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 $332 million to more than 7,748 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.

Texas

Project Highlight: Training for a Sustainable Agriculture Future

Thousands of Texas ranchers hurt by drought are seeking new ways to make their land profitable. Large Texas farms are being subdivided. Farms of all sizes are now in closer contact with non-agricultural communities due to urban growth. Agriculture in Texas is changing, and the technical professionals who support producers must keep up by learning innovative, research-based production and marketing strategies relevant to their clientele’s interests. This need prompted Texas A&M Extension educators to organize a SARE-funded training program on the sustainable and organic practices that are of emerging interest to Texas’ farmers and ranchers. The program reached 45 employees of Texas A&M and Prairie View A&M Extension, and the USDA Natural Resources Conservation Service. It included hands-on farm training conducted at six locations, with classroom presentations and discussions over four days. Eleven farmers and ranchers served as trainers during the on-site visits. Participants reported back on what they did in their communities as a result of their involvement in the program. Five months after conclusion of the training, they brought information about sustainable and organic practices to 1,000 farmers in 37 different counties through a combination of events and one-on-one outreach.

For more information on this project, see sare.org/projects, and search for project number ES13-120.

SARE in Texas

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

$8,776,053 in total funding

119 grant projects

(since 1988)

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

www.sare.org
SARE Grants in Texas

Total awards: 119 grants

- 37 Research and Education
- 4 Sustainable Community Innovation
- 9 Professional Development Program
- 25 Farmer/Rancher
- 26 Graduate Student
- 18 On Farm Research/Partnership

Total funding: $8,776,053

- $7,196,602 Research and Education
- $40,000 Sustainable Community Innovation
- $703,658 Professional Development Program
- $241,676 Farmer/Rancher
- $315,704 Graduate Student
- $278,413 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/texas

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/texas to learn more.

Nelson Daniels  
Prairie View A&M University  
(936) 261-5112  
daniels@ag.tamu.edu

Larry Redmon  
Texas A&M University  
(979) 845-4008  
l-redmon@tamu.edu

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.
Texas has been awarded $8,776,053 grants to support 118 projects, including but not limited to, 36 research and/or education projects, 9 professional development projects and 25 producer-led projects. Texas 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>
| LS21-345  | Soil for Water                                                                | $1,000,000   | Mike Morris  
National Center for Appropriate Technology  
Eric Bendfeldt  
Virginia Cooperative Extension  
Dr. Dirk Philipp  
University of Arkansas  
Dr. Rocky Lemus  
Mississippi State University, Department of Plant and Soil Sciences |
| LS20-341  | Assessing Water Use Efficiency, Soil Health, and Pollinators within a Transition from Irrigation to Dryland Management in the Texas High Plains | $299,208     | Dr. Scott Longing  
Texas Tech University  
Dr. Veronica Acosta-Martinez  
USDA-ARS |
| LS20-343  | Toward Culturally Responsive Disaster Management for Limited Resource Producers: The Role of Person, Place and Professional Agencies | $300,000     | Dr. Noel Estwick  
Prairie View A&M University  
Dr. Nelson Daniels  
Prairie View A&M University  
Dr. Marco Robinson  
Prairie View A&M University |
| LS19-313  | Organic and Conventional Agriculture: Learning from Each Other to Promote Soil Health and Economic Viability in West Texas | $299,667     | Dr. Katie Lewis  
Texas A&M AgriLife Research |
| LS19-312  | Regional Food Transportation for Texas Farmers                                 | $299,311     | Caroline Krejci  
The University of Texas at Arlington |
| LS18-288  | A Southern Regional Water Conference to Improve Producer Adoption of Sustainable Water Management Practices | $48,000      | Dr. Diane Boellstorff  
Texas A&M AgriLife Extension Service |
| LS17-277  | Indicators and Soil Conservation Practices for Soil Health and Carbon Sequestration | $312,000     | Dr. Barbara Bellows  
Tarleton State University/ TIAER |
| LS17-283  | Developing Organic Cropping Systems for Grain Production in Texas             | $276,000     | Ronnie Schnell  
Texas A&M University, Soil & Crop Sciences |
| LS17-286  | Long-term Agroecosystems Research and Adoption in the Texas Southern High Plains - Phase III | $300,000     | Dr. Charles West  
Texas Tech University |
| LS16-275  | Evaluating Organic Pest Control Products for Strawberries in Combination with High and Low Tunnels for Limited Resource Farmers in the Mid-South | $246,413     | Dr. Russell Wallace  
Texas A&M University AgriLife Extension |
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Title</th>
<th>Funding</th>
<th>Principal Investigator(s)</th>
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<tbody>
<tr>
<td>LS16-271</td>
<td>Intensifying Cropping Systems in Semi-Arid Environments to Enhance Soil Health and Profitability</td>
<td>$232,827</td>
<td>Dr. Paul DeLaune, Texas A&amp;M AgriLife Research / Soil and Crop Sciences</td>
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<tr>
<td>LS14-261</td>
<td>Long-term AgroEcosystems Research and Adoption in the Texas Southern High Plains – Phase II</td>
<td>$300,000</td>
<td>Dr. Charles West, Texas Tech University</td>
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<tr>
<td>LS14-264</td>
<td>Beyond Fresh: Expanding Markets for Sustainable Value-added Food Products in Texas</td>
<td>$220,000</td>
<td>Mike Morris, National Center for Appropriate Technology</td>
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<tr>
<td>LS12-249</td>
<td>Improving Soil Quality to Increase Yield and Reduce Diseases in Organic Rice Production</td>
<td>$225,000</td>
<td>Fugen Dou, Texas A&amp;M AgriLife Research</td>
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<tr>
<td>LS11-238</td>
<td>Long-term AgroEcosystems Research and Adoption in the Texas Southern High Plains – Phase I</td>
<td>$329,999</td>
<td>Dr. Charles West, Texas Tech University, Philip Brown, Texas Tech University</td>
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<tr>
<td>LS10-229</td>
<td>Integrated Crop and Livestock Systems for Enhanced Soil Carbon Sequestration and Microbial Diversity in the Semiarid Texas High Plains</td>
<td>$160,000</td>
<td>Dr. Jennifer Moore-Kucera, Texas Tech University</td>
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<tr>
<td>LS10-236</td>
<td>Traceability in Specialty Crop Production and Supply Chains: Distilling a Research and Extension Agenda</td>
<td>$33,000</td>
<td>Kathryn Boys, Virginia Tech, Kathryn Boys, Clemson University</td>
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<tr>
<td>LS08-202</td>
<td>Crop-livestock Systems for Sustainable High Plains Agriculture</td>
<td>$200,000</td>
<td>Dr. Vivien Allen, Texas Tech University</td>
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<tr>
<td>LS08-208</td>
<td>Marketing of locally produced sustainable animal fiber products</td>
<td>$140,000</td>
<td>John Bernard, University of Delaware, Hikaru Hanawa Peterson, Kansas State University, Gwendolyn Hustvedt, Texas State University</td>
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<tr>
<td>LS07-201</td>
<td>Pigeon pea: a multipurpose, drought resistant forage, grain and vegetable crop for sustainable southern farms</td>
<td>$200,000</td>
<td>Dr. John Sloan, Texas AgriLife Research</td>
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<tr>
<td>LS05-175</td>
<td>Sustainable and profitable control of invasive plant species by small ruminants</td>
<td>$178,000</td>
<td>Dr. James Muir, Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td>LS05-214</td>
<td>SARE Research and Education Program Impacts and Diffusion</td>
<td>$31,526</td>
<td>Marari Suvedi, CARRS Center for Evaluative Studies</td>
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<tr>
<td>LS03-144</td>
<td>Expanding the Marketing Opportunities for Organic Growers in Texas</td>
<td>$19,924</td>
<td>Douglas Constance, Sam Houston State University</td>
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<tr>
<td>LS03-150</td>
<td>Sustainable and profitable control of invasive species by browsing goats on small farms</td>
<td>$14,199</td>
<td>Dr. James Muir, Texas A&amp;M AgriLife Research</td>
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<tr>
<td>LS02-131</td>
<td>Forage and Livestock Systems for Sustainable High Plains Agriculture</td>
<td>$251,805</td>
<td>Dr. Vivien Allen, Texas Tech University</td>
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<tr>
<td>LS00-117</td>
<td>System for value-added export of manure nitrogen and phosphorus through turfgrass sod</td>
<td>$149,726</td>
<td>Donald Vietor, PhD, Texas A&amp;M University, Soil &amp; Crop Sciences</td>
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<tr>
<td>LS99-100</td>
<td>Systems for sustainability of alfalfa production on acid, Coastal Plain soils using various harvesting strategies</td>
<td>$149,750</td>
<td>Vincent Haby, Texas Agricultural Experiment Station</td>
</tr>
<tr>
<td>Project #</td>
<td>Project Title</td>
<td>SARE Support</td>
<td>Project Leaders</td>
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<tr>
<td>LS99-108</td>
<td>System for Conserving and Adding Value to Manure Sources of Nutrients in Turf-grass Sod</td>
<td>$16,854</td>
<td>Donald Vietor, PhD Texas A&amp;M University, Soil &amp; Crop Sciences</td>
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<tr>
<td>LS98-097</td>
<td>Introducing Alternative Crops Into Traditional Cotton-Grain Farming to Aid Transition To &quot;Freedom to Farm&quot; Agriculture</td>
<td>$114,279</td>
<td>Roland E. Roberts Texas A&amp;M University Research and Extension Center</td>
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<tr>
<td>LS97-082</td>
<td>Sustainable Crop/Livestock Systems in the Texas High Plains</td>
<td>$222,125</td>
<td>Dr. Vivien Allen Texas Tech University</td>
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<tr>
<td>LS95-069</td>
<td>Managing Soil Phosphorous Accumulation From Poultry Litter Application Through Vegetable/Legume Rotations</td>
<td>$135,000</td>
<td>D. R. Earhart Texas Agricultural Experiment Station</td>
</tr>
<tr>
<td>LS92-047</td>
<td>Farm Scale Evaluation of Alternative Cotton Production Systems</td>
<td>$60,000</td>
<td>William M. Lyle Texas Agricultural Experiment Station</td>
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<tr>
<td>LS92-048</td>
<td>Developing Environmentally Sound Poultry Litter Management Practices for Sustainable Cropping Systems</td>
<td>$140,000</td>
<td>D. R. Earhart Texas Agricultural Experiment Station</td>
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<tr>
<td>LS89-015</td>
<td>Enhancement of the Stability of Southern Region Agroecosystems Through Profitable Transition to Sustainable Agriculture</td>
<td>$121,989</td>
<td>Keith Jones Texas Department of Agriculture</td>
</tr>
<tr>
<td>LS88-002</td>
<td>Whole-farm Low/Reduced Input Farming Systems and Educational Program</td>
<td>$90,000</td>
<td>Hoover Carden Prairie View A &amp; M University</td>
</tr>
<tr>
<td>LS88-010</td>
<td>Solarization and Living Mulch to Optimize Low-Input Production Systems for Small Fruits (88-87-4)</td>
<td>$80,000</td>
<td>Charles Long Texas A &amp; M University</td>
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</table>

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

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<thead>
<tr>
<th>Project #</th>
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<th>Project Leaders</th>
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<tbody>
<tr>
<td>PDP21-06</td>
<td>Sustainable Aquatic Habitat Management on Agricultural Lands</td>
<td>$60,000</td>
<td>Brittany Chesser Texas A&amp;M AgriLife Extension Service Dr. Aaron Sumrall Texas A&amp;M AgriLife Extension Service</td>
</tr>
<tr>
<td>ES20-151</td>
<td>Beekeeping Curriculum and Training for Texas Agricultural Extension Agents and 4-H Youth Leaders</td>
<td>$79,516</td>
<td>Nicole Gueck AgriLogic Consulting, LLC Elizabeth &quot;Wizzie&quot; Brown Texas AgriLife Extension Service Leesa Hyder Texas Beekeepers Association Molly Keck Texas AgriLife Extension Service Ashley Ralph Texas Beekeepers Association Mary Reed Texas Apiary Inspection Services</td>
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<tr>
<td>ES19-147</td>
<td>Training Texas County Extension Agents and Mentor Ranchers to Improve Small Ruminant Health and Productivity Through Natural Genetic Selection Strategies</td>
<td>$76,996</td>
<td>Dr. Reid Redden Texas A&amp;M AgriLife Extension</td>
</tr>
<tr>
<td>ES18-139</td>
<td>Natural Resource Management for Sustainable Agriculture Production in East Texas</td>
<td>$42,773</td>
<td>Dr. Vanessa Corriher-Olson Texas A&amp;M AgriLife Extension</td>
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<tr>
<td>ES18-142</td>
<td>Promotion and Adoption of Sustainable Agriculture Practices in Texas: Training the Trainers</td>
<td>$80,000</td>
<td>Dr. Jake Mowrer Texas A&amp;M AgriLife Extension</td>
</tr>
</tbody>
</table>
### Ranching with Wildlife: Teaching Sustainable Livestock Production Practices for Wildlife Habitat
- **Project #:** ES17-136
- **Project Title:** Ranching with Wildlife: Teaching Sustainable Livestock Production Practices for Wildlife Habitat
- **SARE Support:** $78,838
- **Project Leaders:**
  - John Tomecek
  - Texas A&M Agrilife Extension Service

### Farming for the Future: Adopting Sustainable Agriculture Practices
- **Project #:** ES13-120
- **Project Title:** Farming for the Future: Adopting Sustainable Agriculture Practices
- **SARE Support:** $55,904
- **Project Leaders:**
  - Dr. Megan Clayton
  - Texas A&M AgriLife Extension Service, Department of Rangeland, Wildlife, and Fisheries Management

### Achieving Rangeland Sustainability Through Total Resource Management
- **Project #:** ES99-045
- **Project Title:** Achieving Rangeland Sustainability Through Total Resource Management
- **SARE Support:** $157,061
- **Project Leaders:**
  - William Fox, Ph.D.
  - Texas Cooperative Extension
  - C. Wayne Hanselka, Ph.D.
  - Texas Cooperative Extension

### Environmentally and Economically Sustainable Use of Rangeland
- **Project #:** LST94-002
- **Project Title:** Environmentally and Economically Sustainable Use of Rangeland
- **SARE Support:** $72,570
- **Project Leaders:**
  - James F. Cadenhead
  - Texas A & M Research and Extension

## FARMER/RANCHER GRANTS

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<tr>
<th>Project #</th>
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<tr>
<td>FS19-312</td>
<td>Tagasaste: A new feed source for West Texas</td>
<td>$9,670</td>
<td>Malinda Beeman, Marfa Maid Dairy</td>
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<tr>
<td>FS18-306</td>
<td>Subsoiling as an Effective and Affordable Water Capture Tool</td>
<td>$9,720</td>
<td>Amanda Krause, Parker Creek Ranch</td>
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<tr>
<td>FS17-299</td>
<td>Organic Sweet Potato as a Commercial Crop in South Texas</td>
<td>$10,000</td>
<td>Lois Kim, Farmer</td>
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<tr>
<td>FS14-281</td>
<td>Organic Cultivation Methods for Asparagus as an Alternative Crop in South Texas</td>
<td>$14,736</td>
<td>Gilbert Garza, Texas/Mexico Border Coalition CBO</td>
</tr>
<tr>
<td>FS13-277</td>
<td>Evaluating switchgrass in marginal land as a beneficial insect habitat and as compost source for vegetable production</td>
<td>$8,379</td>
<td>Cynthia Remsing, Lynn Remsing</td>
</tr>
<tr>
<td>FS12-262</td>
<td>Development of an innovative forage crop system for pasture raised swine</td>
<td>$8,303</td>
<td>Ron Luce, Poppa Skinny's Farm</td>
</tr>
<tr>
<td>FS10-246</td>
<td>Low Cost Geothermal Greenhouse Heating System for Southern Climates</td>
<td>$9,999</td>
<td>Tanya Miller, Millican Farms, LLC</td>
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<tr>
<td>FS07-219</td>
<td>Treating Soil Compaction Using Woven Weed Fabric</td>
<td>$9,886</td>
<td>Roy Riddle</td>
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<tr>
<td>FS06-198</td>
<td>Evaluation of Mulches for Organic Cantaloupe Production in Semi-Arid Regions</td>
<td>$9,855</td>
<td>John Chandler</td>
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<tr>
<td>FS06-205</td>
<td>Cover Crop Optimization for Sustainable Forage Systems on a Southern Dairy Farm</td>
<td>$9,872</td>
<td>Neil R. Miller, World Hunger Relief, Inc.</td>
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<tr>
<td>FS05-190</td>
<td>Addressing Cedar Infestations - Using Animal Impact to Increase Forage Production and Improve Soil Health</td>
<td>$14,987</td>
<td>Peggy Cole Jones, Holistic Resource Management of Texas, Inc</td>
</tr>
<tr>
<td>FS05-196</td>
<td>Weed Control for Row Crops Using Corrugating Linerboard/Medium Paper</td>
<td>$7,399</td>
<td>Michael E. Tolbert, The Landowners Association of Texas-Tyler Chapter</td>
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<tr>
<td>FS03-161</td>
<td>Sustainable Pastured Layer Research Project</td>
<td>$14,992</td>
<td>Graciela Alvarado, Texas/Mexico Border Coalition Community Based Org.</td>
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</table>
FS03-174  Goat Range-Nutrition Performance Test  $13,113  Marvin F. Shurley  Meat Goat Association

FS02-151  Increase Soil Organic Matter in Citrus Soils  $8,112  Jim Hoffimann

FS01-142  Pepitas de Ajo: permanent ground cover in garlic production  $14,132  Lydia Villanueva  Comm. Approaching Sustainability w/ Agroecology

FS99-088  Internal Parasite Resistance Selection Method for Sheep  $4,844  Ray Cloudt

FS99-090  Crop Rotation and Rotational Grazing Study  $9,876  Ken Graff

FS98-075  An Intensive Marketing Workshop for Growers and Ranchers  $7,561  Sue Johnson  Texas Organic Growers Association

FS97-050  Effects of Conservation Tillage on Water Quality in Southern Texas  $8,000  Charles Eubanks  Cameron County Field

FS97-053  Cool Season and Warm Season Grasses to Stabilize Erodible Soils and Increase Profitability  $10,000  David Kearney  Wichita County Field Crops Committee

FS96-036  Native Warm Season Grasses As Alternative Hay Source to Annual Sorghum/Sudan Grasses on Family-Operated Goat Dairy  $9,640  Lee B. Dexter  White Egret Farm

FS95-021  Pecan IPM Using Black-Eyed Peas as a Trap Crop  $4,000  Kyle Brooksheir

FS94-001  Controlling Aphids with Harmonia Lady Beetle in Pecan Orchards  $4,600  Cindy Wise  Texas Pecan Growers Assoc.

FS94-010  Site Specific Applications of Seed/Fertilizer/Chemicals  $10,000  Ricky & Becky Meinen

**GRADUATE STUDENT GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GS21-241 | Harnessing the Wild Relatives of Rice for Novel Adaptive Phenotypes: Genetics and breeding for agricultural sustainability beyond the Green Revolution | $16,500      | Dr. Benildo Reyes  
Texas Tech University  
Swarupa Mandal  
Texas Tech University |
| GS21-248 | African American Absentee Landowners in Houston and Their Knowledge of Rural Land Ownership Conservation Practices: A needs assessment | $14,532      | Dr. Chanda Elbert  
Texas A&M University  
Ashley Pellerin  
Texas A&M University |
| GS21-251 | Effectiveness of Tarping and Tillage as Weed Management Strategies in South Texas | $16,499      | Dr. Alexis Racelis  
University of Texas - Rio Grande Valley  
Christopher De la Rosa  
University of Texas Rio Grande Valley |
| GS20-226 | Comparing the Effects of Forage Mix and Nutrient Management on Soil Greenhouse Gas Flux in Semi-arid Improved Pastures | $16,450      | Lindsey Slaughter  
Texas Tech University  
Billi Petermann  
Texas Tech University |
<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Budget</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
</table>
| GS20-227| Texas Little Bluestem (Schizachyrium scoparium) Phenotypic Attribute Correlations to Collection Site Environment Characteristics | $11,889 | Dr. James Muir  
Texas A&M AgriLife Research  
Kimberlee Howell  
Tarleton State University |
| GS20-229| Cannabis sativa L. as a Feed Source in Backyard Rabbit Production    | $16,419 | Dr. William Smith, Ph.D.  
Tarleton State University  
Kristen Jacobson  
Tarleton State University |
| GS19-198| The Success of Organic and Other Sustainable Dual-Purpose Wheat Systems Depend on Access to Adapted Varieties | $16,500 | Bill Pinchak  
Texas A&M AgriLife Research  
Philip Hinson  
Texas A&M University |
| GS19-211| Roadblocks to Success: Needs assessment of small producers in Texas   | $10,132 | Dr. Ken Mix  
Texas State University  
Katie Tritsch  
Texas State University |
| GS19-209| Improving Resilience, Sustainability and Nutritional Properties of Specialty Crops Using Composted Spent Coffee Grounds | $16,044 | Dr. David Reed  
Texas A&M University  
Amanda Birnbaum  
Texas A&M University |
| GS18-193| Investigating Controls Over Nodulation and Nitrogen Fixation in Leguminous Cover Crops in Subtropical South Texas | $16,500 | Dr. Alexis Racelis  
University of Texas - Rio Grande Valley  
Stephanie Kasper  
University of Texas Rio Grande Valley |
| GS18-196| Effects of Cumulative Cattle Trampling on Soil Bulk Density and Infiltration of Rain Water on an Annual Forage Crop Pasture | $9,001  | Dr. Charles West  
Texas Tech University  
Dr. Kathryn Radicke-Vanderburg  
West Texas A&M University / Purdue Global University / Unity College |
| GS18-179| Developing Suitable Cover Crop Systems for South Texas: Evaluating Different Late-Summer and Winter Cover Crop Species | $16,352 | Muthu Bagavathiannan  
Texas A&M University  
Spencer Samuelson  
Corteva Agriscience |
| GS16-160| Agroecological methods to manage brassica pests on organic farms      | $11,000 | Dr. Alexis Racelis  
University of Texas - Rio Grande Valley  
Madeline Marshall  
Corteva Agriscience |
| GS16-161| Examining the role of bats in pest management in agroecosystems of south Texas | $10,223 | Dr. Alexis Racelis  
University of Texas - Rio Grande Valley  
Katharine Jones  
The University of Texas at Rio Grande Valley |
| GS15-148| Multifunctionality of Cover Crops in South Texas: Looking at multiple benefits of cover cropping on small farms in a subtropical climate | $8,953  | Dr. Alexis Racelis  
University of Texas - Rio Grande Valley  
Savannah Rugg  
University of Texas Pan-American |
| GS15-152| Evaluation of winter annual cover crops under multiple residue managements: Impacts on land management, soil water depletion, and cash crop productivity. | $9,383  | Dr. Charles West  
Texas Tech University  
Dr. Lisa Baxter  
University of Georgia (Tifton Campus) |
| GS14-133| Effects of Simulated and Insect Herbivory on Total and Protein Percipitable Phenolic Concentrations of Two Legumes | $9,040  | Dr. James Muir  
Texas A&M AgriLife Research  
Tiana Blackmon  
Tarleton State University |
| GS14-138| Use of Artificial Lighting to Increase Photoperiod Length for Pasture-Raised Laying Hens to Improve Egg Productivity and Quality | $10,997 | Dr. Jackie Wahrmund  
University of Kentucky  
Margaret Morgan  
Texas A&M University-Commerce |
| GS12-109| Factors contributing to the economic impact of cotton fleahoppers, Pseudatomoscelis seriatus | $9,336  | Micky Eubanks  
Auburn University  
Loriann Garcia  
Texas A&M University |
<table>
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<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
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</table>
| GS11-107   | Managing Climate Change on Apple Orchards                                      | $9,954       | Dr. James Veteto  
University of North Texas  
Stephen Carlson  
University of North Texas |
| GS11-108   | Evaluating functional diversity in an organic intercropping system             | $10,000      | Dr. Astrid Volder  
Texas A&M University  
Jose Franco  
Texas A&M University |
| GS07-056   | Allelopathic effects of small grain cover crops on cotton plant growth and yields | $10,000      | Dr. Vivien Allen  
Texas Tech University  
Yue Li  
Texas Tech University |
| GS07-064   | Cropping systems for sustainable nutrient management and dairy production      | $10,000      | Donald Vietor, PhD  
Texas A&M University, Soil & Crop Sciences  
Ronnie Schnell  
Texas A&M University, Soil & Crop Sciences |
| GS04-040   | Cycling of composted biosolids through turfgrass sod enhances sustainability across agricultural and urban landscapes | $10,000      | Donald Vietor, PhD  
Texas A&M University, Soil & Crop Sciences  
Nels Hansen  
Soil & Crop Sciences Department |
| GS03-021   | Development of Methodology to Measure Net Feed Efficiency in Bulls to Enhance Profitability and Environmental Sustainability of Beef Production | $10,000      | Gordon Carstens  
Texas A&M University |
| GS02-012   | Optimizing Water Use for Three Old World Bluestems in the Texas High Plains    | $10,000      | Dr. Vivien Allen  
Texas Tech University  
Dirk Philipp  
Texas Tech University |

**ON FARM RESEARCH/PARTNERSHIP GRANTS**

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<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
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| OS21-140   | Introducing Beneficial Entomopathogenic Nematodes for Biological Control and Enhanced Plant Resistance to Improve Pest Management in Cucurbit Crops | $20,000      | Anjel Helms  
Texas A&M University |
| OS20-138   | Strategic Management of Legume Cover-forage Crops to Optimize Utility in a Challenging Environment | $20,000      | Dr. Reagan Noland  
Texas A&M AgriLife Extension |
| OS20-139   | Incorporating Native Plants in Insectary Strips to Promote Insect Diversity and Belowground Beneficial Microbes | $20,000      | Pushpa Soti  
University of Texas Rio Grande Valley |
| OS19-128   | Sustainable Pasture Management in Texas: Optimizing forage production and nutrient use in various environments and soils | $14,298      | Dr. James Kiniry  
usda-ars |
| OS19-131   | Advancing the Frontier of Legume Cover Crops and Building Integrated System Resilience in Semi-arid West Texas | $15,000      | Dr. Reagan Noland  
Texas A&M AgriLife Extension |
| OS18-119   | Supporting Alternative Crop Options Through Improved Fertility Recommendations for Canola in Central and South Texas | $14,811      | Fernando Guillen-Portal  
Texas A&M University |
| OS18-121   | Integrating Cover Crops as Potential Weed and Pest Management Strategy in Organic Vegetable Farms in South Texas | $15,000      | Pushpa Soti  
University of Texas Rio Grande Valley |
Using Mycorrhizal Fungi to Improve Soil Health and Increase Yield in Organic Vegetable Farms

Deep Soil Profile Sampling of Nitrate for Residual Nitrogen Credit in Winter Wheat – Texas Blacklands

Determining accurate nitrate level requirements in an aquaponic system.

Developing farmer-appropriate integrated pest management strategies in South Texas: The potential of push-pull technologies to regulate organic brassica pest

Huitlacoche Production as an Alternative Crop in South Texas

Adaptable Wide Stale Seedbed System Combining Precision Fertilizer Placement, Conservation Irrigation Management with Reduced Tillage Practices for Long Term Farm Sustainability

BIOLOGICAL CONTROL OF SALTCEDAR ON WEST TEXAS RANCHES CONSERVES FORAGE AND WATER RESOURCES

Use of Guar (Cyamopsis tetragonolaba (L.) Taub) for cover crop rotation and green manuring

Livestock and Feedstock: Distiller’s Grain and Fuel Ethanol

Comparison of Stockpiled Bermudagrass + Annual Ryegrass and Traditional Hay-Only Winter Feeding Practices

Evaluation and Maintenance of Sustainable Systems for Alfalfa Production and Marketing Strategies on Coastal Plain Soils

Investing in Community Linkages to Improve our Food System

Establishing Sustainable Agriculture & Community Development in Elgin Texas

Building Local Food & Local Communities in Western Oklahoma

Sustainable Agriculture Innovations Lead to Rural Success

SUSTAINABLE COMMUNITY INNOVATION GRANTS

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<td>Establishing Sustainable Agriculture &amp; Community Development in Elgin Texas</td>
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<td>CS06-040</td>
<td>Building Local Food &amp; Local Communities in Western Oklahoma</td>
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<td>Darryl Birkenfield Ogallala Commons</td>
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<tr>
<td>CS03-012</td>
<td>Sustainable Agriculture Innovations Lead to Rural Success</td>
<td>$10,000</td>
<td>Gayla Kessinger Canutillo Independent Schoo</td>
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Texas
$8,776,053

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).