

SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION (SARE) PROGRAM

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4. PROJECT TITLE: Northeast Organic and Sustainable Farmers Network
5. PROJECT NUMBER: 89-06-02 GRANT NUMBER: LNE89-14
FUNDING PERIOD: 1989-91
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7. MAJOR PARTICIPANTS:
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State Farmer Coordinators:
Alton Eliason, CT
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Vernon Grubinger, Larry Myott, VT

Additional Farmer Participants: See Project Profile (4A)

8. **COOPERATORS:** See attached "NOSFaN Participants List" for additional cooperators listed under "NOFA/MOFGA Certification Committee Liaisons", "NOFA/MOFGA State Council Presidents", "NOFA/MOFGA Newsletters", and "Other Contacts". In addition, over forty researchers and/or Extensionists from Northeast Land Grant Universities provided written comments on a draft publication, *Organic and Low-Input Farming Systems in the Northeast*, which documents current organic farming practices in the Northeast.

9. **PROJECT STATUS:** SARE funding period is completed. All objectives have been completed with the exception of publication of *Organic and Low-Input Farming Systems in the Northeast*, which is being negotiated with the Northeast Regional Agricultural Engineering Service (NRAES).

10. **FUNDING TO DATE:**

<u>Recipient Org.</u>	<u>SARE \$</u>	<u>Non-Fed. Match</u>
NOFA	84,650	60,054
Cornell Univ.	30,350	21,260
Totals	\$115,000	\$81,314

11: **ABSTRACT:**

This project was designed by a committee of the Natural Organic Farmers Association (NOFA) Interstate Council to address the need for more and better information about organic and low-input farming systems among farmers, Extension agents and researchers in the Northeast. The project implemented both a set of concrete activities and a collaborative process aimed at increasing the mutual understanding and knowledge-sharing between the organic farming community and the "conventional" agriculture community.

Three major activities were undertaken: 1) on-farm field days were held on 21 farms throughout the Northeast during the summers of 1989 and 90; 2) experienced farmers were identified and interviewed to provide documentation of the farming practices currently used by organic and low-input farmers in the Northeast; and 3) in-service training for Cooperative Extension agents and other agriculture professionals was offered in three states.

The process of organizing these activities brought together organic farmers, Extension agents and Land Grant specialists in a variety of contexts, and helped to clarify differences as well as similarities of perspectives, values and methodological approaches to the problems faced by farmers.

12. **OBJECTIVES:**

1) Create a network consisting of at least three organic and sustainable farmers from each of eight Northeast states, and conduct a series of field days for farmers and Extension agents at 15 of these farms.

2) Produce a manual documenting the production practices

currently in use on certified organic farms in the Northeast: Organic farming represents one end of a continuum from chemical-intensive to chemical-independent agricultural systems.

3) Expand the range of options which Cooperative Extension agents can suggest to the increasing numbers of conventional farmers who are inquiring about low-input systems, by training agents in the production, management, and marketing issues involved in organic and sustainable agriculture.

13. SPECIFIC RESULTS:

The collaborative process. The project had many successes in forging links and improving understanding and knowledge sharing between the organic farming community and the conventional agriculture community. Major participants contributed in many ways to increasing the dialogue. For example, many Extension agents and organic farmers who worked together to organize field days, found that this collaboration strengthened the relationship substantially, as shown by these excerpts from an evaluation of the collaborative process:

Extension agent: "I'm fairly new to the (State) scene, but I'm positive about the working relationship between NOFA and Extension - and the NOSFaN Field Days have only helped us to work together even better."

Extension agent: "I was encouraged by the turnout and interest at this meeting, and I feel very strongly that this subject, and coordination between our two groups, are essential for sustainable ag and organic farming education in the future. I look forward to next summer's programs."

Organic Farmer: "Dr. X (Vegetable Specialist at U of X) was very excited by the two farm tours and said that he plans to include an organic tour in his regular twilight meetings next year... It's nice to see such positive interest. Also the X County agent has been out several times. I feel we have made substantial progress."

On the other hand, problems were also acknowledged:

Extension agent: "My sense is that NOFA is more likely to reach out to Extension, but that generally Extension is, on the whole, ill-equipped to deal with inquiries and support of organic/sustainable methods...Part of the problem has been major budgetary cuts and reorganization of Extension. Resources are extremely limited."

Farmer Network and Farm Field Days. Farm Field Days were held on twenty-one farms across seven states during the summers of 1989 and 1990. The series featured producers of organic and low-input field crops, vegetables, tree fruits, dairy, beef sheep and poultry, as

well as on-farm composting operations. Nearly one thousand farmers, Extension personnel and others attended the series.

The process of identifying, evaluating and selecting field day farms involved NOFA/MOFGA farmers and Extension field staff working together in each state, according to criteria defined by the project steering committee. Nearly fifty farms were reviewed during this period.

Field days demonstrated both the potential for and the obstacles to wider adoption of sustainable farming systems in the Northeast. For example, New York dairy farmers Kevin Engelbert reported:

"Basically, we don't have any aspect of our farming operation that hasn't improved since we began farming organically (in 1981). From our crops' yield and value to our cows' health and production to our financial bottom line, everything has improved. Our four cuttings of alfalfa average 20%-plus protein and eight tons of dry matter/acre - as well as, or better than we did in a conventional system."

On the other hand, orchardist Amy Hepworth felt that:

"There are problems and limitations with organic fruit growing in the Northeast due to weather patterns and pest pressures...(For example)...The organic approach to disease control is the use of sulfur, applied five pounds to the acre, spraying 7 to 12 times to control primary scab. Using this amount of sulfur is very harsh on the soil, the surrounding environment and the farmers."

In-Service Training - "Farming For the Future." Three seminars were offered to Extension, USDA and other agricultural professionals in an effort to provide balanced, practical information on organic and transitional farming systems. These two-day seminars were held in Massachusetts, New Jersey and New York, and featured presentations by experienced farmers as well as researchers, Extension agents and other specialists. Sessions covered a range of issues, including sustainable agriculture concepts; soil management practices and materials; weed and pest control strategies; livestock health; organic production standards and certification; the organic industry and marketplace; and whole-farm case examples.

The experience of designing, conducting and receiving feedback from these sessions provided some important insights as to the challenges involved in "training" for sustainable agriculture. Extension agents attending the sessions were hungry for "nuts and bolts" information: fact sheets, experimental data, specific products or practices which could be recommended with confidence in a particular situation, for example to deal with a particular pest problem. This is not surprising; agents tend to be most comfortable in the role of technical information provider, backed up by the research base and institutional legitimacy of the Land Grant system.

Unfortunately, this linear transfer-of-technology approach is of limited value in helping farmers develop more sustainable farming systems. There are no "one size fits all" solutions which can be passed from researcher to Extension agent to groups of farmers. And there are no piecemeal solutions that address a problem in one aspect of a farming system without affecting the rest of the whole. Rather, the farmer her/himself must be the primary agent in a process of innovation and adaptation, developing a unique set of integrated practices suitable for that particular farm. The Extension professional must function as a facilitator of this learning process, not just as a conduit for technical information.

The tension between agents' desire for generalizable solutions to technical problems, and the inherent difficulty of providing them, created an ongoing challenge for in-service training. Our experience suggests that training should focus at least as much on process issues as on technical issues. One effective approach, for example, was teaching by case studies, with a focus on the process of helping farmers to identify a problem as a systems problem, to understand root causes, and to seek a wholistic, ecologically grounded responses. The following comments, from an Extension agent who was very involved in organizing the second of three sessions, illustrate the kind of reflection and analysis that helped to improve each program over the preceding one:

*"Our audience came to this conference because they have some, or quite a bit of interest or experience in sustainable/organic agriculture. I think these are people whose minds are already open to the ideas, the philosophy, the cause...what they expected to get was specific information, some direction or at least some indication of what they can do to put themselves in a position to help clientele.
"We failed to take into consideration where our audience was coming from. We should have included, from the first words we spoke, that we have difficulty in preparing such a meeting because the audience traditionally goes to meetings in which facts and data are all they see. We needed to bring out in the open that we don't have all the data or complete statistical analyses of all the factors involved...But, what we can do is work together, share experiences and program ideas to network our strengths and weaknesses."*

Documentation of Farmer Practices. A team of researchers conducted in-depth interviews with 38 organic and transitional farmers throughout the Northeast. Specific production practices were documented, including crop rotations, use of cover crops and green manures, composting, soil amendments, tillage and cultivation regimes, livestock health and nutrition, pest management strategies and marketing practices. A draft publication was produced, titled *Organic and Low-Input Farming Systems in the Northeast*.

Initial arrangements for review and publication of the book were negotiated with the Northeast Agricultural Engineering Service (NRAES), and over forty research and/or Extension professionals

reviewed portions of the manuscript. The project steering committee, in cooperation with NRAES, is now overseeing the revision process. The final publication will be made available by NRAES to the Cooperative Extension system and to the public, nationwide. NOFA will also distribute the book regionally through its networks.

This publication is significant in that it greatly increases the information available on organic and transitional farming practices in use at this time in the Northeast. As it is based on case studies and not on replicated research, it does not provide a basis for specific recommendations, but suggests ideas that farmers and researchers can pursue in their own contexts. But perhaps the book's greatest significance is that the process of review by the academic community has initiated a lively dialogue, and has demonstrated that both the organic farming community and the Land Grant/conventional agriculture community can greatly benefit from greater sharing of knowledge and experience. In several instances documented in the book, it is clear that a farmer's practices would be made more effective through application of available research-based knowledge. At the same time, there are practices and concepts which are well-accepted in the organic farming community which are only beginning to be appreciated and understood by Land Grant researchers.

Attitudinal and Conceptual Barriers: An important finding of this project was that, in spite of our efforts to the contrary, there remain widespread attitudinal and conceptual barriers that inhibit communication, cooperation and knowledge-sharing between the organic and the conventional agriculture communities.

Attitudinal barriers include lingering resentments, misperceptions, and distrust on the parts of both the organic and conventional agriculture communities, developed through years of inadequate communication. Conceptual barriers stem from the different philosophical paradigms underlying organic and conventional agriculture, as well as from the difference between a transfer-of-technology model and a farmer-to-farmer model of agricultural innovation.

These barriers constitute, in the words of one project participant, a "dysfunctionality of the family of agriculture", and a key challenge for the movement towards a more sustainable agriculture. The experience of this project shows that overcoming these barriers will take creativity, persistence and a strong commitment from the institutions and individuals who most strongly influence agriculture in the Northeast.

14. PRODUCER INVOLVEMENT:

- A. Farmers attending Workshops: 39
Farmers attending Field Days: approx 600
- B. Farmers who are major participants: 56
See Project Profile (4A)

15. POTENTIAL CONTRIBUTIONS AND PRACTICAL APPLICATIONS:

A. If we consider the major "finding" of this project to be the value of improved knowledge-sharing between the organic and "conventional" agriculture communities, then widespread adoption of this finding would, we believe, lead to the following: an accelerated pace of information transfer and innovation among farmers, researchers and extensionists; wider adoption of advances made by the organic farming community in, for example, pest management, weed control, compost making and utilization; improved efficacy of organic farms through application of relevant research-based knowledge; improvement of Extension agent skills in facilitating farmer-directed innovation and sustainable systems design.

B. Although this project has not generated new paradigms by itself, it has made clear the differences between the technology and economics-oriented, linear, transfer-of-technology paradigm underlying traditional research and Extension efforts, and the ecological systems and values-oriented, context-dependent, farmer-innovator paradigm embraced by most organic farmers. Further advances towards a sustainable agriculture will most likely emerge from a dynamic synthesis of these paradigms, which can only be achieved through continuing efforts to enhance dialogue and collaboration between the organic and conventional agriculture communities.

16. AREAS NEEDING ADDITIONAL STUDY:

Further problem solving efforts are needed to overcome the conceptual and attitudinal barriers dividing organic from conventional farmers in the Northeast, in order to catalyze a more productive phase in the advancement of sustainable agriculture efforts in the region.

Additional research is also needed on a host of technical, ecological and economic questions relating to organic and transitional farming systems. Specific suggestions are listed by topic in the manuscript *Organic and Low-Input Farming Systems in the Northeast*.

17. STATES INVOLVED: CT, MA, ME, NH, NJ, NY, RI, VT.

8. EXTENSION INVOLVEMENT:

1 Project Coordinator
8 Other major participants
100 (approx) participants in in-service training

19. FARMER ADOPTION:

Although we cannot provide quantitative data on adoption and benefits resulting from this project, the following outcomes are

suggested: Since approximately 600 farmers attended farm field days, we can estimate that some fraction, perhaps 50% or 300 farmers, came away with one or more new ideas to put to use on their farms. The impacts of in-service training on farmer adoption would be more indirect. Impacts of the publication will not be obtained until it is published and distributed. However, based on comments of farmer reviewers, it is likely that most farmers who read the book will find new ideas which will help improve their practices.