What is SARE?

Since 1988, the Sustainable Agriculture Research & Education (SARE) program has been the go-to USDA grants and outreach program for farmers, ranchers, researchers and educators who want to develop innovations that improve farm profitability, protect water and land, and revitalize communities. To date, SARE has awarded over $389 million to more than 8,542 initiatives.

SARE is grassroots with far-reaching impact

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

SARE communicates results

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

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

Maryland

Project Highlight: Maryland Extension Training: Solar Photovoltaic Options, Opportunities and Challenges

A team of researchers and educators at the University of Maryland collaborated to create an in-depth training curriculum to help producers learn about the options, opportunities and challenges associated with on-farm solar power. Due to increasing energy costs and decreasing costs of solar technology, many farms in Maryland are considering solar electric installations to power their operations. However, only 7.25% of farms in Maryland currently have solar panels installed, with many agricultural communities lacking the knowledge, technical expertise and experience necessary to facilitate this demand for on-farm solar. To address these challenges, Dr. Drew Schiavone, an energy conservation and technology specialist at the University of Maryland, obtained a SARE grant to create an educational training initiative.

The project launched a series of four regional “train-the-trainer” workshops designed to provide Extension educators and other agricultural service providers with the technical skills, knowledge, attitude and awareness needed to conduct training programs. In conjunction with these workshops, the University of Maryland also created a catalog of videos that are a great resource for farmers or anyone else looking to install solar panels. The educational curriculum and associated workshops explore the basic principles of solar PV technology and its appropriate on-farm applications, and provide an overview of solar contracts and leasing options relevant to Maryland farmers. By expanding access to this type of training, more producers will be able to produce clean energy and increase the sustainability of their farms.

For more information on this project, see sare.org/projects and search for project number ENE20-165.

SARE in Maryland

neast.sare.org/sare-in-your-state/maryland

$7,799,053 in total funding

166 grant projects

(since 1988)

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

Total awards: 166 grants

- 39 Research and Education
- 6 Sustainable Community Innovation
- 11 Professional Development Program
- 54 Farmer/Rancher
- 31 Graduate Student
- 19 On Farm Research/Partnership
- 6 Research Only

Total funding: $7,799,053

- $4,709,195 Research and Education
- $78,593 Sustainable Community Innovation
- $914,560 Professional Development Program
- $413,007 Farmer/Rancher
- $451,255 Graduate Student
- $291,034 On Farm Research/Partnership
- $941,409 Research Only

Find a complete list of projects on page 3.

SARE's Impact

53 percent of producers report using a new production technique after reading a SARE publication.

79 percent of producers said they improved soil quality through their SARE project.

64 percent of producers said their SARE project helped them achieve higher sales.

Learn about local impacts at: northeast.sare.org/sare-in-your-state/maryland

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 northeast.sare.org/state-pages/maryland to learn more.

Naveen Kumar Dixit
University of Maryland Eastern Shore
(410) 621-3650
fnaveenkumar@umes.edu

Emily Zobel
University of Maryland Extension
(410) 228-8800
ezobel@umd.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.
Maryland has been awarded $7,799,053 grants to support 164 projects, including but not limited to, 37 research and/or education projects, 11 professional development projects and 54 producer-led projects. Maryland 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>LNE23-467</td>
<td>Building Community and Capacity of Care Farms Benefiting People with Intellectual or Developmental Differences in the Northeast United States</td>
<td>$257,753</td>
<td>Woody Woodroof Red Wiggler Community Farm Andrea Barnhart Red Wiggler Community Farm</td>
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<td>LNE23-468</td>
<td>Acres4Change Stewardship Education and Training Program</td>
<td>$134,483</td>
<td>Pertula George-Redd Acres4Change</td>
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<td>LNE23-460</td>
<td>Aquaponic Systems, a Financially and Environmentally Sustainable Urban Farming Alternative in Maryland Taught Through Peer Learning Groups</td>
<td>$183,663</td>
<td>Jose-Luis Izursa University of Maryland</td>
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<td>LNE23-461</td>
<td>Sustaining Urban Farming: Teaching Apprentices to Think Like Farmers and Researching Urban Farmers’ Income and Quality of Life</td>
<td>$288,853</td>
<td>Margaret Morgan-Hubbard ECO City Farms</td>
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<td>LNE22-443</td>
<td>Implementation of Improved Intestinal Parasite Management Practices on Maryland Livestock Farms</td>
<td>$165,354</td>
<td>Sarah Potts University of Maryland</td>
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<td>LNE21-419</td>
<td>Teaching Black Farmers in Baltimore City to Grow Ethnic Crops for Black Communities</td>
<td>$252,248</td>
<td>Denzel Mitchell, Jr. Farm Alliance of Baltimore</td>
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<td>LNE20-397</td>
<td>Implementing Rotational Grazing Practices on Livestock Operations in Maryland</td>
<td>$78,076</td>
<td>Dr.Amanda Grev University of Maryland</td>
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<td>LNE18-366</td>
<td>Optimization of Starter Nitrogen Fertilizer Application for Corn Planted into a Cereal Rye Cover Crop</td>
<td>$199,790</td>
<td>Dr.Katherine Tully University of Maryland</td>
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<td>LNE15-341</td>
<td>Quantifying and demonstrating scrubbing H2S from farm-based anaerobic digestion systems</td>
<td>$216,879</td>
<td>Stephanie Lansing University of Maryland</td>
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<td>LNE14-338</td>
<td>Deep soil nitrogen: A resource for sustainability in the mid-Atlantic using early cover crops</td>
<td>$249,576</td>
<td>Dr.Ray Weil University of Maryland Dr.Sarah Hirsh University of Maryland</td>
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<td>LNE11-312</td>
<td>No-till, No-herbicide Planting of Spring Vegetables Using Low Residue Winter Killed Cover Crops</td>
<td>$154,405</td>
<td>Dr.Ray Weil University of Maryland Natalie Lounsby University of New Hampshire</td>
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<tr>
<td>LNE08-274</td>
<td>Cover Crops for Sustainable Pest Management and Soil Quality in Production Nurseries</td>
<td>$175,920</td>
<td>Dr.Paula Shrewsbury University of Maryland</td>
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</table>
LNE06-241  An integrated approach to developing a day neutral strawberry production industry $88,700 Willie Lantz University of Maryland Extension

LNE05-224  Increasing economic and environmental sustainability of aquaculture production systems through aquatic plant culture $159,309 Andrew Lazur University of Maryland Ctr. for Environmental Sci.

LNE05-232  High tannin grain sorghum as a possible natural anthelmintic for sheep and goats $100,000 Niki Whitley UMES - Maryland Cooperative Extension

LNE04-201  Optimizing Environmental Benefits From Riparian Buffers in Maryland $123,977 Galen P. Dively Department of Entomology

LNE04-206  Season Extension and Cultivar Evaluations for Increasing Farmer Profitability Using High Tunnels in the Baltimore/Washington Metropolitan Marketing Area $94,650 Mark Davis Future Harvest-CASA

LNE04-211  Mid-Atlantic Sheep - Goat Marketing Project $31,000 Susan Schoenian Maryland Cooperative Extension

LNE04-213  Environmental and Economic Effects of Management-Intensive Grazing on Dairy Farms & Phase II $16,963 Dr. Ray Weil University of Maryland

LNE03-180  Optimization of cover crop strategies for pumpkin production in the mid-Atlantic $99,613 Caragh Fitzgerald Maryland Cooperative Extension Kathryne Everts University of Delaware, Dept. of Plant and Soil

LNE03-190  Small Ruminant Integrated Parasite Management (IPM) $49,830 Susan Schoenian Maryland Cooperative Extension

LNE03-192  Multipurpose Brassica cover crops for sustaining Northeast farmers $158,570 Dr. Ray Weil University of Maryland

LNE03-193  Sustainable pasture lamb production $147,495 Niki Whitley UMES - Maryland Cooperative Extension

LNE02-167  Enhancement, Implementation - Evaluation of Biologically Based Pest Management Tactic for Three Key Pests in Production Nurseries $138,636 Dr. Paula Shrewsbury University of Maryland

LNE01-145  Improving Sustainable Enterprise Selection - Marketing Skills through Business Skills Training $4,230 Ginger Myers Howard County Economic Development Authority

LNE01-152  Environmental - Economic Impacts of Management-Intensive Grazing on Dairy Farms $131,795 Dr. Ray Weil University of Maryland

LNE00-131  Development and Evaluation of Management Alternatives for Root Knot Nematodes and Volunteer Potatoes $128,900 Kathryne Everts University of Delaware, Dept. of Plant and Soil

LNE00-140  Microdairy: Creating a Profitable Five-Cow Dairy $168,590 Frank Kipe Old Springhouse Farm

LNE97-084  Design and Implementation of a Searchable Database on Compost Production and Use for Internet Users $20,000 Patricia D. Millner USDA-ARS
Soil Test for Active Organic Matter: A Tool to Help Assess Soil Quality

$100,000
Dr. Ray Weil
University of Maryland

Fescue Endophyte Research Study

$9,632
Craig Hartsock
Allegany Soil Conservation District

Control of Gastrointestinal Nematodes in Dairy Cattle Under Intensive Rotational Grazing Management

$45,000
Louis Gasbarre
USDA-ARS

Resource Conservation - Environmental Stewardship in the "Maryland Ag in the Classroom" Curriculum Guide

$70,000
Richard R. Leader
Chesapeake Audubon Society/Pickering Creek Environmental Center

Managing Dairy Waste Using Constructed Wetlands - Composting

$110,305
Leslie Cooperband
University of Maryland

An Integrated Response to Pollination-Related Problems Resulting from Parasitic Honey-Bee Mites, the Africanized Honey Bee, and honey-bee pathogens

$100,000
Nicholas Calderone
ARS Bee Research Laboratory

Winter Cover Crops for Corn Production in the Northeast: N Balance and Soil Moisture Status

$105,000
Morris Decker
University of Maryland

Role of Cereal Grain Cover Crops in Nitrogen Management for the Chesapeake Bay Region

$150,000
Russell Brinfield
University of Maryland

RESEARCH ONLY GRANTS

Optimizing spring cover crop management for productivity, soil health and climate resilience

$249,267
Dr. Ray Weil
University of Maryland

A Comparison of Forage Production, Livestock Performance, Soil Health, and Economics Between Perennial and Perennial/Annual Combination Forage Systems

$99,899
Dr. Amanda Grev
University of Maryland

Sustainability in Beekeeping: Improved Accuracy and Sensitivity of Sampling for the Honey Bee Parasite Varroa destructor

$145,317
David Hawthorne
University of Maryland

Creating an Ecofriendly Pest Suppression Program in Sweet Corn

$100,371
Dr. Cerruti R. R. Hooks
University of Maryland

Managing Agricultural Drainage Ditches for Conservation Biological Control on the Delmarva Peninsula

$197,728
William Lamp
University of Maryland, College Park

Improving Honey Bee Health and Crop Visitation during Pollination

$148,827
Kirsten Traynor
University of Maryland

Dennis vanEngelsdorp
University of Maryland

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Educational Support for Increasing the Acceptance of Federal Nutrition Benefits by Maryland Farmers

$190,073
Megan Todd
Agriculture Law Education Initiative
<table>
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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>ENE20-160</td>
<td>Farm Stress Management and Resources for Maryland Service Providers</td>
<td>$96,645</td>
<td>Shannon Dill</td>
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<td>ENE20-165</td>
<td>Maryland Extension Training: Solar Photovoltaic Options, Opportunities and Challenges</td>
<td>$72,152</td>
<td>Dr. Drew Schiavone</td>
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<td>ENE18-151</td>
<td>Agricultural Conservation Leasing Guide Education Series</td>
<td>$159,380</td>
<td>Sarah Everhart</td>
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<td>University of Maryland Francis K. Carey School of Law</td>
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<td>ENE16-144</td>
<td>The Northeast Cover Crops Council: Building the network and online decision support tools</td>
<td>$144,859</td>
<td>Dr. Katherine Tully</td>
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<td>ENE98-038</td>
<td>Organic Grain Production Another Way</td>
<td>$90,100</td>
<td>John Hall</td>
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<td>ENE98-044</td>
<td>Locally Led Farmer Groups for Sustainable Agriculture: The Study Circle Approach</td>
<td>$6,500</td>
<td>Jim Hanson</td>
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<td>Department of Ag Resource Economics</td>
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<td>ENE98-046</td>
<td>Conducting On-Farm Research: Enabling Farmers to Implement Sustainable Change in Agriculture</td>
<td>$50,000</td>
<td>Kathryne Everts</td>
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<td>University of Delaware, Dept. of Plant and Soil</td>
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<td>ENE97-033</td>
<td>Riparian Buffer Training (Enhancement, Installation, and Management of Riparian Buffer Systems)</td>
<td>$20,500</td>
<td>Robert Tjaden</td>
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<td>Univ. of MD Cooperative Ext. Service</td>
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<td>ENE96-022</td>
<td>Video Training on Improving Water Quality Featuring Farmers and Their Practices in the German Branch Watershed</td>
<td>$24,351</td>
<td>Jim Hanson</td>
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<td>Department of Ag Resource Economics</td>
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<tr>
<td>ENE96-024</td>
<td>Training, Networking and Demonstrating Whole Farm Forage Grazing Systems</td>
<td>$60,000</td>
<td>Elmer M. Dengler</td>
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**FARMER/RANCHER GRANTS**

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<th>Project #</th>
<th>Project Title</th>
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<tr>
<td>FNE23-054</td>
<td>2023 Weed Suppression Study and Analysis</td>
<td>$10,539</td>
<td>Elizabeth Lamb Lamb</td>
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<td>The Sixth Branch</td>
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<td>FNE22-007</td>
<td>Determining the Effect of Tree Pruning and Nutritional Inputs on a Neglected Chestnut Orchard</td>
<td>$29,975</td>
<td>Jane Dennison, Ph.D.</td>
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<td>Morris Orchard LLC</td>
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<td>FNE22-020</td>
<td>Nature’s Colors: Exploring the Production &amp; Profitability of Natural Dyes in Baltimore</td>
<td>$30,000</td>
<td>Kenya Miles</td>
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<td>FNE22-031</td>
<td>Foliar Application of Kaolin Clay to Manage Pest and Diseases in Day Neutral Strawberry</td>
<td>$22,247</td>
<td>Maria Velikonja</td>
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<td>Carniola Farms INC</td>
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<td>FNE22-014</td>
<td>Improving Soil Tilth and Productivity with Mycorrhizal and Saprophytic Fungi</td>
<td>$2,236</td>
<td>Matthew Harhai</td>
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<td>Goat Plum Tree Farm, LLC</td>
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<td>FNE22-016</td>
<td>Ground Cherries: Improving Harvesting Efficiency and Defining Marketing Measures</td>
<td>$5,557</td>
<td>Jenni Hoover</td>
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<td>Serenity Grove Farm</td>
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<td>FNE22-021</td>
<td>For the Love of Legumes: Sustainable Urban Micro-Scale Grains and Dried Beans On a Demonstration Farm in Baltimore City</td>
<td>$29,806</td>
<td>Denzel Mitchell, Jr.</td>
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<td>Farm Alliance of Baltimore</td>
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<td>FNE21-991</td>
<td>Growing Dahlias for Cut Flower Production via Autopots and Aquaponics</td>
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<td>Dr. Tom Precht</td>
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<td>FNE20-954</td>
<td>Composting Sheep Manure with Black Soldier Fly Larvae for Fly and Parasite Control</td>
<td>$13,263</td>
<td>Andrew Keller</td>
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<td>FNE20-951</td>
<td>Managing Corn Earworm in Hemp Field Using Sweet Corn as a Trap Crop</td>
<td>$14,895</td>
<td>Kelly Edwards</td>
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<td>FNE18-900</td>
<td>Use of Rate-of-Gain and Dry Lot to Maintain Parasite Anthelmintic Susceptibility in Blue-faced Leicester Maryland Lambs</td>
<td>$13,658</td>
<td>Andrew Keller</td>
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<td>FNE17-875</td>
<td>Using real-time generated rate-of-gain to determine anthelmintic need in pastured Blue Faced Leicester Maryland lambs</td>
<td>$9,104</td>
<td>Andrew Keller</td>
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<td>FNE16-843</td>
<td>Methods for improving quality and conditions of ground cherry production-part II</td>
<td>$5,652</td>
<td>Lisa Garfield</td>
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<td>FNE15-828</td>
<td>Methods for improving quality and conditions of ground cherry production</td>
<td>$6,889</td>
<td>Lisa Garfield</td>
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<td>FNE15-832</td>
<td>Exploring dryland rice production in the mid-Atlantic</td>
<td>$11,405</td>
<td>Heinz Thomet</td>
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<td>FNE14-803</td>
<td>Effectiveness of Aerated Static Pile to Windrow Composting on Small-Scale Farms</td>
<td>$6,237</td>
<td>Emma Jagoz</td>
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<td>FNE13-789</td>
<td>Exploring low-tech food dehydration to increase profits on small farms</td>
<td>$14,915</td>
<td>Tanya Tolchin</td>
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<td>FNE12-768</td>
<td>Water Hyacinth Project</td>
<td>$8,687</td>
<td>Larry Ward</td>
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<td>FNE10-682</td>
<td>Big Flip Floats for Commercial Oyster Aquaculture</td>
<td>$11,384</td>
<td>Christine Power</td>
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<td>David Chamberlain</td>
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<td>FNE10-693</td>
<td>Economical Climate Control for extended Production in High Tunnel Vertical Growing Systems</td>
<td>$7,651</td>
<td>Allen Lilly</td>
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<td>FNE08-630</td>
<td>Increasing profitability: Building consumer preference for chevon through education and outreach</td>
<td>$10,000</td>
<td>Jeanne Dietz-Band</td>
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<td>FNE08-631</td>
<td>Testing Two Selection Assays-Efficacy for Varroa-mite-tolerant Bee Production</td>
<td>$4,347</td>
<td>Adam Finkelstein</td>
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<td>FNE08-647</td>
<td>Propagating day-neutral strawberry plugs for fall planting</td>
<td>$3,395</td>
<td>Jim Strawser</td>
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<td>FNE07-620</td>
<td>Assess and quantify the benefit of alternative and renewable energy for greenhouse operations</td>
<td>$8,800</td>
<td>John Shepley</td>
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<td>FNE06-594</td>
<td>Sustainable livestock farming: A promotional video and teaching tool</td>
<td>$5,770</td>
<td>Robin Way</td>
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<td>FNE05-546</td>
<td>Using ultrasound scanning and performance testing technology to increase loineye area in lamb</td>
<td>$5,785</td>
<td>John Hall Hall Suffolks</td>
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<td>FNE04-517</td>
<td>Enhancing the Maryland Nursery Industry’s Ability to Improve Water Quality and Increase Profit</td>
<td>$9,900</td>
<td>Leslie Hunter-Cario Environmental Concern, Inc.</td>
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<td>FNE04-532</td>
<td>Verifying New Sustainable Methods for Small Ruminant Parasite Control</td>
<td>$3,300</td>
<td>Karen Taylor</td>
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<tr>
<td>FNE03-477</td>
<td>Farrow to Finish Premium Pastured Pork</td>
<td>$1,555</td>
<td>Errol Mattox</td>
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<td>FNE03-492</td>
<td>Raising Goats on Pasture Alone or with Grain Supplementation</td>
<td>$2,907</td>
<td>Kurt Schuster</td>
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<td>FNE03-497</td>
<td>Sustainable Methods for Small Ruminant Parasite Control</td>
<td>$1,892</td>
<td>Karen Taylor</td>
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<td>FNE02-402</td>
<td>Use of Corn Gluten Meal to Reduce Weeds in Beet Fields</td>
<td>$2,356</td>
<td>David Barylski</td>
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<td>FNE02-424</td>
<td>Effect of Straw, Leguminous and Non-Leguminous Cover Crops on Productivity and Weed Suppression in Organically Managed Asparagus Beds</td>
<td>$864</td>
<td>Michael Klein</td>
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<td>FNE02-426</td>
<td>Production of Strawberries in November and December</td>
<td>$9,927</td>
<td>David Lankford</td>
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<td>FNE02-427</td>
<td>Indoor Raspberry Production</td>
<td>$7,633</td>
<td>Wayne Lockwood</td>
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<td>FNE02-447</td>
<td>Determination of Omega-3 Fatty Acid in Pastured Raised Meat Rabbits</td>
<td>$5,937</td>
<td>Robin Way Rumbleway Farm</td>
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<td>FNE01-376</td>
<td>Maximizing Nitrogen - Phosphorus Efficiency in a Managed-Intensive-Grazing Dairy</td>
<td>$4,481</td>
<td>Judy Gifford St. Brigid’s Farm</td>
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<td>FNE01-382</td>
<td>Effect of Wood Chip Mulch, Leguminous - Non-Leguminous Cover Crops on Productivity - Weed Suppression in Organically Managed Asparagus Beds</td>
<td>$3,583</td>
<td>Michael Klein</td>
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<td>FNE00-296</td>
<td>On-site demonstration for replacing broadcast herbicides with cultivation and banded herbicides in corn.</td>
<td>$5,426</td>
<td>Roy Crow</td>
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<td>FNE00-305</td>
<td>Wine grape production in Harford County: the use of canines as a deterrent to deer damage.</td>
<td>$822</td>
<td>Robert Halman Ole 9 Vineyard</td>
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<td>FNE00-311</td>
<td>The use of the predacious Phytoselid mite, Amblyseius cucumeris, and the entomopathogenic fungus, Beauveria bassiana, for control of western flower thrips in commercial bedding plant production.</td>
<td>$2,874</td>
<td>Gary Magnum</td>
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<tr>
<td>FNE99-257</td>
<td>Dairying in Harford County, Maryland: Transition to Intensive Grazing</td>
<td>$6,050</td>
<td>David Keyes</td>
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</table>
FNE99-263  No-till Transplanted Watermelons in Rye Cover Crop  $5,308  Mike Malone

FNE99-265  Mulching with Black Plastic Drainage Pipe  $2,390  Lawrence MacDonald

FNE99-267  Amending Soils to Produce Blueberries in Maryland  $1,523  Guy & Lynn Moore

FNE99-268  Improving Protein Utilization in Grazing Dairy Cows by Supplementing the Diet with Liquid Molasses  $4,175  Ginger Myers

FNE99-269  Evaluating a No-till Transplanter for Organic Vegetable Production  $3,072  Drew Norman

FNE99-278  Warm-Season Grass Demonstration for Dairy Farms  $2,520  Harry Strite

FNE99-287  Ginseng Dead-Heading: Determining the Effects of Removing Seed-Producing Flowers from Woods-Grown Ginseng  $2,363  Steve & Karen Galloway

FNE98-202  Evaluating Raised Beds and Various Mulches for Vegetable Production  $3,120  Ed Armacost

FNE97-187  Mixed Field Forage  $2,230  Darryl Walker

FNE96-148  Improving Aquaculture Productivity - Safety with Dockside Elevator Systems  $3,869  Richard Pelz

FNE95-104  Season Extension Through Annual Organic Strawberry Production - Fall Vegetable Production  $4,705  Eric Rice

FNE93-012  Bio-Control of Corn Earworm and European Corn Borer in Sweet Corn  $1,510  Nicholas C. Maravell

Nick's Organic Farm

GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GNE21-254 | Effects of floral diversification on beneficial arthropods and ecosystem services in an edamame agroecosystem | $14,998       | Anahi Espindola  
University of Maryland, College Park  
Kathleen Evans  
University of Maryland |
| GNE21-255 | How the Transition to Organic Grain Effects Biological Indicators of Soil Health | $14,970       | Dr.Ray Weil  
University of Maryland  
Biwek Gairhe  
University of Maryland |
| GNE21-257 | Dragonflies as potential biological control on farms: prey assessment using a DNA approach | $15,000       | William Lamp  
University of Maryland, College Park  
Margaret Hartman  
University of Maryland |
| GNE21-268 | Management options for farmers facing saltwater intrusion along the Chesapeake Bay’s Eastern Shore | $14,999       | Dr.Katherine Tully  
University of Maryland  
Alison Schulenburg  
University of Maryland - College Park |
Optimizing Early-season Pest Control in Corn: Untangling the Contributions of Neonicotinoid Seed Treatments, In-furrow Pyrethroids, and Bt Hybrids

$14,961

Dr. Kelly Hamby
University of Maryland College Park
Maria Cramer
University of Maryland

Co-digestion of Algae from Algal Turf Scrubbers in Farm-based Digesters to Increase Profitability and Reduce Nutrients to the Chesapeake Bay Watershed

$14,978

Stephanie Lansing
University of Maryland
Danielle Delp
University of Maryland

Developing a Perennial Living Mulch System to Manage Insect Pests in Northeastern Cantaloupe Fields

$14,955

Dr. Cerruti R. R. Hooks
University of Maryland
Demian Nunez
University of Maryland

Farming in the Face of Climate Change: Planting Alternative Crops in Salt-intruded Fields

$14,995

Dr. Katherine Tully
University of Maryland
Elizabeth de la Reguera
University of Maryland, College Park

Novel Application of Existing Beekeeping Equipment to Combat Inter-colony Transmission of the Varroa Honey Bee Parasite

$14,976

Dennis vanEngelsdorp
University Maryland
Kelly Kulhanek
University of Maryland

Plant Growth Promoting Rhizobacteria to Benefit Kale Production: Resilience to Drought Stress, Salinity and Microbial Food Safety

$15,000

Dr. Shirley Micallef
University of Maryland
Xingchen Liu
University of Maryland

Healthy Soils, Healthy Farmers: Assessing Farmers’ Soil Contact Activities and Soil Contamination on Urban and Rural Farms

$15,000

Dr. Keeve Nachman, PhD
Johns Hopkins BSPH
Sara Lupolt, MPH
Johns Hopkins Bloomberg School of Public Health

Honey Bee Pathophysiology as a Predictive Measure of Overwinter Colony Loss

$14,506

Dennis vanEngelsdorp
University Maryland
Anthony Nearman
University of Maryland

Effects of Living Mulch and Cover Crop Residues on Natural Enemy Abundance and Efficacy in Sweet Corn

$14,009

Dr. Cerruti R. R. Hooks
University of Maryland
Veronica Yurchak
University of Maryland

Evaluation of Biochar as an Additive for Biogas Desulfurization in Dairy Manure Digesters

$14,950

Stephanie Lansing
University of Maryland
Abhinav Choudhury
University of Maryland, College Park

Movement of Spiders from Drainage Ditches to Agricultural Fields to Enhance Conservation Biocontrol

$13,684

William Lamp
University of Maryland, College Park
Dylan Kutz
University of Maryland

Understanding Spotted Wing Drosophila’s Role as a Vector for Fruit Rot Fungi in Fall Red Raspberries

$14,994

Dr. Kelly Hamby
University of Maryland College Park
Margaret Lewis
University of Maryland

Getting Legume Cover Crops to Work in Mid-Atlantic Field Crop Rotations

$14,811

Dr. Katherine Tully
University of Maryland
Cara Peterson
University of Maryland - College Park

Evaluating the Effect of Potato Leafhopper Feeding on Biological Nitrogen Fixation in Alfalfa

$8,804

William Lamp
University of Maryland, College Park
Morgan Thompson
University of Maryland, College Park
<table>
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<tr>
<th>Project #</th>
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</table>
| GNE17-148 | The Maryland Winter Cover Crop Program: assessing performance                | $14,800      | Dr. Brian Needelman  
University of Maryland  
Brian Davis  
University of Maryland |
| GNE17-150 | Integrating sustainability & food safety: assessing Salmonella serovar fitness in irrigation water & transfer onto crops | $14,958      | Dr. Shirley Micallef  
University of Maryland  
Angela Ferelli  
University of Maryland |
| GNE17-160 | Effect of winter cover crops on soil nitrogen dynamics in no-till corn systems | $14,998      | Dr. Katherine Tully  
University of Maryland  
Resham Thapa  
Department of Plant Science and Landscape Architecture, University of Maryland |
| GNE16-116 | Evaluations of economic benefits and long-term sustainability of neonicotinoid seed treatment use in the mid-Atlantic | $14,978      | Dr. Kelly Hamby  
University of Maryland College Park  
Aditi Dubey  
University of Maryland College Park |
| GNE15-096 | Evaluating the effects of green manure and biofertilizers on pak choi yield, minerals, and phytonutrient contents | $14,994      | Corrie Cotton  
UMES  
Nadine Burton  
University of Maryland Eastern Shore |
| GNE15-099 | The effect of cover crops on the abundance and survival of beneficial stink bugs | $11,916      | Dr. Cerruti R. R. Hooks  
University of Maryland  
Peter Coffey  
University of Maryland Extension |
| GNE15-104 | Cold tolerance of the invasive kudzu bug and its potential impact on soybean production in the Northeast | $14,423      | William Lamp  
University of Maryland, College Park  
Jessica Grant  
University of Maryland |
| GNE15-106 | On-farm and isotopic evaluation of deep soil nitrogen capture and cycling by cover crop mixtures | $14,945      | Dr. Ray Weil  
University of Maryland  
Dr. Sarah Hirsh  
University of Maryland |
| GNE14-089 | Reduction of environmental risks and improving livestock productivity in Mixed Crop-Livestock Systems with cheap byproducts of berry fruits | $14,983      | Dr. Debabrata Biswas  
University of Maryland  
Serajus Salaheen  
USDA ARS |
| GNE12-032 | Quantification and persistence of ionophore antimicrobials associated with poultry litter | $14,754      | Dr. Joshua M. McGrath  
University of Maryland  
Dr. Amir Sapkota  
University of Maryland  
Saptashati Biswas  
University of Maryland |
| GNE12-047 | Spatial pattern of infestation risk and management of the invasive brown marmorated stink bug in soybeans | $14,956      | Galen Dively  
University of Maryland College Park  
William Lamp  
University of Maryland, College Park  
Dilip Venugopal  
Dept. of Entomology, Univ. of Maryland |
| GNE11-025 | Cover crop selection and manure placement for weed suppression and nitrogen use efficiency in a no-till organic corn system | $14,986      | Dr. Ray Weil  
University of Maryland  
Hanna Poffenbarger  
University of Maryland |
| GNE11-030 | Developing Inoculum to Increase Anaerobic Digestion Efficiency in Winter Months | $14,974      | Stephanie Lansing  
University of Maryland  
Freddy Witarsa  
University of Maryland |
Giant Miscanthus Production on Maryland Eastern Shore’s Marginal Land: Grassroots Efforts to Restore Profitable Agriculture

Increasing Efficiency and Decision-Making Capability of Small, Socially Disadvantaged, and Minority Farmers

Increasing Awareness of Well Drinking Water Quality of the Farming Community in Maryland

Upcycling Local Waste Streams to Boost Urban Farm Productivity

Relationship Marketing in the Digital Age: Helping Farmers Grow Their Businesses Through Online Marketing

Evaluation of Hops Production in Maryland as a Sustainable Agricultural Enterprise

On-farm food safety trainings for community supported agriculture, on-farm markets, and agritourism operations

Increasing profitability of tomato production in high tunnels

A Maryland cheesemakers guild: Supporting producers, connecting with consumers

Changing the mindset of Maryland cover crop farmers through delayed spring burn-down

Priming for production: A podcast on soil health

Am I making a profit? Using calculators to develop profitable prices for farm-raised meats

Sustainable management tools for the redheaded flea beetle in nurseries

Launching a Maryland small farms poultry processing and marketing group

Developing a Cost Effective, Energy Efficient Greenhouse Using Solar Heating to Extend the Growing Season

Organic Dried Bean Production in Mid-Atlantic

Short cycling as an approach to successful organic strawberry production
ONE05-045 Promoting Pollinators on Maryland’s Working Landscapes $9,535 Annette Meredith University of Maryland

ONE03-015 Double-crop forage systems for dairy farms $9,970 Don Schwartz Maryland Cooperative Extension

SUSTAINABLE COMMUNITY INNOVATION GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CNE12-096</td>
<td>Baltimore City Urban Agriculture Alliance</td>
<td>$14,530</td>
<td>Maya Kosok Civic Works</td>
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<tr>
<td>CNE11-090</td>
<td>Producer Inventory Management for Fresh Fruit and Vegetable Sales to Retail Outlets</td>
<td>$15,000</td>
<td>Willie Lantz University of Maryland Extension</td>
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<tr>
<td>CNE10-077</td>
<td>Stimulating Maryland Agricultural Entrepreneurship through Curbside Roundtables and Individual Planning</td>
<td>$12,008</td>
<td>Ginger Myers University of Maryland Extension</td>
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<tr>
<td>CNE08-047</td>
<td>Expanding and strengthening a network of farmers to support a local foodshed</td>
<td>$5,660</td>
<td>Laura Hunsberger University of Maryland Cooperative Extension</td>
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<tr>
<td>CNE08-056</td>
<td>Leveraging community financing for farm and farmland protection</td>
<td>$10,000</td>
<td>Dr.Lynda Brushett Cooperative Development I Michael Speltz Society for Protection of</td>
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Total funding from the USDA SARE program to Maryland $7,799,053

For further information on projects, contact 802-651-8335 or nesare@uvm.edu. Sustainable Agriculture Research and Education (SARE) is funded by USDA’s National Institute of Food and Agriculture (NIFA).