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 $332 million to more than 7,749 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 Virginia

Project Highlight: Fighting Downy Mildew with Better Crop Selection

Seed crop growers of cucumbers, squash, melons, gourds and watermelons have faced severe losses in Virginia from downy mildew. To stem these losses and to reduce the economic impact, seed grower Edmund Frost used a SARE grant to find varieties of melons, cucumbers and winter squash able to withstand downy mildew. By finding such varieties, he could share results with other seed growers and gather information needed to make progress with seed production and breeding of the resistant varieties.

Frost conducted trials that identified 15 cucumber varieties with the ability to produce twice as much as standard varieties labeled “resistant,” 20 winter squash and tropical pumpkin varieties with better downy mildew resistance than other varieties, and several varieties that produce good-quality melons in areas with high downy mildew pressure.

While the identified pumpkin varieties showed downy mildew resistance, there were quality problems that Frost looked at in a second SARE-funded project. Frost made significant progress with three pumpkin varieties and shared the results with growers at two conferences. One of the seeds bred during the project, F6 Seminole-Waltham seed, is now being sold to growers.

For more information on these projects, see sare.org/projects, and search for project numbers FS13-273 and FS16-291.

$5,858,810 in total funding
125 grant projects
(since 1988)

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

Total awards: 125 grants
24 Research and Education
9 Sustainable Community Innovation
7 Professional Development Program
46 Farmer/Rancher
25 Graduate Student
14 On Farm Research/Partnership

Total funding: $5,858,810
$4,313,501 Research and Education
$112,727 Sustainable Community Innovation
$526,040 Professional Development Program
$406,943 Farmer/Rancher
$304,489 Graduate Student
$195,110 On Farm Research/Partnership

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/virginia

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/virginia to learn more.

Eric Bendfeldt
Virginia Tech
(540) 432-6029 Ext: 106
ebendfel@vt.edu

Chris Mullins
Virginia State University
(804) 524-5834
cmullins@vsu.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.
Virginia has been awarded $5,858,810 grants to support 123 projects, including but not limited to, 22 research and/or education projects, 7 professional development projects and 46 producer-led projects. Virginia has also received additional SARE support through multi-state projects.

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| LS20-324  | Organic Soil Health Education Online Course and Resources for the Southern SARE Region Farmers and Ranchers                                  | $49,882      | Brise Tencer  
Organic Farming Research Foundation                                                                                                      |
| LS20-327  | A Modular Curriculum for Growing Food Grain for the Local Market                                                                              | $50,004      | Dr.Heather Coiner  
Common Grain Alliance                                                                                                                     |
| LS20-332  | Silvopasture for Poultry Production with Outdoor Access: Impact on animal welfare, economic, and environmental parameters                  | $279,078     | Dr.Leonie Jacobs  
Virginia Polytechnic Institute and State University (Virginia Tech)  
John Fike  
school of Plant and Environmental Sciences,  
Va Tech  
Dr.John Munsell  
Virginia Tech - Department of Forest Resources and Environmental  
Gabriel Pent  
Dept. of Crop and Soil Environmental Science,  
Virginia Tech  
Dr.John Munsell  
Virginia Tech - Department of Forest Resources and Environmental  
Gabriel Pent  
Dept. of Crop and Soil Environmental Science,  
Virginia Tech  
Gabriel Pent  
Dept. of Crop and Soil Environmental Science,  
Virginia Tech |
Virginia Tech                                                                                                                             |
| LS16-268  | Integrating Row Covers Into Sustainable Production Systems to Strengthen the Sustainability of Specialty Crops Farmers                | $252,542     | Dr.Mark Reiter  
Virginia Polytechnic Institute and State University  
Dr.Ramon Arancibia  
University of Missouri Extension                                                                                                           |
| LS13-255  | Made in the Shade - Using Silvopasture Research and On-farm Demonstrations to Advance These Sustainable Agroforestry Systems          | $190,000     | John Fike  
school of Plant and Environmental Sciences,  
Va Tech                                                                                                                                     |
| LS13-258  | Towards ecologically-based fertilizer recommendations that improve soil quality in high-density apple orchards                          | $140,000     | Dr.Gregory Peck  
Cornell University                                                                                                                        |
| LS08-206  | Sustainable agriculture in Virginia and North Carolina: a multi-state assessment of the economic, social and political context       | $155,481     | Dr.Jonah Fogel  
University of Virginia                                                                                                                   |
| LS07-195  | How farmers learn: improving sustainable agriculture education                                                                               | $205,000     | Dr.Nancy Franz  
Virginia Tech                                                                                                                             |
| LS06-191  | Promoting the development of economically and ecologically sustainable pasture-fed beef markets                                              | $198,652     | Denise Mainville  
Department of Agricultural & Applied Economics                                                                                           |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS03-149</td>
<td>Enhancing Sustainability of Organic Broccoli Production through Integration of No-tillage and Farmscaping</td>
<td>$163,741</td>
<td>Ronald Morse</td>
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<td>Virginia Polytechnic Institute &amp; State University</td>
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<tr>
<td>LS03-156</td>
<td>Saving our Seed: A program to train farmers</td>
<td>$204,500</td>
<td>Tony Kleese</td>
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<td>Carolina Farm Stewardship Association</td>
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<td></td>
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<td>Brian Cricket Rakita</td>
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<td>Carolina Farm Stewardship Association</td>
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<td>LS99-099</td>
<td>Economic and Environmental effects of Compost use for Sustainable Vegetable Production</td>
<td>$153,969</td>
<td>Greg Evanylo</td>
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<tr>
<td>LS97-083</td>
<td>The Hometown Creamery Revival</td>
<td>$145,474</td>
<td>Vicki Dunaway</td>
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<td>Dairy Farm Cooperators</td>
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<tr>
<td>LS97-084</td>
<td>Regionally Centered Sustainable Agriculture System</td>
<td>$173,240</td>
<td>Anthony Flaccavento</td>
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<td>Clinch Powell Sustainable Development Initiative</td>
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<tr>
<td>LS96-080</td>
<td>Alternative Agriculture Strategies for Rural Community Sustainable Development Northampton County, Virginia</td>
<td>$228,517</td>
<td>Terry Thompson</td>
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<td>The Nature Conservancy Virginia Coast Reserve</td>
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<td>LS95-070</td>
<td>Effects of Organic and Chemical Fertility Inputs on Soil Quality in Limited Resource Vegetable Farms</td>
<td>$184,319</td>
<td>Greg Evanylo</td>
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<tr>
<td>LS95-071</td>
<td>Developing Municipal/On-Farm Linkages for On-Farm Composting and Utilization of Yard Wastes: A Regional Resource Issue Project</td>
<td>$69,167</td>
<td>Greg Evanylo</td>
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<td>Virginia Tech</td>
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<tr>
<td>LS91-037</td>
<td>Low-Input Crop and Livestock Systems for the Southeastern United States</td>
<td>$360,000</td>
<td>J.P. Fontenot</td>
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<tr>
<td>LS90-029</td>
<td>An Expert Crop Rotation Planning System (CROPS) for Implementing and Evaluating Low-input Crop and Livestock Systems</td>
<td>$60,000</td>
<td>Nicholas Stone</td>
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<td>Virginia Polytechnic Institute &amp; State University</td>
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<tr>
<td>LS88-008</td>
<td>Development, Implementation and Evaluation of Low-input Crop and Livestock Systems for the Southern Region (88-96-2)</td>
<td>$390,000</td>
<td>John Luna</td>
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<td>Oregon State University</td>
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<tr>
<td>LS88-008.2</td>
<td>Low-Input Crop and Livestock Systems for the Southeastern United States</td>
<td>$360,000</td>
<td>John Luna</td>
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<td>Oregon State University</td>
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</table>

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES18-144</td>
<td>Sharing the Wealth of Cover Crops: Improved cover crop and soil health knowledge sharing and networking</td>
<td>$79,091</td>
<td>Wade Thomason</td>
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<tr>
<td>ES11-109</td>
<td>Expanding the Expertise of Agricultural Professionals to Serve New Constituents: Practical Training on Organic Horticulture and Hoophouses</td>
<td>$99,980</td>
<td>Jim Lukens</td>
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<td>Southern Sustainable Agriculture Working Group</td>
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<td>Pamela Kingfisher</td>
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<td>Southern SAWG</td>
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<tr>
<td>ES11-110</td>
<td>Comprehensive Training in Direct Marketing of Meat and Meat Products for Cooperative Extension Agents and Agricultural Professionals</td>
<td>$90,573</td>
<td>Scott Greiner</td>
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<tr>
<td>ES06-085</td>
<td>Sustainable Organic No-Till Systems: A Training Program for CES and NRCS Field Professionals</td>
<td>$104,623</td>
<td>Ronald Morse</td>
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<td>Virginia Polytechnic Institute &amp; State University</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>ES03-071</td>
<td>Developing a Hair Sheep Production Systems for Southwest Virginia</td>
<td>$51,879</td>
<td>Martha Mewbourne</td>
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<tr>
<td>ES01-053</td>
<td>Innovative Cropping Systems SARE-PDP Project, Colonial Soil and Water</td>
<td>$49,913</td>
<td>Brian Noyes Colonial Soil and Water Conservation District</td>
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<tr>
<td>ES01-059</td>
<td>Training for the Pasture Land Management Research Extension &amp; Education Program</td>
<td>$49,981</td>
<td>John Galbraith Virginia Polytechnic Institute &amp; State University</td>
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</table>

**FARMER/RANCHER GRANTS**

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<tr>
<th>Project #</th>
<th>Project Title</th>
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<th>Project Leaders</th>
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<tbody>
<tr>
<td>FS21-332</td>
<td>Cropland Remediation of Heavy Metals</td>
<td>$11,707</td>
<td>William Drumheller, Sr. Royall D Farm, LLC</td>
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<tr>
<td>FS18-308</td>
<td>Evaluating the Effectiveness of Locally Available Woodchips for Weed Control</td>
<td>$9,756</td>
<td>Patrick Johnson NANIH Farm and Garden, Inc.</td>
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<tr>
<td>FS16-287</td>
<td>Retro Fitting an Existing Orchard</td>
<td>$9,837</td>
<td>Marianne Cicala Farmer</td>
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<tr>
<td>FS16-289</td>
<td>Analyzing Baby Ginger as a Profitable Crop Through Organic Certification and</td>
<td>$9,978</td>
<td>William Crenshaw Farmer</td>
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<td>Value-Added Processing</td>
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<tr>
<td>FS16-291</td>
<td>Winter Squash Evaluation and Improvement for Downy Mildew Resistance and Fruit</td>
<td>$14,862</td>
<td>Edmund Frost Commonwealth Seed Growers / Twin Oaks Seed Farm</td>
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<td>FS16-292</td>
<td>Comparing Methods for No-Till Lespedeza Pasture Establishment</td>
<td>$8,688</td>
<td>Gail Hobbs-Page Farmer</td>
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<td>FS14-280</td>
<td>Controls on vegetable growth, flowering, and production of Hops in the</td>
<td>$8,834</td>
<td>Justen Dick Kelly Ridge Farms, LLC</td>
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<td>Southeastern USA</td>
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<tr>
<td>FS14-285</td>
<td>Development of a Clean Hay Mulch System for a Diverse, Biologically Managed</td>
<td>$5,866</td>
<td>Arthur and Carol Upshur Copper Cricket Farm</td>
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<td>CSA Vegetable Farm</td>
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<tr>
<td>FS13-273</td>
<td>Identifying and Marketing Quality Open-Pollinated and Organic Cucurbit</td>
<td>$9,963</td>
<td>Edmund Frost Commonwealth Seed Growers / Twin Oaks Seed Farm</td>
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<td>Seedstocks for Virginia</td>
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<td>FS12-261</td>
<td>Are beeswax cappings contaminated with pesticides?</td>
<td>$3,500</td>
<td>Elizabeth LeGall Meadows Edge Farm</td>
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<td>FS10-243</td>
<td>Winter Production of Nucleus Honeybee Colonies</td>
<td>$9,944</td>
<td>John Fraser</td>
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<td>FS09-238</td>
<td>Development of a novel grazing system for sustainability of a cow-calf</td>
<td>$9,500</td>
<td>Jason Carter VA Cooperative Extension Joe Shomo</td>
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<td>FS09-241</td>
<td>Developing a Sustainable Commercial Production System for the Goji berry</td>
<td>$7,349</td>
<td>Norma Wilson</td>
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<tr>
<td>Project Number</td>
<td>Title</td>
<td>Funding Amount</td>
<td>Principal Investigator</td>
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<tr>
<td>FS08-223</td>
<td>Promoting Sustainable Beekeeping Practices through local production of nucs (nucleus colonies) and local queen honeybees</td>
<td>$14,736</td>
<td>Karla Eisen</td>
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<tr>
<td>FS08-225</td>
<td>Improving Sustainability of A Long-term Certified Organic Cash Grain Production System</td>
<td>$8,828</td>
<td>W. Todd Henry</td>
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<tr>
<td>FS08-227</td>
<td>Optimizing management of manure composts to yield high value mushroom crops and soil amendments</td>
<td>$6,317</td>
<td>Mark Jones</td>
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<tr>
<td>FS08-229</td>
<td>Enhanced genetic selection of dairy sheep for the Southern US</td>
<td>$9,486</td>
<td>Marcia McDuffie</td>
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<tr>
<td>FS08-231</td>
<td>Financial analysis of growing no till organic field corn and wheat using cover crops for weed suppression</td>
<td>$8,827</td>
<td>Joel Thomas Yowell</td>
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<tr>
<td>FS07-217</td>
<td>Low Input No-Till Vegetable Production in the Shenandoah Valley</td>
<td>$9,988</td>
<td>Michael Phillips</td>
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<tr>
<td>FS07-218</td>
<td>Biodegradable Mulch</td>
<td>$3,457</td>
<td>Eric Plaksin</td>
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<tr>
<td>FS06-210</td>
<td>Which Edamame Variety is best for a Market Garden?</td>
<td>$4,459</td>
<td>Patricia Stansbury</td>
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<tr>
<td>FS05-186</td>
<td>Growing Alternative Crops in Tobacco Greenhouses</td>
<td>$4,085</td>
<td>Charlie Broadwater</td>
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<tr>
<td>FS05-192</td>
<td>Managing Cover Crops Under-The-Trellis: A Vital Step Toward Vineyard Sustainability</td>
<td>$9,958</td>
<td>Jason Murray</td>
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<tr>
<td>FS05-194</td>
<td>On Farm Hatchery for Fingerling Catfish</td>
<td>$9,450</td>
<td>James O. Shands</td>
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<td>FS04-179</td>
<td>Production Cost vs. Market Value Comparison of Rare Breed and Commercial Swine</td>
<td>$10,000</td>
<td>Darin Buse</td>
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<td>FS04-180</td>
<td>A Varroa Mite Management Project</td>
<td>$13,271</td>
<td>Billy M. Davis</td>
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<tr>
<td>FS03-169</td>
<td>Using Compost Tea to Enhance Growth of Pasture for Livestock Grazing</td>
<td>$8,784</td>
<td>George Nolting</td>
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<td>FS03-173</td>
<td>Pasture-based Goat and Sheep Producer to Processor Transfer Station Project</td>
<td>$15,000</td>
<td>Marilyn Sanford</td>
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<tr>
<td>FS03-177</td>
<td>Nigerian Dwarf Goats for Value-added Dairy Products to Provide Sustainable Off-season Farm Income</td>
<td>$7,317</td>
<td>Liane Young</td>
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<td>FS02-147</td>
<td>Appropriate-Scale, Inexpensive Cheese Vat for the Farmstead Cheesemaker</td>
<td>$6,430</td>
<td>Vicki Dunaway</td>
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<tr>
<td>FS02-153</td>
<td>Making Honey Bee Pollination More Sustainable by Reducing Miticides to Control Varroa Mites</td>
<td>$9,340</td>
<td>Wyatt A. Mangum</td>
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</table>
FS02-154  Scott County Hair Sheep Faire  $3,068  Martha Mewbourne

FS02-158  Winter Green Manure Crops for Organic Vegetable Production in the Tidewater Virginia Region  $4,785  J. W. Phillips

FS01-136  A Natural Control for Algae in Virginia Farm Ponds  $5,140  Linda Layne
Virginia Fish Farmers Association

FS00-108  Community Supported Agriculture Marketing Program  $14,975  Alice Coles
Bayview Citizens for Social Justice Inc.

FS00-115  Agricultural Entrepreneur Course  $14,500  Sharon Keith
Farmer Market Association

FS00-117  Building a Successful Small-Farmer Marketing Group When Customers are Geographically Dispersed  $14,800  Ned Johnson
Highlands Bioproduce, Inc.

FS00-119  Developing a Producers’ Cooperative and Market for Free-Range Poultry  $9,672  Andy Lee
Good Earth Organic Farm

FS00-120  Cut Flowers: Tilapia Aquaponics Study  $5,111  Bert McLaughlin

FS00-124  Marketing Open-Pollinated Garden Seed as an Alternative Crop  $4,486  Brian Rakita
Acorn Farm

FS98-073  Developing a Dairy Hair Sheep: Assessing the Potentials  $4,377  Amy Hayner

FS98-077  Test Marketing and Financial Analysis of Fresh Cut Flowers  $5,416  Emmet Lowe

FS98-081  Soil Nutrient Balancing in Vegetable Production  $7,325  Mark W. Schonbeck
Virginia Association for Biological Farming

FS95-020  No-Tillage Production of Transplanted Crops in High Cover Crop Residues  $8,300  Linford Belcher

FS95-024  Alternative Control of Soil Diseases in Vegetable Production  $5,625  Dennis C. Dove
Buttercup Gardens

GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GS21-245  | Spraying Too Much: Understanding the biology of the red headed flea beetle to inform IPM in nursery crops | $16,480      | Alejandro Del Pozo-Valdivia
Virginia Tech
Eleanor Lane
Virginia Tech

| GS20-232  | Assessing Suitable Production Techniques for Ramps in Appalachia                | $14,660      | Dr. John Munsell
Virginia Tech - Department of Forest Resources and Environmental PABITRA ARYAL
School of Plant and Environmental Sciences, Virginia Tech |
<table>
<thead>
<tr>
<th>Project ID</th>
<th>Title</th>
<th>Funding</th>
<th>Principal Investigator(s)</th>
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<tbody>
<tr>
<td>GS19-204</td>
<td>Production of High Protein Feeds from Brewer's Spent Grain to Replace Fishmeal in Aquaculture Diets</td>
<td>$16,333</td>
<td>Dr. Haibo Huang, Virginia Tech, Yanhong He, Virginia Polytechnic Institute &amp; State University</td>
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<tr>
<td>GS19-201</td>
<td>Investing in Tribal Food Security and Agricultural Recovery</td>
<td>$15,740</td>
<td>Marcus Comer, Teena Hamlin, Virginia Polytechnic Institute &amp; State University</td>
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<tr>
<td>GS19-202</td>
<td>Cortisol as an Indicator of Stress in Animals Under Different Grazing Systems</td>
<td>$13,500</td>
<td>John Fike, School of Plant and Environmental Sciences, Va Tech, Sanjok Poudel, Virginia Polytechnic Institute and State University</td>
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<tr>
<td>GS18-188</td>
<td>Ecology and Impact of Chauliognathus spp. as Beneficial Insects in Agricultural Integrated Pest Management</td>
<td>$15,234</td>
<td>Dr. Thomas Kuhar, Virginia Tech, Katlyn Catron, Virginia Tech</td>
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<tr>
<td>GS18-187</td>
<td>Farmers' Market Leadership: Factors contributing to success and failure</td>
<td>$11,823</td>
<td>Eric Kaufman, Virginia Tech, Jama Coartney, Virginia Tech</td>
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<tr>
<td>GS17-167</td>
<td>Development of a Novel Approach for Monitoring the Samurai Wasp, Trissolcus japonicus (Ashmead), an Effective Parasitoid of the Brown Marmorated Stink Bug, Halyomorpha halys (Stal)</td>
<td>$14,813</td>
<td>Chris Bergh, Virginia Tech, Nicole Quinn, Virginia Tech</td>
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<tr>
<td>GS17-176</td>
<td>Enhancing Biological Control in Vegetable Production in Eastern Virginia and Maryland</td>
<td>$16,105</td>
<td>Megan O'Rourke, Virginia Tech, Christopher McCullough, Virginia Tech</td>
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<td>GS17-177</td>
<td>Effect of Cultural Practices in Controlling Southern Blight of Potato in the Mid-Atlantic Region</td>
<td>$16,413</td>
<td>Dr. Steven Rideout, Virginia Tech, Jose Garcia Gonzalez, Virginia Tech</td>
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<td>GS16-153</td>
<td>Living Soil for a Sustainable Future: Assessing the Effects of Cover Crops and Tillage on the Soil Microbial Community and Health</td>
<td>$10,995</td>
<td>Dr. Ramon Arancibia, University of Missouri Extension, Samantha Taggart, Virginia Tech</td>
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<tr>
<td>GS16-162</td>
<td>Designing and Evaluating Complex Cover Crop Mixtures</td>
<td>$10,994</td>
<td>Dr. Mark Reiter, Virginia Polytechnic Institute and State University, Bethany Wolters, Virginia Tech</td>
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<tr>
<td>GS16-164</td>
<td>Shade Effects on Yield, Botanical Composition, Nutritive Value, and Ergot Alkaloid Concentrations of Forage Mixtures for Silvopastures</td>
<td>$11,000</td>
<td>Dr. Chris Teutsch, Virginia Polytechnic Institute and State University, Kelly Mercier, Virginia Tech</td>
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<tr>
<td>GS15-144</td>
<td>Improved Trapping Strategies for Managing Harlequin Bug: Applying recent research and discovery of its aggregation pheromone as a tool for vegetable growers</td>
<td>$9,893</td>
<td>Dr. Thomas Kuhar, Virginia Tech, Anthony Dimeglio, Bayer Crop Science</td>
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<td>GS15-150</td>
<td>Non chemical methods of weed control in strawberry annual plasticulture system</td>
<td>$11,000</td>
<td>Dr. Jayesh Samtani, Virginia Tech. University, Sanghamitra Das, Bayer Crop Science</td>
</tr>
</tbody>
</table>
GS14-130  Acoustic analysis: A novel way to measure livestock grazing behavior  $10,981  Gabriel Pent  
Dept. of Crop and Soil Environmental Science, Virginia Tech  
John Fike  
school of Plant and Environmental Sciences, Va Tech  
Gabriel Pent  
Dept. of Crop and Soil Environmental Science, Virginia Tech  

GS14-131  Making Pest Management More Sustainable in Cucurbit Production  $10,922  Dr. Thomas Kuhar  
Virginia Tech  
Dr. James Wilson  
Virginia Tech  

GS13-120  Management of Mexican Bean Beetle, Epilachna varivestis Mulsant, in Snap Beans Using Cultural Control Strategies  $10,622  Dr. Thomas Kuhar  
Virginia Tech  
Louis Nottingham  
Virginia Tech  

GS12-113  Mob grazing effects on nutrient runoff in cool season pastures  $10,974  Dr. W. Cully Hession  
Virginia Tech  
Emily Williams  
Virginia Polytechnical Institute and State University  

GS12-118  Increasing Fresh Virginia-Grown Edamame Supply through Season Extension Techniques  $10,731  Dr. Maru Kering  
Virginia State University  
Dr. Bo Zhang  
Virginia State University  
Shawntae Nolen  
Virginia State University  

GS09-079  Optimal Nutritive Value of Honeylocust Seed Pods Within Temperate Silvopasture  $9,894  John Fike  
school of Plant and Environmental Sciences, Va Tech  
Jacob Johnson  
Virginia Polytechnical Institute and State University  

GS09-081  Trap cropping for management of Harlequin bug in cole crops  $9,523  Dr. Thomas Kuhar  
Virginia Tech  
Anna Wallingford  
Virginia Tech  

GS05-050  Effect of European Corn Borer on Corn Whole-Plant Yield and Forage Quality  $6,107  Roger Youngman  
Virginia Polytechnic Institute and State Univ.  
Siddharth Tiwari  
Virginia Polytechnic Institute and State Univ.  

GS04-031  Effects of Organic Amendments on Soil Humic Substances Content and Physiological Properties of Water-Stressed Zea mays and Glycine max  $9,793  Greg Evanylo  
Virginia Tech  
Chandra Bowden  
Virginia Tech  

GS03-024  Optimizing Forage Production and Quality Within a temperate Silvopasture System  $9,959  John Fike  
school of Plant and Environmental Sciences, Va Tech  

ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
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<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tbody>
<tr>
<td>OS21-143</td>
<td>Tapping New Forest Farming Opportunities in Central Appalachia Through Black Walnut Syrup Production</td>
<td>$19,546</td>
<td>Dr. A. L. (Tom) Hammett Virginia Tech</td>
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<tr>
<td>OS21-144</td>
<td>Cluster Protection Shelter to Reduce Fungicide Usage in Conventional and Organic Vineyards</td>
<td>$20,000</td>
<td>Mizuho Nita Virginia Tech</td>
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<tr>
<td>OS18-111</td>
<td>Evaluating Legume Cover Crops for Sustainable Corn Grain Production in the Virginia Coastal Plain</td>
<td>$9,747</td>
<td>Keith Balderson Northern Neck Soil and Water Conservation District</td>
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<tr>
<td>Project #</td>
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<td>Project Leaders</td>
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<td>OS18-122</td>
<td>Sustainable Varroa Mite Management in Honey Bee Queen Production</td>
<td>$14,998</td>
<td>Dr. James Wilson Virginia Tech</td>
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<td>OS17-103</td>
<td>Integrating Cropping Practices to Improve Nutrient Management Plans and Ensure Environmental and Economic Sustainability in Dairy Farming Systems</td>
<td>$15,000</td>
<td>Gonzalo Ferreira Virginia Tech</td>
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<tr>
<td>OS17-107</td>
<td>Use of Protective Covers to Reduce Fungicide Usages in Organic Wine Grape Production in Virginia</td>
<td>$15,000</td>
<td>Mizuho Nita Virginia Tech</td>
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<tr>
<td>OS13-069</td>
<td>Developing jujube (Ziziphus jujube Mill) or Chinese date as an alternative fruit tree crop to improve sustainability of small farmers in Mississippi</td>
<td>$15,000</td>
<td>Dr. Ramon Arancibia University of Missouri Extension</td>
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<td>OS12-065</td>
<td>Sustainable practices for the management of the invasive brown marmorated stink bug, Halyomorpha halys (Stal), on vegetables</td>
<td>$14,820</td>
<td>Dr. Thomas Kuhar Virginia Tech</td>
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<tr>
<td>OS10-051</td>
<td>Appalachian Forest Farming Network for Native Medicinal Plant Production</td>
<td>$15,000</td>
<td>Dr. James Chamberlain, III Research Scientist</td>
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<td>OS07-037</td>
<td>Allelopathic potential of a biculture cover cropping system utilizing Fabaceae and Brassicaceae cover crops</td>
<td>$12,840</td>
<td>Janet Spencer Virginia Cooperative Extension</td>
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<tr>
<td>OS06-030</td>
<td>Reducing soil erosion and nitrogen leaching through sustainable cropping systems</td>
<td>$6,271</td>
<td>Wade Thomason Virginia Tech</td>
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<tr>
<td>OS02-001</td>
<td>Production, Marketing and Financial Analysis of Seedless Watermelons Growing in Tobacco Transplant Greenhouses</td>
<td>$12,118</td>
<td>Scott Jessee Virginia Polytechnic Institute &amp; State Univ.</td>
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<td>OS02-005</td>
<td>Direct Marketing Assessment for the Potential of Ethnic Crops</td>
<td>$9,775</td>
<td>Jason Murray Virginia Cooperative Extension</td>
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<tr>
<td>OS02-007</td>
<td>Developing Sustainable Internal Parasite Control Programs for Small Ruminants</td>
<td>$14,995</td>
<td>Joseph Tritschler Virginia State University</td>
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**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

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<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tbody>
<tr>
<td>CS12-090</td>
<td>The Montgomery County Farm to Community Planning Project</td>
<td>$9,997</td>
<td>Ellen Stewart Friends of the Farmers Market</td>
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<tr>
<td>CS12-091</td>
<td>Refugee Farm Worker Training Program</td>
<td>$10,000</td>
<td>Adrianna Vargo Local Food Hub</td>
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<tr>
<td>CS08-066</td>
<td>Growing Food &amp; Community: 2009 Initiatives</td>
<td>$10,000</td>
<td>Dawn Story Growing Food &amp; Community</td>
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<tr>
<td>CS06-043</td>
<td>Building sustainable communities through agricultural and food-based entrepreneurship</td>
<td>$10,000</td>
<td>Julie Brown Institute for Advanced Learning and Research</td>
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<tr>
<td>CS06-047</td>
<td>Value-added Sustainable Agriculture Initiative</td>
<td>$40,000</td>
<td>Kathryn Chupik Appalachian Sustainable Development</td>
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<td>Code</td>
<td>Title</td>
<td>Funding</td>
<td>Recipient</td>
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<tr>
<td>CS03-011</td>
<td>Making the Connection: Enhancing Agricultural Understanding in an Urbanizing Area</td>
<td>$7,200</td>
<td>Suzanne Heflin Prince William County Farm Tour</td>
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<tr>
<td>CS03-015</td>
<td>Community Development through a Regional Food System Plan</td>
<td>$10,000</td>
<td>Barbara Schwenk Accomack-Northampton Planning District Commission</td>
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<td>CS02-001</td>
<td>Agri-tourism: A Strategy Toward Sustainable Farm, Business, Family and Community</td>
<td>$8,230</td>
<td>Brian Calhoun Virginia Cooperative Extension</td>
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<td>CS02-003</td>
<td>Making the Connection: Enhancing Agricultural Understanding in an Urbanizing Area</td>
<td>$7,300</td>
<td>Suzanne Heflin Prince William County Farm Tour</td>
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**Total funding from the USDA SARE program to Virginia**

$5,858,810

For further information on projects, contact Candace Pollock, Southern SARE public relations coordinator, at (770) 412-4786 or cpollock@uga.edu. Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).