Outcome Funding and Northeast SARE Research and Education Grants

University of Maryland

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nesare.org
What is SARE?

Grants and outreach to advance sustainable innovations and improvements to American agriculture.
Projects that improve farm profits, stewardship, and quality of life, and benefit the wider farm community.

A whole-farm approach; whole farm effects considered when making component changes.

Farmers as research partners and important reservoirs of knowledge.
SARE is...

decentralized

Four regional programs cover the U.S. and Regional Administrative Councils set grant programs and make award decisions with USDA/NIFA funding.
SARE grants cover a broad spectrum of new ideas and innovative approaches.
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.
Two tiers of funding

Small grants
One- or two-year projects with budgets of $15,000 or fewer.

Large grants
Outcome-driven, two- to four-year projects with typical budgets of $30,000 to $250,000.
Large grants

Research and Education

**Outcome-driven projects** that educate farmers to obtain adoption of sustainable practices; research about new sustainable techniques

Professional Development

**Outcome-driven projects** that deliver training to extension, NRCS staff, and other farm service providers to increase effectiveness in their outreach and sustainable agriculture education programs.
Research and Education

- Research and Education awards cover a wide array of topics in production, marketing, and quality of life.

- Farmers should participate in project development.

- Projects must improve farm profits, enhance stewardship, or enhance farmer quality of life.
Education

- Outcome funded grant programs require adoption of beneficial practices by participants (beneficiaries)
- NESARE is buying a program from Project Director that will educate farmers to adopt a beneficial practice or practices
- You are selling primarily an education program to NESARE
Education

- Must be robust and engage farmers in active, positive change in farm practices and farmer actions.

- Changes must be verified and quantified through strong farmer interactions and follow-up.

- Outreach tools and materials must be farmer-friendly and potentially useful to a wider audience.
Research

- Address economic, environmental and/or social problems or opportunities relevant to farm sustainability
- Meet a need that is substantiated by data
- Show potential for on-farm benefits that contribute to NESARE’s outcome statement
Research should be integrated into the education component. You can--

- Do research on-farm and on-station
- Hold workshops about the research and other topics related to research
- Hold field days at research sites
- Publish research results as a farmer-ready fact sheet as well as a journal article
Outcomes, or performance targets, drive the big-grant proposals.

Research and Education
Measurable and verifiable benefit to farmers

Professional Development
Measurable and verifiable benefit to farm educators
Verification

Verify your target with:

- Online surveys
- Paper-and-pencil surveys
- Farm visits
- E-mail
- Face-to-face conversations
- Phone calls

Build strong relationships with farmers or service providers for project momentum and improved verification.
Outcomes vs. activities

**Activity:**
50 vegetable farmers attend a no-till demonstration.

**Performance Target Outcome:**
11 farmers report implementing reduced- or no-till practices on 407 acres of land, realizing $76 per acre in input savings.
Milestones lead to a performance target

**Milestones:**
- 120 farmers sign up for tillage workshop
- 109 attend workshop and learn about reduced and no-till practices; 83 farmers at workshop sign up for farm tour
- 79 farmers attend farm tour to learn from farmers practicing no/reduced till
- 20 farmers seek advice from PD about no/reduced till for their farms
- 40 farmers from tour respond to follow-up survey about reduced tillage practices

**Performance target:**
11 farmers report adopting reduced- or no-till practices on 407 acres of land, realizing $76 per acre in input savings.
THE OUTCOME FRAMEWORK

MILESTONE 1
200 complete online survey

MILESTONE 2
150 attend workshops; learn A, B, C

MILESTONE 3
125 attend field demo; learn and practice A, B, C

MILESTONE 4
100 consult with PDs about implementing A, B, C

PERFORMANCE TARGET
80 farmers do A, B, C on x acres or with x animals and increase x in sales or productivity

MILESTONE 1

MILESTONE 2

MILESTONE 3

MILESTONE 4

PERFORMANCE TARGET
Research Results and Performance Targets

Researchers ask:

How can I state a Performance Target when I don’t yet know the results of the research?

Answer: (You can’t)

Performance target has to be based on education using existing information that is known about the content area, and can target known beneficial, yet underutilized farm practices.
The Cutting Edge: The Research - Carving new ideas that may or may not develop into farmer-adoptable practices

The Blade: Foundational knowledge farmers need to learn to understand the research and adopt new practices

Known beneficial practices related to the research that farmers can adopt for performance target.
The **Education Program** should teach about the **Blade**.

Education about the **Cutting Edge** may also be included.

The **Performance Target** has to be based on the **Blade**, especially when the research is groundbreaking and novel.
Close contact with farmers – the ultimate beneficiaries of agricultural research – is necessary for developing an outcome funded project.

Close contact with farmers:

- **Informs** research design
- **Improves** credibility of the proposed research solutions
- **Increases** likelihood that new practices or approaches are adopted
**Problem:**
An operational challenge to adoption of anaerobic digestor systems (ADS) on dairy farms has been service interruption of biogas-fueled engine-generator sets (EGS) due to hydrogen sulfide (H$_2$S) damage. The H$_2$S damage results in high maintenance cost of EGSs and lost revenue for farmers.

The ability of scrubbers to effectively reduce H$_2$S concentration in biogas over time affects ADS profitability, overall digester and EGS effective lifetimes, and on-farm electricity production potential.

**Farmer Interest:**
Farmers have indicated they need better understanding of ADS operational and maintenance conditions, quantifiable benefits of different types of scrubbing systems, and the costs associated with operating the scrubbers.
Education Solution: We will develop Fact Sheets, Technical Notes, and workshops; Provide technical information and practical expertise to farmers on H₂S scrubbers, the efficiencies/cost of various scrubber types; new innovative methods; data-based information on maintenance and ability to protect engine generators.

We will demonstrate and evaluate the effectiveness, economics, energy use, and management of 8 different H₂S scrubbers on existing ADS in MD, PA, and NY.

Research program: The efficacy of H₂S scrubbing systems on 8 existing farms will be evaluated, with a financial analysis of the systems. Better information is needed to increase the adoption of this beneficial technology, especially in light of the large capital investment needed for ADS. Biogas scrubber analysis is needed, has not been conducted in the US marketplace, and we will provide this new and innovative information.
What need to tell SARE Reviewers?

1. Better quantify farmer interest by a simple survey – many inexpensive ways to do survey
2. Provide Performance Target with number of farmers likely to make improvements in existing ADS or buy an ADS; scale of the improvements; calculated or estimated benefits as a result of the improvements
3. A curriculum with topics to be taught in a logical sequence
4. A set of milestones with details about educational approach
5. More info about farmers (beneficiaries)
6. More info about research and how research will be integrated with education program
7. A plan to verify learning and Target
Small grants

Farmer Grants
For commercial farmers who want to explore an interesting new idea; must include a technical advisor.

Partnership Grants
For researchers, farm service providers or others who want to work with farmers in on-farm research trials, demonstrations, or addressing quality of life and community issues.

Graduate Student Grants
For graduate students researching sustainable agriculture topics under the supervision of a faculty member.
## Two Grant Programs that can do Research without Performance Target

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<thead>
<tr>
<th>Partnership Grants</th>
<th>Graduate Student Grants</th>
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<tbody>
<tr>
<td>❖ Researcher, extension staff or other service provider, or other organization</td>
<td>❖ Graduate student is the applicant and project manager.</td>
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<tr>
<td>representative is the applicant and project manager.</td>
<td>❖ Graduate faculty advisor acts as principal investigator.</td>
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<td>❖ Direct farmer participation as partners and cooperators.</td>
<td>❖ Research on any topic of potential interest to farmers and Cooperative Extension staff.</td>
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<tr>
<td>❖ Projects can address a broad range of production, marketing, quality of life, or</td>
<td>❖ Projects can enhance existing research by the graduate advisor.</td>
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<td>community issue topics.</td>
<td>❖ Outreach via papers, poster presentations, conferences.</td>
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<td>❖ Project must include outreach.</td>
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<td>❖ Good tool for enhancing program and professional goals.</td>
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Small grants – difference from large

- Capped at $15,000.
- No preproposal.
- Normally run one or perhaps two years.
- Expectation of success with project objectives, but no requirement for outcomes – farmer adoption.
- Each grant has specific eligibility guidelines.
A last word on small grants

- A series of small grants can be used for projects that merit more exploration.
- Results of small grants can provide preliminary data that supports justification for large grants that require an outcome (farmer adoption).
- Application is straightforward.
- Projects are understood to be exploratory and experimental.
- Interesting results may be used to redirect research or professional development priorities.
Grant Connections

Farmer,
Partnership,
Graduate Student

Professional Development

Research and Education
How to apply

- Follow the “get a grant” option at nesare.org. Read website content and download instructions.
- Submit Graduate Student proposals by May 13, 2014. Awards announced in August.
- Submit Partnership proposals in early November, and Farmer proposals in early December. Awards announced in March.
Maryland SARE Coordinators

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