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 8,519 initiatives.

SARE is grassroots with far-reaching impact

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

SARE communicates results

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

SARE in Texas

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

$11,015,379 in total funding

137 grant projects

(since 1988)

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

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 Grants in Texas

Total awards: **137 grants**

- **41 Research and Education**
- **4 Sustainable Community Innovation**
- **12 Professional Development Program**
- **27 Farmer/Rancher**
- **29 Graduate Student**
- **21 On Farm Research/Partnership**
- **3 Education Only**

Total funding: **$11,015,379**

- **$8,961,600** Research and Education
- **$40,000** Sustainable Community Innovation
- **$892,240** Professional Development Program
- **$271,338** Farmer/Rancher
- **$363,136** 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](https://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](https://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

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

For detailed information on SARE projects, go to [www.SARE.org](http://www.SARE.org)

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 $11,015,379 grants to support 136 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  
Texan 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 of the Project</th>
<th>Funding Amount</th>
<th>Principal Investigator(s)</th>
<th>Institution(s)</th>
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<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</td>
<td>National Center for Appropriate Technology</td>
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<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</td>
<td>Texas A&amp;M AgriLife Research</td>
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<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</td>
<td>Texas Tech University, Philip Brown</td>
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<td>Texas Tech University</td>
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<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</td>
<td>Texas Tech University</td>
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<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</td>
<td>Virginia Tech, Kathryn Boys</td>
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<td>Clemson University</td>
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<td>LS08-202</td>
<td>Crop-livestock Systems for Sustainable High Plains Agriculture</td>
<td>$200,000</td>
<td>Dr.Vivien Allen</td>
<td>Texas Tech University</td>
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<td>LS08-208</td>
<td>Marketing of locally produced sustainable animal fiber products</td>
<td>$140,000</td>
<td>John Bernard</td>
<td>University of Delaware, Hikaru Hanawa Peterson, Kansas State University, Gwendolyn Hustvedt, Texas State University</td>
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<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</td>
<td>Texas AgriLife Research</td>
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<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</td>
<td>Texas A&amp;M AgriLife Research</td>
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<tr>
<td>LS05-214</td>
<td>SARE Research and Education Program Impacts and Diffusion</td>
<td>$31,526</td>
<td>Marari Suvedi</td>
<td>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</td>
<td>Sam Houston State University</td>
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<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</td>
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<td>LS02-131</td>
<td>Forage and Livestock Systems for Sustainable High Plains Agriculture</td>
<td>$251,805</td>
<td>Dr.Vivien Allen</td>
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<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</td>
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<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</td>
<td>Texas Agricultural Experiment Station</td>
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<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</td>
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<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</td>
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<td>Texas A&amp;M University Research and Extension Center</td>
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<td>LS97-082</td>
<td>Sustainable Crop/Livestock Systems in the Texas High Plains</td>
<td>$222,125</td>
<td>Dr. Vivien Allen</td>
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<td>LS95-069</td>
<td>Managing Soil Phosphorous Accumulation From Poultry Litter Application Through Vegetable/Legume Rotations</td>
<td>$135,000</td>
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<td>LS92-047</td>
<td>Farm Scale Evaluation of Alternative Cotton Production Systems</td>
<td>$60,000</td>
<td>William M. Lyle</td>
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<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</td>
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<td>Texas Department of Agriculture</td>
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<td>LS88-002</td>
<td>Whole-farm Low/Reduced Input Farming Systems and Educational Program</td>
<td>$90,000</td>
<td>Hoover Carden</td>
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<td>Prairie View A &amp; M University</td>
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<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</td>
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<td>Texas A &amp; M University</td>
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</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  
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 |
ES20-151  Beekeeping Curriculum and Training for Texas Agricultural Extension Agents and 4-H Youth Leaders  $79,516  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

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

ES18-139  Natural Resource Management for Sustainable Agriculture Production in East Texas  $42,773  Dr. Vanessa Corriher-Olson  Texas A&M AgriLife Extension

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


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


LST94-002  Environmentally and Economically Sustainable Use of Rangeland  $72,570  James F. Cadenhead  Texas A & M Research and Extension

**FARMER/RANCHER GRANTS**

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<th>Project Title</th>
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<th>Project Leaders</th>
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<tbody>
<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>
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<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>
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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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<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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<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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<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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<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>
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<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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<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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<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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<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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<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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<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>
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<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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<td>FS03-161</td>
<td>Sustainable Pastured Layer Research Project</td>
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<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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<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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<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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<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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<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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<td>FS96-036</td>
<td>Native Warm Season Grasses As Alternative Hay Source to Annual Sorghum/Sudan Grasses on Family-Operated Goat Dairy</td>
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<td>Lee B. Dexter</td>
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## GRADUATE STUDENT GRANTS

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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&lt;br&gt;Leeah Richardson University of Texas at Austin</td>
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<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&lt;br&gt;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&lt;br&gt;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&lt;br&gt;Swarupa Mandal Texas Tech University</td>
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<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&lt;br&gt;Ashley Pellerin Texas A&amp;M University</td>
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<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&lt;br&gt;Christopher De la Rosa University of Texas Rio Grande Valley</td>
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<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&lt;br&gt;Billi Petermann Texas Tech University</td>
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<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&lt;br&gt;Kimberlee Howell Tarleton State University</td>
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<tr>
<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&lt;br&gt;Kristen Jacobson Tarleton State University</td>
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<tr>
<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 Texas A&amp;M AgriLife Research&lt;br&gt;Philip Hinson Texas A&amp;M University</td>
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<tr>
<td>GS19-211</td>
<td>Roadblocks to Success: Needs assessment of small producers in Texas</td>
<td>$10,132</td>
<td>Dr. Ken Mix Texas State University&lt;br&gt;Katie Tritsch Texas State University</td>
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<tr>
<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 Texas A&amp;M University&lt;br&gt;Amanda Birnbaum Texas A&amp;M University</td>
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</table>
Investigating Controls Over Nodulation and Nitrogen Fixation in Leguminous Cover Crops in Subtropical South Texas

Dr. Alexis Racelis
University of Texas - Rio Grande Valley
Stephanie Kasper
University of Texas Rio Grande Valley

$16,500

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

Dr. Charles West
Texas Tech University
Dr. Kathryn Radicke-Vanderburg
West Texas A&M University / Purdue Global University/ Unity College

$9,001

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

Muthu Bagavathiannan
Texas A&M University
Spencer Samuelson
Corteva Agriscience

$16,352

Agroecological methods to manage brassica pests on organic farms

Dr. Alexis Racelis
University of Texas - Rio Grande Valley
Madiline Marshall
Corteva Agriscience

$11,000

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

Dr. Alexis Racelis
University of Texas - Rio Grande Valley
Katharine Jones
The University of Texas at Rio Grande Valley

$10,223

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

Dr. Alexis Racelis
University of Texas - Rio Grande Valley
Savannah Rugg
University of Texas Pan-American

$8,953

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

Dr. Charles West
Texas Tech University
Dr. Lisa Baxter
University of Georgia (Tifton Campus)

$9,383

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

Dr. James Muir
Texas A&M AgriLife Research
Tiana Blackmon
Tarleton State University

$9,040

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

Dr. Jackie Wahrmund
University of Kentucky
Margaret Morgan
Texas A&M University-Commerce

$10,997

Factors contributing to the economic impact of cotton flea hoppers, Pseudatomoscelis seriatus

Micky Eubanks
Auburn University
Loriann Garcia
Texas A&M University

$9,336

Managing Climate Change on Apple Orchards

Dr. James Veteto
University of North Texas
Stephen Carlson
University of North Texas

$9,954

Evaluating functional diversity in an organic intercropping system

Dr. Astrid Volder
Texas A&M University
Jose Franco
Texas A&M University

$10,000

Allelopathic effects of small grain cover crops on cotton plant growth and yields

Dr. Vivien Allen
Texas Tech University
Yue Li
Texas Tech University

$10,000

Cropping systems for sustainable nutrient management and dairy production

Donald Vietor, PhD
Texas A&M University, Soil & Crop Sciences
Ronnie Schnell
Texas A&M University, Soil & Crop Sciences

$10,000

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

Donald Vietor, PhD
Texas A&M University, Soil & Crop Sciences
Nels Hansen
Soil & Crop Sciences Department

$10,000
ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
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<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 &lt;br&gt;University of North Texas</td>
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<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 &lt;br&gt;Texas A&amp;M AgriLife Research</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 &lt;br&gt;Texas A&amp;M AgriLife, Texas Water Resources Institute &lt;br&gt;Juan Enciso &lt;br&gt;Texas A&amp;M AgriLife Extension</td>
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<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 &lt;br&gt;Texas A&amp;M University</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 &lt;br&gt;Texas A&amp;M AgriLife Extension</td>
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<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 &lt;br&gt;University of Texas Rio Grande Valley</td>
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<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 &lt;br&gt;usda-ars</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 &lt;br&gt;Texas A&amp;M AgriLife Extension</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 &lt;br&gt;Sustainable Oils/Global Clean Energy Holdings</td>
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<tr>
<td>OS18-121</td>
<td>Integrating Cover Crops as Potential Weed and Pest Management Strategy in Organic Vegetable Farms in South Texas</td>
<td>$15,000</td>
<td>Dr. Pushpa Soti &lt;br&gt;University of Texas Rio Grande Valley</td>
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<td>OS17-108</td>
<td>Using Mycorrhizal Fungi to Improve Soil Health and Increase Yield in Organic Vegetable Farms</td>
<td>$14,995</td>
<td>Dr. Alexis Racelis &lt;br&gt;University of Texas - Rio Grande Valley</td>
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<td>OS16-095</td>
<td>Deep Soil Profile Sampling of Nitrate for Residual Nitrogen Credit in Winter Wheat - Texas Blacklands</td>
<td>$15,000</td>
<td>Dr. Jake Mowrer &lt;br&gt;Texas A&amp;M AgriLife Extension</td>
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<td>OS14-087</td>
<td>Determining accurate nitrate level requirements in an aquaponic system.</td>
<td>$9,737</td>
<td>Dr. Joseph Masabni &lt;br&gt;Texas A&amp;M</td>
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<td>OS14-089</td>
<td>Developing farmer-appropriate integrated pest management strategies in South Texas: The potential of push-pull technologies to regulate organic brassica pest</td>
<td>$15,000</td>
<td>Dr. Alexis Racelis University of Texas - Rio Grande Valley</td>
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<td>OS13-072</td>
<td>Huitlacoche Production as an Alternative Crop in South Texas</td>
<td>$14,962</td>
<td>Dr. Alexis Racelis University of Texas - Rio Grande Valley</td>
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<td>OS12-067</td>
<td>Adaptable Wide Stale Seedbed System Combining Precision Fertilizer Placement, Conservation Irrigation Management with Reduced Tillage Practices for Long Term Farm Sustainability</td>
<td>$15,000</td>
<td>Dionicio Valdez Texas A&amp;M AgriLife Extension Service</td>
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<td>OS10-053</td>
<td>BIOLOGICAL CONTROL OF SALTCEDAR ON WEST TEXAS RANCHES CONSERVES FORAGE AND WATER RESOURCES</td>
<td>$14,965</td>
<td>Allen Knutson Texas AgriLife Extension Service (retired)</td>
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<tr>
<td>OS06-031</td>
<td>Use of Guar (Cyamopsis tetragonolaba (L.) Taub) for cover crop rotation and green manuring</td>
<td>$15,000</td>
<td>Dr. Russell Wallace Texas A&amp;M University AgriLife Extension</td>
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<tr>
<td>OS05-023</td>
<td>Livestock and Feedstock: Distiller's Grain and Fuel Ethanol</td>
<td>$15,000</td>
<td>Peggy Korth Water Assurance Technology Energy Resources</td>
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<tr>
<td>OS04-021</td>
<td>Comparison of Stockpiled Bermudagrass + Annual Ryegrass and Traditional Hay-Only Winter Feeding Practices</td>
<td>$14,645</td>
<td>Larry Redmon Texas Cooperative Extension</td>
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<tr>
<td>OS02-006</td>
<td>Evaluation and Maintenance of Sustainable Systems for Alfalfa Production and Marketing Strategies on Coastal Plain Soils</td>
<td>$15,000</td>
<td>Larry Redmon Texas Cooperative Extension</td>
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**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

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<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>
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<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>
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<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>
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<td>CS03-012</td>
<td>Sustainable Agriculture Innovations Lead to Rural Success</td>
<td>$10,000</td>
<td>Gayla Kessinger Canutillo Independent Scho</td>
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**EDUCATION ONLY GRANTS**

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<td>EDS23-048</td>
<td>Field day trainings to enhance sheep health and productivity</td>
<td>$45,000</td>
<td>Dr. Reid Redden Texas A&amp;M AgriLife Extension</td>
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</table>
A Southern Regional Water Conference to Improve Producer Adoption of Sustainable Water Management Practices

Dr. Diane Boellstorff
Texas A&M AgriLife Extension Service

$48,000

Total funding from the USDA SARE program to Texas
$11,015,379

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).