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 $333 million to more than 7,794 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...

Vermont

Project Highlight: Extension Agent Advances Farmers’ Innovative Ideas

Heather Darby is all about partnering with farmers to advance their cutting edge ideas—in the end, to the benefit of hundreds of producers across the region. A recipient of 13 SARE-funded projects, the University of Vermont Extension specialist has worked with researchers and farmers to help oilseed producers get more value out of biodiesel, organic dairy farmers grow their own feed and other growers tap new local markets for wheat, hops and dry beans.

“I would say that every SARE grant I’ve received was generated because of the questions and interests of the farmers in Vermont and other nearby areas,” Darby says.

Many of those questions have been raised by the region’s emerging community of biodiesel producers, who are pioneering the use of oilseed crops like sunflower and canola in New England. Darby has worked on two SARE grants to learn more about oilseeds—particularly pest and weed management—and to share their knowledge with others.

With another SARE grant, she is working with oilseed producers and researchers to “close the loop” by producing food-quality oil that can be sold to restaurants and then later returned to farmers for biodiesel production. This two-stage life can increase the oil’s value by up to 50 percent.

Darby is also helping Vermont’s wheat growers produce grain suitable for local bakers, who have been hesitant to source flour locally because of inconsistent quality.

For more information on this research, see sare.org/projects, and do a coordinator search for “Darby.”

SARE in Vermont

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

$9,983,698 in total funding

280 grant projects (since 1988)

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

Total awards: 280 grants
- 48 Research and Education
- 12 Sustainable Community Innovation
- 19 Professional Development Program
- 102 Farmer/Rancher
- 22 Graduate Student
- 74 On Farm Research/Partnership
- 3 Research Only

Total funding: $9,983,698
- $5,287,931 Research and Education
- $141,505 Sustainable Community Innovation
- $1,775,986 Professional Development Program
- $641,876 Farmer/Rancher
- $303,888 Graduate Student
- $1,311,018 On Farm Research/Partnership
- $521,494 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/vermont

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/vermont to learn more.

Beth Holtzman
University of Vermont Extension
(802) 476-2003
beth.holtzman@uvm.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.
Vermont has been awarded $9,983,698 grants to support 279 projects, including but not limited to, 47 research and/or education projects, 19 professional development projects and 102 producer-led projects. Vermont has also received additional SARE support through multi-state projects.

### RESEARCH AND EDUCATION 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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<td>LNE21-414</td>
<td>Improving Pasture Resource Management with Farmer-Engaged Planning - Part 2</td>
<td>$85,346</td>
<td>Cheryl Cesario UVM Extension</td>
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<td>LNE20-400</td>
<td>Biological and Cultural Tactics for the Control of Wireworms in Root Crops</td>
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<td>LNE19-373</td>
<td>New England Cider Apple Program: Optimizing Production for High-Value Markets</td>
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<td>LNE19-375</td>
<td>Staying Ahead in the Packshed: Improving Postharvest Equipment and Building Guidance for Fruit and Vegetable Farms</td>
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<td>LNE19-379</td>
<td>Pre- and Post-Harvest Strategies for Leek Moth Control on Diversified Vegetable Farms</td>
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<td>LNE18-361</td>
<td>Developing Corn Silage Systems to Meet the Needs of Cover Crops</td>
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<td>LNE17-355</td>
<td>Improving pasture resource management with farmer-engaged planning</td>
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<td>LNE16-347</td>
<td>The “In-Between”: Precooling and curing fruits and vegetables for improved quality and profit</td>
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<td>LNE16-348</td>
<td>Development of pest and nutrient management strategies for hop production in the Northeast</td>
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<td>Developing best management practice for growing grain suitable for malt in the Northeast</td>
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<td>LNE13-326</td>
<td>Improving profits for maple producers through tubing sanitation</td>
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<td>LNE12-317</td>
<td>Using winter canola and high-glucosinolate mustards to protect and improve soil resources and enhance on-farm profitability</td>
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<td>LNE11-309</td>
<td>Adding Value to Oilseed Crops by Producing Food Quality Oils</td>
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<td>Novel approaches to improve energy efficiency in northern New England greenhouses</td>
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<td>LNE09-278</td>
<td>Northeast SARE program evaluation, Sustainable Community Grants</td>
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<td>LNE09-280</td>
<td>Marketing on-farm compost for sustainability and economic viability</td>
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<td>Improving oilseed production and harvesting practices in New England: A farmer-to-Farmer exchange</td>
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<td>LNE09-283</td>
<td>Integrated learning courses for organic and sustainable vegetable production</td>
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<td>LNE08-267</td>
<td>Increasing Farm Profitability through Agritourism Product Development and Marketing</td>
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<td>LNE07-254</td>
<td>Improving pasture management for horses</td>
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<td>LNE07-260</td>
<td>Burlington Food Hub: Innovative direct marketing opportunities</td>
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<td>Vegetable seed growing handbook</td>
<td>$26,441</td>
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<td>Dairy stewardship alliance: On-farm assessment for sustainable practices</td>
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<td>LNE05-233</td>
<td>Community market project</td>
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<td>LNE04-200</td>
<td>Implementing Dairy Goat Nutrition Programs on Farms for Improved Sustainability</td>
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<td>Carol Delaney</td>
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<td>Developing Sustainable Local Food Sales to a College Institutional Market</td>
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<td>Integrated learning courses for sustainable livestock production</td>
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<td>LNE03-185</td>
<td>Pasture forage quality and yield response to irrigation, N fertilizer, and organic amendments</td>
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<td>LNE03-186</td>
<td>Seed Growers’ Handbook: Producing Vegetable Seeds for Sustainable Agriculture</td>
<td>$62,925</td>
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<td>Vermont Food Education Every Day (VTFEED)</td>
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<td>Controlling Pests of Pastured Livestock on Organic Farms</td>
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<td>LNE97-086</td>
<td>Evaluation and Documentation of Homeopathic Nosodes in Organic and Conventional Dairy Production</td>
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<td>LNE97-087</td>
<td>Managed Riparian Buffer Zones and Cover Crops to Minimize Phosphorus and Nitrogen Runoff Losses from Corn Fields</td>
<td>$142,448</td>
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<td>LNE97-097</td>
<td>Documentation of Organic and Transitional Dairy Production Practices</td>
<td>$43,986</td>
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<td>LNE96-066</td>
<td>Evaluating a Heat Therapeutic Control of the Honey Bee Mite Varroa Destructor</td>
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<td>LNE96-075</td>
<td>Northeast Kingdom Nutrient Management Project</td>
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<td>New England Sustainable Agriculture Conference – 1997</td>
<td>$36,478</td>
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<td>ANE95-023</td>
<td>Development of Fungal Entomopathogens for Greenhouse IPM (LNE95-058)</td>
<td>$231,931</td>
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<td>LNE95-053</td>
<td>An Economic Analysis of Community Supported Agriculture Consumers</td>
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<td>LNE95-058</td>
<td>Development of Fungal Entomopathogens for Greenhouse IPM (ANE95-23)</td>
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<td>LNE93-039</td>
<td>Systems Analysis of Organic and Transitional Dairy Production</td>
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<td>LNE92-033</td>
<td>Fungal Pathogens for Biocontrol of Western Flower Thrips and Green Peach Aphids in Greenhouses</td>
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<td>LNE89-017</td>
<td>Improving Milk Quality and Animal Health By Efficient Pasture Management</td>
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<td>LNE88-002</td>
<td>Improving Farm Profitability by Efficiently Using the Pasture Resource</td>
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RESEARCH ONLY GRANTS
Improving the Capacity of Pea Cover Crops to Enhance Soil Health

$196,658
Dr. Eric Bishop-von Wettberg
University of Vermont

Turn the Tap: Integrated Research to Support Sustainable Irrigation Practices on Northeast Vegetable Farms

$124,982
Dr. Joshua Faulkner
University of Vermont Extension

Potential for a Pheromone Mating Disruption Program for the Invasive Swede Midge within Complex Annual Rotational Systems

$199,854
Dr. Yolanda Chen
University of Vermont

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

<table>
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<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tr>
<td>ENE20-159</td>
<td>Developing Technical Skills of Service Providers in the Northeast to Assist Farmers with Production of Industrial Hemp</td>
<td>$185,371</td>
<td>Dr. Heather Darby</td>
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<td>ENE18-149</td>
<td>Developing Technical Skills of Service Providers in the Northeast to Assist Farmers with Transition to No-Till</td>
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<td>ENE14-130</td>
<td>Professional development project in weed and forage identification and management</td>
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<td>ENE13-127</td>
<td>Breaking Barriers: Building Capacity to Provide Tractor Education</td>
<td>$89,681</td>
<td>Beth Holtzman</td>
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<td>ENE08-107</td>
<td>Focusing on Beginning Farmers</td>
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<td>ENE06-097</td>
<td>A video on sustainable tillage practices for vegetable farms</td>
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<td>ENE06-098</td>
<td>Education to extension agents, veterinarians, and other professionals in complementary treatments and preventive management for organic livestock farms</td>
<td>$116,962</td>
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<td>ENE05-091</td>
<td>Climate change and agriculture: Preparing educators to promote practical and profitable responses</td>
<td>$113,106</td>
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<td>ENE04-083</td>
<td>A Legal Guide to the Business of Farming in Vermont</td>
<td>$59,069</td>
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<td>ENE03-074</td>
<td>A video on vegetable farmers and their innovative cover crop techniques</td>
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<td>ENE01-059</td>
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<td>ENE99-047</td>
<td>A Video on Ecological Sweet Corn Production</td>
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<td>ENE97-030</td>
<td>Video of Innovations in On-Farm Marketing in New England</td>
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### FARMER/RANCHER GRANTS

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<td>FNE21-984</td>
<td>Solarization or Occultation? Optimizing Tarping for Soil Health and Productivity in No-Till Vegetable Production</td>
<td>$5,875</td>
<td>Nic Cook&lt;br&gt;Cedar Circle Farm</td>
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<td>FNE20-960</td>
<td>Evaluation of Apple Cultivars for Hard Cider Production in the Northeast</td>
<td>$8,980</td>
<td>Todd Parlo&lt;br&gt;Walden Heights Nursery &amp; Orchard</td>
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<td>FNE19-937</td>
<td>Modular Meat Processing Facility for Small Grazing Operations</td>
<td>$14,745</td>
<td>Brian Leach&lt;br&gt;Haystack Farmstead LLC</td>
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<td>FNE19-935</td>
<td>Feasibility of Integrating Sheep into Vermont Vineyards: An Initial Look at Ecologic and Economic Benefits</td>
<td>$6,419</td>
<td>Ethan Joseph&lt;br&gt;Shelburne Vineyard</td>
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<td>FNE19-920</td>
<td>Comparing Management-Intensive Rotational Grazing Strategies to Enhance Land Regeneration and Farmer Livelihood</td>
<td>$13,108</td>
<td>Brandon Bless&lt;br&gt;Bread and Butter Farm</td>
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<td>FNE18-909</td>
<td>Nutritional Contribution of Forage on Pasture-Raised Pigs</td>
<td>$3,163</td>
<td>Alessandra Rellini&lt;br&gt;Agricola Farm</td>
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<td>FNE18-906</td>
<td>Swede Midge Control for Cruciferous Crops</td>
<td>$8,735</td>
<td>Jaiel Pulskamp&lt;br&gt;KETTLE SONG FARM</td>
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<td>FNE18-895</td>
<td>Seakale: Commercial Opportunities for New Perennial Crops and Climate Smart Agriculture</td>
<td>$14,968</td>
<td>Graham Unangst-Rufenacht</td>
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<td>FNE17-871</td>
<td>Establishing populations of ground-nesting native bees (Colletes) for orchard pollination services</td>
<td>$6,989</td>
<td>John Hayden&lt;br&gt;The Farm Between</td>
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<td>FNE16-840</td>
<td>Comparison of a commercial Varroa mite honeybee treatment with treatment-free Varroa management techniques</td>
<td>$14,998</td>
<td>Ross Conrad&lt;br&gt;Dancing Bee Gardens</td>
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<td>Screening broccoli cultivars for Swede midge tolerance</td>
<td>$8,118</td>
<td>Andy Jones&lt;br&gt;Intervale Community Farm</td>
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<td>Testing an aerated static pile (ASP) compost system for efficiency of time and space</td>
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<td>An enterprise analysis of three organic strawberry production systems in northeastern Vermont</td>
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<td>Improving the yield of cold-weather shiitake by irrigation</td>
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<td>FNE15-816</td>
<td>Wet rice organic weed control trials</td>
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<td>Erik Andrus</td>
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<td>FNE15-817</td>
<td>Mustard cover crops as biofumigants for organic strawberry production</td>
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<td>FNE14-793</td>
<td>Economics of pasture and forage in the production of geese</td>
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<td>FNE14-801</td>
<td>Effective use of food scraps as poultry feed</td>
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<td>FNE14-812</td>
<td>Evaluation of apple and pear varieties for cold humid climates under certified organic management</td>
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<td>FNE11-703</td>
<td>From Seed to Sugar: A Vertically-Integrated Model for Small-Scale Turbinado Sugar Production from Organic GMO-Free Beets</td>
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<td>FNE10-676</td>
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<td>Investigating the Commercial Viability of Growing Organic Black Currants in the Northeast</td>
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<td>Adaptation of the Cornell Net Carbohydrate and Protein System to Northeast Sheep Dairy Operations</td>
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<td>Development of Organic Feeds and Production Techniques for Tilapia Fish Production in Ecologically Based Recirculating Aquaculture Systems</td>
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<td>Managed Rotational Grazing in Wetland Area</td>
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<td>Planting Strawberries &amp; Blueberries Into Oats &amp; White Clover</td>
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<td>Using Milkhouse Waste Water for Alternative Cash Crop</td>
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<td>Identification of Local Ethnic Needs for Livestock</td>
<td>$4,904</td>
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<td>Evaluating the Effectiveness of Non-Chemical Methods in the Control of Tarnished</td>
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<td>FNE99-274</td>
<td>On-Farm Impacts of Soybean Silage in an Annual Rotation with Corn Silage</td>
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<td>Northeast Livestock Export Program (Phase III)</td>
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<td>FNE98-219</td>
<td>Rootswork 1998 - A Community-Based Research, Demonstration, Education and</td>
<td>$3,393</td>
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<td>Low-Cost Conversion of Cow Dairy to Sheep Dairy</td>
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<td>FNE97-181</td>
<td>Development of NOFA Certified Pastured Poultry contractual Company to Diversify and</td>
<td>$5,450</td>
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<td>Education of Public in the Use of Native Woodland Plants and Wildflowers in the Home</td>
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<td>FNE97-185</td>
<td>Diversifying an Organic Grain System: Spring Wheat &amp; Edible Bean Variety Trials...</td>
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<td>Sorghum Syrup Production in Vermont (FNE96-157)</td>
<td>$6,000</td>
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<td>Agri-Tourism: Educating the Public and Generating On-Farm Income</td>
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<td>The Value of Low Maintenance Turfgrass for Cut Flower Production</td>
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<td>Don’t Bag it…Compost It!!</td>
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<td>Biological Control of Tarnish Plant Bug in Strawberries</td>
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| GNE21-259  | Integrating Vermont Farmer and Service Provider Knowledges Using Co-Created Mental Models of Soil Health                                                                                                   | $14,968      | Dr. V. Ernesto Mendez 
University of Vermont 
Catherine Horner 
University of Vermont |
| GNE21-271  | Developing a plant-based attractant to trap swede midge, Contarinia nasturtii (Diptera: Cecidomyiidae)                                                                                                       | $14,438      | Dr. Yolanda Chen 
University of Vermont 
Andrea Campbell 
The University of Vermont |
| GNE21-250  | Quantifying How Soil Aggregate Size Impacts Nitrous Oxide Emissions from Manure Injection                                                                                                                | $12,662      | Dr. Heather Darby 
University of Vermont Extension 
Sarah Brickman 
University of Vermont |
| GNE20-228  | Beguiling Flowers: Exploring the Role Flowers Play in Pollinator Exposure to Pesticides                                                                                                                     | $14,871      | Alison Brody 
University of Vermont 
Jessica Cole 
University of Vermont |
| GNE19-205  | Impacts of Silage Tarps on Soil Arthropods, Soil Properties and Crop Yields                                                                                                                               | $15,000      | Gillian Galford 
University of Vermont 
Eva Kinnebrew 
University of Vermont |
| GNE18-179  | Improving the Rotational Value of Field Pea as a Legume Cover Crop.                                                                                                                                       | $15,000      | Eric Bishop von Wettberg 
University of Vermont 
Edward Marques 
University of Vermont |
| GNE18-170  | Agricultural Best Management Practices to Mitigate Gaseous Carbon and Nitrogen Losses from a Zea Mays Silage System                                                                                          | $15,000      | Carol Adair 
University of Vermont 
Kyle Dittmer 
University of Vermont |
| GNE17-157  | Full-diet farming: A case study of an alternative model for community-supported agriculture                                                                                                                   | $14,171      | Amy Trubek 
University of Vermont 
Caitlin Morgan 
University of Vermont |
| GNE17-163  | Linking adaptive management to climate change impacts on diversified vegetable and berry farms in northern New England                                                                                       | $13,385      | Dr. V. Ernesto Mendez 
University of Vermont 
Alissa White 
Department of Plant & Soil Science at the University of Vermont |
| GNE16-117  | Table to farm: Using shotgun metagenomics to quantify antibiotic resistance on farms feeding food scraps to laying hens                                                                                       | $14,909      | John Barlow 
University of Vermont 
Korin Eckstrom 
University of Vermont |
| GNE16-121  | Development of an effective and economical pheromone mating disruption system for swede midge                                                                                                               | $14,265      | Dr. Yolanda Chen 
University of Vermont 
Rebecca Hallett 
University of Guelph 
Dr. Elisabeth Hodgdon 
Cornell Cooperative Extension |
**The effects of compost and vegetation on stormwater treatment and soil nutrient distribution within bioretention cells**

GNE16-124

- **SARE Support:** $3,892
- **Project Leaders:** Dr. Stephanie Hurley, University of Vermont - Plant and Soil Science Department, Dr. Joshua Faulkner, University of Vermont Extension, Dr. Eric Roy, University of Vermont - Rubenstein School of Environment and Natural Resources, Jason Kokkinos, University of Vermont

**Quantifying the nest density of an economically important native pollinator using population genetics**

GNE16-129

- **SARE Support:** $14,758
- **Project Leaders:** Dr. Taylor Ricketts, University of Vermont, Charlie Nicholson, University of Vermont

**Bee Viruses: The Evaluation of Flowering Plants in Horizontal Transmission and Conditions Promoting Viral Replication**

GNE15-094

- **SARE Support:** $14,640
- **Project Leaders:** Alison Brody, University of Vermont, Dr. Samantha Alger, University of Vermont

**Improvements in feed efficiency, milk yield, and components by delineating the rumen microbiome**

GNE15-097

- **SARE Support:** $15,000
- **Project Leaders:** Dr. Andre Brito, University of New Hampshire, Dr. Jana Kraft, University of Vermont, Laura Cersosimo, University of Vermont

**Exploring the use of bokashi as a soil fertility amendment in Northeast vegetable production systems**

GNE15-098

- **SARE Support:** $13,062
- **Project Leaders:** Dr. Josef Görres, University of Vermont, Dana Christel, University of Vermont

**The Root of the Problem: Enhancing food security among Latino/a farm workers in Vermont**

GNE15-109

- **SARE Support:** $14,537
- **Project Leaders:** Dr. Teresa Mares, Jessie Mazar, University of Vermont

**Staphylococcus mastitis, biofilms, and antibiotic resistance: Barriers to milk quality and food safety on artisanal and farmstead cheese producing farms in Vermont**

GNE14-087

- **SARE Support:** $14,999
- **Project Leaders:** John Barlow, University of Vermont, Dr. Robert Mugabi, University of Vermont

**Evaluating the Use of Forage Radish to Enhance Winter Rye Cover Crop Performance**

GNE14-091

- **SARE Support:** $14,998
- **Project Leaders:** Dr. Sid Bosworth, University of Vermont, Kirsten Workman, UVM Extension

**Evaluation of flowering cover crops as an IPM tool in Northeastern hop production**

GNE12-033

- **SARE Support:** $14,154
- **Project Leaders:** Dr. Heather Darby, University of Vermont Extension, Lily Calderwood, University of Vermont

**Mitigating and preventing flood-related soil quality degradation using cover crop blends**

GNE12-045

- **SARE Support:** $14,836
- **Project Leaders:** Dr. Josef Görres, University Of Vermont, Lindsey Ruhl, UVM

**Evaluating the use of forage radishes as a pasture improvement tool**

GNE11-022

- **SARE Support:** $10,343
- **Project Leaders:** Dr. Josef Görres, University Of Vermont, Peter Austin, University of Vermont

### ON FARM RESEARCH/PARTNERSHIP GRANTS

<table>
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<tr>
<th>Project #</th>
<th>Project Title</th>
<th>SARE Support</th>
<th>Project Leaders</th>
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<tr>
<td>ONE21-386</td>
<td>Integrating Solar Corridors into Vermont Corn Silage Production Systems</td>
<td>$28,797</td>
<td>Dr. Heather Darby, University of Vermont Extension</td>
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<td>ONE21-391</td>
<td>Mycorrhizal Banks to Enhance Vegetable Yield and Reduce Water Quality Impairment by Mitigating Excessive Soil Phosphorus</td>
<td>$29,994</td>
<td>Dr. Josef Görres, University Of Vermont</td>
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<td>ONE21-407</td>
<td>Organic No-Till Forage Crop Innovations</td>
<td>$29,745</td>
<td>Kirsten Workman, UVM Extension</td>
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<td>ONE21-381</td>
<td>High Tunnel Gantry System with Transport Cart and Automated Row Cover System to Assist Small Farm Production, Scalability, and Profitability</td>
<td>$29,944</td>
<td>Diane Abruzzini, Rigorous</td>
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<td>ONE21-390</td>
<td>From Pasture to Cheese: Effect of Farm Practices on Raw Milk and Cheese Microbial Communities</td>
<td>$29,880</td>
<td>Dr. Marta Gomez-Chiarri, University of Rhode Island</td>
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<td>ONE20-358</td>
<td>Exploring Low-Phosphorous Wool Pellets as Fertilizer and Soil Conditioner for Vegetables</td>
<td>$29,329</td>
<td>Dr. Terence Bradshaw, University of Vermont, Laura Johnson, UVM Center for Sustainable Agriculture</td>
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<td>ONE20-379</td>
<td>Evaluating &quot;Flex Ear&quot; Corn Varieties for Agronomic and Conservation Performance</td>
<td>$29,363</td>
<td>Jeffrey Sanders, University of Vermont Extension</td>
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<td>ONE20-365</td>
<td>Field Assessment of a Novel Behavioral Disruptor for Spotted Wing Drosophila Management in Northeastern Berry Crops</td>
<td>$29,999</td>
<td>Victor Izzo, University of Vermont, Scott Lewins, University of Vermont</td>
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<td>ONE20-355</td>
<td>A Partnership for Improving Northeast Honey Bee Breeding Stock by Implementing Novel Selection Criteria</td>
<td>$30,000</td>
<td>Dr. Samantha Alger, University of Vermont</td>
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<td>ONE20-360</td>
<td>Understanding Opportunities and Risks Associated with Alternative Milking Strategies</td>
<td>$29,737</td>
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<td>ONE20-362</td>
<td>Expanding Local Markets through Evaluating Sensory Characteristics and Agronomic Performance of Flint Corn Varieties</td>
<td>$29,185</td>
<td>Roy Desrochers, University of Vermont and State Agricultural College</td>
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<td>ONE20-350</td>
<td>Expanding Farm Partnerships to Trial Human-Urine-Derived Fertilizer on New Crops</td>
<td>$28,187</td>
<td>Abraham Noe-Hays, Rich Earth Institute</td>
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<td>ONE20-361</td>
<td>Assessment of a Collaborative Milk Shed in Lamoille County, Vermont</td>
<td>$16,079</td>
<td>Silene DeCiucies, Center for an Agricultural Economy</td>
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<td>ONE19-331</td>
<td>The Ag Engineering Podcast: Tools, Tips and Techniques for Improving Sustainability on Your Farm</td>
<td>$27,280</td>
<td>Andrew Chamberlin, UVM Extension</td>
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<td>ONE19-333</td>
<td>Developing Pest and Fertility Best Practices for Industrial Hemp</td>
<td>$29,973</td>
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<td>ONE19-335</td>
<td>Mycoremediation of Phosphorus in Agricultural Runoff using Mycorrhizal-Plant Associations</td>
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<td>Dr. Josef Görres, University Of Vermont</td>
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<td>ONE19-343</td>
<td>Anaerobic Soil Disinfection to Control Soilborne Pathogen Rhizoctonia solani in Vermont Field Conditions</td>
<td>$30,000</td>
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<td>Building a Resilient Farmer Network in the Face of Climate Disruption</td>
<td>$29,917</td>
<td>Beth Roy</td>
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<td>ONE19-350</td>
<td>Supporting Local Agriculture via Clinical Research: Human Studies with Elderberries to Improve Biomarkers of Obesity</td>
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<td>Dr. Patrick Solverson</td>
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<td>ONE19-329</td>
<td>Increasing Yield and Carbon Sequestration of Hemp Production with Understory Companion Crops</td>
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<td>Dr. Eric Bishop-von Wettberg</td>
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<td>ONE18-312</td>
<td>Understanding Quality Standards for Cereal Rye to Help Farmers Access Value-Added Markets for Malting, Distilling, and Baking</td>
<td>$14,971</td>
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<td>ONE18-318</td>
<td>Practical Strategies for Reducing Ammonia Volatilization from Urine-Derived Fertilizers</td>
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<td>ONE18-323</td>
<td>Vermont Maple in Every School Project</td>
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<td>Helen Rortvedt</td>
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<td>ONE17-299</td>
<td>Evaluating the perennial living mulches in a silage corn production system in the Northeast</td>
<td>$15,000</td>
<td>Dr. Sid Bosworth</td>
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<td>ONE17-293</td>
<td>Winter-terminated cover crop strategies for vegetable farms in northern New England</td>
<td>$14,966</td>
<td>Dr. Heather Darby</td>
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<td>ONE17-302</td>
<td>Application of regionally adapted nematodes for root maggot management</td>
<td>$13,046</td>
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<td>ONE17-305</td>
<td>A farmer collaboration initiative</td>
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<td>ONE16-254</td>
<td>Orchard pruning for cider apple production</td>
<td>$14,889</td>
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<td>ONE16-256</td>
<td>Vermont organic dairy custom grazing network</td>
<td>$14,957</td>
<td>Jennifer Colby, M.S.</td>
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<td>ONE16-258</td>
<td>Increasing the viability of heirloom dry bean production in the Northeast: Part II</td>
<td>$14,925</td>
<td>Dr. Heather Darby</td>
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<td>ONE16-275</td>
<td>A regional, farmer-driven approach to labor issues</td>
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<td>ONE16-253</td>
<td>Can grazing selectivity increase fatty acid and nutritive content of annual forages grown for dairy?</td>
<td>$14,999</td>
<td>Dr. Sid Bosworth</td>
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<td>ONE16-288c</td>
<td>Vermont cover crop initiative</td>
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<td>ONE15-228</td>
<td>Evaluation of tillage and manure application practices on soil quality and greenhouse gas emissions</td>
<td>$12,940</td>
<td>Carol Adair</td>
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<td>ONE15-230</td>
<td>Innovative Impact Assessment of Farm and Food Innovations</td>
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<td>ONE15-234</td>
<td>Increasing the viability of heirloom dry bean production in the Northeast</td>
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<td>Dr. Heather Darby&lt;br&gt;University of Vermont Extension</td>
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<td>ONE15-235</td>
<td>Evaluating water quality benefits from soil aeration</td>
<td>$14,877</td>
<td>Laura Dlugolecki&lt;br&gt;Winooski Natural Resources Conservation District&lt;br&gt;Sophie Sauvé&lt;br&gt;Winooski NRCD&lt;br&gt;Holly Kreiner&lt;br&gt;Winooski Natural Resources Conservation Specialist</td>
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<td>ONE15-244</td>
<td>Value-added products from urine: Enriched compost and stabilized liquid fertilizer</td>
<td>$14,833</td>
<td>Kim Nace&lt;br&gt;Rich Earth Institute&lt;br&gt;Abraham Noe-Hays&lt;br&gt;Rich Earth Institute</td>
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<td>ONE14-196</td>
<td>Tools for grass farmers to monitor grazing behavior and forage use in real time</td>
<td>$13,095</td>
<td>Dr. Juan Alvez&lt;br&gt;UVM Extension</td>
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<td>ONE14-199</td>
<td>Biological management of apple replant disease</td>
<td>$14,314</td>
<td>Dr. Terence Bradshaw&lt;br&gt;University of Vermont</td>
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<td>ONE14-202</td>
<td>Aeration Tillage Effects on Hay Yield and Soil Health in Clay Soils</td>
<td>$14,986</td>
<td>Jeffrey Carter&lt;br&gt;UVM Extension&lt;br&gt;Rico Balzano&lt;br&gt;Little Lake Orchard</td>
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<td>ONE14-210</td>
<td>Evaluating value chain facilitators</td>
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<td>Executive Director&lt;br&gt;Rutland Area Farm and Food Link</td>
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<td>ONE14-218</td>
<td>Urine as fertilizer: Maximizing hay yield and enriching low-N composts</td>
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<td>Abraham Noe-Hays&lt;br&gt;Rich Earth Institute&lt;br&gt;Kim Nace&lt;br&gt;Rich Earth Institute</td>
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<td>ONE14-220</td>
<td>Biological control of conifer root aphids in Christmas trees</td>
<td>$14,995</td>
<td>Dr. Bruce L. Parker&lt;br&gt;University of Vermont</td>
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<td>ONE13-175</td>
<td>Enhancing honey production with clover: Innovative methods to use white and alsike clover in Vermont hay fields</td>
<td>$14,848</td>
<td>Dr. Sid Bosworth&lt;br&gt;University of Vermont</td>
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<td>ONE13-176</td>
<td>Food Storage Curriculum for Farmers and Processors</td>
<td>$14,952</td>
<td>Christopher Callahan&lt;br&gt;University of Vermont Extension</td>
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<td>ONE13-177</td>
<td>Cover Crop Diversity in No-Till Systems</td>
<td>$14,964</td>
<td>Jeffrey Carter&lt;br&gt;UVM Extension&lt;br&gt;Kirsten Workman&lt;br&gt;UVM Extension</td>
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<td>ONE13-180</td>
<td>Developing agronomic practices for flax production in the Northeast</td>
<td>$14,889</td>
<td>Dr. Heather Darby&lt;br&gt;University of Vermont Extension</td>
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<td>ONE13-182</td>
<td>Vermicompost as a fast-acting nitrogen amendment to mitigate nitrogen deficiencies in organic vegetable production</td>
<td>$14,588</td>
<td>Dr. Josef Görres&lt;br&gt;University Of Vermont</td>
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<td>ONE13-188</td>
<td>Sustainable fertilizer from reclaimed urine: A farm-scale demonstration for hay production</td>
<td>$14,876</td>
<td>Kim Nace&lt;br&gt;Rich Earth Institute&lt;br&gt;Abraham Noe-Hays&lt;br&gt;Rich Earth Institute</td>
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<td>ONE12-154</td>
<td>The future of growing rice in Vermont: Managing for climate change</td>
<td>$14,923</td>
<td>Dr. Laura Bermingham&lt;br&gt;University of Vermont</td>
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</table>
ONE12-155 Raw waste milk as a pasture amendment $14,944 Dr. Sid Bosworth University of Vermont

ONE12-158 Mitigating fertility effects of flooding with variable rate amendment $14,999 Dr. Josef Görres University Of Vermont

ONE12-169 Evaluating flowering plant selection for pollinator habitat enhancement: Open-pollinated natives vs. native cultivars $14,850 Dr. Leonard Perry University of Vermont

ONE11-137 Underseeding Clover in Organic Wheat to Reduce Mycotoxins and Improve Grain Quality $14,728 Dr. Sid Bosworth University of Vermont

ONE11-139 Evaluation of organic strategies to control a new invasive pest, swede midge, Contarinia nasturtii (Diptera: Cecidomyiidae) $15,000 Dr. Yolanda Chen University of Vermont

ONE11-140 The Effects of Topdressing Organic Nitrogen on Hard Red Winter Wheat Yield and Quality: Part II $14,186 Dr. Heather Darby University of Vermont Extension

ONE11-146 Guide to Financing the Community Supported Farm $14,982 Mark Cannella University of Vermont Extension Allen Matthews Chatham University

ONE11-148 Evaluation of the effects of aerators on alfalfa stands $14,992 Hilary Solomon PMNRC

ONE10-114 The effects of topdressing organic nitrogen on wheat protein $11,540 Dr. Heather Darby University of Vermont Extension

ONE10-123 Compost for Management of Plant Pathogens and Weed Seeds $15,000 Dr. Deborah Neher, PhD University of Vermont

ONE10-126 Evaluating the on-farm environmental and economic impacts of the use of aerators with liquid and semi-solid manure under various management conditions $14,907 Hilary Solomon PMNRC

ONE08-081 Assessing the value of oilseed meals for soil fertility and weed suppression $9,213 Dr. Heather Darby University of Vermont Extension

ONE08-084 Developing On-Farm Research Expertise Among Farmers in Vermont $9,997 Dr. Wendy Sue Harper Northeast Organic Farming Association of Vermont

ONE08-089 Eggplants as habitat plants in Poinsettias $9,993 Dr. Margaret Skinner University of Vermont

ONE07-070 Fenceless Grazing $10,000 Christopher Dutton Vermont Technical College

ONE06-052 Assessing on-farm pasture availability and forage quality for dairy feed planning $9,914 Dr. Sid Bosworth University of Vermont

ONE06-061 A study to determine if anthelmintic-resistant internal parasites exist in Vermont sheep flocks $10,000 Chet Parsons University of Vermont Extension
### SUSTAINABLE COMMUNITY INNOVATION GRANTS

<table>
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<th>SARE Support</th>
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<tr>
<td>CNE13-107</td>
<td>On-Line Farm to Workplace System</td>
<td>$14,985</td>
<td>Tara Kelly&lt;br&gt;Rutland Area Farm and Food Link</td>
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<td>CNE13-110</td>
<td>FarmRaisers: Raising funds, kids, and crops in the Upper Valley</td>
<td>$14,716</td>
<td>Beth Roy&lt;br&gt;Vital Communities</td>
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<td>CNE12-093</td>
<td>The Community Market Project</td>
<td>$14,369</td>
<td>Erin Buckwalter&lt;br&gt;Northeast Organic Farming Association of Vermont</td>
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<td>CNE11-084</td>
<td>Market Basket</td>
<td>$8,755</td>
<td>Angela Berkfield&lt;br&gt;Post Oil Solutions</td>
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<td>CNE10-070</td>
<td>Facilitating Collaborative Farm-to-Restaurant Sales in Chittenden County, Vermont</td>
<td>$9,783</td>
<td>Travis Marcotte&lt;br&gt;Intervalle Center</td>
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<td>CNE10-074</td>
<td>Greater Falls Food Hub</td>
<td>$15,000</td>
<td>Denise Mason&lt;br&gt;Southeastern Vermont Community Action (SEVCA)</td>
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<td>CNE09-065</td>
<td>Marketing the market: facilitating EBT usage among farmers’ market customers</td>
<td>$9,792</td>
<td>Liz Kenton&lt;br&gt;UVM Extension&lt;br&gt;Sarah Kleinman&lt;br&gt;University of Vermont Extension</td>
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<td>CNE09-066</td>
<td>Incubation, expansion and learning: The microloan fund for New England farmers</td>
<td>$17,514</td>
<td>Dorothy Suput&lt;br&gt;The Carrot Project</td>
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<td>CNE08-049</td>
<td>Vermont food basket project</td>
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<td>Travis Marcotte&lt;br&gt;Intervalle Center</td>
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<td>CNE07-026</td>
<td>Bridging the gap: Connecting youth, farms and communities</td>
<td>$9,994</td>
<td>Sara Porth&lt;br&gt;University of Vermont Extension</td>
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<td>CNE06-006</td>
<td>Rutland Area Farm and Food Link - community farm and agricultural resource center</td>
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<td>CNE06-007</td>
<td>South Hero Land Trust Farm Initiative</td>
<td>$6,697</td>
<td>Chris Gordon&lt;br&gt;South Hero Land Trust</td>
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Total funding from the USDA SARE program to Vermont
$9,983,698

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).