</td>
<td>Improving Stocking and Insect Control Procedures to Increase Survival of Saltwater ShrimpPost-larvae in Inland Ponds</td>
<td>$6,667</td>
<td>DAVID CODDINGTON GREENE PRAIRIE AQUAFARM</td>
</tr>
<tr>
<td>FS00-122</td>
<td>Using Caged Filter-Feeding Fish to Increase Production and Profits from Fertile Catfish Ponds</td>
<td>$3,282</td>
<td>William R. Odom, Jr.</td>
</tr>
<tr>
<td>FS98-080</td>
<td>Establishment of a Grazing Management School for Producers</td>
<td>$9,760</td>
<td>Kenneth Rogers</td>
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</table>
### GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
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</tr>
</thead>
</table>
| 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 (Brassica rapa chinensis) 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 |
### ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
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</tr>
</thead>
<tbody>
<tr>
<td>OS22-154</td>
<td>Harvest Management and Genotype Effects on Sunn Hemp forage as Cover Crop to Improve Sustainable Beef Cattle Production in Southeastern USA</td>
<td>$20,000</td>
<td>Dr.byeng min Tuskegee university</td>
</tr>
<tr>
<td>OS20-136</td>
<td>Validation of a Spotted Wing Drosophila Growing Degree Day Model for the Southeast for Sustainable Blueberry Production</td>
<td>$16,581</td>
<td>Dr.Edgar Vinson, III Department of Horticulture, Auburn University &amp; Alabama Cooperative Extension System</td>
</tr>
<tr>
<td>OS18-117</td>
<td>Evaluation of High-residue Cover Crop Systems and Biodegradable Mulches for Weed Control in Vegetable Production in Alabama</td>
<td>$14,977</td>
<td>Steve Li Auburn University</td>
</tr>
<tr>
<td>OS14-088</td>
<td>On-Farm Evaluation and Use of Sunn Hemp (Crotalaria juncea L.) legume to Improve Sustainable Meat Goat Production and Health in Southern USA</td>
<td>$15,000</td>
<td>Dr.Byeng ryel Min Tuskegee University</td>
</tr>
<tr>
<td>OS13-071</td>
<td>Comparison of on-farm winter feeding strategies for sustainable meat goat production</td>
<td>$14,500</td>
<td>Dr.Nar Gurung Tuskegee University</td>
</tr>
<tr>
<td>OS11-059</td>
<td>Sustainable goat farming: Pasture enhancement and diet selection by goats</td>
<td>$14,493</td>
<td>Dr.Uma Karki Tuskegee University</td>
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<tr>
<td>OS08-040</td>
<td>Sustainable Irrigation Methods for Alternative Crop Production</td>
<td>$15,000</td>
<td>Dr.Elina Coneva Auburn University</td>
</tr>
<tr>
<td>OS04-018</td>
<td>Recirculating Production Pond Inflows to Increase Production and Reduce Effluents on Small-Scale Fish Farms</td>
<td>$14,145</td>
<td>David Cline Alabama Cooperative Extension System</td>
</tr>
<tr>
<td>OS02-003</td>
<td>Central Alabama Soil Quality Improvement for Cotton Growers</td>
<td>$2,116</td>
<td>Leonard Kuykendall AL Cooperative Extension System/Autauga County</td>
</tr>
<tr>
<td>OS02-004</td>
<td>Incorporation of Triticale/Clover into Existing Grazing Management Systems to Enhance Beef Cattle Production Sustainability</td>
<td>$967</td>
<td>Perry Mobley</td>
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### SUSTAINABLE COMMUNITY INNOVATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
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<tbody>
<tr>
<td>CS09-074</td>
<td>Producers/Buyers Cooperative: Linking Family Farms and Institutions</td>
<td>$10,000</td>
<td>Kathryn Strickland Food Bank of North Alabama</td>
</tr>
</tbody>
</table>
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.

Total funding from the USDA SARE program to Alabama
$4,196,986

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