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...

Connecticut

Project Highlight: Assessment of a Composite Herbal Feed Additive on Reducing Haemonchus contortus in a Dual Purpose Sheep Operation

Dr. Erin Masurn, a veterinarian at Fork You Farms in Bantam, Connecticut, led a team of researchers to see if the herbal formula “Early Bird” could treat harmful parasites in sheep. Gastrointestinal nematodes are a type of parasite that can negatively impact the health and reproductive ability of sheep herds. “Early Bird” has shown to be successful at preventing gastrointestinal nematode propagation; however, researchers at Fork You Farms want to test the efficacy of “Early Bird” as a treatment method for sheep that have already been affected.

With the help of a Northeast SARE grant, Dr. Masurn ran an experiment to test how sheep infected with various parasites respond to the “Early Bird” treatment. According to researchers, “Early Bird” has the potential to increase the meat, fiber and dairy productivity of small ruminant and camelid operations by diminishing overall parasite burden. Using different species with varying parasite burdens gives producers the opportunity to gain a better understanding of the limits of herbal parasite control. This project will help veterinarians develop protocols for the usage of the product and help farmers determine its worth to their specific operations.

For more information on this project, see sare.org/projects and search for project number ONE21-399.

SARE in Connecticut

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

$3,772,257 in total funding

93 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: 93 grants

- 20 Research and Education
- 6 Sustainable Community Innovation
- 3 Professional Development Program
- 35 Farmer/Rancher
- 10 Graduate Student
- 13 On Farm Research/Partnership
- 6 Research Only

Total funding: $3,772,257

- $1,893,842 Research and Education
- $70,904 Sustainable Community Innovation
- $227,995 Professional Development Program
- $263,433 Farmer/Rancher
- $143,210 Graduate Student
- $211,417 On Farm
- $961,456 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.

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USDA SARE
Sustainable Agriculture Research & Education

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 $3,772,257 grants to support 90 projects, including but not limited to, 17 research and/or education projects, 3 professional development projects and 35 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>
| LNE23-469  | A Three-Pronged Strategy to Equitably Provide Planting Stock to Forest Farmers: Propagation Training, Seed Exchange, and Working with Wild Harvesters | $246,505     | Marlyse Duguid
Yale School of Forestry and Environmental Studies                      |
| 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 Hazzard
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                                               |
<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNE97-082</td>
<td>Biological and Cultural Methods of Insect Management in Vegetables: Survey and Case Studies of Organic Farms and Evaluation of the Scientific Literature</td>
<td>$20,000</td>
<td>Kimberly Stoner  Connecticut Agricultural Experiment Station</td>
</tr>
<tr>
<td>LNE96-065</td>
<td>Farm to School Food Education Project</td>
<td>$33,319</td>
<td>Elizabeth Wheeler  The Hartford Food System</td>
</tr>
<tr>
<td>LNE96-068</td>
<td>New Connections in the Northeast Food System</td>
<td>$13,000</td>
<td>Mark Winne  Hartford Food System</td>
</tr>
</tbody>
</table>
| ANE95-028  | Integration of Biological and Chemical Control of Twospotted Spider Mites in Containerized Nursery Production | $35,246      | Timothy Abbey  Univ. of Connecticut Cooperative Extension System  
                                      |                                                      | Richard Cowles  Connecticut Agricultural Experiment Station |
| LNE94-049  | Project Farm Fresh Start: A Farm-to-School Feasibility Study                  | $30,000      | Mark Winne  Hartford Food System                                                  |

### RESEARCH ONLY GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNE23-482R</td>
<td>Operationalizing Drone Imaging Technology to Detect Nutrient Deficiencies in Fruit Orchards</td>
<td>$200,000</td>
<td>Dr.Chandi Witharana  University of Connecticut</td>
</tr>
<tr>
<td>LNE23-477R</td>
<td>Hemp hurd fiber: a sustainable substitute for sphagnum peat moss in greenhouse and nursery plant production</td>
<td>$161,414</td>
<td>Dr.Jessica Lubell-Brand  University of Connecticut</td>
</tr>
<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>
<th>SARE Support</th>
<th>Project Leaders</th>
</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 - 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
FNE23-066  Identifying and Selecting Wild Yeast Strains in Hard Cider  $29,104  Jeff Rogers  Rogers Orchards

FNE23-046  The Ask Aunt Nellie Project - A Crowd-Sourced Connecticut Farm Management Knowledge Base  $15,797  Diane Dorfer  Cobblestone Farm

FNE22-005  Germination Testing to Improve the Quality of Ecotypic Native Seed in the Northeast  $29,299  Dina Brewster  The Hickories, LLC

FNE21-996  Using Shade Cloth to Prevent Heat Damage in Summer Broccoli  $10,320  Andrew Urbanowicz  Urbanowicz Farm

FNE19-925  Honey Plant Intercropping on Christmas Tree Farms  $10,032  Richard Cowles  Humming Grove Farm

FNE19-944  Winter Triticale and Red Clover Double Cropping Field Trials for a Three-Year Production Cycle  $14,824  Craig Stearns  Mountain Dairy

FNE19-939  Tree Regeneration and Establishment Strategies in Silvopasture and Sugarbush Systems  $13,450  Dr. Joseph Orefice  Hidden Blossom Farm

FNE17-869  Establishing propagation protocols and assessing weed risk of litchi tomato, Solanum sisymbriifolium  $5,459  Diane Dorfer  Cobblestone Farm

FNE17-883  Comparison of indigenous microorganism and commercial soil inoculant on crop yields and basil downy mildew disease resistance  $15,000  Melody Wright  Pleasant Valley Botanicals

FNE13-783  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  $11,033  Peter Lowy  Pete and Jens Backyard Birds

FNE12-736  Conservation tillage for organic cabbage: Yield, weed growth, and management costs  $4,561  Janna Berger  Adamah/Isabella Freedman Jewish Retreat Center

FNE11-709  Evaluation of the insect resistance of interspecific squash hybrids  $4,022  Bryan Connolly  Green Dragon Farm

FNE07-605  Small farm air chill system  $6,912  Craig Floyd  Footsteps Farm, LLC

FNE07-604  Determining cost-effectiveness of raising slow growing genotype broilers in three alternative housing systems  $7,861  Julie Cronin

FNE06-569  Breeding colorful disease- and pest-tolerant potatoes  $3,225  Bryan Connolly  Green Dragon Farm

FNE04-515  Horticultural Weed Barrier Mats From Dairy Manure - Phase 2  $10,000  Matthew Freund  Freunds' Farm, Inc.
<table>
<thead>
<tr>
<th>Project Code</th>
<th>Project Title</th>
<th>Funding</th>
<th>PI/Co-PI/Location</th>
</tr>
</thead>
<tbody>
<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 Green Dragon Farm</td>
</tr>
<tr>
<td>FNE03-465</td>
<td>Litchfield County Farmers Livestock Market</td>
<td>$4,137</td>
<td>Christos Glynos Bethlehem Boer Goat Ranch</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 Foxfire Farm</td>
</tr>
<tr>
<td>FNE02-412</td>
<td>Horticultural Weed Barrier Mats From Dairy Manure</td>
<td>$8,800</td>
<td>Matthew Freund Frends' Farm, Inc.</td>
</tr>
<tr>
<td>FNE01-373</td>
<td>Compost Planting Pots</td>
<td>$7,500</td>
<td>Matthew Freund Frends' Farm, Inc.</td>
</tr>
<tr>
<td>FNE00-315</td>
<td>Timing of Brassica planting to reduce flea beetle damage.</td>
<td>$4,697</td>
<td>Brian O'Hara</td>
</tr>
<tr>
<td>FNE00-294</td>
<td>Fava beans and kale as potential spring nurseries for insect natural enemies to move into the greenhouse.</td>
<td>$5,382</td>
<td>Kathryn Caruso</td>
</tr>
<tr>
<td>FNE99-243</td>
<td>Compost Planting Pots</td>
<td>$700</td>
<td>Matthew Freund Frends' Farm, Inc.</td>
</tr>
<tr>
<td>FNE99-272</td>
<td>&quot;Clean Green Machine&quot; A Hydroponic System</td>
<td>$4,520</td>
<td>David S. Roberts</td>
</tr>
<tr>
<td>FNE99-236</td>
<td>Demonstration of the Effectiveness of Pediobius for Control of Mexican Bean Beetle and Squash Beetle</td>
<td>$2,480</td>
<td>Kathryn Caruso</td>
</tr>
<tr>
<td>FNE98-203</td>
<td>Squash Vine Borer and Cotton Row Covers</td>
<td>$1,540</td>
<td>Brian O'Hara</td>
</tr>
<tr>
<td>FNE98-208</td>
<td>Sheep Farmstead Cheesemaking in Connecticut</td>
<td>$3,050</td>
<td>Suzanne Sankow Beaverbrook Farm</td>
</tr>
<tr>
<td>FNE97-162</td>
<td>Biological Insect Control of Herbaceous Perennials</td>
<td>$600</td>
<td>Michael Berecz</td>
</tr>
<tr>
<td>FNE96-129</td>
<td>Pedal-Powered Tillage for a Small Community-Supported Farm (CSA)</td>
<td>$2,400</td>
<td>Megan Haney Mad Mares Farm</td>
</tr>
<tr>
<td>FNE96-154</td>
<td>Growing Potatoes Organically 3 Different Ways</td>
<td>$1,670</td>
<td>Johan van Acterberg Hidden Meadow Farm</td>
</tr>
<tr>
<td>FNE96-159</td>
<td>Certified Organic Associated Growers (COAG)</td>
<td>$2,670</td>
<td>Tony Norris</td>
</tr>
<tr>
<td>FNE95-088</td>
<td>Canaan Valley Agricultural Cooperative Waste Management Program</td>
<td>$4,350</td>
<td>Peter Jacquier Laurel Brook Farm</td>
</tr>
</tbody>
</table>
## GRADUATE STUDENT GRANTS

<table>
<thead>
<tr>
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<th>SARE Support</th>
<th>Project Leaders</th>
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</thead>
<tbody>
<tr>
<td>GNE22-297</td>
<td>Controlling Salmonella on eggs using probiotics and postbiotics.</td>
<td>$15,000</td>
<td>Mary Anne Amalaradjou, University of Connecticut, Ragini Reddyvari, University of Connecticut</td>
</tr>
<tr>
<td>GNE22-281</td>
<td>Farmer Engagement with Regenerative Agriculture in New England: Understanding Barriers and Facilitators to Improve Services and Outreach</td>
<td>$13,913</td>
<td>Brian Gareau, Boston College, Sandra DiDonato, Boston College</td>
</tr>
<tr>
<td>GNE19-221</td>
<td>Importance of Environmental Factors on Plantings of Wild-Simulated American Ginseng</td>
<td>$15,000</td>
<td>Marlyse Duguid, Yale School of Forestry and Environmental Studies, Karam Sheban, Yale School of the Environment</td>
</tr>
<tr>
<td>GNE19-213</td>
<td>Use of Lactic Acid Bacteria to Control L. monocytogenes on Apples under Simulated Commercial Conditions</td>
<td>$15,000</td>
<td>Mary Anne Amalaradjou, University of Connecticut, Mairui Gao, University of Connecticut</td>
</tr>
<tr>
<td>GNE17-146</td>
<td>Maximizing the health and size of on-site native pollinator populations for crops requiring sonication pollination</td>
<td>$14,973</td>
<td>Julia Kuzovkina, University of Connecticut, John Campanelli, University of Connecticut</td>
</tr>
<tr>
<td>GNE16-128</td>
<td>Early (in-ovo) administration of probiotics to promote growth in broiler chicken</td>
<td>$14,999</td>
<td>Mary Anne Amalaradjou, University of Connecticut, Michael Darre, University of Connecticut, Muhammed Shafeekh Muyyarikkandy, University of Connecticut</td>
</tr>
<tr>
<td>GNE15-113</td>
<td>Natural and eco-friendly approaches to control aflatoxins in poultry feed</td>
<td>$14,393</td>
<td>Michael Darre, University of Connecticut, Dr. Kumar Venkitanarayanan, University of Connecticut, Hsinbai Yin, University of Connecticut</td>
</tr>
<tr>
<td>GNE14-083</td>
<td>Anaerobically digested dairy as a renewable substitution for peat in media for nursery production</td>
<td>$14,856</td>
<td>Dr. George Elliott, UCONN, John Lamont, Frog Belly Farm</td>
</tr>
<tr>
<td>GNE11-020</td>
<td>Organic fertilization for greenhouses</td>
<td>$12,556</td>
<td>Dr. George Elliott, UCONN, Kristin Hulshart, University of Connecticut</td>
</tr>
<tr>
<td>GNE10-010</td>
<td>Prevalence of Clostridium difficile (C. diff) in Connecticut Swine farms</td>
<td>$12,520</td>
<td>Dr. Robert Heimer, Yale University School of Public Health, Dr. Lynda Osadebe, Yale University</td>
</tr>
</tbody>
</table>

## ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
<thead>
<tr>
<th>Project #</th>
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<th>Project Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE22-415</td>
<td>Investigating Poor Growth of Hard Clams in New Jersey</td>
<td>$28,713</td>
<td>Dr. Sylvain Deguise, DMV, PhD, Connecticut Sea Grant, University of Connecticut</td>
</tr>
<tr>
<td>ONE22-412</td>
<td>Pairing Residues, Resistance Genes and Microbial Community Structure to Understand Off-Farm Impact of Antibiotic Use on Dairy Farms</td>
<td>$29,057</td>
<td>Dr. Christine Georgakakos, University of Connecticut</td>
</tr>
</tbody>
</table>
Monitor Streptomycin Resistance in Erwinia Amylovora Populations in New England

ONE22-431

Quan Zeng
Connecticut Agricultural Experiment Station

Assessment of a Composite Herbal Feed Additive on Reducing Haemonchus contortus in a Dual Purpose Sheep Operation

ONE21-399

Dr. Erin Masur, DVM
Fork You Farms, LLC

Incorporating Online Ordering Systems to Increase Farmer Sales at Farmers' Markets and Beyond

ONE20-368

Ashley Kremser
CitySeed

Boosting farmer sales through culinary events and marketing

ONE16-265

Ashley Kremser
CitySeed

Farmer-led cover crop trials and demonstrations for vegetable and corn silage fields

ONE16-279c

Jim Hyde
USDA NRCS

Investigating forage radish and compost as a means of alleviating soil compaction in established bramble and blueberry fields

ONE13-179

Mary Concklin
University of Connecticut

Management of basil downy mildew using organic fungicides and nitrogen fertilization rate

ONE12-152

Joan Allen
Assistant Cooperative Extension Educator in Residence

Evaluation of Organic Control Products for Basil Downy Mildew

ONE11-132

Joan Allen
Assistant Cooperative Extension Educator in Residence

Hastening Adoption of Zone-Tillage on CT/ New England Vegetable Farms

ONE08-080

Jude Boucher
University of Connecticut Cooperative Extension

Increasing biological control of brassica pests through overwintering

ONE06-064

Kimberly Stoner
Connecticut Agricultural Experiment Station

Simple methods to stack manure and make compost without nutrient loss

ONE03-011

Tom Morris
University of Connecticut

Farmland ConneCTions Guide

CNE10-073

Greg Plotkin
American Farmland Trust
Ben Bowell
American Farmland Trust

Granby Sampler

CNE10-079

Michelle Niedermeyer
Granby Agriculture Commission

Southern Litchfield County's first regional locally-grown produce distribution facility

CNE09-064

Vincent Nolan, Jr.
Town of New Milford

Engaging and growing community through a community supported market

CNE07-018

Nicole Berube
CitySeed, Inc

Creating sustainable food purchasing guidelines in the Northeast

CNE07-029

Joshua Viertel
Yale Sustainable Food Project

Planning for community farms across Connecticut

CNE06-015

Kimberly Stoner
Connecticut Agricultural Experiment Station
Total funding from the USDA SARE program to Connecticut
$3,772,257

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).