



# Research and Education Grant 2019 Preproposal Instructions

## Important Dates

The online system will open for submissions: **June 1, 2018**

Preproposal submissions are due: **July 10, 2018, 11:59 p.m. ET**

Applications are submitted online at: [www.ciids.org/nesare/REpre](http://www.ciids.org/nesare/REpre).

## Questions?

Visit our website at: [www.northeastsare.org/RandE](http://www.northeastsare.org/RandE).

Contact the Northeast SARE office at [northeastsare@uvm.edu](mailto:northeastsare@uvm.edu) or 802/651-8335.

## About Northeast SARE

The Northeast Sustainable Agriculture Research and Education (SARE) Program offers competitive grants to farmers, educators, service providers, researchers, and graduate students to address key issues affecting the sustainability of agriculture throughout our region. With funding from the USDA, Northeast SARE is one of four regional SARE programs that aims to improve farm profits, stewardship, and quality of life for farmers.

The program—including funding decisions—is driven by our **outcome statement**:

*Agriculture in the Northeast will be diversified and profitable, providing healthful products to its customers; it will be conducted by farmers who manage resources wisely, who are satisfied with their lifestyles, and have a positive influence on their communities and the environment.*



The Northeast region includes: Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, West Virginia, Vermont, and Washington, D.C.

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Northeast SARE, one of four regional SARE programs, is hosted by the University of Vermont and is funded by the USDA National Institute of Food and Agriculture. USDA is an equal opportunity provider and employer. Northeast SARE programs are offered to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status.

# About Northeast SARE Research and Education Grants

## Overview

The Research and Education Grant program funds projects that result in gains in farmer knowledge and skills applied to make verifiable (measurable) changes that lead to greater sustainability throughout the Northeast region. Projects may be submitted with or without an applied research component, but all projects must have an outcome-based education program for farmers.

## Outcome Funding

Research and Education projects must use an outcome funding approach that directly connects project activities to measurable goals. Central to this approach for Northeast SARE grants is the performance target, a statement that describes the changes in behavior or conditions among project beneficiaries (in this case, farmers) that are expected as a result from the proposed project. To learn more about outcome funding, download our “*Guide to Outcome Funding*” at: [www.northeastsare.org/RandE](http://www.northeastsare.org/RandE).

## About Preproposals

Preproposals are required for Research and Education grants, as well as for Northeast SARE’s two other major grant programs: Research for Novel Approaches and Professional Development. An individual project leader may submit no more than two preproposals per grant program per year.

The preproposal is a preliminary concept document that allows SARE reviewers to select the most promising projects to be invited to submit full proposals. Proposals are only invited if they have strong, data-based justification, a clear and measurable performance target, and effective approaches to achieving the target. Projects must explore, improve, or expand on practices or approaches that address the three tenets of sustainable agriculture: environmental quality, financial viability, and social sustainability/quality of life issues.

In previous years, about one-third of preproposals have been invited to submit full proposals, and about one-third of full proposal submissions have been awarded. Five to ten awards are made each year, depending on available funding.

## Eligible Applicants

There is no requirement that project leaders have a specific affiliation, but they must have the institutional capacity and support networks necessary to carry out the project. Typically, proposals come from university and extension staff, agricultural nonprofits, research farm and experiment station personnel, private consultants, agriculture related businesses and organizations, and government agencies. Project leaders must have the skills and experience needed to oversee and carry out their proposed work.

## Funding Available

Reviewers prefer projects in the \$30,000 to \$200,000 range. Funding requests should align with project duration, scope of the work, and intensity of interaction with beneficiaries. Amounts higher than the typical range will be considered for projects that include multi-disciplinary or multi-institutional research and education networks, especially when those networks enable a more comprehensive systems approach to addressing challenges or opportunities.

Northeast SARE encourages projects to request the funding necessary to support collaboration with 1890 land grant universities. Projects are also encouraged to include funding to specifically address or assess social dimensions of the proposed work.

## Project Duration

Typical project length is 2 to 3 years. The maximum project length allowed is 3.5 years.

## Conflict of Interest

Members of the Northeast SARE Administrative Council and their immediate family members or business associates are not permitted to apply for or receive funding from SARE grants. Members of proposal review teams are not permitted to discuss or vote on proposals that involve institutions they work for, organizations for which they serve as board member or adviser, former graduate student advisees, or close personal friends.

## Public Domain

While applications and reviews will remain confidential, Northeast SARE considers funded projects, subsequent reports, and related information to be in the public domain.

## Grant Timeline

Online application system opens for submissions .....	June 1, 2018
Preproposal submission deadline.....	July 10, 2018
Project leaders notified whether or not they are invited to submit a full proposal .....	August 17, 2018
Feedback provided to invited preproposals to strengthen full proposal .....	September 7, 2018
Feedback provided to preproposals not invited .....	late September 2018
Full proposal submission deadline .....	October 30, 2018
Awards announced to project leaders.....	February 22, 2019
Earliest start date for projects, with contracts from UVM to follow shortly.....	February 25, 2019
Grant management conference calls with Northeast SARE staff.....	March 2019

## Preparing Your Preproposal

Preproposals are submitted online at: [www.ciids.org/nesare/REpre/](http://www.ciids.org/nesare/REpre/). The online application system will be open for submissions from June 1 until the deadline, 11:59 p.m. ET on July 10, 2018. Staff support to answer questions or deal with technical submission issues will be available until 5:00 p.m. ET on the due date. Preproposals submitted after 11:59 p.m. on July 10 will not be accepted.

There are word limits for all sections of the preproposal. It is highly advisable to use a word processing program to develop the application offline, ensuring it is accurate and complies with the word limits. Do not use special formatting or symbols. These will be lost when you paste the text into the online application. Use only the keyboard symbols.

No attachments are allowed in the preproposal application.

No authorized signatures are required for preproposal submission.

The online application system will prompt you to set up an account and log you into the site. If you have applied in a previous year and are using the same email, the system may remember your account from before.

You will start the application by entering a clear, succinct title of under 120 characters, including spaces, that captures the essence of the project's intent. Avoid acronyms, jargon, or unnecessary words.

Next, enter your project's expected project start and end dates, your name, organization, and contact information.

Examples for each section of the preproposal are included in the appendix.

## Step by Step Instructions

Refer to the appendix for examples of each section of the preproposal. Note that grant review criteria appear next to related sections. All preproposals are evaluated using these criteria and they must be adequately addressed for an application to be funded.

### 1. Performance target (50 words)

The performance target is the core of the project preproposal; it is the primary item reviewers use to evaluate the merit of the project. The performance target has three required components:

- *A specific, verifiable practice or strategy that beneficiaries (farmers) will adopt by the end of the project as a result of their participation.* These may include adoption of a new or improved:
  - crop, or livestock production practice;
  - system for food safety, product processing, pest management;
  - approach to business management, marketing, or value-added enterprise; and
  - plan for intergenerational farm transfer, human resource management, etc.
- *The number (not an undefined percentage) of farmers who will adopt the practice or strategy, and the extent of their adoption, expressed in measurable units like acres, animals, markets, enterprises, etc.* The extent of adoption statements may include the total number of:
  - acres or animal units switched to a new practice;
  - new markets, products or enterprises developed;
  - new plans created, or farm management strategies implemented;
  - employees, farm families, or markets affected by new plan, practice or strategy; or
  - other practices or strategies adopted.
- *The measurable benefit(s) that result from farmers' adoption of new practices or strategies.* These must be able to be measured directly, extrapolated, or calculated from values already established in the literature. Resulting measurable benefits may include environmental, financial, and/or social factors like the following examples:
  - Pounds of excess nutrients removed from livestock diet and waste products resulting from adoption of recommended practices to improve nutrient balance of feed rations.
  - The dollar value of input costs reduced from adopting recommended pest control or nutrient management strategies.
  - The dollar value of increased sales resulting from planting acres of land to a new crop, adopting a new marketing strategy, or developing a new enterprise.

#### Review criteria:

The performance target describes adoption of a beneficial new practice, strategy, or behavior by farmer beneficiaries, and it describes the extent of that adoption and the benefits resulting from the adoption. The performance target is specific, meaningful, measurable, and ambitious.

- Farmer-reported improvements in quality of life, such as increase in personal satisfaction, increased number of vacation days, or improvements in farm efficiency resulting from changes in farm organization or labor management.
- Acres of farmland passed on to younger farmers resulting from the creation of farm transfer plans.

Note that the performance target must not be dependent on research results. The proposed research should complement the learning participants will engage in as they progress to the performance target, but the level to which participants achieve the performance target must not depend on the findings of the research program.

## 2. Milestones (250 words)

Milestones list logically connected learning or action steps beneficiaries will accomplish as they progress towards the performance target. They describe and quantify what farmers will experience throughout the project, in sequence.

Milestones must describe: 1) Recruitment to participate, 2) Pre-training engagement, 3) Learning through the education program, 4) Engagement to support follow-up action, and 5) Verification of actions or changes.

If funded, milestones will become the benchmarks for required progress reports, and must be verifiable (measurable).

Milestones are written in terms of what the farmer beneficiaries will do and learn, rather than as a plan of work or list of activities that the project team will perform.

Each milestone is written as a statement with three components:

- A realistic number of farmer beneficiaries who participate;
- The project interactions or educational experiences in which the farmers participate; and
- The specific knowledge or skills they learn or the intermediate action step they complete as a result of participating.

Reviewers look for realistic levels of participation sufficient to accomplish the performance target, a strong, logical relationship between the milestones and performance target and a progression of milestones that prepare beneficiaries to achieve the performance target.

### Review criteria:

The milestones describe a sequence of knowledge and skills acquisition by farmers, and the changes they make or steps they take that lead – logically and realistically – to the performance target. The milestones describe how project personnel and beneficiaries interact for:

- 1) Recruitment to participate,
- 2) Pre-training engagement,
- 3) Learning during an education program,
- 4) Engagement to support action and
- 5) Verification of actions and changes.

### 3. Problem, solution and benefits (175 words)

Explain the problem, harm, or missed opportunity for farmers the project will address, the causes (or hypothesized causes) of the problem and why, in the context of sustainability, it is important to address.

Describe the number, type, and size of farms and the extent of agricultural production affected by the problem.

Briefly state the project's proposed solution and describe the expected benefits to social, economic and/or environmental sustainability for farmers from solving the problem.

Provide numerical data to justify the statements made about the items above. Data sources that provide justification may include references in literature, the work of others, farmer surveys, extension surveys, census data, etc. Citations are not required in the preproposal, but will be required in a full proposal.

#### Review criteria:

The problem is important to agriculture in the Northeast; the type, number and scale of farms affected is described; the need to address the problem is significant. The solution clearly has potential to address the problem, and the benefits to farmers from solving the problem are meaningful. Descriptions are clear and claims made about the problem and solution are supported by specific evidence (data).

### 4. Description of project beneficiaries (125 words)

Describe the population of farmers targeted for participation in this project and how you will know by the time of a full proposal submission whether farmers will take part in your project. These should be farmers who experience the problem and can benefit from the proposed solution.

If you have formal or informal survey data about farmers' concerns or willingness to participate in the project, provide that information. If you do not have data yet, state how you will obtain numerical data that substantiates farmers' willingness to take part in the project for a full proposal.

#### Review criteria:

The targeted beneficiaries are farmers, and their interest is clearly described and can be supported with data, or there is a plan to assess their interest with data to be presented in the full proposal.

### 5. Research description (250 words)

This section is required for projects with an applied research component. Projects that do not include research components should write "not applicable" in this section.

Please do not use this section to describe performance target verification methods like surveys to verify beneficiary learning and actions. Those methods refer to milestone and performance target verification and are not necessary for the preproposal. (Descriptions of verification methods/instruments will be required in the full proposal).

Research that is relevant to the described problem may include field research or social science research. A description of field research must include:

- The hypothesis for proposed research;
- The main treatments;
- Location and scope of the trials; and
- Measurements to show differences among treatments.

A description of social science research must include:

- The proposed study objective and hypothesis to be tested;
- The target population(s); and
- Data collection and anticipated analysis methods to be used.

#### Review criteria:

If there is a research component, the research topic is relevant to the problem, the hypothesis is clearly stated, and the methods, treatments, and experimental design are well described.

## 6. Education plan (200 words)

Provide a summary of the methods used to help farmers learn about the problem, the proposed solution(s), and to facilitate their adoption of the new practice or strategy. The plan must be realistic, describe content and methods appropriate to engaging farmers, and be likely to lead to achievement of the performance target. The education program need not be based on expected research results; however, if the project proposes research, the information gained through that research should be integrated to complement the educational activities based on existing knowledge.

The education plan must include:

- Concepts and curriculum topics in which farmers will increase knowledge and skills;
- Methods and sequence for instruction and beneficiary support (workshops, demonstrations, etc.);
- Known challenges to farmer adoption that will be addressed; and
- Roles of collaborators to be involved (regulators, educators, farmers, consultants, buyers, etc.) that are critical to the success of the project.

## 7. Key individuals – coordinator and cooperators (125 words)

Briefly describe essential team members who will devote significant time to the project, including the project leader (coordinator) and other key individuals (cooperators). Descriptions should demonstrate the ability to manage the project and conduct its activities. Name the individuals, their organizational affiliation, and their primary responsibilities in the project.

If some key individuals have not yet been identified, provide an outline of the potential leadership team. An acceptable entry might say, “a veterinarian with poultry expertise who works in the target states,” or “two health department personnel with experience in water quality.”

Lastly, name any other organizations, outside of your own, that will be receiving funds requested from SARE to carry out the project, and/or those contributing significant money, personnel time, facilities, or equipment to the project.

## 8. Funding request estimate (3 words)

Select a range that estimates the total budget request you anticipate for this project including the allowed indirect to your institution (limited to 10% of the total): “Under \$50,000;” “\$50,000 to \$99,000;” “\$100,000 to \$149,000;” “\$150,000 to \$199,000;” or “Over \$200,000.”

### Review criteria:

The educational methods are clearly described, specific curriculum topics are listed and the key instructional and support methods are described.

### Review criteria:

The project leader and other key individuals have the capacity and appropriate experience to conduct the project. Reviewers consider key individuals listed as well as whether a key individual should be listed given the nature of the project, such as a grower organization, a nonprofit, government agency, or other entity with a record of activity in the proposed area of work.

### Review criteria:

The estimate of funds needed appears realistic and reasonable per the work described.

## Next Steps: Planning for Full Proposal Submission

As a reminder, an individual project leader may submit no more than two preproposals per grant program (includes this Research and Education program, Research for Novel Approaches, and Professional Development Program) per year.

Only project leaders with an invited preproposal may submit a full proposal. A project leader may submit **only one full proposal per year**, selecting just one of Northeast SARE's major grant programs, even if more than one preproposal was invited to submit a full proposal.

Project leaders will be notified as to whether or not they are invited to submit a full proposal on August 17, 2018. Feedback that may be used to strengthen a full proposal will be provided to project leaders with invited preproposals by September 7, 2018. For preproposals not invited to submit full proposals, feedback will be provided to project leaders in late September.

Full proposal instructions will be sent to invited preproposal project leaders.

The full proposal will require additional information for all sections included in the preproposal plus the addition of a verification plan, a listing members of a Project Advisory Committee, literature review and citation list, attachments such as letters of commitment from key individuals and Current and Pending support of the project leader, and a complete project budget.

### Budget planning

While the preproposal only asks for an estimate of the project budget, the full proposal will require a detailed Excel spreadsheet of the funding needs with justification for each item requested. Invited project leaders will receive a budget template. Full proposal budgets should not differ significantly from the preproposal estimates.

SARE funds can be used for the following project expenses: personnel, travel, materials and supplies, communications, and other direct costs. USDA currently allows indirect costs up to 10% of total funds, which may be estimated as 11.11% of direct costs.

SARE funds cannot be used for the following: capital expenditures--items like land, buildings, livestock, greenhouses, other major fixtures and improvements, general use items, and machinery not essential to the project.

## Appendix: Examples of Preproposal Sections

The following examples are meant to be used for illustrative purposes only.

### 1. Performance target examples

Fifty-five vegetable farmers adopt legume and non-legume cover crops or improved cover crop management practices on a total of 700 acres, reducing historical N applications by 50 lbs. per acre per year without reducing yields.

Ten dairy farmers implement nutrient management plans on a total of 1,000 acres, reducing annual fertilizer applications of N by an average of 50 lbs. per acre and saving \$30 per acre in fertilizer costs.

Twenty farms with a total of 100 full-time employees develop an employee training program, policy manual, and productivity incentives, reducing employee absentee days by an average of 50 per year per farm compared to the previous three years.

Twenty-five farmers with average direct-market annual sales of \$150,000 per farm conduct market analyses and then develop and implement marketing plans that lead to an average increase in annual sales of \$15,000 per farm.

### 2. Example milestones

*See the example milestones below leading to a performance target with types of interaction indicated in bold. The interaction types are included here for your guidance and would not be included (not required) in the preproposal. \*Note: The performance target does not need to be included in the preproposal milestones. It is provided here for reference only.*

Recruitment to participate	1000 vegetable farmers learn about the cover crop research and education project including the performance target, planned research and education activities and support for cover crop planning through a recruitment announcement that includes an invitation to participate in the project educational and demonstration components and to complete an online survey about current practices.
Pre-training engagement	200 vegetable farmers return the survey; 180 agree to participate in the education program; 10 agree to host on-farm demonstrations.
Learning through education program	160 of these farmers attend one of two three-hour workshops where they gain a greater understanding of the project's goals, performance target and upcoming activities and learn about the benefits and optimal management practices of cover crops.
	150 of these farmers attend a follow-up field day at the university and learn about new cover crops research and performance of existing cover crops; 10 farmers plant on-farm demonstration trials.
	100 of the farmers attend on-farm demonstrations hosted by at least 5 cooperating on-farm demonstrators and submit cover crop plans for their farms to the project team for review.
Engagement to support follow-up action	100 farmers submit cover crop plans for their farms to the project team for review and receive ongoing consultations with project team by phone, e-mail and cover crops blog. The farmers also communicate with other farmers via the cover crops blog.
Verification of actions or changes	100 farmers respond to verification survey to report on actions taken to adopt legume and/or non-legume cover crops, changes in N fertilization, yields, and successes and/or challenges experienced.
Performance target*	55 vegetable farmers adopt legume and non-legume cover crops or improved cover crop management practices on a total of 700 acres, reducing historical N applications by 50 lbs. per acre per year without reducing yields.

Another set of sample milestones.

Recruitment to participate	500 dairy farmers learn about nutrient management education opportunities offered by this project through a direct mailing.
Pre-training engagement	250 dairy farmers sign up online or return a postcard to enroll in a listserv to receive additional information about the project including its goals and learning objectives, schedule of workshops and field days and informational articles.
Learning through education program	Two hundred dairy farmers attend one of four initial nutrient management workshops and learn about sources and economic and environmental costs of excess N and P accumulated in the soils of their farms.
	Sixty of these farmers attend a follow-up workshop where they learn about nutrient planning and record-keeping techniques and gain experience with practical management tools they can use on their farms.
Engagement to support follow-up action	25 of these farmers receive individual advice from the project team members as they work on writing a nutrient management plan.
	15 farmers complete nutrient management plans that include their specific intentions for improving N fertilizer management; these plans are shared with the project team leaders.
Verification of actions or changes	25 farmers respond to verification survey or interviews to report on actions implement nutrient management plans, changes in N fertilization and successes and/or challenges experienced.
Performance target*	10 dairy farmers implement nutrient management plans on a total of 1,000 acres, reducing annual fertilizer applications of N by an average of 50 lbs. per acre.

### 3. Example statement of problem, solution and benefits

Three thousand New England vegetable farmers managing 40,000 acres of vegetable production could significantly reduce nitrogen fertilizer inputs and improve soil health by planting cover crops.

A 2010 survey of 400 New England vegetable farmers, with 240 responding, revealed that only 10 percent of the vegetable crop acreage in New England is routinely planted to cover crops, despite the well-known cover crop benefits of organic matter enrichment, weed suppression, nutrient recycling, and nitrogen fixation. The main reason the surveyed vegetable farmers indicated they don't plant cover crops is a lack of confidence when selecting them—only 15 percent said they were confident about making appropriate cover crop choices for their farms.

This project will increase farmer confidence and use of cover crops through further research to demonstrate the nitrogen supplying ability of cover crops in vegetable systems, education about all cover crop benefits, and selection options for vegetable crops.

### 4. Example description of project beneficiaries

Commercial vegetable farmers in Massachusetts, Vermont, New Hampshire, and Rhode Island represent the beneficiary audience for this project. We plan to target farmers who have extensive acreage of wholesale production, although many of these farmers also do some direct marketing; smaller direct market farmers will also be included in our outreach. Prior to our submission of a proposal, we will survey the four hundred farmers surveyed in 2010 about cover crop use, along with 2,000 other farmers on the New England Vegetable and Fruit Conference's and extension specialists' list serves, about their interest in an intensive cover crops education and research project.

## **5. Example of a field research description**

Our hypothesis is that there are available plants not typically used as cover crops in New England that could be beneficial cover crops in vegetables. More choices of effective, versatile cover crop species should increase adoption of cover crops by vegetable farmers.

We will:

- Screen two dozen crops from North America and Europe for winter hardiness, heat tolerance for summer growing, and ability to provide nitrogen to the next crop.
- Compare new cover crops with traditional crops like buckwheat, winter rye, crimson clover, and hairy vetch in both small plots and large farm-scale plots.
- Plant trials each year at three in cooperating farmers' fields and one university research station.
- Measurements will include planting date, percent emergence, days to flower and completion, biomass yield, total N content, winter survival, and subsequent crop yield.

## **6. Example of an education plan**

The education plan will address cover crop benefits for soil health, weed control and nutrient supply, and management constraints to cover crop use such as time of seeding, establishment, mowing and killing, and rotations with commonly grown vegetable crops.

On-farm demonstrations at university farms and on cooperating farms will show how constraints can be overcome, and a cover crop decision tool will be provided with hands-on training in its use. Farmers hosting demonstrations will receive templates for data collection.

Winter meetings, webinars, short video clips, individual consultation, and site visits over two years will support adoption and adjustment of cover crop practices. Farmers will receive assistance with individualized cover crop planning from the project team. Farmer-to-farmer communication will also be facilitated through a cover crops blog, where farmers currently planting cover crops will teach others about benefits and challenges, and the research results from trials on farms and at the university farm will also be shared.

## **7. Example of key individuals – coordinator and cooperators**

Dr. Selena Garcia will be project leader. A Delta College professor with 20 years of experience working farmers to improve soil health, Dr. Garcia will manage the development of all workshops and educational materials.

Darnell Jones will manage the research trials at the university and on participating farms; Darnell has conducted research on nutrient management at Alpha University for 15 years while also advising farmers on cover crops, fertilizer plans, and design of on-farm trials.

Three extension specialists in vegetable crops, one from each participating state, will assist with outreach and on-farm consultation.