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 $307 million to more than 7,384 initiatives.

SARE is grassroots with far-reaching impact

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

SARE communicates results

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

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

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

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

$3,827,523 in total funding

71 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: **71 grants**
- 20 Farmer/Rancher
- 9 Graduate Student
- 9 On Farm Research/Partnership
- 10 Professional Development Program
- 23 Research and Education

Total funding: **$3,827,523**
- $182,565 Farmer/Rancher
- $92,264 Graduate Student
- $107,779 On Farm Research/Partnership
- $706,401 Professional Development Program
- $2,738,514 Research and Education

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.

Ayanava Majumdar
Auburn University/Alabama Extension
(251) 331-8416
azm0024@auburn.edu

Rudy Pacumbaba
Alabama Cooperative Extension System
(256) 372-4266
rop0001@aces.edu

Franklin Quarcoo
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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 $3,972,479 grants to support 82 projects, including but not limited to, 22 research and/or education projects, 10 professional development projects and 20 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>
<tbody>
<tr>
<td>LS20-331</td>
<td>Building Grassroots Infrastructure for Peer-to-Peer Learning and Support for Sustainable Farmers in Alabama</td>
<td>$49,992</td>
<td>Alice Evans</td>
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<td>Alabama Sustainable Agriculture Network</td>
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<td>Alabama Cooperative Extension System, Auburn University</td>
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<tr>
<td>LS19-307</td>
<td>Biofertilization of Bermudagrass: A step toward sustainable forage production</td>
<td>$221,115</td>
<td>Dr.Leanne Dillard</td>
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<td></td>
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<td>Auburn University</td>
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<tr>
<td>LS18-289</td>
<td>Development and Implementation of Ecologically Sound, System-based Tactics for Managing Pests and Insect-vectored Diseases in Cucurbit Production in the Southeast</td>
<td>$270,000</td>
<td>Henry Fadamiro</td>
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<td>Auburn University</td>
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<tr>
<td>LS11-242</td>
<td>Adoption of Sustainable Farming and Ranching Practices among African-American Farmers: Helping and Hindering Factors and the Role of the 2008 Farm Bill</td>
<td>$126,770</td>
<td>Heather Gray</td>
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<td>Federation of Southern Cooperatives/Land Assistant Fund</td>
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<td>Federation of Southern Cooperatives</td>
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<tr>
<td>LS10-234</td>
<td>Enhancing the Economic Stability of Select Limited Resource Farms through the Establishment of Micropropagated Pecan Orchards Integrated with Crops and Animals</td>
<td>$15,000</td>
<td>Dr.Leonard Githinji</td>
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<td></td>
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<td></td>
<td>Tuskegee University</td>
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<tr>
<td>LS10-237</td>
<td>Understanding Small Landowners’ Perspectives in Adoption of Goat-Agroforestry Land Management System</td>
<td>$27,961</td>
<td>Dr.Buddhi Gyawali</td>
</tr>
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<td>Kentucky State University</td>
</tr>
<tr>
<td>LS09-223</td>
<td>Nutrient optimization for sustainable goat production systems in the southeastern U.S.</td>
<td>$170,000</td>
<td>Dr.Sandra Solaiman</td>
</tr>
<tr>
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<td>Tuskegee University</td>
</tr>
<tr>
<td>LS09-218</td>
<td>A farmer-researcher collaborative effort to design no-till systems appropriate for small-scale organic producers in Alabama and the Deep South</td>
<td>$250,000</td>
<td>Joseph Kloepper</td>
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<td>Auburn University</td>
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<td></td>
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<td></td>
<td>Dr.Jan Garrett</td>
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<td></td>
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<td>Auburn university</td>
</tr>
<tr>
<td>LS08-207</td>
<td>Enhancing the long-term sustainability and profitability of small, limited resource farmers in the Black Belt South through marketing research &amp; education</td>
<td>$122,000</td>
<td>Dr.Tasha Hargrove</td>
</tr>
<tr>
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<td>Tuskegee University</td>
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</tbody>
</table>
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


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  Tuskegee University Goat Production Training Programs $71,164  Jerry R. Crews  Auburn University

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #  Project Title  SARE Support  Project Leaders
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
<table>
<thead>
<tr>
<th>Project #</th>
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</thead>
</table>
| 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**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| 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                                                           |
| FS08-226   | Native-Grass Prairie Restoration and Soil Remediation Program                                                                               | $9,995       | Fitz Hudson                                                             |
| FS08-224   | Organic Strawberry Production: Extending the Season with Low Tunnels                                                                        | $10,000      | Carol Garrett  
Auburn University  
Jan Garrett                                                                       |
| 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                                                                  |
### Small Scale Rabbit, Production, and Marketing Project

- **Project #**: FS06-202
- **Title**: Small Scale Rabbit, Production, and Marketing Project
- **SARE Support**: $10,000
- **Project Leader**: Jeanette Grayson

### Soil Building and Fertility through Cover Cropping among Limited Resource Farmers

- **Project #**: FS05-187
- **Title**: Soil Building and Fertility through Cover Cropping among Limited Resource Farmers
- **SARE Support**: $11,968
- **Project Leader**: John Brown
  - Selma-Dallas Small Farmers Association

### Alternative techniques for harvesting inland saltwater shrimp

- **Project #**: FS05-195
- **Title**: Alternative techniques for harvesting inland saltwater shrimp
- **SARE Support**: $6,557
- **Project Leader**: DAVID CODDINGTON
  - GREENE PRAIRIE AQUAFARM

### Improving Stocking and Insect Control Procedures to Increase Survival of Saltwater Shrimp Post-larvae in Inland Ponds

- **Project #**: FS02-159
- **Title**: Improving Stocking and Insect Control Procedures to Increase Survival of Saltwater Shrimp Post-larvae in Inland Ponds
- **SARE Support**: $6,667
- **Project Leader**: DAVID CODDINGTON
  - GREENE PRAIRIE AQUAFARM

### Using Caged Filter-Feeding Fish to Increase Production and Profits from Fertile Catfish Ponds

- **Project #**: FS00-122
- **Title**: Using Caged Filter-Feeding Fish to Increase Production and Profits from Fertile Catfish Ponds
- **SARE Support**: $3,282
- **Project Leader**: William R. Odom, Jr.

### Establishment of a Grazing Management School for Producers

- **Project #**: FS98-080
- **Title**: Establishment of a Grazing Management School for Producers
- **SARE Support**: $9,760
- **Project Leader**: Kenneth Rogers

### Crop Production Systems for Nonchemical Control of Reniform Nematodes

- **Project #**: FS97-049
- **Title**: Crop Production Systems for Nonchemical Control of Reniform Nematodes
- **SARE Support**: $8,892
- **Project Leader**: Richard Edgar

### Sustainable Pumpkin Production in the Southeast

- **Project #**: FS97-052
- **Title**: Sustainable Pumpkin Production in the Southeast
- **SARE Support**: $4,655
- **Project Leader**: Dwight James

### Development of Sustainable Seaweed Aquaculture on Alabama’s Gulf Coast

- **Project #**: FS97-064
- **Title**: Development of Sustainable Seaweed Aquaculture on Alabama’s Gulf Coast
- **SARE Support**: $10,000
- **Project Leader**: David and Leianne Wright
  - Canebrake Farms

### Clover Clippings as Replacement for Chicken Litter in Compost

- **Project #**: FS94-011
- **Title**: Clover Clippings as Replacement for Chicken Litter in Compost
- **SARE Support**: $6,160
- **Project Leader**: Jean Mills
  - Southern SAWG

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### GRADUATE STUDENT GRANTS

<table>
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<tr>
<th>Project #</th>
<th>Project Title</th>
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<th>Project Leaders</th>
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</thead>
</table>
| 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 |
### ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS04-036</td>
<td>Assessing the Viability of the Inland Shrimp Farming as a Viable Enterprise in Alabama</td>
<td>$9,901</td>
<td>Ntam Baharanyi, Tuskegee University, Barrett Temple-Vaughan, Tuskegee University, Anthony Deanes, Tuskegee University</td>
</tr>
<tr>
<td>GS04-037</td>
<td>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</td>
<td>$9,814</td>
<td>Chris Kerth, Auburn University, Department of Animal Sciences, Kirk Braden, Auburn University</td>
</tr>
<tr>
<td>GS04-042</td>
<td>Determination of Microbiological Hazards and Critical Control Points in Regional Rabbit Processing Facilities</td>
<td>$10,000</td>
<td>Leonard Williams, Alabama A&amp;M University, Cornelius Howard, Alabama A&amp;M University</td>
</tr>
<tr>
<td>GS03-023</td>
<td>Aphids as Beneficial Insects? Using a Fire Ant – Aphid Interaction for the Sustainable Management of Insect Pests in Southern Cotton</td>
<td>$7,040</td>
<td>Micky Eubanks, Auburn University, John Styrsky, Auburn University</td>
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</tbody>
</table>

### SUSTAINABLE COMMUNITY INNOVATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>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>
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<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>
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<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>
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<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>
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<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>
</tr>
<tr>
<td>Project ID</td>
<td>Project Title</td>
<td>Funding Amount</td>
<td>Principal Investigator(s)</td>
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</tbody>
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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. |

**Total funding from the USDA SARE program to Alabama**  
$3,972,479

For further information on projects, contact Candace Pollock, Southern SARE public relations coordinator, at (770) 412-4786 or cpollock@uga.edu.  
Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).