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 $360 million to more than 8,161 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...

Connecticut

Project Highlight: Arming Basil Growers with Disease-Control Solutions

Whenever a new pest enters the scene, farmers must quickly learn how to deal with it if they are to remain profitable. Two SARE-funded projects are helping Connecticut farmers cope with this very situation in the case of a serious outbreak of Downy mildew of basil, a new disease to the eastern United States.

Typically, organic farmers depend on cultural practices to reduce disease problems, with control products complementing these practices. In the case of Downy mildew, Connecticut farmers could find no solutions due to the lack of published research on the efficacy of available control products. So Extension agent Joan Allen looked at disease-control products on two species of basil in one SARE-funded project, and then in a second project focused on the most promising contenders. Because of her work, basil growers now have access to possible solutions.

The results from Allen’s first project provided basil farmers information about two products, narrowed down from an original five. Farmers started using the better performers, MilStop and Oxidate. Allen also looked at the effect of nitrogen fertilization rate alone and in combination with the fungicides on the severity of the disease. Close to 500 farmers and gardeners learned of possible new practices through presentations.

For more information on these projects, see sare.org/projects, and search for project numbers ONE11-132 and ONE12-152.

SARE in Connecticut

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

$3,075,724 in total funding
86 grant projects (since 1988)

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

Total awards: 86 grants
- 19 Research and Education
- 6 Sustainable Community Innovation
- 3 Professional Development Program
- 33 Farmer/Rancher
- 9 Graduate Student
- 12 On Farm Research/Partnership
- 4 Research Only

Total funding: $3,075,724
- $1,647,337 Research and Education
- $70,904 Sustainable Community Innovation
- $227,995 Professional Development Program
- $218,532 Farmer/Rancher
- $128,210 Graduate Student
- $182,704 On Farm Research/Partnership
- $600,042 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/connecticut

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/connecticut to learn more.

Rachel Bespuda
University of Connecticut
(203) 407-3172
rachel.bespuda@uconn.edu

Joe Bonelli
University of Connecticut
(860) 875-3331
joseph.bonelli@uconn.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.
Connecticut has been awarded $3,075,724 grants to support 83 projects, including but not limited to, 16 research and/or education projects, 3 professional development projects and 33 producer-led projects. Connecticut 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>
</table>
| LNE21-423    | The Northeast Forest Farmers Coalition: Building a Community of Practice       | $249,193     | Marlyse Duguid  
Yale School of Forestry and Environmental Studies                           |
| LNE18-363    | Improved N Management for Corn using Aerial Images, Adapt-N, Chemical and Biological Tests, and Cover Crops | $241,570     | Dr. Karl Guillard  
University of Connecticut                                                         |
| LNE13-324    | Developing adaptable native shrubs for the green industry                      | $58,347      | Dr. Jessica Lubell-Brand  
University of Connecticut                                                           |
| LNE09-281    | Aronia berries: A sustainable nutraceutical crop for the Northeast             | $151,821     | Dr. Mark Brand  
University of Connecticut                                                           |
| LNE09-279    | Development and on-farm training of biologically based methods for integrated crop management of stone fruits in New England | $195,498     | Dr. Robert Marra  
Connecticut Agricultural  
Lorraine Los  
University of Connecticut                                                                 |
| LNE03-177    | Perimeter trap crop approach to pest management on vegetable farms             | $139,527     | Ruth Hazzarad  
University of Massachusetts  
Jude Boucher  
University of Connecticut Cooperative Extension                                   |
| LNE01-143    | Farmer-Run Research Organization for Southern New England                      | $167,660     | Thomas Morris  
University of Connecticut                                                           |
| LNE01-144    | Survey of the Nutrient Status of Organic Vegetable Farms                       | $35,397      | Thomas Morris  
University of Connecticut                                                           |
| LNE00-137    | Benefits & Drawbacks of Various Winter Cover Crops in Vegetable Pest Management | $89,202      | Kimberly Stoner  
Connecticut Agricultural Experiment Station                                           |
| LNE98-106    | Biological Control for Soil-Dwelling Insects & Diseases in Strawberries        | $147,557     | Richard Cowles  
Connecticut Agricultural Experiment Station                                           |
| LNE97-083    | Nitrogen Management for Pumpkins and Squash                                    | $40,000      | Richard A. Ashley  
University of Connecticut                                                           |
| LNE97-082    | Biological and Cultural Methods of Insect Management in Vegetables: Survey and Case Studies of Organic Farms and Evaluation of the Scientific Literature | $20,000      | Kimberly Stoner  
Connecticut Agricultural Experiment Station                                           |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNE21-432R</td>
<td>Nutritional Management Strategies for Improving Growth and Carcass Composition of Beef-Dairy Crossbred Calves</td>
<td>$200,000</td>
<td>Dr. Sarah Reed University of Connecticut</td>
</tr>
<tr>
<td>LNE21-430R</td>
<td>Reducing Farmer Risk through the Use of Triploid Hemp Genetics</td>
<td>$101,168</td>
<td>Dr. Jessica Lubell-Brand University of Connecticut</td>
</tr>
<tr>
<td>LNE21-425R</td>
<td>In-ovo and Early Probiotic Supplementation to Control Salmonella in Broilers</td>
<td>$150,000</td>
<td>Mary Anne Amalaradjou University of Connecticut</td>
</tr>
<tr>
<td>LNE20-412R</td>
<td>Enhancing the Safety of Eggs and Fresh Produce by Novel Ultra-fine Bubble Technology</td>
<td>$148,874</td>
<td>Dr. Abhinav Upadhyay University of Connecticut</td>
</tr>
</tbody>
</table>

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ENE10-116</td>
<td>Professional development for agricultural service providers in applied poultry science</td>
<td>$134,501</td>
<td>Dr. Richard Brzozowski University of Maine Cooperative Extension</td>
</tr>
<tr>
<td>ENE99-048</td>
<td>Alternative &amp; Herbal Livestock Health Practices</td>
<td>$86,994</td>
<td>Thomas Morris University of Connecticut</td>
</tr>
<tr>
<td>ENE98-042</td>
<td>Feeding Our Cities: Establishing a Strong Urban/Sustainable Agriculture Interface in Southern New England</td>
<td>$6,500</td>
<td>Michael T. Keilty University of Connecticut Extension</td>
</tr>
</tbody>
</table>

**FARMER/RANCHER GRANTS**

<table>
<thead>
<tr>
<th>Project #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>FNE22-005</td>
<td>Germination Testing to Improve the Quality of Ecotypic Native Seed in the Northeast</td>
<td>$29,299</td>
<td>Dina Brewster The Hickories, LLC</td>
</tr>
<tr>
<td>FNE21-996</td>
<td>Using Shade Cloth to Prevent Heat Damage in Summer Broccoli</td>
<td>$10,320</td>
<td>Andrew Urbanowicz Urbanowicz Farm</td>
</tr>
<tr>
<td>FNE19-925</td>
<td>Honey Plant Intercropping on Christmas Tree Farms</td>
<td>$10,032</td>
<td>Richard Cowles Humming Grove Farm</td>
</tr>
<tr>
<td>FNE19-939</td>
<td>Tree Regeneration and Establishment Strategies in Silvopasture and Sugarbush Systems</td>
<td>$13,450</td>
<td>Dr. Joseph Orefice Hidden Blossom Farm</td>
</tr>
<tr>
<td>Project Code</td>
<td>Project Title</td>
<td>Funding Amount</td>
<td>Principal Investigator</td>
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<tr>
<td>FNE19-944</td>
<td>Winter Triticale and Red Clover Double Cropping Field Trials for a Three-Year Production Cycle</td>
<td>$14,824</td>
<td>Craig Stearns</td>
</tr>
<tr>
<td>FNE17-883</td>
<td>Comparison of indigenous microorganism and commercial soil inoculant on crop yields and basil downy mildew disease resistance</td>
<td>$15,000</td>
<td>Melody Wright</td>
</tr>
<tr>
<td>FNE17-869</td>
<td>Establishing propagation protocols and assessing weed risk of litchi tomato, Solanum sisymbriifolium</td>
<td>$5,459</td>
<td>Diane Dorfer</td>
</tr>
<tr>
<td>FNE13-783</td>
<td>Enhancing growth rate and well-being of pigs raised on pasture through the use of mobile evaporative cooling while improving pasture fertility and reducing environmental degradation</td>
<td>$11,033</td>
<td>Peter Lowy</td>
</tr>
<tr>
<td>FNE11-709</td>
<td>Evaluation of the insect resistance of interspecific squash hybrids</td>
<td>$4,022</td>
<td>Bryan Connolly</td>
</tr>
<tr>
<td>FNE07-605</td>
<td>Small farm air chill system</td>
<td>$6,912</td>
<td>Craig Floyd</td>
</tr>
<tr>
<td>FNE07-604</td>
<td>Determining cost-effectiveness of raising slow growing genotype broilers in three alternative housing systems</td>
<td>$7,861</td>
<td>Julie Cronin</td>
</tr>
<tr>
<td>FNE06-569</td>
<td>Breeding colorful disease- and pest-tolerant potatoes</td>
<td>$3,225</td>
<td>Bryan Connolly</td>
</tr>
<tr>
<td>FNE04-515</td>
<td>Horticultural Weed Barrier Mats From Dairy Manure — Phase 2</td>
<td>$10,000</td>
<td>Matthew Freund</td>
</tr>
<tr>
<td>FNE03-454</td>
<td>Remote Sensing for Nitrogen Management in Corn</td>
<td>$6,298</td>
<td>Randolph Blackmer</td>
</tr>
<tr>
<td>FNE03-457</td>
<td>Tolerance Variation to Mexican Bean Beetles of Common Bean Cultivars</td>
<td>$1,974</td>
<td>Bryan Connolly</td>
</tr>
<tr>
<td>FNE03-465</td>
<td>Litchfield County Farmers Livestock Market</td>
<td>$4,137</td>
<td>Christos Glynos</td>
</tr>
<tr>
<td>FNE02-412</td>
<td>Horticultural Weed Barrier Mats From Dairy Manure</td>
<td>$8,800</td>
<td>Matthew Freund</td>
</tr>
<tr>
<td>FNE02-437</td>
<td>Increasing Small Farm Profits with American Chestnut Production and Silvopasture</td>
<td>$4,766</td>
<td>Elisa Santee</td>
</tr>
<tr>
<td>FNE01-373</td>
<td>Compost Planting Pots</td>
<td>$7,500</td>
<td>Matthew Freund</td>
</tr>
</tbody>
</table>
FNE00-294  Fava beans and kale as potential spring nurseries for insect natural enemies to move into the greenhouse.

FNE00-315  Timing of Brassica planting to reduce flea beetle damage.

FNE99-243  Compost Planting Pots

FNE99-236  Demonstration of the Effectiveness of Pediobius for Control of Mexican Bean Beetle and Squash Beetle

FNE99-272  "Clean Green Machine” A Hydroponic System

FNE98-203  Squash Vine Borer and Cotton Row Covers

FNE98-208  Sheep Farmstead Cheesemaking in Connecticut

FNE97-162  Biological Insect Control of Herbaceous Perennials

FNE96-129  Pedal-Powered Tillage for a Small Community-Supported Farm (CSA)

FNE96-154  Growing Potatoes Organically 3 Different Ways

FNE96-159  Certified Organic Associated Growers (COAG)

FNE95-088  Canaan Valley Agricultural Cooperative Waste Management Program

FNE94-048  Innovative Uses of Leaf Compost for the Modern Farmer/Grower

GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
</table>
| GNE22-281   | Farmer Engagement with Regenerative Agriculture in New England: Understanding Barriers and Facilitators to Improve Services and Outreach | $13,913      | Brian Gareau  Boston College  
Sandra DiDonato  Boston College |
| GNE19-213   | Use of Lactic Acid Bacteria to Control L. monocytogenes on Apples under Simulated Commercial Conditions | $15,000      | Mary Anne Amalaradjou  University of Connecticut  
Mairui Gao  University of Connecticut |
| GNE19-221   | Importance of Environmental Factors on Plantings of Wild-Simulated American Ginseng | $15,000      | Marlyse Duguid  Yale School of Forestry and Environmental Studies  
Karam Sheban  Yale School of the Environment |
GNE17-146  Maximizing the health and size of on-site native pollinator populations for crops requiring sonication pollination  $14,973  Julia Kuzovkina  
University of Connecticut  
John Campanelli  
University of Connecticut  

GNE16-128  Early (in-ovo) administration of probiotics to promote growth in broiler chicken  $14,999  Mary Anne Amalaradjou  
University of Connecticut  
Michael Darre  
University of Connecticut  
Muhammed Shafeekh Muyyarrikkandy  
University of Connecticut  

GNE15-113  Natural and eco-friendly approaches to control aflatoxins in poultry feed  $14,393  Michael Darre  
University of Connecticut  
Dr. Kumar Venkitanarayanan  
University of Connecticut  
Hsinbai Yin  
University of Connecticut  

GNE14-083  Anaerobically digested dairy as a renewable substitution for peat in media for nursery production  $14,856  Dr. George Elliott  
UCONN  
John Lamont  
Frog Belly Farm  

GNE11-020  Organic fertilization for greenhouses  $12,556  Dr. George Elliott  
UCONN  
Kristin Hulshart  
University of Connecticut  

GNE10-010  Prevalence of Clostridium difficile (C. diff) in Connecticut Swine farms  $12,520  Dr. Robert Heimer  
Yale University School of Public Health  
Dr. Lynda Osadebe  
Yale 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>
| ONE22-431  | Monitor streptomycin resistance in Erwinia amylovora populations in New England | $30,000      | Quan Zeng  
Connecticut Agricultural Experiment Station  |
| ONE22-412  | Pairing residues, resistance genes and microbial community structure to understand off-farm impact of antibiotic use on dairy farms | $29,057      | Dr. Christine Georgakakos  
University of Connecticut  |
| ONE21-399  | Assessment of a Composite Herbal Feed Additive on Reducing Haemonchus contortus in a Dual Purpose Sheep Operation | $14,319      | Dr. Erin Masur, DVM  
Fork You Farms, LLC  |
| ONE20-368  | Incorporating Online Ordering Systems to Increase Farmer Sales at Farmers’ Markets and Beyond | $15,698      | Ashley Kremser  
CitySeed  |
| ONE16-279c | Farmer-led cover crop trials and demonstrations for vegetable and corn silage fields | $22,465      | Jim Hyde  
USDA NRCS  |
| ONE16-265  | Boosting farmer sales through culinary events and marketing                  | $14,992      | Ashley Kremser  
CitySeed  |
| ONE13-179  | Investigating forage radish and compost as a means of alleviating soil compaction in established bramble and blueberry fields | $14,958      | Mary Concklin  
University of Connecticut  |
| ONE12-152  | Management of basil downy mildew using organic fungicides and nitrogen fertilization rate | $6,705       | Joan Allen  
Assistant Cooperative Extension Educator in Residence  |
| ONE11-132  | Evaluation of Organic Control Products for Basil Downy Mildew                | $4,705       | Joan Allen  
Assistant Cooperative Extension Educator in Residence  |
**Hastening Adoption of Zone-Tillage on CT/New England Vegetable Farms**

**ONE08-080**

$9,902

Jude Boucher
University of Connecticut Cooperative Extension

**Increasing biological control of brassica pests through overwintering**

**ONE06-064**

$9,903

Kimberly Stoner
Connecticut Agricultural Experiment Station

**Simple methods to stack manure and make compost without nutrient loss**

**ONE03-011**

$10,000

Tom Morris
University of Connecticut

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**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>
| CNE10-073 | Farmland ConneCTions Guide | $14,978 | Greg Plotkin
American Farmland Trust
Ben Bowell
American Farmland Trust |
| CNE10-079 | Granby Sampler | $14,942 | Michelle Niedermeyer
Granby Agriculture Commission |
| CNE09-064 | Southern Litchfield County’s first regional locally-grown produce distribution facility | $11,214 | Vincent Nolan, Jr.
Town of New Milford |
| CNE07-029 | Creating sustainable food purchasing guidelines in the Northeast | $9,831 | Joshua Viertel
Yale Sustainable Food Project |
| CNE07-018 | Engaging and growing community through a community supported market | $9,986 | Nicole Berube
CitySeed, Inc |
| CNE06-015 | Planning for community farms across Connecticut | $9,953 | Kimberly Stoner
Connecticut Agricultural Experiment Station |

**Total funding from the USDA SARE program to Connecticut**

$3,075,724

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).