

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 \$309 million to more than 7,408 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.



www.sare.org

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

Delaware

Project Highlight: *Training the Trainers on Cover Crop Practices*

Interest in cover crops is high due to their ability to improve soil health, reduce off-farm inputs and protect both the soil and water quality. In 2014, a national conference on soil health and cover crops co-hosted by SARE drew strong engagement from Northeastern farmers, educators and researchers. As a follow up to keep the momentum going and expand the use of cover crops in the Northeast, Extension professionals with a sustainable agriculture focus came together in 2015 to organize an in-depth train-the-trainer workshop.

The Northeast SARE Regional Cover Crops Training, hosted by Delaware State University, covered the latest research on the benefits and successful management of cover crops in grain, vegetable and animal production. The planning committee included agricultural leaders from 13 states. Ninety-four participants were organized into 11 teams that integrated farmers, USDA-NRCS representatives, Extension professionals, academics and leaders from industry and nonprofits.

From this two-year project, 12 farmers adopted new cover crop species, planted new fields in cover crops, or used new establishment and termination techniques, with more reporting their intention to do so. Additionally, 71 service providers recommended cover crop practices to other farmers. Videos from the three-day conference are posted on the SARE website.

For more information on this project, see sare.org/projects, and search for project number [ENE15-141](#).

SARE in Delaware

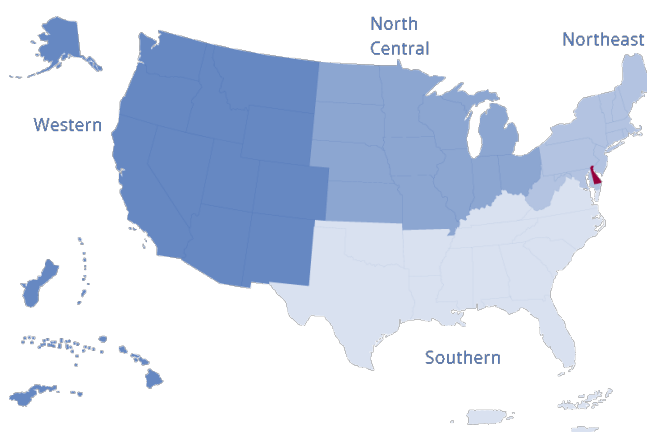
northeast.sare.org/sare-in-your-state/delaware

\$943,731
in total funding

29 grant projects

(since 1988)

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



SARE Grants in Delaware

Total awards: 29 grants



9 Farmer/Rancher
7 Graduate Student
6 On Farm
2 Research/Partnership
2 Professional Development Program
5 Research and Education

Total funding: \$943,731



\$64,573 Farmer/Rancher
\$101,089 Graduate Student
\$101,301 On Farm
Research/Partnership
\$140,943 Professional Development Program
\$535,825 Research and Education

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/delaware

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/delaware to learn more.

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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.



AGRICULTURE PROJECTS FUNDED IN DELAWARE

by USDA's
Sustainable Agriculture Research and Education (SARE) Program

Delaware has been awarded \$943,731 grants to support 28 projects, including but not limited to, 4 research and/or education projects, 2 professional development projects and 9 producer-led projects. Delaware has also received additional SARE support through multi-state projects.

RESEARCH AND EDUCATION GRANTS

| Project # | Project Title | SARE Support | Project Leaders |
|-----------|--|--------------|---|
| LNE12-314 | Improving water and nitrogen use efficiency using soil moisture monitoring to improve irrigation management | \$210,666 | James Adkins University of Delaware |
| LNE08-269 | Efficacy of Natural Dewormers in the Control of Gastrointestinal Nematodes of Small Ruminants | \$166,168 | Dr. Dahlia Jackson-O'Brien Delaware State University |
| LNE07-261 | Farming for native bees | \$93,991 | Dr. Faith Kuehn Plant Industries Administrator |
| LNE05-221 | Mentoring small fresh produce farmers who want to increase farm revenue by selling value-added products through direct-market channels | \$65,000 | Anne Fitzgerald Delaware Department of Agriculture |

PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

| Project # | Project Title | SARE Support | Project Leaders |
|-----------|--|--------------|--|
| ENE15-141 | 2016 Northeast SARE Regional Cover Crops Training | \$134,443 | John Clendaniel Delaware State University |
| ENE98-043 | Nutrient Management Education: Development and Implementation of Training Modules on Basic Principles, Current State of Knowledge and Advances in Research | \$6,500 | Karen L. Gartley University of Delaware |

FARMER/RANCHER GRANTS

| Project # | Project Title | SARE Support | Project Leaders |
|-----------|--|--------------|---|
| FNE17-873 | Improving poultry farm sustainability through pollinator buffers | \$11,481 | Tina Hill Hill Farms, Inc |
| FNE13-786 | Economic analysis of oyster mushroom production in an unused poultry house | \$8,849 | Ramrattan sagram |
| FNE12-746 | Survivability and production of heritage breed egg layers on pasture in Delmarva | \$13,784 | Kim Hartline Spring Morning Farm LLC. |
| FNE11-735 | Effects of Pole Lima Production in North/South vs. East/West Row Placement | \$5,375 | Edward Zitvogel Zitvogel Farms |
| FNE09-655 | Sustainable cropping systems for processing baby lima bean production | \$10,000 | Wm. Donald (Don) Clifton, II Clifton Farms, Inc. |

| | | | |
|-----------|---|---------|------------------|
| FNE07-598 | Greenhouse heating system | \$2,744 | Katherine Brooks |
| FNE04-505 | Using Innovative Production Systems to Meet the Needs of new Emerging Markets | \$5,000 | Luke Chappel |
| FNE98-200 | Organic No-Till Cropping System Farm Evaluation 1998-2000 | \$4,200 | Jon Danko |
| FNE96-147 | Economical Analysis of Kenaf Grown with Different Nutrient Sources | \$3,140 | Daniel Palmer |

GRADUATE STUDENT GRANTS

| Project # | Project Title | SARE Support | Project Leaders |
|-----------|---|--------------|--|
| GNE19-210 | Do Soil Health Practices Impact Subsurface "Legacy" Phosphorus Losses from Soils on the Delmarva Peninsula? | \$14,713 | Amy Shober University of Delaware Lauren Mosesso University of Delaware |
| GNE19-217 | Microbial Inoculants for the Improvement of Alfalfa Crop Productivity and Health | \$12,453 | Dr.Harsh Bais University of Delaware Amanda Rosier University of Delaware |
| GNE19-203 | Improvements to Quality-related Limitations to Market Growth of Biodiesel and Renewable Hydrocarbon Diesel Produced from Low-value Feedstocks | \$15,000 | Dr.Gulnihal Ozbay Delaware State University Dr.Shehu Isah Delaware State University |
| GNE19-219 | Soil Microbiome Impacts on Floral Rewards and Implications for Pollinator Nutrition | \$14,984 | Dr.Deborah Delaney University of Delaware Grace Savoy-Burke University of Delaware |
| GNE15-111 | Using silicon fertilizers to improve soil phosphorus availability and uptake by winter wheat in high-phosphorus soils | \$14,995 | Amy Shober University of Delaware Angelia Seyfferth University of Delaware Zhixuan Qin University of Delaware |
| GNE14-086 | Use of a Natural Biocontrol Agent Bacillus subtilis UD1022 to Increase Crop Yield and Reduce Contamination by Listeria monocytogenes On Cantaloupes | \$14,035 | Dr.Kalmia Kniel University of Delaware Dr.Harsh Bais University of Delaware Sarah Markland University of Delaware |
| GNE11-023 | Developing sustainable aquaculture methods for the mummichog, Fundulus heteroclitus, with emphasis on egg production | \$14,909 | Dennis McIntosh Delaware State University Courtney Janiak Delaware State University |

ON FARM RESEARCH/PARTNERSHIP GRANTS

| Project # | Project Title | SARE Support | Project Leaders |
|-----------|---|--------------|--|
| ONE20-372 | Prevalence of Toxoplasma gondii on Small Ruminant Farms in Delaware | \$29,992 | Dr.Kwame Matthews Delaware State University |
| ONE19-344 | Cost Benefits of Common Insecticide Practices Used to Prevent Soybean Pest Problems in Delaware | \$28,221 | Dr.David Owens University of Delaware |
| ONE18-317 | Characterization of Gastrointestinal Nematode Anthelmintic Resistance on Small Ruminant Farms in Delaware | \$14,974 | Dr.Kwame Matthews Delaware State University |

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|------------|---|----------|---|
| ONE16-280c | Utilizing cover crops for additional benefits in Delaware | \$11,111 | Mark VanGessel University of Delaware |
| ONE14-215 | Determining the risks associated with scavenging raptors to the biosecurity of broiler farms on Delmarva. | \$11,307 | Dr. Brigid McCrea Delaware State University Cooperative Extension |
| ONE12-157 | Development of best use practices on commercial colonies of <i>Bombus impatiens</i> on crops in Delaware | \$5,696 | Dr. Deborah Delaney University of Delaware Jacquelyn Marchese University of Delaware |

**Total funding from the USDA SARE program to
Delaware
\$943,731**



For further information on projects, contact Deb Heleba, Northeast SARE communications specialist, at 802-651-8335, ext 552 or debra.heleba@uvm.edu. Sustainable Agriculture Research and Education (SARE) is funded by USDA's National Institute of Food and Agriculture (NIFA).