

## 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 \$406 million to more than 8,802 initiatives.

### SARE is grassroots with far-reaching impact

Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

### SARE communicates results

SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining an online library of practical publications, grantee-produced information products and other educational materials.



[www.sare.org](http://www.sare.org)

# SARE: Advancing the Frontier of Sustainable Agriculture in... New Hampshire

## Project Highlight: Exploring the Feasibility of Growing Microgreens in a Modified Cold Storage Room

Jennifer Wilhelm led a team of researchers at Fat Peach Farm in New Hampshire to determine if growing microgreens in a modified cold storage room can increase farm revenue. In the Northeast, producers are challenged with bringing in sufficient crop yield while facing significantly shorter growing seasons. Most small-scale farms have cold storage rooms that are only in use during the summer months to keep products fresh for market, but they remain untouched during the colder months. This gives New Hampshire farmers the opportunity to extend their growing season and increase profits by modifying their cold storage rooms to grow microgreens.

To explore the viability of this venture, researchers at Fat Peach Farm obtained a SARE grant to determine the economic benefits and shortcomings of growing microgreens in modified storage rooms. With this grant, the recipients were able to fund a series of experiments aimed at evaluating different production methods for producing microgreens in a controlled indoor environment. The researchers tested four varieties of microgreens under two different methods of light treatment in order to determine the crop viability. To assess economic profitability, the researchers tracked start-up costs as well as all production costs including electricity for heat, fans and lighting. Ultimately, the research found that microgreens provide a simple and efficient way for producers to increase the sustainability and profitability of their farms.

For more information on this project, see [sare.org/projects](http://sare.org/projects) and search for project number FNE20-966.

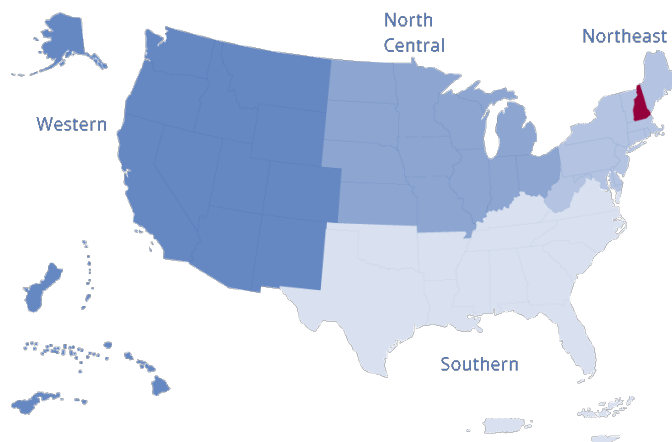
## SARE in New Hampshire

[northeast.sare.org/state-profiles/new-hampshire/](http://northeast.sare.org/state-profiles/new-hampshire/)

**\$1,992,526**  
in total funding

**21 grant project**  
(since 1988)

For a complete list of grant projects state by state, go to [www.sare.org/state-summaries](http://www.sare.org/state-summaries)



# SARE in New Hampshire

## Grants awarded 2019-2024

Total awards: **21 grants**

- 4 Farmer/Rancher
- 5 Research and Education
- 3 Professional Development Program
- 3 On Farm Research/Partnership
- 4 Graduate Student
- 2 Research Only

Total funding: **\$1,992,526**

\$57,594	Farmer/Rancher
\$1,014,236	Research and Education
\$361,992	Professional Development Program
\$71,336	On Farm Research/Partnership
\$59,020	Graduate Student
\$428,348	Research Only

Find a complete list of projects on page 3.

## Farmer and rancher impacts 2019-2024

SARE grantees have reported the following impacts from their projects:

**3,481 farmers participated in a SARE-funded project**

**956 farmers reported a change in knowledge, awareness, skills or attitude**

**147 farmers changed a practice**



Learn about local impacts at:  
[northeast.sare.org/sare-in-your-state/new-hampshire/](https://northeast.sare.org/sare-in-your-state/new-hampshire/)

## 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-profiles/new-hampshire/](https://northeast.sare.org/state-profiles/new-hampshire/) to learn more.

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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.

For detailed information on SARE projects, go to  
**[www.SARE.org](https://www.SARE.org)**



# AGRICULTURE PROJECTS FUNDED IN NEW HAMPSHIRE

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

New Hampshire has been awarded \$5,256,679 grants to support 105 projects, including but not limited to, 15 research and/or education projects, 7 professional development projects and 44 producer-led projects. New Hampshire has also received additional SARE support through multi-state projects.

## RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
<a href="#">LNE23-459</a>	Northeast Kiwiberries: Jumpstarting a Regional Industry via Participatory Evaluation of Advanced Breeding Selections	\$226,392	Iago Hale University of New Hampshire
<a href="#">LNE23-471</a>	Viable Working Farmlands: Succession Planning Advising and Education for New England Farmers	\$166,170	Shemariah Blum-Evitts Land For Good
<a href="#">LNE22-436</a>	Developing Mediated Market Models to Increase Consumer Engagement and Market Access for New England Farmers	\$257,846	Dr. Analena Bruce University of New Hampshire
<a href="#">LNE22-441</a>	Agroforestry Transition Hub: Education and On-farm Research to Advance Agroforestry for Climate Resilience for Northeast Farmers	\$149,831	Theresa Ong, PhD Dartmouth College
<a href="#">LNE20-403</a>	Advancing Strawberry Production in the Northeast	\$213,997	Dr. Rebecca Sideman UNH Cooperative Extension
<a href="#">LNE16-346</a>	Unraveling challenges and opportunities of kelp meal supplementation in Northeast organic dairies	\$199,820	Dr. Andre Brito University of New Hampshire
<a href="#">LNE15-343</a>	Improving nutrient and pest management in high tunnel tomato production	\$249,539	Dr. Rebecca Sideman UNH Cooperative Extension
<a href="#">LNE13-323</a>	Forage-based approaches for improving profitability and ecosystem services of dairy farms in New Hampshire and Pennsylvania	\$199,927	Dr. Andre Brito University of New Hampshire

<a href="#">LNE11-313</a>	UNH Organic Dairy Farm Agroecosystem Study, Phase II; A closed system, energy independent organic dairy farm for Northeastern U.S.	\$392,658	Dr.John Aber University of New Hampshire
<a href="#">LNE08-277</a>	UNH Organic Dairy Farm agroecosystem study	\$379,087	Dr.John Aber University of New Hampshire
<a href="#">LNE04-199</a>	Food Stamp Redemptions at New Hampshire Farmers' Markets	\$30,968	Helen Costello UNH Cooperative Extension
<a href="#">LNE03-183</a>	Towards a community-based school food system	\$76,388	Tom Kelly UNH Office of Sustainability
<a href="#">LNE98-108</a>	Nutrition & Management of Dairy Sheep & Goats on Pasture	\$151,190	Bruce Clement
<a href="#">LNE98-109</a>	Resource Kit for Preserving Rural Character	\$6,000	Jean Conklin University of New Hampshire Cooperative Extension
<a href="#">LNE97-081</a>	Potential of Earthworms as Biocontrol Agents of Scab and Leafminers in New England Apple Orchards	\$99,790	William E. MacHardy University of New Hampshire

#### RESEARCH ONLY GRANTS

Project #	Project Title	SARE Support	Project Leaders
<a href="#">LNE23-476R</a>	Capturing Sunlight: Using Row Orientation to Maximize Photosynthesis, Soil Moisture, and Weed Suppression in Cover Crop-Based Systems	\$248,033	Natalie Lounsbury University of New Hampshire
<a href="#">LNE20-413R</a>	Attract-and-Kill Strategies for Sustainable Striped Cucumber Beetle Management	\$180,315	Dr.Anna Wallingford UNH Cooperative Extension
<a href="#">LNE18-371R</a>	Expanding No-till Organic Vegetable Production through the Combination of High-residue Cover Crops and Solarizing Tarps	\$126,668	Dr.Richard Smith University of New Hampshire
<a href="#">LNE15-344R</a>	UNH organic dairy farm agroecosystem study, phase III: A closed system, energy independent organic dairy farm for the Northeastern U.S.	\$389,118	Dr.John Aber University of New Hampshire

#### PROFESSIONAL DEVELOPMENT PROGRAM GRANTS

Project #	Project Title	SARE Support	Project Leaders
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ENE21-169	Building Equitable Farmland Tenure Models for Northeast Farmers	\$97,359	Jean Willoughby Agrarian Trust
ENE20-166	Building Farm Financial Management Skills through Effective Distance Education	\$163,612	Seth Wilner UNH Cooperative Extension
ENE19-155	Improving Professional Capacity to Deliver Farm Succession Planning Assistance in New England	\$101,021	Shemariah Blum-Evitts Land For Good
ENE07-105	Building capacity in whole-farm systems and planning using the holistic management framework	\$171,923	Seth Wilner UNH Cooperative Extension
ENE03-080	Farmer research education program	\$141,471	Richard Kersbergen University of maine Cooperative Extension Seth Wilner UNH Cooperative Extension
ENE00-056	Agricultural Easements for Sustainable Agriculture	\$37,175	Nada Haddad UNH Cooperative Extension
ENE99-051	Market Planning for Value-Added Agricultural Products	\$25,490	John Porter New Hampshire Cooperative Extension

#### FARMER/RANCHER GRANTS

Project #	Project Title	SARE Support	Project Leaders
FNE24-075	Winter-Kill Cover-Cropping for Erosion Control in Mechanically-Cultivated Organic Garlic	\$6,218	Max Blindow Benedikt Dairy
FNE22-008	Agroforestry Production of Rare Medicinal Herbs in New Hampshire	\$30,000	Kate Dobrowski Greenhillfarm NH
FNE20-948	Reducing New England High Tunnel Heating Costs and Fossil Fuel Usage Utilizing an Earth Air Heat Exchanger	\$15,000	Dan Lagueux Hip Peas Farm
FNE20-966	Exploring the Feasibility of Growing Microgreens in a Modified Cold Storage Room	\$6,376	Jennifer Wilhelm Fat Peach Farm
FNE18-914	Assessing No-Till Permanent Raised Beds for Mixed Vegetable Production on Marginal Soils	\$14,965	Jennifer Wilhelm Fat Peach Farm

FNE14-809	Perennial globe artichokes wintered in low tunnels	\$4,680	Janel Martin 4J's Earthworks
FNE14-814	Livestock tracking system	\$14,600	Carole Soule Learning Networks Foundation
FNE13-777	Using compost heat for perennial production	\$13,940	Pat Gianunzio Petal Pushers Farm
FNE12-740	Warm-season grass selection to balance forage production and wildlife management needs	\$8,179	Charles Cox Tuckaway Farm
FNE12-741	Mechanical approaches to perennial weed suppression in organically established no-till cover crops	\$8,879	Dorn Cox Westwick Farming LLC
FNE12-744	Time to grow crops vs. day of year planted, part II	\$7,497	Steve Fulton Farmer
FNE12-762	Silvopasture in the Northeast: Environmental and economic implications of land-use conversion within a northern hardwoods forest	\$14,570	Dr. Joseph Orefice Hidden Blossom Farm
FNE12-767	Winter/spring grazing of Brassicas and winter rye	\$14,858	Carole Soule Learning Networks Foundation
FNE11-710	organic no-till establishment of hairy vetch as a cover crop into hay sod and sensitivity to carbon amendments	\$11,525	Dorn Cox Westwick Farming LLC
FNE11-718	Planning tool for succession planting of crops, particularly lettuce, broccoli, and corn	\$9,002	Steve Fulton Farmer
FNE10-692	Seedless Table Grape Variety Evaluation Grown on VSP Training System	\$9,388	John Lastowka Lastowka's Maple Gate Farm
FNE08-628	Interseeding legume and grain crops with high-oil-content sunflowers	\$9,100	Dorn Cox Westwick Farming LLC
FNE08-633	Evaluating small grains with silage corn in a double-cropping system on dairy farms	\$4,214	Bob Foulkes

FNE07-602	Interseeding legume and grain crops with high oil content sunflower	\$8,633	Dorn Cox Westwick Farming LLC
FNE07-606	Finishing lambs on grain and brassicas in the Northeast: an economic study of three systems	\$7,501	Bill Fosher Edgefield Farm
FNE07-616	Potassium nutrition for greenhouse tomatoes in the Northeast	\$7,238	Jock McKenzie
FNE07-621	Organic sweet potato fertilizer trial	\$2,806	James Warren Fertile Fields Farm
FNE06-590	Identifying bindweed control methods for the Northeast while maintaining crop production	\$3,885	Mary Ellen Sheehan South Village Garden
FNE04-514	A Book on Why and How to Run Cooperative CSA	\$9,210	Scott Franzblau
FNE03-459	Reclaiming Pastureland for Diversified Fruit/Maple Production	\$6,382	Stephen Davis Cold Pond Community Farm
FNE03-467	Innovative and Creative Ways of Safely Selling Dairy Products at Farmer's Markets	\$8,703	Courtney Haase Nunsuch Dairy & Cheese
FNE02-405	Wild Cranberry and Wetlands Project	\$3,300	Martha Carlson Sandwich Community School, Inc
FNE02-444	Concord Cooperative CSA	\$7,200	Dave Trumble
FNE01-363	Food Safety & Quality Control Program for Farmstead Sheep Cheese	\$10,093	Bruce Clement
FNE01-364	Evaluating Italian Ryegrass for Summer Pasture in New England	\$940	Ellen Clement
FNE01-370	Orchard Hill Farm Orchard Spray Program	\$1,185	Anton Elbers Orchard Hill Farm
FNE01-375	Charcoal Making	\$4,550	Ken Gagnon



FNE01-395	Intercropping Winter Rye With Corn Silage	\$4,378	Fred Sullivan Brokenridge Farm
FNE00-330	Resource recovery and utilization of trout manure.	\$2,385	Greg Bossart
FNE00-333	Community partnering, education, and marketing.	\$5,620	Tom Earle RR 1 Box 27
FNE99-230	Farm Based Sustainable Agriculture Education Programs	\$2,850	David Batchelder Mill Valley Farm
FNE99-249	Alternative Use of Seasonal Forage Crops: Triticale, Field Peas, and Brassicas	\$750	Christian D. Gowdy Brookfield Farm
FNE98-191	Training Site for the Micro Process Design 25 Gallon Vat Pasteurizer	\$5,500	Courtney Haase Nunsuch Dairy & Cheese
FNE98-220	Forest Grown Medicinal Plants to Increase Woodlot Income	\$1,545	Charles Baylies
FNE96-130	Plant Population Effect on Yields of Sweet Corn	\$632	Charles Hardey
FNE95-083	Towards Aquaculture	\$3,936	Klee Dugan
FNE94-067	Solar Vehicle for Farm Use	\$3,355	Buck & Caroline Robinson
FNE94-074	Organic Tomato Disease Control	\$2,450	David Trumble David Trumbel-Green Truck Farm
FNE93-035	Evaluation of Alternatives to Synthetic Chemicals and Lime for Nutrient Supply, Weed Suppression, and pH Control on Raspberry Plants	\$2,500	Mark Towle The Raspberry Farm John Shaw The Raspberry Farm

#### GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
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<a href="#">GNE22-289</a>	Cutting Management Approaches to Understand Phytoestrogens Accumulation in Forage Legume Species Used in Dairy Production Systems	\$14,997	Dr.Richard Smith University of New Hampshire Palash Mandal University of New Hampshire
<a href="#">GNE21-251</a>	Antifungal Activity of Grapevine-derived Extracts against Botrytis cinerea	\$14,490	Dr.Subhash Minocha University of New Hampshire Annasamy Chandrakala University of New Hampshire
<a href="#">GNE20-235</a>	Understanding the Hydrodynamic Effect of Oyster Farms in Shallow Water Estuarine Environments	\$14,848	Dr.Diane Foster University of New Hampshire Spencer Marquardt University of New Hampshire
<a href="#">GNE19-198</a>	Improving Biopesticide Efficacy of Apple Diseases through Co-application with Natural Products	\$14,685	Anissa Poleatewich University of New Hampshire Liza DeGenring University of New Hampshire
<a href="#">GNE18-169</a>	Expanding Northeast Strawberry Production in Controlled Environment Agriculture with Naturally-Derived Nutrient Source	\$14,758	Anissa Poleatewich University of New Hampshire Anna DeVitto University of New Hampshire
<a href="#">GNE18-182</a>	Harvesting Sap and Producing Syrup From Trees Other Than Maples, Birches, and Walnuts	\$14,848	Dr.Heidi Asbjornsen University of New Hampshire David Moore University of New Hampshire
<a href="#">GNE17-153</a>	Developing legume-grass mixtures to improve the environmental sustainability of northeastern organic dairies	\$14,916	Dr.Andre Brito University of New Hampshire Mohammad Ghelich Khan University of New Hampshire
<a href="#">GNE15-101</a>	Research and educational approaches to guide dairy farmer decisions about kelp meal supplementation in the Northeast	\$14,666	Dr.Andre Brito University of New Hampshire Simone Frotas University of New Hampshire Caren Ghedini University of New Hampshire
<a href="#">GNE14-077</a>	Potassium management and soil testing in high tunnel tomato production	\$11,526	Dr.Rebecca Sideman UNH Cooperative Extension Connor Eaton University of New Hampshire Dr.Rebecca Sideman UNH Cooperative Extension
<a href="#">GNE13-051</a>	Responses of soil faunal food webs to pesticide seed treatments	\$14,963	Dr.Richard Smith University of New Hampshire Lesley Atwood University of New Hampshire

<a href="#">GNE12-031</a>	Integrating grazing research with surveys to assess and advance the current knowledge about kelp meal supplementation for organic dairy farms in the northeast	\$14,963	Dr.Andre Brito University of New Hampshire Nicole Antaya University of New Hampshire
<a href="#">GNE12-049</a>	Feasibility of integrating annual feed grains into established organic pasture	\$14,924	Dr.Richard Smith University of New Hampshire Jennifer Wilhelm University of New Hampshire
<a href="#">GNE10-011</a>	Molasses as an Alternative Energy Feed Source for Organic Dairies	\$14,426	Dr.Andre Brito University of New Hampshire Dr.Kathy Soder USDA-ARS Shara Ross University of New Hampshire Nicole Antaya University of New Hampshire

#### ON FARM RESEARCH/PARTNERSHIP GRANTS

<b>Project #</b>	<b>Project Title</b>	<b>SARE Support</b>	<b>Project Leaders</b>
<a href="#">ONE21-401</a>	Merrimack County New Hampshire Cover Crop Seed Production Feasibility Project	\$11,339	Jessica Newnan Merrimack County Conservation District
<a href="#">ONE20-370</a>	Improving High Tunnel Management with Soil Steamers through an Equipment Sharing Model	\$29,997	Amanda Littleton Cheshire County Conservation District
<a href="#">ONE19-349</a>	NH Community Food Ambassadors for Mobile Farmers Markets	\$30,000	Allison Cunningham Organization for Refugee and Immigrant Success
<a href="#">ONE16-267</a>	Soil health management outreach using mechanical aeration	\$11,200	Stacy Luke Merrimack County Conservation District
<a href="#">ONE16-284c</a>	Increasing cover crop adoption through farmer peer-to-peer support	\$10,083	Carl Majewski UNH Cooperative Extension
<a href="#">ONE14-200</a>	From incubators to independence: Providing training and technical assistance to refugee farmers in New Hampshire	\$14,030	Andrea Bye Organization for Refugee and Immigrant Success Charlene Higgins Organization for Refugee & Immigrant Success
<a href="#">ONE14-212</a>	Conserved farmland access	\$14,796	Amanda Littleton Cheshire County Conservation District
<a href="#">ONE14-222</a>	Weed control in low-input or organically grown wild lowbush blueberries	\$13,460	Olivia Saunders UNH Cooperative Extension

ONE14-226	NOFA-NH Technical Consultancy Program	\$15,000	Ray Conner Northeast Organic Farming Association of NH
ONE10-121	Evaluating small grains for late season and early spring forage	\$7,521	Carl Majewski UNH Cooperative Extension
ONE09-101	Winter Sprouting Broccoli as an Alternative Tunnel Crop in New England	\$9,981	Dr.Rebecca Sideman UNH Cooperative Extension
ONE09-110	Tracking Labor for Time and Enterprise Budgeting	\$5,828	Seth Wilner UNH Cooperative Extension
ONE04-026	Evaluation of Brown-Midrib Sudangrass-Sorghum as a Forage on NH Dairy Farms	\$4,064	Carl Majewski UNH Cooperative Extension
ONE04-032	Marketing Plans for Farms Catering to Niche Markets	\$4,581	Seth Wilner UNH Cooperative Extension

#### SUSTAINABLE COMMUNITY INNOVATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
CNE10-067	Cheshire Labor and Infrastructure Needs Assessment	\$13,234	Amanda Littleton Cheshire County Conservation District
CNE10-072	Capital Area Farm and Community Connection Infrastructure Inventory Project.	\$12,085	Stacy Luke Merrimack County Conservation District
CNE10-082	Farm and Farmland Acquisition: A Curriculum for Farmers and Communities	\$15,000	Kathryn Ruhf Land For Good
CNE08-044	Cultivating Community Connections: From seed to table	\$10,000	Sonja Riddle-Ford Stonewall Farm
CNE08-052	NOFA-NH Local and Organic Food Project	\$9,945	Barbara Sullivan NOFA-NH
CNE07-031	Farmer and community feasibility study	\$3,288	Amanda Littleton Cheshire County Conservation District
CNE06-002	Farm transfer planning: Tools for revitalizing rural life	\$9,931	Bob Bernstein Land For Good

CNE06-008

Agricultural commissions: A new resource for sustaining New Hampshire farms and communities

\$10,000

Nada Haddad  
UNH Cooperative Extension

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**Total funding from the USDA SARE program to  
New Hampshire  
\$5,256,679**

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For further information on projects, contact 802-651-8335 or [nesare@uvm.edu](mailto:nesare@uvm.edu).

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