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.

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, granteeproduced 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

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

Find a complete list of projects on page 3.

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
cbunch@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>
</table>
| LS22-364  | Development of Sustainable Organic Rice Ratoon Production Systems in the Southern US | $340,000     | Dr.Tanumoy Bera  
Texas A&M AgriLife Research  
Dr.Fugen Dou  
Texas A&M University  
Dr.Lloyd T. Wilson  
Texas A&M University  
Dr.Yubin Yang  
Texas A&M University  
Dr.Xin-Gen (Shane) Zhou  
Texas A&M University | |
| LS22-371  | Evaluating Cover Crops for Weed Reduction throughout the Southern States       | $360,000     | Justin Duncan  
National Center for Appropriate Technology  
Dorothy Barker  
Operation Spring Plant (OSP)  
Jahi Chappell  
Southeastern African American Farmers Organic Network (SAAFON) | |
| LS22-372  | Sustainable Soil Resource Management and Produce Marketing on Resource-limited Urban Farms | $371,000     | Dr.Omar Harvey  
Texas Christian University  
Dr.Esayas Gebremichael  
Texas Christian University  
Dr.Stacy Grau  
Texas Christian University  
Jesse Herrera  
CoAct | |
| LS22-373  | Converting to alternative annual and perennial forage based systems for sustainable grazing in semi-arid environments | $371,000     | Dr.Paul DeLaune  
Texan A&M AgriLife Research / Soil and Crop Sciences  
Francisco Abello  
Texas A&M AgriLife Extension Service  
Emi Kimura  
Dr.Dariusz Malinowski  
Texas AgriLife Research  
Dr.Marco Palma  
Texas A&M AgriLife Research  
Dr.William Pinchak  
Texas A&M AgriLife Research | |
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>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 | 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 Semi-arid 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>
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</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>
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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>
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<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>
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<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>

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS
<table>
<thead>
<tr>
<th>Project ID</th>
<th>Title</th>
<th>Budget</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
</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  
J. Boone Holladay  
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  |
<table>
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<tr>
<td>FS23-348</td>
<td>Increasing Financial Sustainability on the Farm by Employing Moringa as a Drought Tolerant, Cost-Reducing Lamb Feed Supplement</td>
<td>$15,000</td>
<td>Diana Padilla Padilla Farm LLC DBA Yahweh's All Natural Farm and Garden</td>
</tr>
<tr>
<td>FS22-338</td>
<td>New Design of Two Queen Horizontal Honey Bee Hive Bases for Commercial and Small Scale Beekeeping Operations</td>
<td>$14,662</td>
<td>Daniel Brantner Texas Honey Company</td>
</tr>
<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>
</tr>
<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>
</tr>
<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>
</tr>
<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>
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</tbody>
</table>

FARMER/RANCHER GRANTS

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<td>Principal Investigator(s)</td>
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<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>
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<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>
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<tr>
<td>FS10-246</td>
<td>Low Cost Geothermal Greenhouse Heating System for Southern Climates</td>
<td>$9,999</td>
<td>Tanya Miller</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>
</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>
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<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>
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<tr>
<td>FS03-161</td>
<td>Sustainable Pastured Layer Research Project</td>
<td>$14,992</td>
<td>Graciela Alvardo</td>
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<td>FS03-174</td>
<td>Goat Range-Nutrition Performance Test</td>
<td>$13,113</td>
<td>Marvin F. Shurley</td>
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<tr>
<td>FS02-151</td>
<td>Increase Soil Organic Matter in Citrus Soils</td>
<td>$8,112</td>
<td>Jim Hoffimann</td>
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<td>FS01-142</td>
<td>Pepitas de Ajo: permanent ground cover in garlic production</td>
<td>$14,132</td>
<td>Lydia Villanueva</td>
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<td>FS99-088</td>
<td>Internal Parasite Resistance Selection Method for Sheep</td>
<td>$4,844</td>
<td>Ray Cloudt</td>
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<td>FS99-090</td>
<td>Crop Rotation and Rotational Grazing Study</td>
<td>$9,876</td>
<td>Ken Graff</td>
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<tr>
<td>FS98-075</td>
<td>An Intensive Marketing Workshop for Growers and Ranchers</td>
<td>$7,561</td>
<td>Sue Johnson</td>
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<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>
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<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>
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<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>
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<tr>
<td>Project #</td>
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<tr>
<td>GS23-280</td>
<td>Plants Attracting Killers: Using Resistance Traits that Attract Insect Predators to Suppress Sorghum Aphids</td>
<td>$16,116</td>
<td>Micky Eubanks Texas A&amp;M University Emily Russavage Texas A&amp;M University</td>
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<td>GS23-292</td>
<td>Effect of Waste Milk Application on Reclaimed CRP Grassland Health and Ecosystem Services</td>
<td>$14,874</td>
<td>Caitlyn Cooper-Norris Texas Tech University Shaelyn Rainey TTU NRM</td>
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<td>GS23-295</td>
<td>Development of active root system architecture of upland cotton for improved sub-surface water uptake during drought conditions.</td>
<td>$15,900</td>
<td>Dr. Gunvant Patil Texas Tech University Micayla Lamb Texas Tech University</td>
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<tr>
<td>GS22-260</td>
<td>Quantifying the Risks of Pesticide Exposure to Squash Bee Behavior and Pollination Services</td>
<td>$16,500</td>
<td>Dr. Shalene Jha University of Texas at Austin Leeah Richardson University of Texas at Austin</td>
</tr>
<tr>
<td>GS22-261</td>
<td>Climate Change Impacts on the U.S. Livestock Sector and Possible Adaptations</td>
<td>$16,500</td>
<td>Dr. Bruce A. McCarl Texas A&amp;M University Muxi Cheng Texas A&amp;M University</td>
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<tr>
<td>GS22-273</td>
<td>Native Texas Perennial Bunchgrass for Bioenergy Feedstock and Ruminant Nutrition</td>
<td>$14,432</td>
<td>Dr. James Muir Texas A&amp;M AgriLife Research Olivia Lasater Tarleton State University</td>
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<tr>
<td>GS21-241</td>
<td>Harnessing the Wild Relatives of Rice for Novel Adaptive Phenotypes: Genetics and breeding for agricultural sustainability beyond the Green Revolution</td>
<td>$16,500</td>
<td>Dr. Benildo Reyes Texas Tech University Swarupa Mandal Texas Tech University</td>
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<tr>
<td>GS21-248</td>
<td>African American Absentee Landowners in Houston and Their Knowledge of Rural Land Ownership Conservation Practices: A needs assessment</td>
<td>$14,532</td>
<td>Dr. Chanda Elbert Texas A&amp;M University Ashley Pellerin Texas A&amp;M University</td>
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<tr>
<td>GS21-251</td>
<td>Effectiveness of Tarping and Tillage as Weed Management Strategies in South Texas</td>
<td>$16,499</td>
<td>Dr. Alexis Racelis University of Texas - Rio Grande Valley Christopher De la Rosa University of Texas Rio Grande Valley</td>
</tr>
<tr>
<td>GS20-226</td>
<td>Comparing the Effects of Forage Mix and Nutrient Management on Soil Greenhouse Gas Flux in Semi-arid Improved Pastures</td>
<td>$16,450</td>
<td>Lindsey Slaughter Texas Tech University Billi Petermann Texas Tech University</td>
</tr>
<tr>
<td>GS20-227</td>
<td>Texas Little Bluestem (Schizachyrium scoparium) Phenotypic Attribute Correlations to Collection Site Environment Characteristics</td>
<td>$11,889</td>
<td>Dr. James Muir Texas A&amp;M AgriLife Research Kimberlee Howell Tarleton State University</td>
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<td>GS20-229</td>
<td>Cannabis sativa L. as a Feed Source in Backyard Rabbit Production</td>
<td>$16,419</td>
<td>Dr. Frank Owsley Tarleton State University Kristen Jacobson Tarleton State University</td>
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<td>GS19-198</td>
<td>The Success of Organic and Other Sustainable Dual-Purpose Wheat Systems Depend on Access to Adapted Varieties</td>
<td>$16,500</td>
<td>Dr. Bill Pinchak&lt;br&gt; Texas A&amp;M AgriLife Research&lt;br&gt; Philip Hinson&lt;br&gt; Texas A&amp;M University</td>
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<td>GS19-211</td>
<td>Roadblocks to Success: Needs assessment of small producers in Texas</td>
<td>$10,132</td>
<td>Dr. Ken Mix&lt;br&gt; Texas State University&lt;br&gt; Katie Tritsch&lt;br&gt; Texas State University</td>
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<td>GS19-209</td>
<td>Improving Resilience, Sustainability and Nutritional Properties of Specialty Crops Using Composted Spent Coffee Grounds</td>
<td>$16,044</td>
<td>Dr. David Reed&lt;br&gt; Texas A&amp;M University&lt;br&gt; Amanda Birnbaum&lt;br&gt; Texas A&amp;M University</td>
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<td>GS18-193</td>
<td>Investigating Controls Over Nodulation and Nitrogen Fixation in Leguminous Cover Crops in Subtropical South Texas</td>
<td>$16,500</td>
<td>Dr. Alexis Racelis&lt;br&gt; University of Texas - Rio Grande Valley&lt;br&gt; Stephanie Kasper&lt;br&gt; University of Texas Rio Grande Valley</td>
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<td>GS18-196</td>
<td>Effects of Cumulative Cattle Trampling on Soil Bulk Density and Infiltration of Rain Water on an Annual Forage Crop Pasture</td>
<td>$9,001</td>
<td>Dr. Charles West&lt;br&gt; Texas Tech University&lt;br&gt; Dr. Kathryn Radicke-Vanderburg&lt;br&gt; West Texas A&amp;M University / Purdue Global University / Unity College</td>
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<td>GS18-179</td>
<td>Developing Suitable Cover Crop Systems for South Texas: Evaluating Different Late-Summer and Winter Cover Crop Species</td>
<td>$16,352</td>
<td>Muthu Bagavathiannan&lt;br&gt; Texas A&amp;M University&lt;br&gt; Spencer Samuelson&lt;br&gt; Corteva Agriscience</td>
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<td>GS16-160</td>
<td>Agroecological methods to manage brassica pests on organic farms</td>
<td>$11,000</td>
<td>Dr. Alexis Racelis&lt;br&gt; University of Texas - Rio Grande Valley&lt;br&gt; Madeline Marshall&lt;br&gt; Corteva Agriscience</td>
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<td>GS16-161</td>
<td>Examining the role of bats in pest management in agroecosystems of south Texas</td>
<td>$10,223</td>
<td>Dr. Alexis Racelis&lt;br&gt; University of Texas - Rio Grande Valley&lt;br&gt; Katharine Jones&lt;br&gt; The University of Texas at Rio Grande Valley</td>
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<td>GS15-148</td>
<td>Multifunctionality of Cover Crops in South Texas: Looking at multiple benefits of cover cropping on small farms in a subtropical climate</td>
<td>$8,953</td>
<td>Dr. Alexis Racelis&lt;br&gt; University of Texas - Rio Grande Valley&lt;br&gt; Savannah Rugg&lt;br&gt; University of Texas Pan-American</td>
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<td>GS15-152</td>
<td>Evaluation of winter annual cover crops under multiple residue managements: Impacts on land management, soil water depletion, and cash crop productivity.</td>
<td>$9,383</td>
<td>Dr. Charles West&lt;br&gt; Texas Tech University&lt;br&gt; Dr. Lisa Baxter&lt;br&gt; University of Georgia (Tifton Campus)</td>
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<td>GS14-133</td>
<td>Effects of Simulated and Insect Herbivory on Total and Protein Percipitable Phenolic Concentrations of Two Legumes</td>
<td>$9,040</td>
<td>Dr. James Muir&lt;br&gt; Texas A&amp;M AgriLife Research&lt;br&gt; Tiana Blackmon&lt;br&gt; Tarleton State University</td>
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<td>GS14-138</td>
<td>Use of Artificial Lighting to Increase Photoperiod Length for Pasture-Raised Laying Hens to Improve Egg Productivity and Quality</td>
<td>$10,997</td>
<td>Dr. Jackie Wahrmund&lt;br&gt; University of Kentucky&lt;br&gt; Margaret Morgan&lt;br&gt; Texas A&amp;M University-Commerce</td>
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<td>GS12-109</td>
<td>Factors contributing to the economic impact of cotton fleahoppers, Pseudatomoscelis seriatus</td>
<td>$9,336</td>
<td>Micky Eubanks&lt;br&gt; Auburn University&lt;br&gt; Loriani Garcia&lt;br&gt; Texas A&amp;M University</td>
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<td>GS11-107</td>
<td>Managing Climate Change on Apple Orchards</td>
<td>$9,954</td>
<td>Dr. James Veteto&lt;br&gt; University of North Texas&lt;br&gt; Stephen Carlson&lt;br&gt; University of North Texas</td>
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<td>GS11-108</td>
<td>Evaluating functional diversity in an organic intercropping system</td>
<td>$10,000</td>
<td>Dr. Astrid Volder&lt;br&gt; Texas A&amp;M University&lt;br&gt; Jose Franco&lt;br&gt; Texas A&amp;M University</td>
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</table>
Allopathic effects of small grain cover crops on cotton plant growth and yields

Cropping systems for sustainable nutrient management and dairy production

Cycling of composted biosolids through turfgrass sod enhances sustainability across agricultural and urban landscapes

Development of Methodology to Measure Net Feed Efficiency in Bulls to Enhance Profitability and Environmental Sustainability of Beef Production

Optimizing Water Use for Three Old World Bluestems in the Texas High Plains

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**ON FARM RESEARCH/PARTNERSHIP GRANTS**

<table>
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<th>Project #</th>
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<td>OS23-162</td>
<td>Assessing Impacts of Grazing Management on Pollinator Conservation in Rangeland</td>
<td>$30,000</td>
<td>Dr. Elinor Lichtenberg</td>
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<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</td>
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<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</td>
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<td>Texas A&amp;M AgriLife, Texas Water Resources Institute</td>
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<td>Juan Enciso</td>
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<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</td>
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<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</td>
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<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</td>
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<td>University of Texas Rio Grande Valley</td>
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<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</td>
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<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</td>
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<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</td>
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<td>Sustainable Oils/Global Clean Energy Holdings</td>
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</table>
OS18-121 Integrating Cover Crops as Potential Weed and Pest Management Strategy in Organic Vegetable Farms in South Texas $15,000 Dr. Pushpa Soti University of Texas Rio Grande Valley

OS17-108 Using Mycorrhizal Fungi to Improve Soil Health and Increase Yield in Organic Vegetable Farms $14,995 Dr. Alexis Racelis University of Texas - Rio Grande Valley

OS16-095 Deep Soil Profile Sampling of Nitrate for Residual Nitrogen Credit in Winter Wheat - Texas Blacklands $15,000 Dr. Jake Mowrer Texas A&M AgriLife Extension

OS14-087 Determining accurate nitrate level requirements in an aquaponic system. $9,737 Dr. Joseph Masabni Texas A&M

OS14-089 Developing farmer-appropriate integrated pest management strategies in South Texas: The potential of push-pull technologies to regulate organic brassica pest $15,000 Dr. Alexis Racelis University of Texas - Rio Grande Valley

OS13-072 Huitlacoche Production as an Alternative Crop in South Texas $14,962 Dr. Alexis Racelis University of Texas - Rio Grande Valley

OS12-067 Adaptable Wide Stale Seedbed System Combining Precision Fertilizer Placement, Conservation Irrigation Management with Reduced Tillage Practices for Long Term Farm Sustainability $15,000 Dionicio Valdez Texas A&M AgriLife Extension Service

OS10-053 BIOLOGICAL CONTROL OF SALTCEDAR ON WEST TEXAS RANCHES CONSERVES FORAGE AND WATER RESOURCES $14,965 Allen Knutson Texas AgriLife Extension Service (retired)

OS06-031 Use of Guar (Cyamopsis tetragonoloba (L.) Taub) for cover crop rotation and green manuring $15,000 Dr. Russell Wallace Texas A&M University AgriLife Extension

OS05-023 Livestock and Feedstock: Distiller’s Grain and Fuel Ethanol $15,000 Peggy Korth Water Assurance Technology Energy Resources

OS04-021 Comparison of Stockpiled Bermudagrass + Annual Ryegrass and Traditional Hay-Only Winter Feeding Practices $14,645 Larry Redmon Texas Cooperative Extension

OS02-006 Evaluation and Maintenance of Sustainable Systems for Alfalfa Production and Marketing Strategies on Coastal Plain Soils $15,000 Larry Redmon Texas Cooperative Extension

**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

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

**CS03-012**

Gayla Kessinger  
Canutillo Independent Schoo

### EDUCATION ONLY GRANTS

<table>
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<th>Project #</th>
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| EDS23-048  | Field day trainings to enhance sheep health and productivity                   | $45,000      | Dr. Reid Redden  
Texas A&M AgriLife Extension  
Jake Thorne  
Texas A&M AgriLife Extension |
Northeast Texas Community College |
| EDS18-01   | 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 |

**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).