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 7,748 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, granteeproduced information products and other educational materials.

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

New Jersey

Project Highlight: Programming Supports Northeast Agritourism

Northeast farmers are relying increasingly on agritourism to expand farm income, create employment for family members and strengthen relationships in the local community. But agritourism also increases a farm’s liability, as farm visitors may be exposed to risks they are not familiar with. Some farmers also lack the experience to market their operation to visitors, make the transition to a retail and hospitality enterprise, and manage the associated risks and liabilities.

In response to these issues, a multistate team of Cooperative Extension faculty, led by Brian Schilling from Rutgers University, used SARE funding to develop a train-the-trainer curriculum on agritourism. Its aim was to equip farm service providers with the knowledge, skills and tools needed to help Northeast farmers minimize risk and liability associated with farm visits, mitigate financial risk, and improve marketing strategies.

The project goal was to train 60 Extension educators and other agricultural service professionals, with at least 30 going on to share information with 200 farmers. But in fact, more than 690 educators and 760 farmers came to this project’s workshops, classroom-style training, webinars and small-group farm assessments throughout New Jersey, Vermont, Delaware, and Maine, surpassing the expected level of participation several times over.

For more information on this project, see sare.org/projects, and search for project number ENE11-121.

SARE in New Jersey

northeast.sare.org/sare-in-your-state/new-jersey

$3,919,736 in total funding

113 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 Jersey

Total awards: 113 grants
- 22 Research and Education
- 2 Sustainable Community Innovation
- 14 Professional Development Program
- 35 Farmer/Rancher
- 17 Graduate Student
- 21 On Farm Research/Partnership
- 2 Research Only

Total funding: $3,919,736
- $1,875,983 Research and Education
- $24,816 Sustainable Community Innovation
- $978,720 Professional Development Program
- $323,398 Farmer/Rancher
- $234,509 Graduate Student
- $290,896 On Farm Research/Partnership
- $191,414 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/new-jersey

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/new-jersey to learn more.

Michelle Infante-Casella
Rutgers Cooperative Extension of Gloucester County
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minfante@njaes.rutgers.edu

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Rutgers Cooperative Extension of Sussex County
(973) 948-3040
komar@njaes.rutgers.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 Jersey has been awarded $3,919,736 grants to support 111 projects, including but not limited to, 20 research and/or education projects, 14 professional development projects and 35 producer-led projects. New Jersey 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>LNE20-395</td>
<td>Empowering Northeastern Strawberry Growers With Flower Mapping</td>
<td>$137,819</td>
<td>Edward Durner Dept. of Plant Biology, Rutgers University</td>
</tr>
<tr>
<td>LNE18-362</td>
<td>Goldenberries (Physalis peruviana): A New Fruit for CSA Farms and Farmers Markets</td>
<td>$102,122</td>
<td>Edward Durner Dept. of Plant Biology, Rutgers University</td>
</tr>
<tr>
<td>LNE18-364</td>
<td>An Area-Wide Pest Management Program to Improve Honey Bee Health in Blueberry and Cranberry Pollination Services</td>
<td>$199,975</td>
<td>Dean Polk Rutgers University</td>
</tr>
<tr>
<td>LNE08-273</td>
<td>Spatially Based Whole-Farm Integrated Crop Management (ICM) Systems for Northeast Highbush Blueberry Production</td>
<td>$180,000</td>
<td>Dr. Cesar Rodriguez-Saona Rutgers University</td>
</tr>
<tr>
<td>LNE07-253</td>
<td>Mating disruption for the management of oriental beetle in ornamental nurseries: A research and extension effort</td>
<td>$106,876</td>
<td>Dr. James Lashomb Rutgers University</td>
</tr>
<tr>
<td>LNE07-265</td>
<td>An integrated approach to developing nutrient management schemes for container-grown nursery crops</td>
<td>$106,562</td>
<td>Dr. John Dighton Rutgers University, Gladis Zinati Rutgers, The State University</td>
</tr>
<tr>
<td>LNE00-132</td>
<td>Alternate Bed Renovation System for Cranberry Production</td>
<td>$157,506</td>
<td>Nicholi Vorsa Marucci Center for Blueberry &amp; Cranberry Research</td>
</tr>
<tr>
<td>LNE99-128</td>
<td>The Green House Project: Sustainable Agriculture in Urban Areas</td>
<td>$122,315</td>
<td>Ralph Coolman Rutgers University</td>
</tr>
<tr>
<td>LNE99-129</td>
<td>Utilization of Community Leaves for Improving Orchard Soil Quality</td>
<td>$95,535</td>
<td>Robert Belding Rutgers Cooperative Extension, Rutgers University</td>
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<tr>
<td>LNE97-085</td>
<td>Integration of Behavioral, Biological, and Reduced-Risk Chemical Approaches into a Sustainable Insect Management Program for Cranberries</td>
<td>$133,179</td>
<td>Sridhar Polavarapu Dept. of Entomology, Rutgers University</td>
</tr>
<tr>
<td>LNE97-093</td>
<td>Sustainable Phosphorous Fertilizer Recommendations for Corn Production in the Northeast USA</td>
<td>$92,780</td>
<td>Joseph R. Heckman Rutgers University, Dept of Plant Science</td>
</tr>
<tr>
<td>LNE97-095</td>
<td>Flowering Plants to Enhance Biological Control in Landscapes</td>
<td>$80,344</td>
<td>Paula M. Shrewsbury Rutgers University</td>
</tr>
</tbody>
</table>
**RESEARCH ONLY GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tbody>
<tr>
<td>LNE20-407R</td>
<td>Reducing Water and Fertilizer Inputs by Incorporating Native Beneficial Bacteria in Sustainable Turfgrass Sod Production</td>
<td>$149,910</td>
<td>Dr. Bingru Huang, PhD, Rutgers University, William Errickson, Rutgers University</td>
</tr>
<tr>
<td>LNE18-369R</td>
<td>Extend and Maximize Postharvest Quality of Strawberry</td>
<td>$41,504</td>
<td>Thomas Gianfagna, Rutgers University</td>
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</tbody>
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**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

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<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENE19-157</td>
<td>Training Agriculture Service Providers on the Nitty-Gritty Details of No-Till and Cover Crop Practices for Greater Implementation</td>
<td>$148,966</td>
<td>Bridgett Hilshey, North Jersey RC&amp;D</td>
</tr>
<tr>
<td>ENE11-121</td>
<td>Development of Extension Programming to Support the Advancement of Agritourism in the Northeast</td>
<td>$112,616</td>
<td>Dr. Brian Schilling, Rutgers University</td>
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<tr>
<td>ENE09-111</td>
<td>Organic vegetable production weed control strategies: Integrating precision cultivation, weed biology and OMRI herbicides</td>
<td>$89,211</td>
<td>Dr. John Grande, Rutgers University</td>
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<tr>
<td>ENE06-096</td>
<td>Matching small-farm crop sprayer application technology with OMRI and traditional agricultural products</td>
<td>$48,386</td>
<td>Dr. John Grande, Rutgers University</td>
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<tr>
<td>ENE04-088</td>
<td>Sustainable Pasture Management for Horses</td>
<td>$79,100</td>
<td>Dr. Carey Williams, Rutgers University Department of Animal Sciences</td>
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**FARMER/RANCHER 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>FNE21-974</td>
<td>Exotic Wild Mushroom Outdoor Cultivation</td>
<td>$7,590</td>
<td>Sergio Campos, Merrick Farm</td>
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<tr>
<td>FNE21-979</td>
<td>Demonstration Pilot for Composting of Manure, Wood Chips and Leaves on a Certified-Organic Produce Farm via Aerated Static Pile Composting</td>
<td>$11,133</td>
<td>Sherry Dudas, Honey Brook Organic Farm</td>
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<tr>
<td>FNE21-983</td>
<td>Testing the Efficacy of a Hybrid Floating Bag and Bottom Planting Method to Grow Oysters</td>
<td>$11,912</td>
<td>Matthew Gregg, Forty North Oyster Farms, Amelia Stanley, Stockton University and Forty North Oyster Farms</td>
</tr>
<tr>
<td>FNE21-985</td>
<td>Mobile Oyster Aquaculture Farming Unit</td>
<td>$14,999</td>
<td>TODD KOSTKA, Brigantine Oyster Company</td>
</tr>
<tr>
<td>FNE20-952</td>
<td>Chemical-Free Vineyards</td>
<td>$14,813</td>
<td>Steve and Audrey Gambino, Villa Milagro Vineyards</td>
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<tr>
<td>FNE19-931</td>
<td>Cold Storage of Eastern Oysters, Crassostrea virginica, to Reduce Winter Mortality in an Increasingly Variable Environment</td>
<td>$14,845</td>
<td>Betsy Haskin, Betsy's Cape Shore Salts</td>
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<tr>
<td>Project Code</td>
<td>Title</td>
<td>Award Amount</td>
<td>Investigator(s)</td>
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<td>FNE18-885</td>
<td>Comparison of Five Methods of Crop Thinning in Pinot Noir and their Effects on Fruit Composition and Wine Quality</td>
<td>$14,871</td>
<td>Michael Beneduce</td>
</tr>
<tr>
<td>FNE18-888</td>
<td>Optimization and Demonstration of Field Nursery Practices for Oyster Seed Cultivation in the Delaware Bay, NJ</td>
<td>$14,240</td>
<td>Lisa Calvo</td>
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<tr>
<td>FNE18-892</td>
<td>Analyzing the Profitability of Seasonal Wreath Production</td>
<td>$5,223</td>
<td>Monica Drazba</td>
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<tr>
<td>FNE16-853</td>
<td>Examining varieties of alternative grain crop: Malt barley and its efficacy in a double-grain cropping system in New Jersey</td>
<td>$14,543</td>
<td>Henry Muehlbauer</td>
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<tr>
<td>FNE15-821</td>
<td>Design and construction of a low-impact amphibious vehicle for efficient and sustainable oyster farming</td>
<td>$15,000</td>
<td>Gustavo and Lisa Calvo</td>
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<tr>
<td>FNE15-833</td>
<td>A honeybee IPM program for pollinator health in blueberry production</td>
<td>$15,000</td>
<td>Dennis Wright</td>
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<tr>
<td>FNE14-807</td>
<td>Evolving cage design for floating oyster farms in Barnegat Bay, NJ</td>
<td>$11,088</td>
<td>Matthew Gregg</td>
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<tr>
<td>FNE13-780</td>
<td>Methods to control bio-fouling of cultured eastern oysters, Crassostrea virginica, by the tube-building polychaete worm, Polydora cornuta</td>
<td>$13,415</td>
<td>Betsy Haskin</td>
</tr>
<tr>
<td>FNE12-747</td>
<td>Improvement and demonstration of subtidal cage culture methods to cultivate oysters in Delaware Bay, New Jersey</td>
<td>$14,910</td>
<td>Barney HOLLINGER</td>
</tr>
<tr>
<td>FNE11-708</td>
<td>The effect of two levels of cluster thinning on crop yield and quality for Cabernet Sauvignon and Cabernet Franc grown in the Eastern US</td>
<td>$10,220</td>
<td>Dr.Lawrence Coia</td>
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<td>FNE11-716</td>
<td>Adaptation and integration of remote setting, selective breeding and triploid production technologies to revitalize oyster culture in Delaware Bay</td>
<td>$15,000</td>
<td>Thomas Foca</td>
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<tr>
<td>FNE11-727</td>
<td>Raising fig trees in high tunnels in the Northeast</td>
<td>$9,799</td>
<td>Maurice sheets</td>
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<tr>
<td>FNE11-729</td>
<td>Improving the Quality of Queen Honey Bees produced in the Northeast by Modifying Standard 10-Frame High Body Boxes</td>
<td>$14,971</td>
<td>Karoly Toth</td>
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<tr>
<td>FNE11-733</td>
<td>Improving Growing Practices for Processing Tomatoes Using Rodale Roller Crimper</td>
<td>$9,290</td>
<td>Theresa Viggiano</td>
</tr>
<tr>
<td>FNE09-672</td>
<td>A Middle Entrance for Beehives II</td>
<td>$3,984</td>
<td>Dave Stewart</td>
</tr>
<tr>
<td>FNE08-646</td>
<td>A middle entrance for beehives</td>
<td>$4,816</td>
<td>Dave Stewart</td>
</tr>
</tbody>
</table>
GNE20-226 Honey Bee Responses to Blueberry Fungicides and Varroa Miticides While Used in NJ Blueberry Pollination Services  
$15,000  
Dean Polk  
Rutgers University  
Chelsea Abegg  
The State University of New Jersey

GNE20-246 Developing a Thermal Shock Method to Control Disease and Biofouling on Oyster Farms  
$15,000  
Dr. David Bushek, PhD  
Haskin Shellfish Research Laboratory, Rutgers University  
Heidi Yeh  
The State University of New Jersey

GNE19-212 Increasing Consumer Acceptance of Baby Leafy Greens Grown in a Controlled Environment  
$15,000  
Dr. Beverly Tepper  
Rutgers University  
Regina O’Brien  
Rutgers University
| GNE18-181 | Evaluating Native American Hazelnuts for Use as Cold Hardy Pollenizers in European Hazelnut Orchards | $10,048 | Dr. Thomas Molnar  
Rutgers University  
Alex Mayberry  
Rutgers University |
| GNE17-141 | Breeding for thermal tolerance in farmed atlantic surfclams (Spisula solidissima) | $14,963 | Dr. Daphne Munroe  
Haskin Shellfish Research Lab (Rutgers University)  
Michael Acquafredda  
Rutgers University - Haskin Shellfish Research Laboratory |
| GNE17-149 | Roles of rhizobacteria from northeast natural ecosystems in improving crop productivity and stress tolerance | $14,848 | Bingru Huang  
Rutgers University  
William Errickson  
Rutgers University |
| GNE17-158 | Reclamation of nutrients and irrigation waters from livestock wastewater | $15,000 | Ashaki Rouff  
Rutgers University Newark  
Alon Rabinovich  
Rutgers University Newark |
| GNE17-162 | Increasing horse pasture productivity by integrating warm-season grasses into cool-season rotational grazing systems | $14,997 | Dr. Carey Williams  
Rutgers, The State University of New Jersey  
Jennifer Weinert  
Rutgers, The State University of New Jersey |
| GNE16-132 | Identifying realized predation on BMSB (Halyomorpha halys, Stål) and host plant impacts | $13,639 | Anne Nielsen  
Rutgers University  
John Pote  
Rutgers University |
| GNE15-112 | Development of a high-resolution surveillance protocol using eDNA for detection of brown marmorated stink bugs | $14,999 | Dr. Julie Lockwood  
Rutgers University  
Dr. Dina Fonseca  
Rutgers University  
Rafael Valentin  
Rutgers, The State University of New Jersey |
| GNE14-084 | Evaluating the biological control agent Trichoderma: Enhancement of plant growth and development through biostimulatory volatile treatment | $10,248 | Dr. Joan Bennett  
Rutgers, The State University of New Jersey  
Samantha Lee  
Rutgers, The State University of New Jersey |
| GNE13-054 | Halyomorpha halys in peaches: improved detection for IPM scouting | $14,850 | George Hamilton  
Rutgers University  
John Cambridge  
Rutgers University |
| GNE13-064 | Optimization of adventitious rooting of hazelnut stem cuttings to expedite on-farm commercialization trials | $8,376 | Dr. Thomas Molnar  
Rutgers University  
Megan Muehlbauer  
Rutgers, The State University of New Jersey |
| GNE13-070 | Biological Control of Blueberry Anthracnose and Cranberry Fruit Rot: Exploiting Fungal Responses to Blueberry and Cranberry Bloom in Biocontrol Treatments | $13,369 | Dr. Peter Oudemans  
Rutgers, The State University  
Dr. Timothy Waller  
Rutgers University |
| GNE12-038 | Landscape effects on spatial distribution and movement of brown marmorated stink bug in peach orchards | $14,179 | Dr. Cesar Rodriguez-Saona  
Rutgers University  
George Hamilton  
Rutgers University  
Noel Hahn  
Rutgers University |
| GNE11-027 | Assessing Nematode Diversity in Natural and Managed Blueberry Habitats | $14,993 | Albrecht Koppenhöfer  
Rutgers University  
Dr. Cesar Rodriguez-Saona  
Rutgers University  
Monique Rivera  
Rutgers University |
ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| ONE20-371  | Efficacy of Whole Herbs on Controlling Gastrointestinal Nematodes in an Alpaca Fiber Operation | $13,448      | Dr. Erin Masur, DVM
Fork You Farms, LLC
Dr. Alexia Tsakiris
Blue Sage Veterinary Wellness Center |
| ONE20-373  | Application of Shell Hash Cover as a Deterrent of Cownose Ray Predation on Hard Clam Farms | $29,997      | Dr. Daphne Munroe
Haskin Shellfish Research Lab (Rutgers University) |
| ONE19-345  | Alternative and Organic Management Practices to Control Oriental Beetle in Commercial Blueberries | $29,848      | Dean Polk
Rutgers University |
| ONE16-285c | Integrating cover crops for suppression of soil born diseases in blueberries | $10,000      | Dr. Peter Oudemans
Rutgers University |
| ONE15-243  | Rediscovering the Rutgers tomato                                              | $14,900      | Peter Nitzsche
Rutgers Cooperative Extension of Morris County |
| ONE15-247  | Establishment and marketing of hops production in the mid-Atlantic           | $14,956      | James Simon
Rutgers University |
| ONE14-201  | Minimizing risks of Vibrio bacteria in farm-raised oysters grown in intertidal environments of the Delaware Bay | $14,899      | Lisa Calvo
Haskin Shellfish Reserach Laboratory, Rutgers University |
| ONE14-217  | Bringing IPM and Natural Enemies Back to the Orchard Post-BMSB                | $14,970      | Anne Nielsen
Rutgers University |
| ONE13-185  | Pepper weevil pathways                                                        | $14,914      | Joseph Ingerson-Mahar
Rutgers University |
| ONE13-190  | Mating disruption and reduced-risk methods to control peach pests and brown marmorated stink bug | $14,833      | Dean Polk
Rutgers University |
| ONE12-161  | Determining pepper weevil pathways                                           | $14,957      | Joseph Ingerson-Mahar
Rutgers University |
| ONE11-151  | Impact of Production System and Cultivar on Yields of Roselle (Hybiscus sabdariffa) Leaves and Calyces | $14,155      | Richard VanVranken
Rutgers Cooperative Extension - Atlantic County |
| ONE09-106  | Hazelnuts: A New Sustainable Crop for the Northeastern United States          | $10,000      | Dr. Thomas Molnar
Rutgers University |
| ONE09-108  | Integrating Cover crops into Sustainable Highbush Blueberry Production in New Jersey | $10,000      | Dr. Zsofia Szendrei
Michigan State University |
| ONE08-090  | Asian Pears, an alternative crop for Northeast fruit growers – Developing a Plant Growth Regulator Thinning Program to Ensure Profitability | $9,997       | Daniel Ward
Rutgers University |
ONE08-092  Low-input management practices for container Ericaceous nursery crops  $9,985  Gladis Zinati  Rutgers, The State University  Dr. John Dighton  Rutgers University

ONE07-078  Evaluating the effects of production system and cultivar on the development of silvering in bell pepper fruit  $9,860  Nancy Maxwell  New Jersey Agricultural Experiment Station  Andy Wyenandt  New Jersey Agricultural Experiment Station  Wesley Kline  New Jersey Agricultural Experiment Station

ONE06-054  Increasing the sustainability of northeastern goat farms via the establishment of value-added goat meat products in new, nontraditional markets  $9,973  H. Louis Cooperhouse  Rutgers, The State University of New Jersey

ONE06-066  Evaluating the effects of variety and production system on the development of silvering in bell pepper fruit  $9,824  Andy Wyenandt  New Jersey Agricultural Experiment Station

ONE05-043  Implementation of an integrated peach rusty spot disease management program in commercial orchards  $10,000  Norman Lalancette  Rutgers University

ONE03-016  Ratcheting up commercial organic high-bush blueberry production systems  $9,380  William Sciarappa  Rutgers Cooperative Extension

**SUSTAINABLE COMMUNITY INNOVATION GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| CNE12-101 | Improving the Sustainability of the Horse Industry through Equine-Related Business Planning | $14,816      | Dr. Carey Williams  
Rutgers University Department of Animal Sciences |
| CNE06-009 | Seeds to Success Youth Farm Stand project: Using social marketing to increase community presence and create a self-supporting project | $10,000      | Luanne Hughes  
Rutgers Cooperative Extension |

**Total funding from the USDA SARE program to New Jersey**

$3,919,736

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).