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 $406 million to more than 8,802 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: 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/state-profiles/texas/

$5,586,321 in total funding

52 grant project

(since 1988)

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

Grants awarded
2019–2024

Total awards: **52 grants**

- 5 Farmer/Rancher
- 11 Research and Education
- 7 Professional Development Program
- 11 On Farm Research/Partnership
- 15 Graduate Student
- 3 Education Only

Total funding: **$5,586,321**

- $75,037 Farmer/Rancher
- $4,410,404 Research and Education
- $482,126 Professional Development Program
- $258,868 On Farm Research/Partnership
- $229,287 Graduate Student
- $130,599 Education Only

Find a complete list of projects on page 3.

Farmer and rancher impacts
2019–2024

SARE grantees have reported the following impacts from their projects:

- **8,516 farmers participated in a SARE-funded project**
- **775 farmers reported a change in knowledge, awareness, skills or attitude**
- **117 farmers changed a practice**

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-profiles/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 $11,713,743 grants to support 147 projects, including but not limited to, 41 research and/or education projects, 13 professional development projects and 29 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>
| LS24-399  | Fostering climate-friendly sustainable farming through integration of biochar and cover crops in Texas and Florida | $399,220 | Dr. Sanku Dattamudi  
Texas A&M University - Kingsville  
Dr. Mahendra Bhandari  
Texas A&M AgriLife Research  
Dr. Saoli Chanda  
Florida International University  
Dr. Yuncong Li  
University of Florida  
Dr. Greta Schuster  
Texas A&M University - Kingsville (TAMUK)  
Dr. Benjamin Turner  
Texas A&M University-Kingsville and King Ranch Institute for Ranch Management  
Xiaoying Li  
University of Florida, Tropical Research and Education Center |
| 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 AgriLife Research  
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  
Dorathy Barker  
Operation Spring Plant (OSP)  
Jahi Chappell  
Southeastern African American Farmers Organic Network (SAAFON) |
<table>
<thead>
<tr>
<th>ID</th>
<th>Project Title</th>
<th>Budget</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
</table>
| 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  
|        |                                                                                |         | Dr. 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  
|        |                                                                                |         | Dr. Eric S. 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  
<p>|        |                                                                                |         | USDA-ARS |</p>
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Project Title</th>
<th>Funding</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
</table>
| 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 |
| 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 |
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Description</th>
<th>Funding</th>
<th>Principal Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS11-238</td>
<td>Long-term AgroEcosystems Research and Adoption in the Texas Southern High Plains – Phase I</td>
<td>$329,999</td>
<td>Dr. Charles West, Texas Tech University, Philip Brown, Texas Tech University</td>
</tr>
<tr>
<td>LS10-229</td>
<td>Integrated Crop and Livestock Systems for Enhanced Soil Carbon Sequestration and Microbial Diversity in the Semiarid Texas High Plains</td>
<td>$160,000</td>
<td>Dr. Jennifer Moore-Kucera, Texas Tech University</td>
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<tr>
<td>LS10-236</td>
<td>Traceability in Specialty Crop Production and Supply Chains: Distilling a Research and Extension Agenda</td>
<td>$33,000</td>
<td>Kathryn Boys, Virginia Tech, Kathryn Boys, Clemson University</td>
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<tr>
<td>LS08-202</td>
<td>Crop-livestock Systems for Sustainable High Plains Agriculture</td>
<td>$200,000</td>
<td>Dr. Vivien Allen, Texas Tech University</td>
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<tr>
<td>LS08-208</td>
<td>Marketing of locally produced sustainable animal fiber products</td>
<td>$140,000</td>
<td>John Bernard, University of Delaware, Hikaru Hanawa Peterson, Kansas State University, Gwendolyn Hustvedt, Texas State University</td>
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<tr>
<td>LS07-201</td>
<td>Pigeon pea: a multipurpose, drought resistant forage, grain and vegetable crop for sustainable southern farms</td>
<td>$200,000</td>
<td>Dr. John Sloan, Texas AgriLife Research</td>
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<tr>
<td>LS05-175</td>
<td>Sustainable and profitable control of invasive plant species by small ruminants</td>
<td>$178,000</td>
<td>Dr. James Muir, Texas A&amp;M AgriLife Research</td>
</tr>
<tr>
<td>LS05-214</td>
<td>SARE Research and Education Program Impacts and Diffusion</td>
<td>$31,526</td>
<td>Marari Suvedi, CARRS Center for Evaluative Studies</td>
</tr>
<tr>
<td>LS03-144</td>
<td>Expanding the Marketing Opportunities for Organic Growers in Texas</td>
<td>$19,924</td>
<td>Douglas Constance, Sam Houston State University</td>
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<tr>
<td>LS03-150</td>
<td>Sustainable and profitable control of invasive species by browsing goats on small farms</td>
<td>$14,199</td>
<td>Dr. James Muir, Texas A&amp;M AgriLife Research</td>
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<tr>
<td>LS02-131</td>
<td>Forage and Livestock Systems for Sustainable High Plains Agriculture</td>
<td>$251,805</td>
<td>Dr. Vivien Allen, Texas Tech University</td>
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<tr>
<td>LS00-117</td>
<td>System for value-added export of manure nitrogen and phosphorus through turfgrass sod</td>
<td>$149,726</td>
<td>Donald Vietor, PhD, Texas A&amp;M University, Soil &amp; Crop Sciences</td>
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<tr>
<td>Project #</td>
<td>Project Title</td>
<td>SARE Support</td>
<td>Project Leaders</td>
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<tr>
<td>LS99-100</td>
<td>Systems for sustainability of alfalfa production on acid, Coastal Plain soils using various harvesting strategies</td>
<td>$149,750</td>
<td>Vincent Haby Texas Agricultural Experiment Station</td>
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<tr>
<td>LS99-108</td>
<td>System for Conserving and Adding Value to Manure Sources of Nutrients in Turf-grass Sod</td>
<td>$16,854</td>
<td>Donald Vietor, PhD Texas A&amp;M University, Soil &amp; Crop Sciences</td>
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<tr>
<td>LS98-097</td>
<td>Introducing Alternative Crops Into Traditional Cotton-Grain Farming to Aid Transition To “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>
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<tr>
<td>LS88-010</td>
<td>Solarization and Living Mulch to Optimize Low-Input Production Systems for Small Fruits (88-87-4)</td>
<td>$80,000</td>
<td>Charles Long Texas A &amp; M University</td>
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**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

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<tr>
<th>Project #</th>
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<th>SARE Support</th>
<th>Project Leaders</th>
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<tbody>
<tr>
<td>SPDP24-026</td>
<td>Supporting a Central Texas Sustainable Farm Incubator Collaborative</td>
<td>$77,032</td>
<td>Michelle Akindiya Farmshare Austin Savannah Rugg Austin Community College</td>
</tr>
</tbody>
</table>
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 Service
Dr. Jacob Dykes
Department of Rangeland, Wildlife and Fisheries Management, Texas A&M AgriLife Extension Service
J. Boone Holladay
Texas A&M AgriLife Extension Service - 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

Carbon Farm Planning to Promote Sustainable Agriculture in Texas

$79,309

Elise Haschke
NCAT
<table>
<thead>
<tr>
<th>Project ID</th>
<th>Project Title</th>
<th>Amount</th>
<th>Principal Investigator(s)</th>
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</thead>
</table>
| 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  
|             |                                                                                |         | 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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<tr>
<th>Project #</th>
<th>Project Title</th>
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<tbody>
<tr>
<td>FS24-369</td>
<td>Chicken Changes: Mobile meat birds for soil health study</td>
<td>$19,988</td>
<td>Ross &amp; Kelly McGarva McGarva Ranch Pasture Division</td>
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<tr>
<td>FS24-376</td>
<td>Regenerating South Texas Plains with Poultry-Inoculated Biochar</td>
<td>$15,717</td>
<td>Sandy Smith Smith Pastures, LLC</td>
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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>
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<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>
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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>
</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>
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<tr>
<td>FS17-299</td>
<td>Organic Sweet Potato as a Commercial Crop in South Texas</td>
<td>$10,000</td>
<td>Lois Kim Farmer</td>
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<tr>
<td>FS14-281</td>
<td>Organic Cultivation Methods for Asparagus as an Alternative Crop in South Texas</td>
<td>$14,736</td>
<td>Gilbert Garza, Texas/Mexico Border Coalition CBO</td>
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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, 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, Poppa Skinny's Farm</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, Millican Farms, LLC</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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<tr>
<td>FS06-198</td>
<td>Evaluation of Mulches for Organic Cantaloupe Production in Semi-Arid Regions</td>
<td>$9,855</td>
<td>John Chandler</td>
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<td>FS06-205</td>
<td>Cover Crop Optimization for Sustainable Forage Systems on a Southern Dairy Farm</td>
<td>$9,872</td>
<td>Neil R. Miller, World Hunger Relief, Inc.</td>
</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, Holistic Resource Management of Texas, Inc</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, The Landowners Association of Texas-Tyler Chapter</td>
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<tr>
<td>FS03-161</td>
<td>Sustainable Pastured Layer Research Project</td>
<td>$14,992</td>
<td>Graciela Alvardo, Texas/Mexico Border Coalition Community Based Org.</td>
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<td>FS03-174</td>
<td>Goat Range-Nutrition Performance Test</td>
<td>$13,113</td>
<td>Marvin F. Shurley, Meat Goat Association</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, Comm. Approaching Sustainability w/ Agroecology</td>
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<tr>
<td>Project #</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, Texas Organic Growers Association</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, Cameron County Field</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, Wichita County Field Crops Committee</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>
<td>$9,640</td>
<td>Lee B. Dexter, White Egret Farm</td>
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<td>FS95-021</td>
<td>Pecan IPM Using Black-Eyed Peas as a Trap Crop</td>
<td>$4,000</td>
<td>Kyle Brooksheir</td>
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<td>FS94-001</td>
<td>Controlling Aphids with Harmonia Lady Beetle in Pecan Orchards</td>
<td>$4,600</td>
<td>Cindy Wise, Texas Pecan Growers Assoc.</td>
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<td>FS94-010</td>
<td>Site Specific Applications of Seed/Fertilizer/Chemicals</td>
<td>$10,000</td>
<td>Ricky &amp; Becky Meinen</td>
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**GRADUATE STUDENT GRANTS**

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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>Anjel Helms, 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>Dr. 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>Grant</td>
<td>Title</td>
<td>Funding</td>
<td>Principal Investigator(s)</td>
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| 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  
Lingyi Li  
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 |
| GS19-198 | The Success of Organic and Other Sustainable Dual-Purpose Wheat Systems Depend on Access to Adapted Varieties | $16,500 | Dr. Bill Pinchak  
Texas A&M AgriLife Research  
Philip Hinson  
Texas A&M University |
**GS19-211**  Roadblocks to Success: Needs assessment of small producers in Texas  $10,132  Dr.Ken Mix  Texas State University  Katie Tritsch  Texas Local Food

**GS19-209**  Improving Resilience, Sustainability and Nutritional Properties of Specialty Crops Using Composted Spent Coffee Grounds  $16,044  Dr.David Reed  Texas A&M University  Amanda Birnbaum, PhD  Texas A&M University

**GS18-193**  Investigating Controls Over Nodulation and Nitrogen Fixation in Leguminous Cover Crops in Subtropical South Texas  $16,500  Dr.Alexis Racelis  University of Texas - Rio Grande Valley  Stephanie Kasper  University of Texas Rio Grande Valley

**GS18-196**  Effects of Cumulative Cattle Trampling on Soil Bulk Density and Infiltration of Rain Water on an Annual Forage Crop Pasture  $9,001  Dr.Charles West  Texas Tech University  Dr.KATHRYN Vanderburg  Purdue Global University / Unity Environmental University / West Texas A&M University

**GS18-179**  Developing Suitable Cover Crop Systems for South Texas: Evaluating Different Late-Summer and Winter Cover Crop Species  $16,352  Muthu Bagavathiannan  Texas A&M University  Spencer Samuelson  Corteva Agriscience

**GS16-160**  Agroecological methods to manage brassica pests on organic farms  $11,000  Dr.Alexis Racelis  University of Texas - Rio Grande Valley  Madiline Marshall  Corteva Agriscience

**GS16-161**  Examining the role of bats in pest management in agroecosystems of south Texas  $10,223  Dr.Alexis Racelis  University of Texas - Rio Grande Valley  Katharine Jones  The University of Texas at Rio Grande Valley

**GS15-148**  Multifunctionality of Cover Crops in South Texas: Looking at multiple benefits of cover cropping on small farms in a subtropical climate  $8,953  Dr.Alexis Racelis  University of Texas - Rio Grande Valley  Savannah Rugg  University of Texas Pan-American

**GS15-152**  Evaluation of winter annual cover crops under multiple residue managements: Impacts on land management, soil water depletion, and cash crop productivity.  $9,383  Dr.Charles West  Texas Tech University  Dr.Lisa Baxter  University of Georgia (Tifton Campus)
<table>
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<th>Project #</th>
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</table>
| GS14-133 | Effects of Simulated and Insect Herbivory on Total and Protein Percipitable Phenolic Concentrations of Two Legumes | $9,040       | Dr. James Muir  
Texas A&M AgriLife Research  
Tiana Blackmon  
Tarleton State University |
| GS14-138 | Use of Artificial Lighting to Increase Photoperiod Length for Pasture-Raised Laying Hens to Improve Egg Productivity and Quality | $10,997      | Dr. Jackie Wahrmund  
University of Kentucky  
Margaret Morgan  
Texas A&M University-Commerce |
| GS12-109 | Factors contributing to the economic impact of cotton fleahoppers, Pseudatomoscelis seriatus | $9,336       | Micky Eubanks  
Auburn University  
Loriann Garcia  
Texas A&M University |
| GS11-107 | Managing Climate Change on Apple Orchards                                        | $9,954       | Dr. James Veteto  
University of North Texas  
Stephen Carlson  
University of North Texas |
| GS11-108 | Evaluating functional diversity in an organic intercropping system                | $10,000      | Dr. Astrid Volder  
Texas A&M University  
Jose Franco  
Texas A&M University |
| GS07-056 | Allelopathic effects of small grain cover crops on cotton plant growth and yields | $10,000      | Dr. Vivien Allen  
Texas Tech University  
Yue Li  
Texas Tech University |
| GS07-064 | Cropping systems for sustainable nutrient management and dairy production         | $10,000      | Donald Vietor, PhD  
Texas A&M University, Soil & Crop Sciences  
Ronnie Schnell  
Texas A&M University, Soil & Crop Sciences |
| GS04-040 | Cycling of composted biosolids through turfgrass sod enhances sustainability across agricultural and urban landscapes | $10,000      | Donald Vietor, PhD  
Texas A&M University, Soil & Crop Sciences  
Nels Hansen  
Soil & Crop Sciences Department |
| GS03-021 | Development of Methodology to Measure Net Feed Efficiency in Bulls to Enhance Profitability and Environmental Sustainability of Beef Production | $10,000      | Gordon Carstens  
Texas A&M University |
| GS02-012 | Optimizing Water Use for Three Old World Bluestems in the Texas High Plains       | $10,000      | Dr. Vivien Allen  
Texas Tech University  
Dirk Philipp  
Texas Tech University |
| OS24-178 | Evaluating a Non-antibiotic Treatment of Mastitis in Organic Dairy Cows | $29,938 | Dr. Sushil Paudyal  
Texas A&M University |
|----------|-------------------------------------------------|---------|------------------------------------------------|
| OS24-179 | Evaluating the impact of cover crop type and termination timing on soil nitrogen storage and nitrogen loss from fields | $29,647 | Dr. Pushpa Soti  
University of Texas Rio Grande Valley |
| OS24-181 | Huitlacoche delicacy: turning the lost corn crop into a high value delicacy vegetable | $30,000 | Dr. Wenwei Xu  
Texas A&M AgriLife Research |
| OS23-162 | Assessing Impacts of Grazing Management on Pollinator Conservation in Rangeland | $30,000 | Dr. Elinor Lichtenberg  
University of North Texas |
| OS23-165 | Hi-A Corn and Management Practices for Nutritional and Food and Feed | $29,998 | Dr. Wenwei Xu  
Texas A&M AgriLife Research |
| OS22-156 | Promoting Water Sustainable Agriculture by Combining In-situ Soil Moisture and Remote Sensing Data for Irrigation Scheduling | $19,987 | T. Allen Berthold  
Texas A&M AgriLife, Texas Water Resources Institute  
Juan Enciso  
Texas A&M AgriLife Extension |
| OS21-140 | Introducing Beneficial Entomopathogenic Nematodes for Biological Control and Enhanced Plant Resistance to Improve Pest Management in Cucurbit Crops | $20,000 | Anjel Helms  
Texas A&M University |
| OS20-138 | Strategic Management of Legume Cover-forage Crops to Optimize Utility in a Challenging Environment | $20,000 | Dr. Reagan Noland  
Texas A&M AgriLife Extension |
| OS20-139 | Incorporating Native Plants in Insectary Strips to Promote Insect Diversity and Belowground Beneficial Microbes | $20,000 | Dr. Pushpa Soti  
University of Texas Rio Grande Valley |
| OS19-128 | Sustainable Pasture Management in Texas: Optimizing forage production and nutrient use in various environments and soils | $14,298 | Dr. James Kiniry  
usda-ars |
| OS19-131 | Advancing the Frontier of Legume Cover Crops and Building Integrated System Resilience in Semi-arid West Texas | $15,000 | Dr. Reagan Noland  
Texas A&M AgriLife Extension |
OS18-119  Supporting Alternative Crop Options Through Improved Fertility Recommendations for Canola in Central and South Texas  $14,811  Dr. Fernando Guillen-Portal  Sustainable Oils/Global Clean Energy Holdings

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 tetragonolaba (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
<table>
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<tr>
<td>CS10-076</td>
<td>Investing in Community Linkages to Improve our Food System</td>
<td>$10,000</td>
<td>Jay Crossley</td>
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<tr>
<td>CS10-081</td>
<td>Establishing Sustainable Agriculture &amp; Community Development in Elgin Texas</td>
<td>$10,000</td>
<td>Amy Miller</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</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</td>
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**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

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<tr>
<td>EDS24-059</td>
<td>Learning on the Land: A Texas Farm-Based Education Handbook</td>
<td>$49,932</td>
<td>Sue Beckwith</td>
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<tr>
<td>EDS23-048</td>
<td>Field day trainings to enhance sheep health and productivity</td>
<td>$45,000</td>
<td>Dr. Reid Redden</td>
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<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</td>
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**EDUCATION ONLY GRANTS**

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Total funding from the USDA SARE program to Texas
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).