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 $327 million to more than 7,665 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 New Mexico

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

New Mexico

Project Highlight: Hill-Climbing Cows May Benefit Ranchers

Most would say that cows don’t go up steep slopes, climb hills or travel far from water, but some just take off for the hills. As grazers, cattle provide ecological benefits to natural areas and help control invasive weeds, but overgrazing can damage riparian areas and can affect downstream water quality. A possible solution? Hill-climbing cattle, which could increase ranchers’ stocking rates as much as 30 percent and improve the productivity of rangeland in the western United States.

New Mexico State University Range Science Professor Derek Bailey and his team of scientists across the West used SARE funding to look at the genetics of behavior—specifically to identify the genes linked to hill climbing—to develop an inexpensive screening test that allows ranchers to select stock with a genetic disposition to wander and climb. By tagging cattle on ranches with GPS collars, tracking their every move and drawing blood from the hill-climbers to identify genetic commonalities, Bailey’s team collected and analyzed enough data to believe that an affordable screening test is possible and that the hill-climbing trait does not come with significant genetic downsides. More hill-climbing cows would allow ranchers across the West to use harder-to-reach areas for grazing and to thus better manage their rangeland.

For more information on these projects, see sare.org/projects, and search for project number SW15-015.

SARE in New Mexico

western.sare.org/sare-in-your-state/new-mexico

$2,709,019 in total funding

73 grant projects

(since 1988)

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

Total awards: 73 grants
- 14 Research and Education
- 6 Professional Development Program
- 47 Farmer/Rancher
- 5 On Farm Research/Partnership
- 1 Research to Grass Roots

Total funding: $2,709,019
- $1,471,656 Research and Education
- $317,629 Professional Development Program
- $578,745 Farmer/Rancher
- $249,456 On Farm Research/Partnership
- $91,533 Research to Grass Roots

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: western.sare.org/sare-in-your-state/new-mexico

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 western.sare.org/state-pages/new-mexico to learn more.

John Idowu
New Mexico State University
(575) 646-2571
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New Mexico State University
Extension
(575) 646-4398
swalker@nmsu.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.
New Mexico has been awarded $2,709,019 grants to support 71 projects, including but not limited to, 12 research and/or education projects, 6 professional development projects and 47 producer-led projects. New Mexico has also received additional SARE support through multi-state projects.

### RESEARCH AND EDUCATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW18-059</td>
<td>On-Farm Investigations of Stale Seedbeds with Biofumigation for Improved Management of Weeds and Soil-Borne Diseases in Chile Pepper</td>
<td>$131,461</td>
<td>Dr. Brian Schutte New Mexico State University</td>
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<tr>
<td>SW15-015</td>
<td>Implementation of Genetic Selection for Grazing Distribution to Make Cattle Grazing in the Western US More Sustainable</td>
<td>$271,217</td>
<td>Dr. Derek Bailey New Mexico State University</td>
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<tr>
<td>SW09-054</td>
<td>Enhancement of Sustainable Livestock Grazing through Selection and Training</td>
<td>$229,527</td>
<td>Dr. Derek Bailey New Mexico State University</td>
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<tr>
<td>SW09-041</td>
<td>Winter Production of Leafy Greens in the Southwestern USA using High Tunnels</td>
<td>$193,879</td>
<td>Dr. Steven Guldan New Mexico State University</td>
</tr>
<tr>
<td>SW07-606</td>
<td>Extending the Grazing Season and Integrating Crops and Livestock to Sustain Small Farms and Ranches in the Southern Rockies</td>
<td>$7,381</td>
<td>Dr. Steven Guldan New Mexico State University</td>
</tr>
<tr>
<td>SW04-144</td>
<td>Southwest Marketing Network: Expanding Markets for Small-Scale Alternative and Minority Farmers and Ranchers</td>
<td>$124,817</td>
<td>Pamela Roy Farm to Table</td>
</tr>
<tr>
<td>SW02-053</td>
<td>Ganados del Valle Family Ranch Sustainability Program</td>
<td>$70,000</td>
<td>Arlene Valdez; Melinda Salazar Ganados Del Valle; Los Ojos, NM</td>
</tr>
<tr>
<td>SW01-004</td>
<td>Field-to-Table Technical Outreach Package for Smaller-Scale Farmers &amp; Ranchers in the Front range</td>
<td>$48,500</td>
<td>Greg Shultz NewFarms</td>
</tr>
<tr>
<td>SW98-060</td>
<td>Acequia Conservation Management</td>
<td>$49,272</td>
<td>Stephen Reichert Tierra y Montes Soil &amp; Water Cons. District</td>
</tr>
<tr>
<td>SW96-027</td>
<td>The Production of New, Existing, and Native Crops Under Conventional and Organic Production Practices in Costilla, New Mexico, Garcia, Colorado, and at Taos Pueblo</td>
<td>$100,000</td>
<td>Craig Mapel New Mexico Department of Agriculture</td>
</tr>
<tr>
<td>SW95-018</td>
<td>Extending the Grazing Season and Integrating Crops and Livestock to Sustain Small Farms and Ranches in the Southern Rockies</td>
<td>$141,602</td>
<td>Dr. Steven Guldan New Mexico State University</td>
</tr>
<tr>
<td>LW93-033</td>
<td>Development of Sustainable Crop and Livestock Production Systems for Land in the Conservation Reserve Program (CRP)</td>
<td>$104,000</td>
<td>Rex E. Kirksey New Mexico State University, Agricultural Science Center</td>
</tr>
</tbody>
</table>
### RESEARCH TO GRASS ROOTS GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
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</thead>
<tbody>
<tr>
<td>WRGR21-005</td>
<td>Native Habitat Enhancement for IPM in New Mexico Vineyards</td>
<td>$91,533</td>
<td>William Giese&lt;br&gt;New Mexico State University&lt;br&gt;Miranda Kersten&lt;br&gt;New Mexico State University</td>
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</tbody>
</table>

### PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

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</tr>
</thead>
<tbody>
<tr>
<td>EW15-011</td>
<td>Developing Digital Tools to Improve Soil Sampling and Analysis for Sustainable Agriculture in the Western U.S</td>
<td>$59,356</td>
<td>Dr. Robert Flynn&lt;br&gt;New Mexico State University</td>
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<tr>
<td>EW13-021</td>
<td>A Distance Learning Approach to Whole Farm Planning</td>
<td>$60,400</td>
<td>Dr. Ann Adams&lt;br&gt;Holistic Management International</td>
</tr>
<tr>
<td>EW08-016B</td>
<td>Professional Training for Developing a Hands-On Organic Weed Management Learning Center for Commercial Market Gardens in Local Communities</td>
<td>$47,934</td>
<td>Beth LaShell&lt;br&gt;Fort Lewis College</td>
</tr>
<tr>
<td>EW04-006</td>
<td>Increasing the Effectiveness of Field Agent Response to Producer Requests for Alternative Marketing Assistance</td>
<td>$95,939</td>
<td>Teresa Mauerer&lt;br&gt;NCAT</td>
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<tr>
<td>EW02-006</td>
<td>Here Forever Farm and Ranch Education</td>
<td>$30,000</td>
<td>Jaime Castillo&lt;br&gt;New Mexico State University</td>
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<tr>
<td>EW95-001</td>
<td>Educational Video on Watershed Management Practices for Pinyon-Juniper Ecosystems</td>
<td>$24,000</td>
<td>Howard Shanks&lt;br&gt;South Central Resource Cons</td>
</tr>
</tbody>
</table>

### FARMER/RANCHER GRANTS

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>FW20-363</td>
<td>Compost application on rangeland in the semi-arid southwest for increased soil C storage and forage production</td>
<td>$19,981</td>
<td>Zachary Withers&lt;br&gt;Polk’s Folly Farm</td>
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<tr>
<td>FW19-357</td>
<td>The use of goat herding techniques to reduce the effects of predation while improving rangeland health in the high plains of New Mexico</td>
<td>$20,000</td>
<td>Emily Cornell&lt;br&gt;Spear J Ranch</td>
</tr>
<tr>
<td>FW18-019</td>
<td>Provencio Soil Improvement Project</td>
<td>$19,976</td>
<td>Ed Provencio&lt;br&gt;Ed Provencio</td>
</tr>
<tr>
<td>FW18-023</td>
<td>Establishing and Maintaining Mite Resistant Nucleus Colonies for the Sustainable Apiary Using USDA Russian and VSH Queen Bees</td>
<td>$16,980</td>
<td>John Gagne&lt;br&gt;San Juan Apiaries</td>
</tr>
<tr>
<td>FW18-028</td>
<td>Greenhouse Energy Storage &amp; Transfer using Water</td>
<td>$7,565</td>
<td>Kemper Barkhurst&lt;br&gt;Bluefly Farms, LLC</td>
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<tr>
<td>FW16-035</td>
<td>A Comparative Study of Shading Systems to Control the Beet Leafhopper and Reduce Beet Curly Top Virus in Heirloom Tomato Fields</td>
<td>$19,909</td>
<td>Peter Sinanian&lt;br&gt;TomatoCulture LLC</td>
</tr>
<tr>
<td>FW16-028</td>
<td>Passive Solar Herb Drying Project</td>
<td>$18,999</td>
<td>Dr. Tomas Enos&lt;br&gt;El Milagro Herbs, Inc.</td>
</tr>
</tbody>
</table>
FW15-037 Aerated Compost Tea- Field Guide $14,560 Minor Morgan North Valley Organics

FW15-045 Lavender Intercropping and Soil Management $13,665 Kemper Barkhurst Bluefly Farms, LLC

FW13-122 Making Roller Crimping a Reality in the Southwest $9,155 Dale Rhoads Rhoads Farm Joran Viers New Mexico State University

FW12-096 The Rocky Mountain Survivor Queenbee Cooperative $25,000 Melanie Kirby Zia Queenbee Co. Julie McIntyre US Fish & Wildlife Service

FW12-039 Distilling Essential Oils from Southwest Medicinal Plants $15,000 Dr.Tomas Enos El Milagro Herbs, Inc.

FW11-005 Pollinator Forage Development $15,000 Heather Harrell For the Love of Bees Les Crowder For the Love of Bees

FW11-043 Assessment of the Economic Viability of High-Value Greenhouse Production $14,743 Margaret C Campos Comida de Campos

FW11-030 Pepper (Capsicum annum) Cultivation, Conservation, and Soil Ecology in Low-Input and Certified Organic Agricultural Systems $19,585 Loretta Sandoval Owner

FW11-027 Testing Traditional Methods of Pest Mitigation $29,434 Joseph Alfaro Valle Encantado

FW11-021 Trials and Informing Regional Farmers about Organic Weed Control Methods $13,163 Dale Rhoads Rhoads Farm

FW11-018 Cotton Gin By-Products (CGB)/Dairy Manure Composting for Desert Farming $13,336 Dr.Robert Woody

FW10-010 Operation of a Subsurface Drip Irrigation (SDI) system under National Organic Plan (NOP) Standards $14,560 Minor Morgan North Valley Organics

FW10-038 Restoring Conservation Reserve Program Land to Health and Productivity $13,112 Kelly Boney Outlaw Land Improvement Company, Inc

FW09-041 Camino de Paz Orchard & Berry Research & Education Program $15,000 Greg Nussbaum Camino de Paz Farm

FW09-047 La Placita Gardens Composting Research Project $15,000 Abino Garcia Mayordomo La Placita Gardens Andrea Botero LA PLAZITA INSTITUTE

FW09-049 Organic Weed Control in Perennial Navajo Tea Greenthread $15,000 Steve Heil

FW09-008 The Use of Two Mesilla Valley, NM Agricultural Byproducts to Create a Needed Organic Material Soil Amendment $14,750 Dr.Robert Woody
FW08-320  Small Acreage Farms Enlisting Organic and Good Agriculture Practices (SAFE O-GAPs), $29,750  Nancy Flores  New Mexico State University
Dr.Nancy Flores  new mexico state university

FW08-004  Manipulating Sandpaper Oak for Livestock and Wildlife Forage and Cover  $15,000  Cheryl Goodloe  Carrizon Valley Ranch
Sid Goodloe  Carrizon Valley Ranch

FW07-032  Southwest Survivor Queenbee Project  $15,000  Melanie Kirby  Zia Queenbee Co.

FW06-031  Growing and Marketing Dye Plants as Alternative Crops  $20,000  Charles Martin  New Mexico State University
Del Jimenez  New Mexico State University

FW05-011  Solar Energy for Sustainable Year-round Production  $9,683  Don Bustos  Santa Cruz Farm

FW02-018  Desert Shrimp  $12,000  R. Mack Bell

FW01-002  Northeast New Mexico Pecan Research  $2,000  Lem Chesher  USDA-ARS

FW01-014  Alternative Crops for the Costilla Valley in New Mexico Adoption, Application, Added Value of Product  $10,000  Teresa Young  NMSU Coop Ext

FW01-036  Regional Producer’s Improvement Project for High Quality Eggs and Other Poultry Products  $10,500  Steve Warshawer  Beneficial Farm

FW00-099  Comparing Irrigation Methods for Organic Wheat Production  $10,000  Lonnie Roybal  Sangre de Cristo Growers Coop.

FW99-008  Passive Solar Greenhouse Construction and Growing Trial  $5,000  Cathy Hope

FW99-044  Verification of Bat Predation of Pests on a 60,000 Acre Irrigated Farm  $4,000  James Dangler

FW99-078  A Temporary Step to a Permanent Solution: Use of Strawbales to Construct a Wind Barrier and System of Terrace Planting Beds  $1,760  Fatou Gueye

FW98-019  Using a Cultivable Catchment System to Establish a Dryland Commercial Truck Farm  $2,700  John Leaf

FW98-030  Permanent Irrigated Pasture Demonstration Project Reducing Irrigation Water Use  $3,100  Milford Denetclaw

FW98-032  The Sustainable Use of Cover Crops in an Annual Vegetable Production System in Northern New Mexico  $4,289  Don Bustos  Santa Cruz Farm

FW97-042  Value Added Wheat Production  $3,500  Tom Seibel
Limiting Gopher Deprivation By Time-Control Livestock Grazing $3,500 Matt Schneberger

Increasing the Value of Irrigated Pastures $4,200 Darrell Baker

Test Plot Demonstration for Organically Produced Small Grains, Phase II $5,000 Lonnie Roybal Sangre de Cristo Growers Coop.

Test Plot Demonstration for Organically Produced Small Grains, Phase I $5,000 Lonnie Roybal Sangre de Cristo Growers Coop.

Municipal Sludge and Legumes as Soil Builders $4,290 Pete Tatschl

Gila Permitees Association Elk Study $5,000 Matt Schneberger

Building productivity and soil health with erosion control structures in arid rangelands: effects of organic amendments and seeding. $74,932 Eva Stricker Quivira Coalition

Initiation of a New Mexico Participatory Vegetable Breeding Program $49,571 Dr.Bradley Tonnessen New Mexico State University Charles Havlik NMSU Agricultural Science Center at Los Lunas Stephanie Walker New Mexico State University

Evaluation of water and feed intake of purebred cattle in confinement and on arid rangelands, and its implications on selection principles $49,958 Dr.Marcy Ward New Mexico State University Dr.Craig Gifford New Mexico State University Dr.Samuel Smallidge New Mexico State University

Pairing Groundwater and Climate Data to Inform Sustainable Ranch Management in Uncertain Times $49,995 Amy Ganguli New Mexico State University

The Rocky Mountain Survivor Queenbee Cooperative $25,000 Melanie Kirby Zia Queenbee Co.

Total funding from the USDA SARE program to New Mexico $2,709,019

For further information on projects, contact Western SARE at (435) 797-2257 or wsare@usu.edu. Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).