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 $389 million to more than 8,542 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

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

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

$11,062,269 in total funding

140 grant projects (since 1988)

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

Total awards: 140 grants
- 41 Research and Education
- 4 Sustainable Community Innovation
- 12 Professional Development Program
- 27 Farmer/Rancher
- 32 Graduate Student
- 21 On Farm Research/Partnership
- 3 Education Only

Total funding: $11,062,269
- $8,961,600 Research and Education
- $40,000 Sustainable Community Innovation
- $892,240 Professional Development Program
- $271,338 Farmer/Rancher
- $410,026 Graduate Student
- $358,398 On Farm Research/Partnership
- $128,667 Education Only

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.

Clarence Bunch
Prairie View A&M University
(936) 261-5117
clbunch@pvamu.edu

Vanessa Corriher-Olson
Texas A&M University
(903) 834-6191
vacorriher@ag.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 $11,062,269 grants to support 139 projects, including but not limited to, 40 research and/or education projects, 12 professional development projects and 27 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>
<tbody>
<tr>
<td>LS22-364</td>
<td>Development of Sustainable Organic Rice Ratoon Production Systems in the Southern US</td>
<td>$340,000</td>
<td>Dr. Tanumoy Bera Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Fugen Dou Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Lloyd T. Wilson Texas A&amp;M University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Yubin Yang Texas A&amp;M University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Xin-Gen (Shane) Zhou Texas A&amp;M University</td>
</tr>
<tr>
<td>LS22-371</td>
<td>Evaluating Cover Crops for Weed Reduction throughout the Southern States</td>
<td>$360,000</td>
<td>Justin Duncan National Center for Appropriate Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dorothy Barker Operation Spring Plant (OSP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jahi Chappell Southeastern African American Farmers Organic Network (SAAFON)</td>
</tr>
<tr>
<td>LS22-372</td>
<td>Sustainable Soil Resource Management and Produce Marketing on Resource-limited Urban Farms</td>
<td>$371,000</td>
<td>Dr. Omar Harvey Texas Christian University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Esayas Gebremichael Texas Christian University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Stacy Grau Texas Christian University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jesse Herrera CoAct</td>
</tr>
<tr>
<td>LS22-373</td>
<td>Converting to alternative annual and perennial forage based systems for sustainable grazing in semi-arid environments</td>
<td>$371,000</td>
<td>Dr. Paul DeLaune Texan A&amp;M AgriLife Research / Soil and Crop Sciences Francisco Abello</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Texas A&amp;M AgriLife Extension Service Emi Kimura</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Dariusz Malinowski Texas AgriLife Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. Marco Palma Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. William Pinchak Texas A&amp;M AgriLife Research</td>
</tr>
</tbody>
</table>
| LS22-375 | Sheep integration for diverse and resilient organic cotton systems | $370,998 | Dr.Reagan Noland  
Texas A&M AgriLife Extension  
Dr.Justin Benavidez  
Texas A&M AgriLife Extension Service  
Caitlyn Cooper-Norris  
Texas Tech University  
Dr.Holli Leggette  
Texas A&M University  
Dr.Reid Redden  
Texas A&M AgriLife Extension  
Dr.Cody Scott  
Angelo State University  
Bob Whitney  
Texas A&M AgriLife Extension |
|---|---|---|---|
| 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 |
| 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 |
| LS16-271 | Intensifying Cropping Systems in Semi-Arid Environments to Enhance Soil Health and Profitability | $232,827 | Dr.Paul DeLaune  
Texas A&M AgriLife Research / Soil and Crop Sciences |
| LS14-261 | Long-term AgroEcosystems Research and Adoption in the Texas Southern High Plains – Phase II | $300,000 | Dr.Charles West  
Texas Tech University |
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Project Title</th>
<th>Budget</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
</table>
| LS14-264     | Beyond Fresh: Expanding Markets for Sustainable Value-added Food Products in Texas | $220,000 | Mike Morris  
( National Center for Appropriate Technology ) |
| LS12-249     | Improving Soil Quality to Increase Yield and Reduce Diseases in Organic Rice Production | $225,000 | Dr. Fugen Dou  
( Texas A&M AgriLife Research ) |
| LS11-238     | Long-term AgroEcosystems Research and Adoption in the Texas Southern High Plains - Phase I | $329,999 | Dr. Charles West  
( Texas Tech University )  
Philip Brown  
( Texas Tech University ) |
| LS10-229     | Integrated Crop and Livestock Systems for Enhanced Soil Carbon Sequestration and Microbial Diversity in the Semiarid Texas High Plains | $160,000 | Dr. Jennifer Moore-Kucera  
( Texas Tech University ) |
| LS10-236     | Traceability in Specialty Crop Production and Supply Chains: Distilling a Research and Extension Agenda | $33,000  | Kathryn Boys  
( Virginia Tech )  
Kathryn Boys  
( Clemson University ) |
| LS08-202     | Crop-livestock Systems for Sustainable High Plains Agriculture | $200,000 | Dr. Vivien Allen  
( Texas Tech University ) |
| LS08-208     | Marketing of locally produced sustainable animal fiber products | $140,000 | John Bernard  
( University of Delaware )  
Hikaru Hanawa Peterson  
( Kansas State University )  
Gwendolyn Hustvedt  
( Texas State University ) |
| LS07-201     | Pigeon pea: a multipurpose, drought resistant forage, grain and vegetable crop for sustainable southern farms | $200,000 | Dr. John Sloan  
( Texas AgriLife Research ) |
| LS05-175     | Sustainable and profitable control of invasive plant species by small ruminants | $178,000 | Dr. James Muir  
( Texas A&M AgriLife Research ) |
| LS05-214     | SARE Research and Education Program Impacts and Diffusion | $31,526  | Marari Suvedi  
( CARRS Center for Evaluative Studies ) |
| LS03-144     | Expanding the Marketing Opportunities for Organic Growers in Texas | $19,924  | Douglas Constance  
( Sam Houston State University ) |
| LS03-150     | Sustainable and profitable control of invasive species by browsing goats on small farms | $14,199  | Dr. James Muir  
( Texas A&M AgriLife Research ) |
| LS02-131     | Forage and Livestock Systems for Sustainable High Plains Agriculture | $251,805 | Dr. Vivien Allen  
( Texas Tech University ) |
| LS00-117     | System for value-added export of manure nitrogen and phosphorus through turfgrass sod | $149,726 | Donald Vietor, PhD  
( Texas A&M University, Soil & Crop Sciences ) |
| LS99-100     | Systems for sustainability of alfalfa production on acid, Coastal Plain soils using various harvesting strategies | $149,750 | Vincent Haby  
( Texas Agricultural Experiment Station ) |
| LS99-108     | System for Conserving and Adding Value to Manure Sources of Nutrients in Turf-grass Sod | $16,854  | Donald Vietor, PhD  
( Texas A&M University, Soil & Crop Sciences ) |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS98-097</td>
<td>Introducing Alternative Crops Into Traditional Cotton-Grain Farming to Aid Transition To “Freedom to Farm” Agriculture</td>
<td>$114,279</td>
<td>Roland E. Roberts, Texas A&amp;M University Research and Extension Center</td>
</tr>
<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>
</tr>
<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>
</tr>
<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>
</tr>
<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>
</tr>
</tbody>
</table>
SPDP23-017  Modernizing Our Roots: Sustainable range and pasture result demonstrations to encourage local education and adoption $78,924  Dr. Megan Clayton
  Texas A&M AgriLife Extension Service, Department of Rangeland, Wildlife, and Fisheries Management
  Dr. Jason Cleere
  Department of Animal Science, Texas A&M AgriLife Extension Service
  Dr. Vanessa Corriher-Olson
  Texas A&M AgriLife Extension
  Dr. Jacob Dykes
  Department of Rangeland, Wildlife and Fisheries Management, Texas A&M AgriLife Extension - Fort Bend County
  Truman Lamb
  Texas A&M AgriLife Extension Service - Anderson County
  Dr. M. Shane McLellan
  Texas A&M AgriLife Extension Service, McLennan County
  Rogelio Mercado
  Texas A&M AgriLife Extension Service, Jim Wells County
  Ashley Pellerin
  Prairie View A&M University
  Larry Pierce, Jr.
  Texas A&M AgriLife Extension Service
  Robert Pritz
  Texas A&M AgriLife Extension Service
  Dr. Jeff Ripley
  Texas A&M AgriLife Extension Service
  Roy Walston
  Walston Ranch, Mill Creek Beef
  Sam Womble
  Texas A&M AgriLife Extension Service - Bexar County

SPDP22-09  Carbon Farm Planning to Promote Sustainable Agriculture in Texas $79,309  Elise Haschke
  NCAT

SPDP22-10  Certificate Program for Sustainable Cotton Production for County Agents $30,349  Steve Hague
  Texas A&M University - Department of Soil & Crop Sciences
  Dr. Jourdan Bell
  Texas A&M AgriLife Research and Extension
  Dr. Seth Byrd
  Oklahoma State University
  Dr. Matthew Foster
  LSU AgCenter
  Emi Kimura
  Murilo Maeda
  Texas A&M AgriLife Extension
  Dr. Josh McGinty
  Texas A&M AgriLife Extension
  Dr. Ben McKnight
  Texas A&M AgriLife Extension
  Dr. Jake Mowrer
  Texas A&M AgriLife Extension
  Dr. Reagan Noland
  Texas A&M AgriLife Extension
  Dr. Scott Nolte
  Texas A&M AgriLife Extension

SPDP21-06  Sustainable Aquatic Habitat Management on Agricultural Lands $60,000  Brittany Chesser
  Texas A&M AgriLife Extension Service
  Mikayla Killam
  Texas A&M University
### Beekeeping Curriculum and Training for Texas Agricultural Extension Agents and 4-H Youth Leaders

**Project #**: ES20-151  
**Project Title**: Beekeeping Curriculum and Training for Texas Agricultural Extension Agents and 4-H Youth Leaders  
**SARE Support**: $79,516  
**Project Leaders**:  
- Nicole Gueck  
  AgriLogic Consulting, LLC  
- Elizabeth "Wizzie" 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

### Training Texas County Extension Agents and Mentor Ranchers to Improve Small Ruminant Health and Productivity Through Natural Genetic Selection Strategies

**Project #**: ES19-147  
**Project Title**: Training Texas County Extension Agents and Mentor Ranchers to Improve Small Ruminant Health and Productivity Through Natural Genetic Selection Strategies  
**SARE Support**: $76,996  
**Project Leaders**:  
- Dr. Reid Redden  
  Texas A&M AgriLife Extension

### Natural Resource Management for Sustainable Agriculture Production in East Texas

**Project #**: ES18-139  
**Project Title**: Natural Resource Management for Sustainable Agriculture Production in East Texas  
**SARE Support**: $42,773  
**Project Leaders**:  
- Dr. Vanessa Corriher-Olson  
  Texas A&M AgriLife Extension

### Promotion and Adoption of Sustainable Agriculture Practices in Texas: Training the Trainers

**Project #**: ES18-142  
**Project Title**: Promotion and Adoption of Sustainable Agriculture Practices in Texas: Training the Trainers  
**SARE Support**: $80,000  
**Project Leaders**:  
- Dr. Jake Mowrer  
  Texas A&M AgriLife Extension

### 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

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| FS23-348   | Increasing Financial Sustainability on the Farm by Employing Moringa as a Drought Tolerant, Cost-Reducing Lamb Feed Supplement | $15,000      | Diana Padilla  
  Padilla Farm LLC DBA Yahweh's All Natural Farm and Garden                     |
| FS22-338   | New Design of Two Queen Horizontal Honey Bee Hive Bases for Commercial and Small Scale Beekeeping Operations | $14,662      | Daniel Brantner  
  Texas Honey Company                                                               |
| FS19-312   | Tagasaste: A new feed source for West Texas                                     | $9,670       | Malinda Beeman  
  Marfa Maid Dairy                                                                  |
| FS18-306   | Subsoiling as an Effective and Affordable Water Capture Tool                    | $9,720       | Amanda Krause  
  Parker Creek Ranch                                                                |
| FS17-299   | Organic Sweet Potato as a Commercial Crop in South Texas                        | $10,000      | Lois Kim  
  Farmer                                                                          |
| FS14-281   | Organic Cultivation Methods for Asparagus as an Alternative Crop in South Texas | $14,736      | Gilbert Garza  
  Texas/Mexico Border Coalition CBO                                                 |
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Project Title</th>
<th>Grant Amount</th>
<th>PI Name</th>
<th>Organization/University</th>
</tr>
</thead>
<tbody>
<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</td>
<td>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</td>
<td>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</td>
<td>Millican Farms, LLC</td>
</tr>
<tr>
<td>FS07-219</td>
<td>Treating Soil Compaction Using Woven Weed Fabric</td>
<td>$9,886</td>
<td>Roy Riddle</td>
<td></td>
</tr>
<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>
<td></td>
</tr>
<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</td>
<td>World Hunger Relief, Inc.</td>
</tr>
<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</td>
<td>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</td>
<td>The Landowners Association of Texas-Tyler Chapter</td>
</tr>
<tr>
<td>FS03-161</td>
<td>Sustainable Pastured Layer Research Project</td>
<td>$14,992</td>
<td>Graciela Alvardo</td>
<td>Texas/Mexico Border Coalition Community Based Org.</td>
</tr>
<tr>
<td>FS03-174</td>
<td>Goat Range-Nutrition Performance Test</td>
<td>$13,113</td>
<td>Marvin F. Shurley</td>
<td>Meat Goat Association</td>
</tr>
<tr>
<td>FS02-151</td>
<td>Increase Soil Organic Matter in Citrus Soils</td>
<td>$8,112</td>
<td>Jim Hoffimann</td>
<td></td>
</tr>
<tr>
<td>FS01-142</td>
<td>Pepitas de Ajo: permanent ground cover in garlic production</td>
<td>$14,132</td>
<td>Lydia Villanueva</td>
<td>Comm. Approaching Sustainability w/ Agroecology</td>
</tr>
<tr>
<td>FS99-088</td>
<td>Internal Parasite Resistance Selection Method for Sheep</td>
<td>$4,844</td>
<td>Ray Cloudt</td>
<td></td>
</tr>
<tr>
<td>FS99-090</td>
<td>Crop Rotation and Rotational Grazing Study</td>
<td>$9,876</td>
<td>Ken Graff</td>
<td></td>
</tr>
<tr>
<td>FS98-075</td>
<td>An Intensive Marketing Workshop for Growers and Ranchers</td>
<td>$7,561</td>
<td>Sue Johnson</td>
<td>Texas Organic Growers Association</td>
</tr>
<tr>
<td>FS97-050</td>
<td>Effects of Conservation Tillage on Water Quality in Southern Texas</td>
<td>$8,000</td>
<td>Charles Eubanks</td>
<td>Cameron County Field</td>
</tr>
<tr>
<td>FS97-053</td>
<td>Cool Season and Warm Season Grasses to Stabilize Erodible Soils and Increase Profitability</td>
<td>$10,000</td>
<td>David Kearney</td>
<td>Wichita County Field Crops Committee</td>
</tr>
<tr>
<td>FS96-036</td>
<td>Native Warm Season Grasses As Alternative Hay Source to Annual Sorghum/Sudan Grasses on Family-Operated Goat Dairy</td>
<td>$9,640</td>
<td>Lee B. Dexter</td>
<td>White Egret Farm</td>
</tr>
</tbody>
</table>
## GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GS23-280  | Plants Attracting Killers: Using Resistance Traits that Attract Insect Predators to Suppress Sorghum Aphids | $16,116      | Anjel Helms  
Texas A&M University  
Emily Russavage  
Texas A&M University |
| GS23-292  | Effect of Waste Milk Application on Reclaimed CRP Grassland Health and Ecosystem Services | $14,874      | Caitlyn Cooper-Norris  
Texas Tech University  
Shaelyn Rainey  
TTU NRM |
| GS23-295  | Development of Active Root System Architecture of Upland Cotton for Improved Sub-surface Water Uptake During Drought Conditions | $15,900      | Dr. Gunvant Patil  
Texas Tech University  
Micayla Lamb  
Texas Tech University |
| GS22-260  | Quantifying the Risks of Pesticide Exposure to Squash Bee Behavior and Pollination Services | $16,500      | Dr. Shalene Jha  
University of Texas at Austin  
Leeah Richardson  
University of Texas at Austin |
| GS22-261  | Climate Change Impacts on the U.S. Livestock Sector and Possible Adaptations | $16,500      | Dr. Bruce A. McCarl  
Texas A&M University  
Muxi Cheng  
Texas A&M University |
| GS22-273  | Native Texas Perennial Bunchgrass for Bioenergy Feedstock and Ruminant Nutrition | $14,432      | Dr. James Muir  
Texas A&M AgriLife Research  
Olivia Lasater  
Tarleton State University |
| 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 Nanda 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 |
| 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. Frank Owsley  
Tarleton State University  
Kristen Jacobson  
Tarleton State University |
The Success of Organic and Other Sustainable Dual-Purpose Wheat Systems Depend on Access to Adapted Varieties

Roadblocks to Success: Needs assessment of small producers in Texas

Improving Resilience, Sustainability and Nutritional Properties of Specialty Crops Using Composted Spent Coffee Grounds

Investigating Controls Over Nodulation and Nitrogen Fixation in Leguminous Cover Crops in Subtropical South Texas

Effects of Cumulative Cattle Trampling on Soil Bulk Density and Infiltration of Rain Water on an Annual Forage Crop Pasture

Developing Suitable Cover Crop Systems for South Texas: Evaluating Different Late-Summer and Winter Cover Crop Species

Agroecological methods to manage brassica pests on organic farms

Examining the role of bats in pest management in agroecosystems of south Texas

Multifunctionality of Cover Crops in South Texas: Looking at multiple benefits of cover cropping on small farms in a subtropical climate

Evaluation of winter annual cover crops under multiple residue managements: Impacts on land management, soil water depletion, and cash crop productivity.

Effects of Simulated and Insect Herbivory on Total and Protein Percipitable Phenolic Concentrations of Two Legumes

Use of Artificial Lighting to Increase Photoperiod Length for Pasture-Raised Laying Hens to Improve Egg Productivity and Quality

Factors contributing to the economic impact of cotton fleahoppers, Pseudatomoscelis seriatus

Managing Climate Change on Apple Orchards

Evaluating functional diversity in an organic intercropping system
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS23-162</td>
<td>Assessing Impacts of Grazing Management on Pollinator Conservation in Rangeland</td>
<td>$30,000</td>
<td>Dr. Elinor Lichtenberg University of North Texas</td>
</tr>
<tr>
<td>OS23-165</td>
<td>Hi-A Corn and Management Practices for Nutritional and Food and Feed</td>
<td>$29,998</td>
<td>Dr. Wenwei Xu Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td>OS22-156</td>
<td>Promoting Water Sustainable Agriculture by Combining In-situ Soil Moisture and Remote Sensing Data for Irrigation Scheduling</td>
<td>$19,987</td>
<td>T. Allen Berthold Texas A&amp;M AgriLife, Texas Water Resources Institute Juan Enciso Texas A&amp;M AgriLife Extension</td>
</tr>
<tr>
<td>OS21-140</td>
<td>Introducing Beneficial Entomopathogenic Nematodes for Biological Control and Enhanced Plant Resistance to Improve Pest Management in Cucurbit Crops</td>
<td>$20,000</td>
<td>Anjel Helms Texas A&amp;M University</td>
</tr>
<tr>
<td>OS20-138</td>
<td>Strategic Management of Legume Cover-forage Crops to Optimize Utility in a Challenging Environment</td>
<td>$20,000</td>
<td>Dr. Reagan Noland Texas A&amp;M AgriLife Extension</td>
</tr>
<tr>
<td>OS20-139</td>
<td>Incorporating Native Plants in Insectary Strips to Promote Insect Diversity and Belowground Beneficial Microbes</td>
<td>$20,000</td>
<td>Dr. Pushpa Soti University of Texas Rio Grande Valley</td>
</tr>
<tr>
<td>OS19-128</td>
<td>Sustainable Pasture Management in Texas: Optimizing forage production and nutrient use in various environments and soils</td>
<td>$14,298</td>
<td>Dr. James Kiniry usda-ars</td>
</tr>
<tr>
<td>OS19-131</td>
<td>Advancing the Frontier of Legume Cover Crops and Building Integrated System Resilience in Semi-arid West Texas</td>
<td>$15,000</td>
<td>Dr. Reagan Noland Texas A&amp;M AgriLife Extension</td>
</tr>
<tr>
<td>OS18-119</td>
<td>Supporting Alternative Crop Options Through Improved Fertility Recommendations for Canola in Central and South Texas</td>
<td>$14,811</td>
<td>Dr. Fernando Guillen-Portal Sustainable Oils/Global Clean Energy Holdings</td>
</tr>
</tbody>
</table>
Integrating Cover Crops as Potential Weed and Pest Management Strategy in Organic Vegetable Farms in South Texas

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 tetragonoloba (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

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>CS10-076</td>
<td>Investing in Community Linkages to Improve our Food System</td>
<td>$10,000</td>
<td>Jay Crossley Houston Tomorrow</td>
</tr>
<tr>
<td>CS10-081</td>
<td>Establishing Sustainable Agriculture &amp; Community Development in Elgin Texas</td>
<td>$10,000</td>
<td>Amy Miller City of Elgin</td>
</tr>
<tr>
<td>CS06-040</td>
<td>Building Local Food &amp; Local Communities in Western Oklahoma</td>
<td>$10,000</td>
<td>Darryl Birkenfield Ogallala Commons</td>
</tr>
</tbody>
</table>
Sustainable Agriculture Innovations Lead to Rural Success

CS03-012

\$10,000 Gayla Kessinger
Canutillo Independent Schoo

EDUCATION ONLY GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS23-048</td>
<td>Field day trainings to enhance sheep health and productivity</td>
<td>$45,000</td>
<td>Dr. Reid Redden&lt;br&gt;Texas A&amp;M AgriLife Extension&lt;br&gt;Jake Thorne&lt;br&gt;Texas A&amp;M AgriLife Extension</td>
</tr>
<tr>
<td>EDS22-38</td>
<td>Development and Implementation of the Agriculture Community Education (ACE) On-line Learning Modules for Northeast Texas Limited Resource Producers</td>
<td>$35,667</td>
<td>Rene’ McCracken&lt;br&gt;Northeast Texas Community College</td>
</tr>
<tr>
<td>EDS18-01</td>
<td>A Southern Regional Water Conference to Improve Producer Adoption of Sustainable Water Management Practices</td>
<td>$48,000</td>
<td>Dr. Diane Boellstorff&lt;br&gt;Texas A&amp;M AgriLife Extension Service</td>
</tr>
</tbody>
</table>

Total funding from the USDA SARE program to Texas
\$11,062,269

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).