

**Massachusetts
SARE
Farmer/Grower
Grant
Recipients**



**Profiles of
Innovation**

Acknowledgments

This project was funded by a Sustainable Agriculture Research and Education (SARE) Farmer/Grower Grant Program Special Initiative Request. Our observation was that Massachusetts growers have participated in the Farmer/Grower Grants program to a limited extent and have had limited success in obtaining Farmer/Grower Grants compared to some Northeast states. Our goal is to increase participation and successful applications by Massachusetts growers through examples, advice, and inspiration drawn from successful Massachusetts SARE grant recipients.

This project would have been impossible without the cooperation of many growers. We thank all the growers who participated in this project for giving generously of their time and thoughts. Thanks also to Wes Autio and Page Stites for technical assistance and Lorraine Herbert for editorial help.

Growers interested in further information about SARE grants described in this booklet can contact Northeast SARE at:
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Angela Baker Hawley

The tiny shop at Angela Baker's Elementals Farm holds the results of her work with

herbs over the past several years, including her SARE grant with Echinacea: tinctures, dried herbs, and many other herbal products. Baker embarked on her project because she was convinced "that the Northeast is very well situated to be a high quality producer of herbal products," but could find little specific information to help those interested in cultivating herbs. The SARE grant "made it possible to take a larger risk than I would have been able to afford otherwise" as she began to develop her business. Baker examined two species under the grant, *E. purpurea* and *E. angustifolia*, and experimented with factors including seed stratification, planting density, soil pH, interplanting with other genera, and sowing into cover crops.



Baker still relies heavily on techniques developed during her project, particularly interplanting Echinacea with biennials. She put considerable effort into recordkeeping and outreach, writing an article for ATTRA and giving a presentation for NOFA, and she believes strongly that a

grant should be a "two-way street," with information shared as widely as possible. Based on her feeling that she underestimated her own labor in the grant proposal, Baker advises other growers, "take care of yourself in the grant!"



Barker-Plotkin and Teo with hybrid poplars and Manchurian apricots in his windbreak.

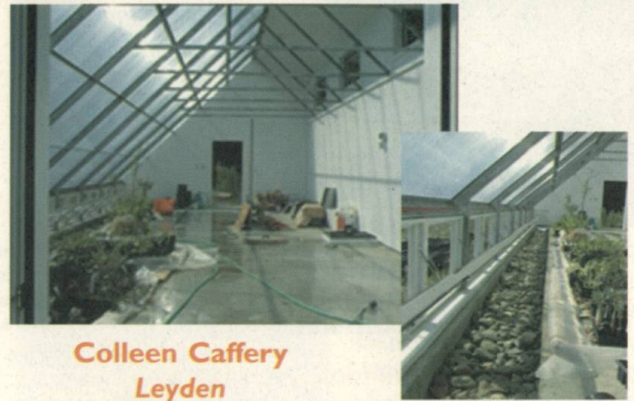
Jeremy Barker-Plotkin Belchertown

“Well, I’ve had plenty of unfunded experimental projects,” laughs Jeremy Barker-Plotkin when asked why he decided to apply for a SARE grant, “and this was a way to have some insurance if things didn’t work out.” Barker-Plotkin is full of ideas for projects, which he attributes partly to spending time in an academic environment,

and has received three SARE grants. He’s also seen the process from the other side, while serving as the NOFA-MA On-Farm Research Coordinator, a job that included helping other growers apply for SARE grants.

Barker-Plotkin’s grants have included a study of organic tomato foliar disease control methods, an heirloom tomato variety trial, and an on-going project to establish a mixed-use windbreak on the land he rents from NESFI in Belchertown.

Based on his experiences as NOFA On-Farm Research Coordinator, Barker-Plotkin advises other growers to pay particular attention to experimental set-up and to SARE’s specifications about uses for grant money. He cites lack of clear experimental design and requests for money for categories not funded by SARE, such as capital improvement, as examples of common problems with grant applications. That said, however, he wishes that unsuccessful grant applicants could get more specific feedback from SARE about the problems with their applications.



Colleen Caffery Leyden

The impressive “Green Greenhouse” set on Colleen Caffery’s hillside farm in Leyden illustrates how SARE grants can be used to contribute to large, long-term projects. Caffery’s concept was to build a greenhouse that could be used throughout the New England year without requiring fossil fuels. Her SARE grant “was related primarily to design and research aspects and data collection subsequent to building [the greenhouse],” while a Massachusetts Dept. of Food and Ag. Agro-Environmental Technology grant helped cover some of the building costs.

The greenhouse features a concrete slab floor with a rock bed underneath, and a fan system which pulls air in and out of the rock bed to heat or cool it. Although parts of the greenhouse have not been completed, Caffery says the performance results from winter 2001 were “quite heartening” – the greenhouse never froze, and the lowest temperature reading was 39°F. At this point, Caffery says, “we know we can keep things growing in there over the winter – we just have to pick the right plants.” Perennials including heaths and heathers and some vegetables and herbs will be tested next winter.

Just as impressive as the greenhouse itself is Caffery’s outreach mechanism, a detailed website including technical details and drawings, photographs, and temperature records from winter 2001 at www-unix.oit.umass.edu/~caffery/greenhouse.



Clockwise: Franczyk with heirloom tomatoes and mobile broiler pen, contented Cornish X's, contrast between green fields improved by broilers and unimproved pasture.

Don Franczyk - Winchendon

Don Franczyk is one of many Massachusetts SARE grant recipients who credit NOFA-MA as the source of both information about the grants and help with the application process. Like many other grant recipients, Franczyk benefited from technical advice and assistance from collaborators: Jeremy Barker-Plotkin helped with the application, "so I had no problem with it," and Sue Ellen Johnson of NESFI provided technical advice for the project, a comparison of broiler chicken breeds raised on pasture.

As a results, he says, "the methodology was good," but due to other circumstances, "the experiment was a complete failure." Franczyk observed that the Cornish X birds ordered for the experiment (he compared them with Kosher Kings) appeared weak from the start and never gained weight as they had in past years. In addition, he suspected a problem with the quality of the organic feed he was using, a suspicion confirmed by other growers after the publication of his outreach article in NOFA's *The Natural Farmer*.

Despite these problems, a visit to Franczyk's Winchendon farm shows that the pasture poultry system has many successful aspects. The birds (only Cornish X's this year) are growing well inside their mobile coops and are dramatically improving the neglected pasture they're being raised on. The interest from other growers generated by Franczyk's *Natural Farmer* article and his own interest in pasturing more Kosher Kings are further indicators of his project's success.



Kristine Keese Plymouth

Kristine Keese, owner with husband Robert of Cranberry Hill Farm, the first and oldest certified organic cranberry grower in New England, says of her 1999 SARE grant to study *Trichogramma* wasps for use in cranberry bogs: "the project launched me, in a way." Although the results of her project were very different than expected, she learned a great deal about these beneficial wasps that she has

put to use and shared with other growers. Cranberry Hill had been purchasing and releasing *Trichogramma* wasps, which parasitize the eggs of the damaging pest cranberry fruit worm, for several years when Keese decided to try collecting *Trichogramma* eggs from parasitized CFW eggs and growing them out herself. She hoped to obtain a reliable source of *Trichogramma* wasps that were specific and effective parasitizers.

As Keese researched the wasps during the project, she learned that there are over 100 different strains of *Trichogramma* wasps and that it is difficult to tell them apart or keep them from interbreeding. This finding, combined with the fact that berries must be picked to determine whether parasitizing has occurred, the tiny size of *Trichogramma* eggs, and the realization that she would have to harvest a very large quantity of berries to get enough eggs for a successful breeding program, convinced Keese that her initial idea was not feasible. Instead, she has concentrated on creating a good habitat for existing wasp populations on her farm, studying the factors that let the wasp populations thrive.

Keese praises SARE for their reaction to these unexpected findings. She notes that "everybody I spoke with was both helpful and appreciative – at no time was I made to feel that I was doing something stupid or unreasonable – even when I wondered myself! They were satisfied to hear what I had learned!"

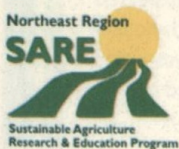


Maria Moreira
Lancaster

The path that eventually led to Maria Moreira's SARE grant began over 15 years ago, when she first rented land on her family's dairy farm in Lancaster to Hmong growers. Since then she has become closely involved with the Hmong community. "Once you get to know the Hmong people," she says, "their love of farming gets you hooked. There were so many areas of need – I just picked one."

Her 2000 SARE grant funded a survey of Hmong growers to understand how their culture informed their farming practices, particularly their attitudes toward and techniques for using pesticides. The grant also funded farm visits by UMass vegetable crops specialist Frank Mangan and grower information sessions with UMass entomologist Ruth Hazzard. Moreira definitely believes there has been improvement in pesticide use practices in the Hmong community, and says that recently "we have been using almost nothing" in terms of pesticides. She feels these efforts have been aided by a belief in the Hmong community that "what's good for the bug is good for me" – in other words, a few small insect holes are a better indicator of fresh, healthy produce than cosmetic perfection.

Moreira has recently become the liaison between the Hmong community and the New Entry Sustainable Farming Project at Tufts University, a project which began in part because of her efforts to help the Hmong through her SARE grant. She says that in her new position "I'm doing exactly what I want to do. In working with the Hmong I've come to appreciate their culture and understand the challenges they face in agriculture."



Michael Pollitt
South Deerfield



Left: Bed mulched with wood chips, showing poor beet germination. Right: Bed without chips.

The nine experimental beds in the backyard of Michael Pollitt's South Deerfield farm, besides being a colorful experimental design, show how a SARE grant can succeed even if an experimental treatment doesn't give good results. In Pollitt's case, a SARE grant allowed him to try out an idea he had already been considering: using wood chips as a mulch for annual vegetable crops. Pollitt hoped for good weed control and mulch benefits from the wood chips, and planned to disturb the chips as little as possible to minimize the risk of N immobilization by decomposing chips.

In practice, Pollitt has found that in most cases the crops are not growing well under the chips. Leaving the chips undisturbed was more difficult than expected, especially when transplanting, and germination of seeded crops was often poor. However, weed control was excellent with the chips. When his grant ends in 2003, Pollitt is considering developing a workshop on mulches with other growers, in which he could present both the benefits and downsides of wood chip mulches to growers with other types of crops.

Pollitt's enthusiasm and interest in sharing knowledge come through in his advice about the SARE program: "Don't hesitate, do it! It's a great, great program. I would never have felt as much a part of the farming community otherwise . . . here am I with [just a small farm] and I have been able to give back to the community."



Photos: Lavender growing at Pioneer Gardens, S. Deerfield

Denise Schwartz South Deerfield

After she founded the Lavender and Herb Growers of Franklin County in 1998, Denise Schwartz felt a SARE grant could help the LHGFC answer a specific question: would lavender grown outdoors reliably survive a New England winter? They had anecdotal evidence from some growers that their lavender plants had been alive for 20 years and from others that their plants died every winter. Since they had many growers excited about starting lavender cultivation on a large scale, experimental results were needed.

In a pattern experienced by many SARE grant recipients, the experiment was both a failure and a success. Nearly 100% of the lavender plants winterkilled in one location and about 60% in another location. But this disappointing result had two silver linings: first, Schwartz feels that many growers who had been planning large lavender plantings “had a reality check.” Second, based on the trial results, Pioneer Gardens in Deerfield, one of the two experimental locations, decided to continue growing lavender using an indoor production system. They now

ship lavender plants to wholesalers throughout North America. Schwartz says, “my goal was to develop another outlet for Massachusetts family farms and develop what I call ‘Massachusetts-grown lavender’ – I think it’s really happening! For me it’s wonderful to see what they’re doing [at Pioneer Gardens] – they are growing LOTS of lavender and I feel like I planted the seed for that.”

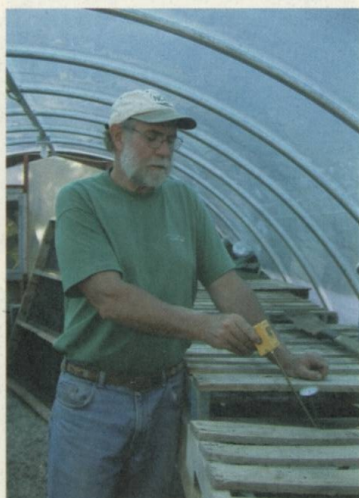
Miranda Smith Amherst

Miranda Smith has known about the SARE program for as long as it has existed. Back when the program was called LISA (Low-Input Sustainable Agriculture), Smith was hired by the NE Regional Council of NOFA to edit the LISA-funded book *The Real Dirt*. This project fit well with Smith’s background as an editor and author of many books on gardening and agriculture.

However, Smith notes that she’s a greenhouse grower by upbringing and says that her 1994 SARE grant “Organic ‘Bag Culture’ of Greenhouse Peppers” was “the one my heart was totally in.” Bag culture can effectively control greenhouse soil pathogen buildup but raises nutrient supply challenges, especially for organic growers. Notes Smith, “I really care about trying to develop a nutrient system that works with organic bag culture.”

Smith is a firm believer in the importance of scientific and statistical techniques for SARE grant recipients. She maintains that “statistics don’t need to be intimidating, and the rigor doesn’t hurt. Alternative agriculture is often viewed as the ‘stepsister,’ and this is not just prejudice – in many cases the same rigor hasn’t been applied [as in conventional research].” She suggests that technical assistance from SARE to assist growers with experimental design and statistics might be of use to many growers and “would elevate [alternative agriculture research] a bit in terms of its credibility.” Mostly, however, Smith says “I think it’s a really great program ... I think people should allow themselves to imagine more broadly than they would if they were just thinking about what they were making from a crop.”





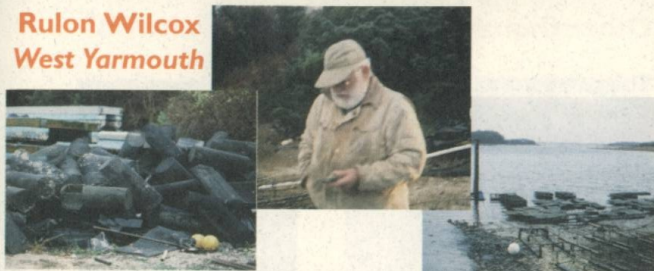
Ed Stockman Plainfield

From his vantage point at Summit Farm in Plainfield, Ed Stockman has a unique view of the SARE grant program. As the recipient of two SARE grants and current NOFA-MA Organic Extension Educator, Stockman has been involved with many different types of grant proposals. He's a believer in the SARE program: "organic ag has evolved to the point that we need

more research-based info to base our farming decisions on. Until recently we relied primarily on experiential info, and that's good, I'm not knocking it, but now we need more organic ag research." However, he's also observed the frustration that some applicants feel when grant proposals are rejected with little or no specific explanation.

He emphasizes the importance of collaborators and technical advisors – although Stockman has extensive research experience and has been a collaborator on many grants, he's working with UMass scientists and technicians on his current grant, a vermiculture project to enhance the nutrient content of compost using *Eisenia fetida*, the redworm or red wiggler. Stockman's enthusiasm for his wigglers is obvious as he checks the moisture of their compost and scoops away a handful to show dozens of worms disappearing deeper into the pile. He notes that very few people are doing much vermiculture research in the Northeast, possibly a factor in the success of his grant proposal. But as he admits, "what you've got to start with is a good idea, then you've got to talk somebody else into it – but that's not as easy as it sounds!"

Rulon Wilcox West Yarmouth



Rulon Wilcox's SARE grant addresses a problem of great importance for one part of the Massachusetts agricultural community – a severe oyster disease known as 'dermo' that is reducing harvests up and down the East Coast. Dermo is caused by a parasite that attaches to the stomach of the oyster, starving it of nutrients, and so far there is no cure for the disease. Says Wilcox, "the one thing that suppresses it is good, cold, hard winters – and we just haven't been having them." The other approach is to speed up growth so the oysters are ready to harvest earlier, before the infection becomes severe.

That's the goal of Wilcox's project, field testing of modified New Zealand oyster cylinders. Traditionally, oysters are grown in flat bags lying on underwater racks. New Zealand growers developed plastic flattened cylinders that hang from a line in the water. Wilcox is testing larger modified cylinders, developed in Rhode Island, which are designed to roll in the shallows of a bay. "We want them to roll," explains Wilcox. "That helps keep the oysters apart, lets them grow faster, and develops a nice rounded cup shape that people like."

Wilcox hopes the modified cylinders will help his oysters grow fast enough to reduce dermo levels, and plans to examine number, size, and weight of his oysters to quantify the effects of the cylinders. But at this point, he says, "we still need to figure out a better way to get them to roll. It's hard to get them to roll in this cove – the grass slows 'em down, and there's a short fetch – we need a bigger open bay." Wilcox is considering trying the cylinders out in other marine environments, and has plans for future projects to keep working on the dermo problem. "We've got to find a way to circumvent this dermo. That's the name of this game – trying to figure out a way to do it better."

Other thoughts from grant recipients

"The collaborator aspect of the grants is good but maybe it should be emphasized more – the more forks in the fire the better!"

Spensley Rickert, Hatfield



"The key is to have somebody other than yourself to help with data collection and statistics. My suggestion would be to make sure you have a partner so you can have more confidence in the results – somebody who's not financially as engaged as you are – you want somebody who's more objective than you are. Since we had [our IPM scout] we were very confident in our results."

Maurice Tougas,
Northboro

"In my report I recommended that if anyone wants to pursue work with Shaw's Success or any other [cranberry] varieties, it should be done over many years. Also it should fit in with their operation and not require a lot of extra work or changes – our system of applying the fertilizer and fungicide treatments to that section of the bog meant you'd have to go out and disconnect sections of the irrigation system, which was very time consuming and always seemed to happen just when I had 20 other things to do."

Clark Griffith, South Carver



Other thoughts from grant recipients

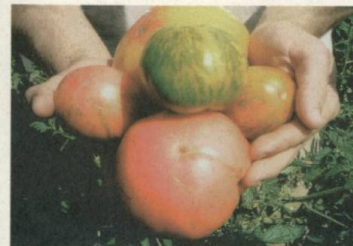
"If you're growing a multi-year crop, apply for a multi-year grant!"

Angela Baker, Hawley



"I just found that the question I should have asked before I agreed to participate in this study was 'What is the best case scenario?' In other words, what is a good yield, what is the lowest possible cost of production, what is the best scenario for price? If I had done that I would have come up with a number [for his profit] that would have made the project make no sense, and I might never have agreed to participate. There are other reasons for participating, of course, but these are different from my goals – I'm relying on this for 99% of my income. So my advice might be something like 'Keep an eye on the prize' – is the information you're going to get going to yield something after the grant is over, is the goal purely the knowledge or are you really going to find out something economically useful?"

Doug Coldwell, South Deerfield



"I think it's really a nice application process – easy, grower-friendly, straightforward, helpful to farmers."

Ed Stockman,
Plainfield



Grant Recipient

Grant No.

Clark Griffith	FNE94-49
Miranda Smith	FNE94-70
Angela Baker	FNE97-160
Doug Coldwell	FNE97-164
Colleen Caffery	FNE99-234
Kristine Keese	FNE99-256
Maurice Tougas	FNE99-280
Jeremy Barker-Plotkin	FNE00-292
	FNE00-325
	FNE01-355
Denise Schwartz	FNE00-350
Don Franczyk	FNE01-372
Maria Moreira	FNE01-386
Michael Pollitt	FNE01-387
Spensley Rickert	FNE01-388
Ed Stockman	FNE01-393
	FNE02-443
Rulon Wilcox	FNE01-399

33 Massachusetts Grants
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