

**FINAL REPORT - SARE/Chapter 3 project #ENE94-1.**

**Section I**

1. Project Number: ENE94-1  
Grant Number:  
Funding Period: 7/1/94 - 12/31/95 (a 6 month extension was granted beyond the original end date of 6/30/95)
2. Project Title: New England Extension Sustainable Agriculture Training Program
3. Project Coordinator:  
  
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4. Type of Report: Final
5. Date of Report: 25 June 1994
6. Reporting Period: from 7/1/94 through 12/31/95
7. Major Participants: please see Appendix A
8. Cooperators: see Appendix A
9. Project Status: The project is NEW
10. Statement of Expenditures: please see Appendix B.

## **Section II**

### **Final Report**

#### **1. Objectives:**

To increase the ability of the Extension system, SCS, ASCS, and farmers in the six New England states to develop and maintain sustainable agriculture, protect the natural environment, and strengthen rural communities, we propose a New England-wide sustainable agriculture training program. Specific objectives to meet this goal within the one-year project are to:

- Increase knowledge about sustainable agriculture and about specific sustainable farming techniques and whole farm systems analysis
- Establish more effective networks among farmers, Extension and other agency personnel, for teaching, and planning and conducting research
- Identify specific information needs of farmers in New England and make plans to develop educational materials and further training and educational programs
- Develop skills to address complex community issues relating to agriculture, and to increase awareness among community members about the importance of maintaining New England's agricultural base.

#### **2. Abstract:**

The New England-wide extension training project in sustainable agriculture began in April 1994. The year's activities culminated in a conference on March 29-30, 1995, entitled, Changing Technologies and Changing Values. Cooperative Extension Systems from all six of the New England states were actively involved, along with representatives from the Vermont chapter of the Northeast Organic Farming Association and the Maine Organic Farmers and Gardeners Association. The purpose of the conference was to provide a forum for discussing cutting-edge technologies that build successful farming systems for the future, as well as examine the social and economic realities of their implementation. The project focused on practices for improved production systems and developing skills to build a broader base of support for the survival of agriculture.

Approximately 250 people attended the conference. About 30 participants from each of the New England states included Extension and federal agency personnel and farmers. Evaluation results of the conference were positive overall. Of the 98 people who responded, 69% rated the conference good or excellent.

A unique aspect of the conference was the use of study circles. The study circle process is a method of participatory learning, which actively involve group members in discussing an issue

or topic by calling upon members' own experiences, understanding, and knowledge rather than relying solely on information provided by an expert. The purpose of the study circles was to help participants develop a broader understanding of sustainable agriculture by capitalizing on the regional expertise of the people who met together. This method might be used to further involve farmers, consumers, environmentalists, agri-business representatives, community leaders, elected officials, and Extension staff in small group discussions about the importance of New England agriculture and successful sustainable agricultural practices in our region. A training for study circle facilitator was held in December 1994. The trainees included 6 people from each of the New England states representing Extension, NRCS, and farmers. Each of these 30 lead study circle discussion groups at the conference.

Following the March conference, various activities have been initiated in the New England States. For example, in Rhode Island, conference attendees formed an action plan for activities to be carried out through the newly created URI Center for Commercial Agriculture, building on ideas generated at the conference. In Maine, several study circle groups are being organized to identify on-farm research needs and projects. Two trainings on Holistic Resource Management were held in September of 1995 in different parts of New England. Over 60 Extension and agency personnel attended the trainings. This was a specific recommendation of conference participants so that Extension and other USDA agency personnel could gain more comprehensive skills in whole farm analysis and planning.

### 3. Specific Project Results

#### A. Accomplishments (by objective)

- *Increase knowledge about sustainable agriculture and about specific sustainable farming techniques and whole farm systems analysis*

One of the main objectives for holding the conference was to provide technical information about sustainable agriculture for Extension and other agencies to take home. This was accomplished through the workshops. The planning committee emphasized holistic approaches with each of the topics covered. For example, there were workshops on crop rotations and maintaining animal health (as opposed to a workshop on preventing mastitis). Each of the workshop panels included at least one agency person and one farmer so that both a technical expert and a practical approach was offered. Please see Appendix C for a list of conference workshops with descriptions.

The use of study circles after the workshops encouraged more in-depth discussion and exchange of ideas about workshop topics presented. One interesting outcome of these discussions was the fact that often farmers and agency folks often do not have the opportunity for in-depth discussion about specific farming techniques or about the best methods to transfer information from one source - whether is research project results or another farm - to another. Many farmers present at the conference believed that the agencies often did not even have the information farmers

needed about integrated approaches to farming. Farmers looking for more sustainable approaches have often had to rely on other farmers for their information. These issues were raised during some of the study circles, stirring up some amount of anxiety.

The planning committee, however, had anticipated that the conference would raise some of these issues - that the agencies would hear from farmers about their need for more in-depth information on ecological approaches to crop and livestock production. And agency people heard from farmers that there really is a wealth of information being generated on farms. All participants agreed that there is much more information needed.

Farmers and agency people alike requested more training on holistic approaches to planning and management. For this reason, two follow-up trainings on Holistic Resource Management (HRM) were held in September of 1995 - one in Durham, NH and one in Sturbridge MA. Sixty Extension, NRCS, FSA, and some state agency personnel were trained in this whole-farm planning and decision-making process. A newsletter article (see *Cultivating Connections*, Vol. I, No.3) describes some of the agency participants' plans for incorporating these concepts into their work.

- *Establish more effective networks among farmers, Extension and other agency personnel, for teaching, and planning and conducting research*

The project has been successful in creating more effective networks. Some are formal and powerfully connected as the planning committee itself. Others are loose affiliations created by heightened awareness of other players in the sustainable ag arena. At times, these networks have responded to farmers' needs by organizing research projects and at others, the response has been a specific program or project - a discussion group or a workshop or series of meetings.

The planning committee for the project includes one or two Extension staff from each of the 6 New England states, representatives from two farming organizations, and a representative from a conservation district in Maine. Beginning this year, the NRCS New England sustainable agriculture specialist will join the planning team to work with us on the continuing project. This project has given committee members a chance to strategize with each other - for the first time essentially - about how to increase the USDA agencies' participation in sustainable ag issues. It has given them a chance to reflect on questions about how agencies change from within and how they can respond to the changing values of the community and society as a whole. Our project has an e-mail discussion group among the members of the planning committee so that ideas and plans can be discussed in between face to face meetings. The e-mail network is also another way to share other pertinent information on sustainable ag events and developments from other regions.

There were also opportunities at the conference to develop new partnerships with farmers and agency people to plan and conduct research or other activities. During the conference, there were two timeslots for participants from each state to get together to make plans for activities and projects that would be carried out within their own states. The conference proceedings

include the list of ideas generated at each of those state caucus meetings. The newsletter included with the proceedings gives an overview of several programs from each state that actually did get implemented since the conference took place - some of these activities are research oriented (mostly on-farm) and some are oriented toward educational or awareness-raising activities.

One more arena where some useful networks have been established is between the New England project and the Northeast Sustainable Agriculture Coordinators. All of the New England project state coordinators participate in the Northeast committee as well. This offers opportunities for the whole region to learn from the experiences of the New England project.

- *Identify specific information needs of farmers in New England and make plans to develop educational materials and further training and educational programs*

As a result of the conference, the study circle training (discussed below), the HRM trainings, and the follow-up activities at the state level, we have many lists of topics and issues that need to be addressed by Extension, researchers, agencies, farmers, or some combination thereof. The New England project received two more years of SARE funding to develop a series of fact sheets that will be applicable throughout the region. The follow-up project is also supporting state level activities that address information needs expressed during the first year of the project. For example, farmers from Rhode Island who attended the conference agreed on a need for research on alternative marketing approaches. Through our Chapter 3 project, a marketing specialist has been working with the Ag Center's farmer board members to assess the demand for various niche markets in the region.

- *Develop skills to address complex community issues relating to agriculture, and to increase awareness among community members about the importance of maintaining New England's agricultural base.*

During the first year of our regional project, we focused on the study circle approach to fulfill this objective. At the facilitator training in December, 30 people from throughout New England were trained. These folks served as study circle discussion facilitators at the conference. The planning committee's goal was for conference attendees to use the study circle approach as they dealt with issues in their own states. Study circles can be used as a way to focus discussion on any issue, whether it's a production issue or a community issue. This was evident at the conference.

Following the conference, some participants used the study circle approach in their work with farmers. For example, a group of dairy farmers, extension, Soil & Water Conservation Districts, and NRCS began to meet regularly in Androscoggin County, Maine. They used the study circle format to discuss issues that included identifying critical issues in nutrient management; identifying research data to answer specific questions; and developing strategies for addressing questions on participating farms.

We had planned during the second year of the project to continue using study circles as the primary method of encouraging participatory approaches to problem solving. It became clear, however, through evaluations from the conference and through assessing agency and farmer needs via our planning committee that the project needed to broaden its scope of participatory approaches. As a result, we are organizing another training for fall of 1996 in participatory research and education, during which a range of approaches will be examined.

#### B. Publicity for the Activities and Programs

Included in this report (Appendix C) is a packet of press materials written about the conference itself. The planning committee has found the press coverage enlightening but also somewhat reflective of the evaluation results of the conference (discussed in the question below). We have published proceedings from the conference which are included with this report. There is also included with the proceedings an update on activities (Activities Underway for 1996) that have taken place in part or in full as a result of the conference.

As a result of a one-year follow-up survey, we hope to write an article describing the successes and set-backs of this project. This article will be submitted to extension and sustainable ag journals for possible publication.

### **4. Potential Contributions and Practical Applications of the Professional Development Program**

#### A. Trainee Adoption and Direct Impact

The committee has analyzed the written evaluations (Appendix E) that were collected at the end of the conference and have discussed these results in a planning meeting following the conference. A summary of the evaluation is enclosed with this report. Overall observations showed that conference participants tended to fall into two categories - either they thought the conference was great or they reacted negatively saying that speakers and discussions divided farmers and agencies into two camps - sustainable vs. conventional.

The committee had struggled with the idea of whether to target the training to those who were already accepting or at least receptive to the idea of sustainable agriculture or whether to try to reach those who were more resistant. In the end, those who came to the conference were from coming from both arenas. It is fairly unclear what motivated agency folks to attend the conference if they were not really interested in the subject matter. But, some skeptical attitudes about sustainable agriculture, both among agency folks and among farmers, did surface.

We conducted a survey (Appendix F) a year after the conference and were able to correlate some of these questions. For example, did those who already had a substantial knowledge of sustainable ag tend to adopt what they learned more after the conference than those who came in with only a little knowledge? Interestingly, those participants that had a favorable view of sustainable agriculture were more likely to notice a change in their work habits and attribute it

to the conference. By using cross tabulations we were able to determine that of those with "slight" knowledge about sustainable agriculture coming into the conference, 87.5% said they use sustainable ag in their work now more due to the conference.

A follow-up evaluation was also done for the study circle training (Appendix G). It was conducted a few months after the training and also after the conference during which they put their training into action. The evaluation was not quantitative; comments were descriptive. The evaluation also somewhat reflects the relative success of the conference approach itself. The evaluation also includes a list of plans for using study circles within the facilitator's own communities.

#### B. Potential Benefits or Impacts

The planning committee hoped that the impact of the conference would be that extension and agency personnel gain knowledge in sustainable production methods; that there would be a growing recognition and appreciation for the expertise in sustainable farming methods farmers have developed; and that they would acquire some new ideas and skills to work more cooperatively with farmers in assessing problems, identifying information needs, and coming up with answers or solutions. Overall, the goal was to influence extension and agency personnel to approach their work with farmers in a different way - moving from the expert/information delivery mode to more participatory methods.

The interest and level of participation in the follow-up HRM trainings has led us to believe that there is an increasing interest in whole farm planning approaches. In addition to the indications of changes in behavior noted on the follow-up survey, several of the state level follow-up activities have suggested that the participatory methods discussed at the conference and trainings have had an influence on the way agency folks and farmers interact. But it is also clear from the evaluations and other feedback from the conference that there is still a lot of resistance to the idea of sustainable agriculture and a lot of confusion about why and especially how to move toward more participatory approaches to research and education.

#### **5. Individuals Involved:**

Number of extension and/or NRCS personnel in attendance:

please see Appendix I for this information

#### **6. Future Recommendations & Areas Needing Additional Professional Development Efforts**

Our final conclusion, as supported by the evaluations, is that change is imminent, but it requires ongoing efforts. The approaches used must be constantly evaluated. We feel we need to do a better job in assessing the motivations agency folks might have for seeking out new tools and ways of approaching farming. The committee is still solidly behind the concept that agencies

and farmers must continue look for ways to work cooperatively to address the increasingly complex issues in agriculture.

The continuing New England project includes a two-day training in November on participatory research and education. The subcommittee in charge of planning this event will use the results of the first year's project to assess the needs of the potential participants. In addition, we plan to conduct at least two focus group discussion in different parts of New England with potential workshop participants to get input regarding possible tools and approaches that would be helpful in their work.

The planning committee continues to discuss different approaches to measuring program impact. We feel it is very useful to seek input about long term changes and adoption of concepts and tools over time through evaluations 6-12 months after the workshop or training has taken place. We also hope this year to use a case study approach to document the potential impact of the participatory training and perhaps the other components of this year's program as well.

## **7. Photographs**

## **8. List of Participants**

The lists participants who took part in the different facets of this training are included in the Appendix H, SARE Professional Development Documentation Forms.



## **LIST OF APPENDICES**

- A. Major participants
- B. Statement of expenditures
- C. Conference brochure
- D. Articles describing conference
- E. Conference proceedings
- F. Post-conference evaluation results
- G. Follow-up survey results
- H. Study circle evaluation results
- I. SARE professional development documentation forms

## MAJOR PARTICIPANTS

### Principle Investigator:

**Dr. Sid Bosworth**, Associate Professor & Statewide Extension Specialist - Agronomy, Plant & Soil Science Department, University of Vermont, Burlington, VT

### Co-Investigators:

**Dr. Vern Grubinger**, Assistant Professor & Extension Specialist -Small Fruit & Vegetables, University of Vermont, Brattleboro, VT

**Dr. Stephen Herbert**, Professor, Dept. of Plant & Soil Sciences & Extension Agronomist, University of Massachusetts - Amherst, MA

**Dr. Cathy Roth**, Extension Rural Development Specialist, University of Massachusetts Extension System, Pittsfield, MA

**Dr. Tim Griffin**, Sustainable Agriculture & Forage Crops Specialist, University of Maine Cooperative Extension, Orono, ME

**Dr. Eric Sideman**, Director of Technical Services, Maine Organic Farmers & Gardners Association, Augusta, ME

**Enid Wonnacott**, Director, Northeast Organic Farming Association of Vermont, Richmond, VT

### Project Director:

**Kate Duesterberg**, Coordinator - UVM Sustainable Agriculture Initiative, University of Vermont, Burlington, VT

### Collaborators:

**Dr. Carol Giesecke**, Coordinator - New England Cooperative Extension Consortium

**Will Reynolds**, University of Rhode Island Extension Specialist - Horticulture

**Paul Stake**, University of Connecticut Extension System Regional Administrator

**William Zweigbaum**, Department of Resource Economics & Development, Agricultural Business Management Specialist - University of New Hampshire Cooperative Extension, Durham, NH

**Jack Kitterage** - farmer and Co-director, Northeast Organic Farming Association of Massachusetts

The role of the **principle investigator** will be to work directly with the Project Director to make sure all aspects of the project get initiated and stay on schedule. Dr. Bosworth will serve on the regional planning committee and play an integral role in identifying and working with other participants in the state-wide planning event, the regional pre-conference training, and the conference. In addition, Dr. Bosworth will provide input on all matters that relate directly to his technical expertise.

The **project director** will work with all committees and coordinate all aspects of the project, ensuring that meetings get scheduled, that the proposals for action get widely distributed for review and input, and monitoring the project budget. Ms. Duesterberg will also function as the conference coordinator.

The **co-investigators** will also serve on the regional planning committee and oversee their state level activities, participate in the pre-conference facilitator training, and, to the extent possible in post-conference activities.

The role of the **collaborators** will be to oversee state pre-conference planning meetings, identify potential conference participants and participate to the extent possible in conference planning and post conference activities.

## APPENDIX C

Conference brochure

# *Changing Technologies and Changing Values*

Sustainable Agriculture Conference  
for New England Cooperative Extension System  
and USDA Agency Personnel and Farmers

March 29-30, 1995

Waterville Valley Resort and Conference Center  
Waterville Valley, New Hampshire

The Center for Sustainable Agriculture  
at the University of Vermont and State Agricultural College  
137 Hills Building  
Burlington, Vermont 05405

# *Changing Technologies and Changing Values*

This two-day conference is part of the New England-wide sustainable agriculture Extension training program funded by the USDA SARE program. Its purpose is to increase the ability of the Extension System, NRCS (formerly SCS), FSA (formerly ASCS), and farmers in the six New England states to develop and maintain sustainable agriculture, protect the natural environment, and strengthen rural communities. The conference will focus on production practices for improved cropping systems and will develop skills to build a broader base of support for the survival of agriculture.

## **Conference Objectives**

- Objectives of the conference include the following:
- Increase knowledge of sustainable agriculture and specific sustainable farming techniques and whole farm systems analysis;
  - Establish more effective networks among farmers, Extension faculty and staff, and other agency personnel for teaching, planning and conducting research;
  - Identify specific information needs of New England farmers and make plans to develop educational materials and further training and educational programs; and
  - Develop skills to address complex community issues relating to agriculture, and to increase awareness among community members about the importance of maintaining New England's agricultural base.

## **Keynote Speakers**

**Frederick Kirschenmann** was born and raised on the farm he now manages: Kirschenmann Family Farms, located in south central North Dakota. After earning a doctorate in philosophy from the University of Chicago in 1964, he entered academic life as a teacher and administrator and ultimately became academic dean at Curry College in Boston, Massachusetts. In 1976, Dr. Kirschenmann returned to the family farm to convert the 3,100 acre grain and livestock operation into an organic farm. It is now one of the largest certified Biodynamic farms in North America. Dr. Kirschenmann has been active in numerous sustainable and organic agriculture movements. He helped found "Farm Verified Organic," a private organic certification agency and now serves as its president. He serves on the USDA National Sustainable Agriculture Advisory Council and the Science and Education National Research Initiative Advisory Council. Dr. Kirschenmann also serves on the North Dakota Board of Higher Education Agricultural Consultation Board and is a founding member of the Northern Plains Sustainable Agriculture Society.

**Greg Watson** brings to the conference his experience in the arenas of agriculture and the environment. Mr. Watson served as the Commissioner of the Massachusetts Department of Food and Agriculture from 1990 to 1993, where he worked on a number of initiatives to further sustainable agriculture in the state, including a set of groundwater protection regulations that encouraged farmers to adopt IPM strategies and a dairy pricing order designed to keep dairy farmers on the land by providing them with a fair price for their milk. In 1993, Mr. Watson was appointed the Director of The Nature Conservancy's Eastern Regional Office,

where he worked to preserve plants, animals and natural communities by protecting the land and waters. Mr. Watson recently resigned this post to consult on issues of sustainable economic development for the Conservancy and other organizations. Mr. Watson also serves on the Board of Directors for the Henry A. Wallace Institute for Alternative Agriculture.

## **A Different Approach for Discussing Issues**

A unique aspect of the conference is the use of study circles. The study circle process is a simple and powerful method of participatory learning. Study circles actively involve group members in discussing an issue or topic by calling upon members' own experiences, understanding, and knowledge rather than relying solely on information provided by an expert. The use of small group discussions was the backbone of the agricultural movement in the U.S. in the 19th century. At that time farmers met to discuss, inform themselves, and take action on key issues in state and national agricultural policy and decision-making.

Conference planners hope that study circles will help participants develop a broader understanding of sustainable agriculture by capitalizing on the regional expertise of over two-hundred people who will attend the conference. We also hope that this method might be used to further involve conference participants in small group discussions focused on the importance of New England agriculture and successful sustainable agricultural practices in our region.

There are ten workshops at the conference. Each is offered twice. One set of ten workshops is followed by study circles. The same set is also offered without the study circle format. Therefore, you have the choice of attending a workshop and learning about the topic as a presentation with brief question and answer, or as presentation followed by a study circle/small group discussion.

## **State Caucuses**

After study circle discussion, a session will be held for each state to summarize and identify possible actions that might be taken by farmers, Extension staff, other agency representatives, consumers, marketers, etc. The reports of these summary/action sessions will serve in part as proceedings of the conference. These sessions may also lead to very concrete strategies that participants could implement. Study circle groups organized after the conference might engage in activities such as organizing study circles to discuss issues related to farming and community interaction or to discuss innovative farming techniques (e.g. management intensive grazing); organizing events to build consumer/producer alliances; visiting model farms or projects outside the region to generate ideas for adoption in New England. Some funding may be available through the New England project for these follow-up activities.

This conference is sponsored by a grant from the USDA Sustainable Agriculture Research and Education Program. It was coordinated by representatives from: the Center for Sustainable Agriculture of the University of Vermont, the Cooperative Extension Systems of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont, Maine Organic Farmers and Gardeners Association, New England Cooperative Extension Consortium, and the Vermont Chapter of the Northeast Organic Farming Association.

## APPENDIX D

Articles describing the conference and the HRM training

**NOFA**  
New Hampshire



May-June 1995

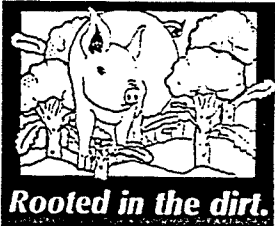
NEWSLETTER OF THE NEW HAMPSHIRE CHAPTER OF THE NORTHEAST ORGANIC FARMING ASSOCIATION

## The Voice of Organic Agriculture in New Hampshire

### Something for Everyone at the NOFA Summer Conference

*Farmers, gardeners, activists and consumers of organic products will all find something new at the 1995 NOFA Summer Conference to be held this August 11-13 at Hampshire College in Amherst, MA. Over 140 workshops will cover a wide range of topics ranging from livestock handling to soap making, from Cuban organic agriculture to nutrition. A keynote address from Lynn Miller, Oregon horse farmer and publisher of The Small Farmer's Journal, promises to be inspiring and informative. Lots of teen and children's workshops are planned as well.*

#### ORGANIC FARMING



**Rooted in the dirt.**

*The Saturday afternoon country fair is fun for young and old with a variety of games, contests, exhibitions, a parade, farmers' market*

*continued on next page*

## CHANGING TECHNOLOGIES, CHANGING VALUES

**O**n March 29th and 30th, a New England conference on Sustainable Agriculture was held for Cooperative Extension and USDA Agency personnel and growers. Approximately 250 participants gathered to look intensively at what sustainability means to our region, and how each of us can define it for ourselves in a functional way so as to begin to effect changes in our daily planning and practices.

The first keynote speaker was Fred Kirschenmann, a biodynamic grain and livestock farmer from south central North Dakota. He laid the groundwork for the group presenting two paradigms of agriculture — the industrial and the ecological. In the industrial model the grower produces a commodity as cheaply as possible, controlling nature and maximizing efficiency by means of specialization, uniformity and economies of scale. The market focus is global and the accounting focus is short term costs. In the ecological model, the grower produces nourishment, while balancing economic viability, envi-

ronmental protection and social responsibility. The market focus is regional and the accounting focus is broad, long-range cost.

The second keynote speaker was Greg Watson, who has integrated agriculture and the environment at the New Alchemy Institute, the Mass. Department of Food and Agriculture, and the Nature Conservancy. Addressing the topic of endangered species, Greg detailed the recent redirection of focus of the Nature Conservancy. The prevailing thinking in the past was to preserve sanctuaries by buying parcels of land; now that is seen as too limiting, so the focus has changed to protecting rural areas through the promotion of sustainable agriculture. Thus the principle responsibility for preserving wildlife in America falls to the farmers and their advisors.

Ten workshops were offered, to break up the immense topic into manageable parts: Improved Decision-Making through Whole Farm Analysis; Techniques for Evaluating Alternative Products and En-

*Continued on next page*

## HOLDING THE QUALITY OF YOUR MARKET

**B**eing able to grow quality organic produce requires a lot of skill and patience. Don't throw all that effort away in the time between harvest and sale in the market! Be as sharp in handling crops to be shipped as you were in producing them.

New Hampshire summers can be hot and sticky, and fruits and veggies can be just as affected by sun and heat as you. Here are some steps to take to preserve nutrients, flavor and overall quality.

1. Pick only in the coolest part of the day, early morning preferred (plants lost previ-

ous day's heat overnight).

2. Cool produce to remove field heat ASAP after picking; enzymes and bacteria in the fruit or greens begin spoilage if not cooled. Hydro-cooling with cold well water in an old bathtub works well, or buy a \$30,000 commercial hydro-cooler like those used on the West Coast. A soak in an ole tub for 15-20 minutes does the same thing. Keep in the shade, under wet burlap, in a cooler or cellar, until leaving the farm.

3. Wash your goods! Remove spines from cucumbers and squash, to slow dehydra-

*Continued on page 3*



# NOFA PROFILES

Charlie Reid has lived in Nottingham for 20 years, having located there as a caretaker for the old Kelsey Farm. In a few years, he purchased a part of the farm to develop as an organic haven for his strong values concerning the environment, the way people eat and how they raise and feed their livestock — in particular, poultry. He built his own timber-framed house and outbuildings from lumber sawn on the property. He developed a small spring-fed trout pond, and is restoring an old apple orchard. Stone Wall Farm has several small growing plots and Charlie would like to clear more of the land for crops. He has used all of his organic chicken manure in the gardens, and earthworms “come up like spaghetti when plants are pulled.” He feels that rototilling kills many worms, so he turns his raised beds with a sod fork. There is a greenhouse constructed of pallets, pvc electrical conduit and other salvaged and scrounged goods. He has made several smaller portable wire and plastic cloches for herb and pea beds to get an early start. Charlie has a commercial aluminum and glass greenhouse off his kitchen that heats the house and hot water on sunny days. Stone Wall Farm is a NH Certified Organic

farm, and many gardening projects are in progress, along with raspberries, and blue- and blackberries. Charlie grows corn “in circles, with beans, like the Indians did”, putting compost in the middle. He adds seaweed and leaves to the hen manure — then chops it with a lawnmower.

Reid says that chickens fed organically grown grains do better, and the manure does not have any strong odors. He feels so strongly about this, that he is planning to set up a mill on the farm to grind organic grains into animal feeds. He has the milling equipment, and plans to put up a barn to store and sell the product. He has over 150 farms interested in buying his feeds, and a grower in New York (Inverness Farm) to supply Certified organic corn, oats, wheat, soy, etc. to his mill. Associated Press and MOFGA have done features on Charlie's farm and poultry ideas. He supports his farming projects as a licensed auctioneer and appraiser, traveling all of New England.

He feels that groups like NOFA need to educate the public more, especially school children about organics, and its effects on life and health. Charlie Reid uses all of his 27 years of organic experience to promote that everyday.

## Changing Continued from Page 1

terprises; Building Consumer Enthusiasm for Agriculture; Crop Rotations to Manage Nutrients, Pests and Markets; Diversifying Markets for Economic Survival; What Leads to Change on the Farm?; Quality of Life—How Can Farmers Get More of it?; Environmental Issues and Regulations, A Pro-Active Approach; Participatory Research—Linking Producers, Extension and Scientists; and, Managing Animals for Health.

The format was unusual. At each workshop there were two presentations, one by a farmer and another by an extension agent. These were followed by Study Circles in which 10-20 participants spoke their minds about what was presented. The explicit purpose was to promote conversation in a non-hierarchical setting, and to come up with specific action recommendations. Occasionally the discussion was heated, as people revealed their perceptions and mistrust. It quickly became apparent that many farmers mistrust environmentalists because of the rising num-

ber of regulations over farm practices. Others, both farmers and extension agents, mistrust sustainability “types” because of their use of scare tactics around the use of chemicals. The beauty of the Study Circles was that these perceptions were freely discussed and analyzed. Some of the fears were partially dispelled as people began to understand that their livelihood would not be threatened by sustainability.

For the two NOFA-NH “types” there (Rick Estes also attended), the conference provided a fascinating view of the sensitivities and conflicting values driving agriculture in this state. Seen as a process and not an end, the concept of sustainability was definitely advanced. At the same time, the gathering brought to light an incredible degree of mistrust amongst farmers, extension agents and agency personnel, environmentalists, regulators and scientists. Hey, perhaps it's time for us to start talking to each other.

—Caroline Robinson

## Summer Conference continued from page 1

and trick horse show. There will be lots of entertainment to choose from as well — movies, contra dancing, a rock and roll party, a coffee-house, story-telling, an organic wine tasting and a debate might make it hard to choose!

Meat eaters, vegetarians and vegans will all find lots of delicious organic food at the conference. Full meals are available throughout the weekend as well as snacks and beverages from the NOFA Nibbles concession stand. Thanks to donations of food last year, meal prices will actually go down some this year.

For registration information, call Julie Rawson at (508) 355-2853 or write to her at 411 Sheldon Rd., Barre, MA 01005. If you'd be willing to publicize the conference by putting up posters in your neighborhood, please contact Julie to obtain posters. Your help would be greatly appreciated!

—Bob German

### Correction

In the last issue we listed sources for organic seeds. The correct address for FEDCO Seeds should have been: FEDCO Seeds PO Box 520 Waterville, ME 04903-0520 Apologies to all for any inconvenience caused.





Rich Houston (left) says there are ways to reduce dependence on antibiotics as the sole cure for mastitis. Veterinarian Dave Hoke took in Houston's talk.

## Practices can reduce need for antibiotics

By Gus Howe

At the Changing Technologies and Changing Values conference held in Waterville Valley, N.H., March 29-30, Rich Houston of Contoocook, N.H., presented herd health guidelines used on his family's 155-cow herd.

"The following is an outline that you may find useful in reducing your dependency on antibiotics as the only treatment for clinical mastitis," said Houston.

### Chronic Cow:

1) Strip out her milk to look for garget. Do you recognize it as a "killer mastitis"? If you think so, it may be best to put her on an effective antibiotic immediately, especially if it's a hot summer day and you fear it may be E. Coli.

2) Administer 1 cc oxytocin. Take a California Mastitis Test to confirm the severity of infection and to see if it has spread to another quarter.

3) Milk her out completely, using any squeezing and kneading necessary to get all the milk and garget out. Go to records to get her somatic cell history. Check health records to see what worked the last time. If she was treated many times before or if she has a high somatic cell count, antibiotics probably won't clear her up anyway.

4) Milk her out again after 10 to 15 minutes have gone by. You'd be surprised how much more you can get out.

5) Probiotic, 2 pills the first day, one pill once each day for three days. Cow cud is an alternate choice.

6) Take her temperature. If very high, it gives an idea how sick she is.

7) Listen to her with a stethoscope. Is she ruminating? Smell her. Does she have a mild or severe ketosis? If so, consider either propylene glycol (if mild and ruminating), IV glucose, or 1/2 pound bypass fat with or without limestone.

8) Let her go and see what she does. Does she look unthrifty? Does she go lie down or does she go eat and drink with the rest of them? If she walks unsteadily she may need IV calcium.

9) You need to get her eating if she's not. Administer sugar IV twice a day for as long as she needs it. Hypertonic once a day for two days. This will make her drink. She needs access to water immediately for the next few hours. One cup bicarb, one cup Epsom salt as a drench, if she looks like she is going off feed.

10) Administer Re-covr IV 30 cc once a day for two days. This reduces swelling, makes them feel better, is quicker than aspirin, and can be used on cows not ruminating. Aspirin is an alternate choice. Re-covr has a 24 hour withholding.

11) Administer Naxcel 10 to 15 cc. Use with more discretion. Once a day only, intra-muscular.

12) Milk her out as much as possible, the more the better. If no change for the better is seen within 12 to 24 hours, resort to the best possible antibiotics.

### New Infection:

1) The difference here is that the cow has no past history of treatment nor does she have a high somatic cell count. Her resistance to infection may be lower. If in the summer, and she is under heat stress, be inclined to treat sooner with antibiotics, as it may be possible to clear up the infection and prevent her from becoming a chronic cow.

2) Follow steps 1) through 12) above if the severity of the infection warrants. Consider not using Naxcel if full antibiotic treatment may be considered.

3) When she is let go, if she shows marked signs of being unthrifty, consider fallback antibiotic treatment.

# Ecological farming called future of ag

By Gus Howe

The future of agriculture relies upon the rapidly growing concept of sustainable agriculture.

At the Changing Technologies and Changing Values Conference held at Waterville Valley, N.H., on March 29-30, farmer Fred Kirschenmann from Windsor, N.D., defined sustainable agriculture as ecological farming and broke the concept down into a set of practices and analogies that are easy to grasp.

According to Kirschenmann, the criteria for sustainable agriculture includes the following standards for managing an ecological ecosystem: not using nonrenewable resources faster than you can find replacements, or faster than nature can replace them; not polluting faster than nature can clean it up; safeguarding inter-generational equity;

and needing to maintain adequate people-to-land ratio.

"The agriculture industry has two options," said Kirschenmann, "to fix the present system, assuming the industrial model of agriculture is the best and most efficient system possible; or to rethink the whole system and undergo a conceptual revolution, to create an ecological model of agriculture. I am an advocate of the latter."

Kirschenmann said that the social mandate for agriculture has long been the industrial model but argued that "For us to assume that we know the nature system well enough to control it is a mistake." He said that as we depend more and more on inputs (research) we become less dependent on the ecological balance of resources, and "nature will eventually win."

Kirschenmann described the following differences in ideology between the long-supported industrial model of agriculture and the sustainable, or ecological, model of agriculture.

● Goals: "The goal of the industrial model is to produce as much food as cheaply as possible, whereas the goal of

the ecological model is to do that in such a way that preserves the environment and protects the nutrients in the land," he said.

● Food Ethic: "The industrial model considers food a commodity and treats it as such. The ecological model evaluates food by nutrition, the pleasure of good eating, where the food comes from, how it is handled along the way."

● Farm Ethic: "The industrial model views the farm as a factory of inputs and outputs, with the emphasis placed on farm inputs. The ecological model views the farm as an organism, placing more attention on what is going on within the farm, for example recycling, predator-prey relationships, ecosystems, etc."

● Operation Principle: "The industrial model uses the operating principle of controlling and conquering nature. The ecological model places

**Change will eventually happen when the costs start increasing to the point that a change will be forced. Eventually it will be less and less viable to maintain the industrial model.**

the emphasis on harmony within nature, conquest and adaptation, which "is where it begins to get interesting economically," said Kirschenmann.

● Tools: "The industrial model relies on hard technologies based on nonrenewable resources, while the ecological model relies on soft technology, based on renewable resources."

● Efficiencies: "The industrial model measures efficiency by productivity, mainly achieved through specialization, uniformity, standardization, maximizing production, labor and economics of scope."

The ecological model measures efficiency in land and energy through diversity, symbiosis, mutual benefits, optimizing production, overall production of a range of nutrients over the long term, and the economics of scope as well as the economics of scale.

● Success: "The industrial model measures success by labor efficiency, quantity of production and the portion of earned income spent on food. The ecological model looks at total efficiency of the farm, not just labor efficiency."

● Market Focus: "The industrial model focuses on the entire world as a global market, while the ecological model emphasizes the importance of efficiency of regional food systems for community food security."

● Research Focus: "The industrial model views research as a vertical crop improvement, eliminating defects and introducing desirable traits in a single organism which, said Kirschenmann, has been reductionist, monoculture and specialized, with work done mostly in laboratories. The ecological model utilizes research for horizontal crop improvement, encouraging diversity of genetic mosaics of plants for more complex gene pool and include more organisms in benefits. This method emphasizes whole systems research, managing biodiversity, and research will be increasingly participatory (including sociologists, economists, farmers, etc. in research)."

● Accounting: "The industrial model looks at the short-term "now" costs of the bottom line, whereas the ecological model takes all costs into consideration, like nutrients and resource losses."

Kirschenmann concluded that "Change will eventually happen when the costs start increasing to the point that a change will be forced. Eventually it will be less and less viable to maintain the industrial model."

## Livestock Roundup

# Holistic approach improves quality of life and profits for farmers

By Roger Clapp  
Livestock Marketing Specialist

Fred Kirshenmann does not look like a nut, and few would describe him that way. But his unconventional attitude towards agriculture holds the germ that is changing our understanding of our relation to the earth and what we're doing on it.

The North Dakota grain and livestock farmer was keynote speaker at the "Changing Technologies and Changing Values Conference" in Waterville Valley, NH. Mar 29-30. Kirshenmann manages a 3,000 acre farm in the summer and talks in the winter. This year he was talking about the limitations inherent in trying to fix the system. While he applauded advances in reducing pesticides, improving nutrient placement and increasing the efficiency of marketing channels, he noted that these still leave us on the technology, economic and ecological treadmills. As quick as we get ahead, we get behind again.

Kirshenmann decided to step off and develop a biological alternative to the industrial approach to agriculture along with fellow visionaries Paul Thagart, Willard Cochrane and Stewart Smith among others. Now, instead of looking at economies of scale, he looks at economies of scope. He manages for land/energy effi-

ciency, feeding the livestock on his crops and cycling the nutrients back into the soil to avoid costly inputs. He also manages for bio-diversity and figures social and ecological concerns into his cost/benefit accounting. Judging from his beaming countenance, the man is rich.

Vermont farmers also extolled the virtues of adopting a whole farm or holistic approach to their operations. Richard Wiswall of East Montpelier reported that he had begun to despair of ever making any money after 10 years as a vegetable farmer. After taking a holistic resource management (HRM) training course, he began to see his entire farm as a solar energy collector. His concept of the wooded areas changed from a tax burden to a source of income to be managed for timber and recreation. His back meadow is no longer that place that he has to find time to brush-hog, but an area to use and restore by running cattle on it. He started managing his records, discontinuing crops like sweet corn that offer little if any margin and concentrating on crops that make him a profit. Setting up a CSA (see below) further reduced risk, evened out his cash flow and tied him into the community. He notes, "The whole process has allowed me to focus on what's important to me: my family, a mid-winter vacation to the south and I'm making

enough money to establish a retirement fund."

Mark and Sarah Russell talked about the changes that switching to rational grazing has brought to their 200 acre dairy farm in Sudbury. "The first great improvement is that we have an income at all," said Mark, explaining how they have been able to significantly cut production costs. Despite the fact the cows are outside year round veterinary bills are also way down. Switching to seasonal production has reduced stress on calves and their handlers. "We just took our first vacation in years and it's been great!"

The UVM Center for Sustainable Agriculture deserves great credit for their organizing efforts in pulling the conference together. Included in the program were state caucuses where we tried to prioritize what we were going to bring back to Vermont. Here are a few things on my "action list":

1. Encourage community-based farming. The benefits of community supported agriculture (CSA) include direct marketing, community investment and access to operating capital. Community mem-

bers buy shares in advance in return for fresh produce, eggs and other products throughout the season. The movement is growing but needs encouragement. We will get out a press release to local papers and other media by April 27. We would like to encourage them to highlight local CSAs in the area by updating last year's directory. So please send information including the contact person's name, address, phone and share information to me at this address or 828-3830.

Lindsey Ketchel will be doing the same for farmers' markets. We can discuss other concepts like public farms, farm-shed associations and adopt-a-farm programs.

2. Agri-Tourism. Our Dept. has worked on several projects from the Cloverleaf Trail to Family Farm Vacations linking tourism and agriculture. However, just as the Travel & Tourism budget is being increased by millions of dollars, our promotion budget is getting whacked to less than a third of what it was in 1990. It is time to forge alliances to keep the importance of our working landscape and rural communities out in front of

decision makers, tourists and the producers themselves. Already Travel & Tourism is distributing our brochures at Welcome Centers and this link can be strengthened. We are working on a seminar to inform farmers how to generate income from tourism without ruining their quality of life. In the larger view, agri-tourism will lead us into the issues of land stewardship and property tax reform.

3. HRM Training. A first step here would be a name change. Many people react to the word "holistic" with the claim that they have never inhaled and don't plan to start. But holistic resource management is really a decision-making tool that allows you to balance your options against clearly defined goals for your life, your family, your farm and your community. While we need to help identify and support new forms of diversified agriculture, we also need to empower individuals to choose and implement the solutions that fit their farm and personal values. So, we're looking for ways to offer more HRM training and incorporate it into other program offerings.

♦♦♦♦

## LETTERS TO THE EDITOR

The opinions of these letters are not necessarily the opinions of the staff and management of *Country Folks*. Readers are invited to submit letters to the editor: *Country Folks*, P.O. Box 121, Palatine Bridge, NY 13428. FAX: 518/673-2699.

Dear *Country Folks*:

We are responding to Patricia Green's amazingly cynical article on the N.E. Sustainable Agriculture Conference. We find it hard to believe that she attended the same conference we did. We found it to be a very stimulating dialogue on defining, doing, supporting, and promoting sustainable agriculture. We felt that the "bashing Extension" and the close minded criticism was the exception rather than the rule. Most of us who are attempting to practice some form of sustainable agriculture will admit that we were educated, trained and participated in the "Industrial Model".

We don't see traditional farmers as "short-sighted, greedy opportunists", as Patricia Green implied. Rather, we sympathize with our fellow farmers who are struggling, not only with Mother Nature's fickle moods, but also with a society which doesn't understand that we all depend on the land to survive.

The fact that the types of people attending this conference were as varied as the colors of Joseph's coat, shows that this conference represented the full spectrum of agriculture in the North East. It is to be expected at a gathering this varied there will be disagree-

ment. However, the changes to programs, research, and farms resulting will be more meaningful because of the variety of the participants. It is too easy to be like Ms. Green and get hung up on the labels and stereotypes that allow us all to be mistrustful and snide about the people and practices that we stick them on. We need to realize these stereotypes for what they are: mere words that divide the farming community against itself. We felt the objective of this conference was to move beyond the disagreements and stereotypes to the common ground. The common ground is that all of us involved in agriculture, regardless of how, want farms to be viable now and for generations to come. That, in a nutshell, is sustainable agriculture. The focus of this conference was how to implement this concept in extension programs, university research, and out on the farm. Patricia Green missed the point by accentuating the negative elements and ignoring positive and constructive discussion which pervaded the conference.

Sincerely,

Mark and Sarah Russell  
Sudbury, VT

See Pat Green's reply Below.

much attention was focused on the emotional aspect of farming, or why people farm aside from money. Warm fuzzy feelings of comfort and contentment were cited. Others wondered how they could change farmers' attitudes to accept lower yields that resulted from lower inputs. In one particular case, an Extension Educator lamented the fact that he could not get a farmer to accept somewhat lower yields even if he saw substantial savings. What he failed to realize was that to that farmer, the attainment of high cow production averages was his measure of success, and thus his warm and fuzzy feeling of farming.

It is unfortunate that you felt I was mistrustful and snide about the people and practices of sustainable agriculture. On the contrary, last summer I participated in a wonderful two day bus tour of sustainable agriculture practices that covered three states. I wrote a five part series on the tour and highlighted the achievement and successes of the operations.

In agreeing to attend the conference, I hoped that it would present that same can-do, practical, hand-on approach to sustainable agriculture that I had found on the tour. Instead, in my opinion, the conference spent too much time on theory, spiritual fulfillment, and our differences than it did on education and enlightenment.

We did little to bridge the gap between the environmental community and the farming community that Greg Watson spoke of. I believe that it was not I who missed the point, but the conference, that had drawn some of the finest agricultural minds in the Northeast together, that missed the mark.

Sincerely,

Patricia Green

Barber Ledge Farm  
Mark and Sarah Russell  
RD 1, Box 1273  
Sudbury, VT 05733

Dear Mr. & Mrs. Russell,

I am writing to you in response to your letter to the editor regarding my article on the NE Sustainable Agriculture Conference in New Hampshire. Let me begin by noting that it was unfortunate that the article had to be printed in two parts, due to its length. I am afraid that took some of the balance I felt Greg Watson's speech gave to the article. I hope you have seen the remainder of the article, printed in the April 24 issue, on page A8.

I am sorry you found the article cynical, although I am not surprised. It is never easy to write an article that is critical of a conference where obviously so much work and intensity went into its preparation. However, from my perspective, and from that of many others whom I have spoken with since the conference, it was decidedly one-sided and critical of the scientific agricultural community. I conceded that for the most part, those whom I have spoken with have been from that community.

You are right when you conclude that it was hard to believe we attended the same conference. In essence, we did not. As my article noted, there were ten different workshops, each broken into study circles and each given at least twice. The different participants brought different views, and thus the discussion and conclusions drawn

reflected the opinions of those who attended. It was for that reason I chose to focus my attention on the speeches of the two key-note speakers, Fred Kirschenmann and Greg Watson. My article also noted "all participants were individuals who came to the conference from different positions and postures." While I tried to present both sides opinions, we obviously approached the conference from different perspectives.

As a point of information, you should know that I transcribe each speech completely from the tape recordings I take of the conferences I attend. Kirschenmann's and Watson's quotes and conclusions are taken directly from those transcriptions. I did not imply that sustainable agriculturalists saw agriculture in such stark black and white terms as Kirschenmann did. However, you cannot deny that these were his words, thoughts and implications.

It is never easy to be the one to stand up and say "the Emperor has no clothes," but there are times I feel it is necessary. It is important for those who advocate low-input, non-chemical agricultural practices to understand that this approach will NOT work for everyone. We must be tolerant of others' views and opinions and work as an agricultural community, accepting of each others' thoughts. In my opinion, that was not the case in many of the workshops I attended.

For example, in one workshop,

# N.E. Sustainable Agriculture Conference: Changing Technologies And Changing Values

By Patricia Green

"Fringe Farming" Or Agriculture's Future?"

WATERVILLE VALLEY, NH - Dressed in the garb of their culture they came, business suits and shiny shoes or handknit wool sweaters and sandals. Some undecided wore cotton. They came to New Hampshire's yuppie paradise, a ski resort, to discuss agriculture's future, with views as different as their attire.

The two-day conference was part of a New England wide sustainable agriculture Extension training program funded by the USDA SARE program. It's stated purpose was to increase the ability of state and federal agencies and farmers "to develop and maintain sustainable agriculture, protect the natural environment, and strengthen rural communities." Focus was to be on production practices for improved cropping systems, and the development of skills to help build a broader base of support for the survival of agriculture.

But, as in the proverbial "East meets West", the varied and distinct cultures of agriculture, although civil in their manners, were harsh in their words, bashing Extension and labeling them ineffective in their teachings and impractical in their advice. Traditional Universities were charged with perpetuating "the industrial agriculture model" destined to be the doom of the hope of any ecological balance, and were accused of undertaking research without any practical application.

On the other hand, "sustainable agriculturalists" were labeled as "fringe farmers" with the conference as fringy as an oriental rug! Some felt the proposed "improvements" were backward and impractical. Others expressed discouragement, wondering why they were there.

From the very beginning controversy arose. Although Fred Magdoff, Northeast Region coordinator for the SARE program told those gathered that no one under the SARE program was to be perceived as the bad guy, the conference's opening keynote speaker Frederick Kirschenmann painted a different picture. With a doctorate in philosophy, and after a career as a University teacher and administrator, Kirschenmann returned to the family farm in South Dakota converting its 3,100 acres into one of the largest "certified Biodynamic farms in North America." Active in numerous sustainable and organic agriculture movements, Kirschenmann helped found "Farm Verified Organic", a private organic certification agency, and now serves as its president.

Although Kirschenmann concluded that sustainable agriculture could not be easily defined by a set of practices, he listed five criteria by which most could agree would define "sustainable".

The first stated that sustainable agriculture did not use non-renewable resources any faster than man could find substitutes. **Secondly**, it does not use renewable resources any faster than nature can regenerate them.

**Thirdly**, sustainable agriculture must not generate pollution "any faster than the earth's planetary sinks can dissi-

pate or disperse it" and must safeguard inter-generation equity.

**Fourth**, in order for sustainable agriculture to thrive, the maintenance of an adequate "people to land ratio" must be kept to insure competent ecologically sound ecosystems. Viewing each farm as its own "local ecosystem", Kirschenmann said each must be managed differently.

It was at this point, however, that Kirschenmann took sides, and drew the dividing line, separating agriculture into two separate and distinct factions: industrial agriculture versus the model of ecological agriculture.

Kirschenmann said some thought the present system of agriculture (industrial model) could be fixed by reducing chemical inputs; being more precise in nutrient placement; and through the further utilization of "the new wave of technology" or genetic engineering.

Kirschenmann disagreed, stating the entire system needed to be rethought calling it a "conceptual revolution" on the magnitude of "a Darwinian or Copernican revolution." A different way of thinking about agriculture. Merely fixing the old system would not meet the previously stated criteria he felt defined sustainable agriculture.

## Two Opposing Approaches To Agriculture

With no shades of gray, Kirschenmann defined agriculture as two different "paradigms" or models, "almost diametrically opposed approaches to agriculture".

"The ideology that drives the way of thinking of these two models of agriculture are quite different," Kirschenmann concluded, noting the ideology of the industrial model was clearly "a productionist ideology, produce as much food as cheaply as possible. PERIOD! That's the goal of industrial agriculture".

"In the ecological model of agriculture, we're really talking about an ecological ideology, an ecological way of thinking. We're not just interested in producing as much food at an affordable price as possible, but we're talking about doing that in a way that protects the environment, preserves the resource base, that treats animals properly. There's a whole list of connections."

Kirschenmann concluded that ecological agriculturalists had a different kind of "food ethic" an ethic that underlied the two different paradigms of agriculture. He further determined that industrial agriculturalists, or traditional producers, viewed their food product as a commodity where as in the ecological model, those people were more interested in, or had more of a relationship with, the food they produced.

"Food is one of the most intimate acts that we perform. It's what we take into our bodies", he said calling this almost spiritual relationship with food "the quiet revolution."

Kirschenmann went on to compare the industrial paradigm of agriculture with a factory while the ecological model was viewed as "an organism... a natural cycling system."

The operating principle for industrial agriculture was seen as the controlling



RUTH HAZZARD, University of Massachusetts, entomologist worked with the study circle from the workshop on "What leads to change on the farm?"



THERESA FREUND, Connecticut agricultural entrepreneur and vegetable farmer takes advantage of the Connecticut state caucus to market her home-grown popcorn. Freund, one of the workshop speakers, developed a busy farm stand to supplement income on the family dairy farm.



GREG WATSON - Evening Keynote Speaker told participants to form coalitions and bridge the gap between the environmental and agricultural communities. Former Commissioner of Agriculture for the Commonwealth of Massachusetts, and former Eastern Regional Director of the Nature Conservancy, Watson now consults on issues of sustainable economic development.



FREDERICK KIRSCHENMANN - Keynote speaker. Biodynamic farmer from North Dakota said industrial agriculture and ecological agriculture were "almost diametrically opposed approaches." Kirschenmann serves on the USDA National Sustainable Agriculture Advisory Council and the Science and Education National Research Initiative Advisory Council. He is a former University teacher of philosophy and administrator.

with nature was sought. Economically,

(cont. on pg. A-8)

## NE Sustainable Ag. Conference

(cont. from pg. A-2)

sought. Economically, industrial agriculturalists were said to be on treadmills of making more money to make more product. Ecologists, however, apparently never fall for that trap.

Again, industrialists choose hard based non-renewable technologies, according to Kirschenmann, while ecologists soft, renewable technologies. Industrialists look only to labor efficiencies while ecologists seek land and energy efficiencies as well.

Kirschenmann labeled "industrial agriculturists" as shortsighted, greedy opportunists whose only measure of success was the bottom line, damn the consequences. Ecological agriculturalists, however, were painted as kinder, gentler, even poorer souls, who thought more about the world as a whole, cared about the planet but produced for the local food shed.

Kirschenmann's conclusion brought approval and agreement from some, but questions of doubt and disagreement from others.

Far from bridging the gap of traditional agriculture to new sustainable possibilities, it set the tone for the adversarial mood that permeated many of the workshops and sessions that followed.

### Workshops Cover Many Topics

Ten workshops with thought provoking topics, each pertaining to a different sustainable agricultural facet were offered to the conference participants. Some involved the probing of technical practices, while others delved into theory and problem solving.

One workshop explored reasons why farmers change practices and cultures, additionally looking into why many resist change. Presenter John Roberts, a Vermont dairy farmer, discussed how he went about changing to round bale silage storage. In his case, much research went into his conversion before he decided it was the most efficient way to store silage. He also converted from a confinement operation to intensive rotational grazing four years ago and is pleased with his decision.

While John Roberts is a farmer who can view all the options and is capable and willing to change, many farmers aren't quite as flexible. Whether they are hindered by fear of failure or economic considerations, many only speak of change, but few follow through.

When the workshop broke into smaller study circles, participants sat down and openly discussed reasons farmers resist change and what finally pushes them into action. It was noted that farmers, in general are a skeptical lot, untrusting of change or experimental ideas. They need visual examples, like split field applications and rarely trust research results unless

they are seen on the farm.

The conclusion was drawn that farmers were more apt to believe another farmer before they believed a researcher.

This was quite disheartening to many of the Extension Educators and USDA employees who felt they personally had presented themselves and their information in an honest and straightforward manner. Most had never had their integrity questioned before.

The question of trust and who do you trust was raised. Media hype of all degrees of "scientific research and finding" had made many skeptical of all science.

Some spoke of taking another approach to change, a planned, expected change as might be brought on by following a holistic farm management approach. Encouraging the pro-active, rather than the re-active, approach to change was discussed.

It was concluded that in order to become "more believable" extension needed to include risk assessment along with its recommendations. Researchers need to listen better and communicate more, opening up the process to share information.

Farmers considering change need to spend more time planning and broaden their basis for gathering information. Computer networking and bulletin boards were seen as a possible mechanism for exchange of ideas.

Conference participants were given the opportunity to exchange ideas on Sustainable agriculture in their individual state caucus sessions. Their suggestions were made on how the information and data could be taken back to the states and

utilized.

It was noted that all participants were individuals who came to the conference from different positions and postures. The question was then posed: How does sustainable agriculture relate to you? Is it practical? Could it be of use in your situation?

### Greg Watson... Technology Is Not The Culprit

The evening's keynote speaker was Greg Watson, former Commissioner of the Massachusetts Department of Food and Agri-

culture and Director of the The Nature Conservancy's Eastern Regional Office. Watson recently resigned his post to consult on issues of sustainable economic development for the Conservancy and other organizations.

Continued next week.

## N.E. Sustainable Agriculture Conference

### Con't From Last Week

By Patricia Green

#### Greg Watson... Technology Is Not The Culprit

The evening's Keynote Speaker was Greg Watson, former Commissioner of the Massachusetts Department of Food and Agriculture and Director of The Nature Conservancy's Eastern Regional Office. Watson recently resigned his post to consult on issues of sustainable economic development for the Conservancy and other organizations.

Watson spoke of the need to bridge the gap between the environmental community and the farming community, telling those gathered that alliances needed to be formed. He conceded that there were still suspicions between the two groups, but concluded the success of sustainable agriculture was critical to everyone's agenda.

Although Watson didn't draw as wide a line between industrial and ecological agriculture as Fred Kirschenmann did, he did point out that present farm policy was being driven by the industrial model, and if Northeasterners wanted to see a change in farm policy, they'd better start working on that now, for the future.

He encouraged those interested in the future of sustainable agriculture, to build new coalitions which included consumers. He also said that to him, sustainable agriculture was as much a process as it was a final product. Although Watson wasn't sure "sustainability" could ever actually be reached, society could continue to move toward it's goals.

Watson spoke of his career at New Alchemy Institute in the early 1970's when, as one of the first organizations to address alternative agriculture practices, they were pointing to situations they felt needed change, and worked to develop tools and technologies to address those issues.

"Technology is not the culprit", Watson said, "its our use of technologies and its the options of the technologies that are made available to us... society has not been presented with the full menu of options that are available to finding ways of producing food, energy and shelter in environmentally sound ways."

Watson said that "organic" was an important "sub-set" of sustainable agriculture, but also that agricultural economics must be addressed. Chemical reductions must not lead to yield reductions.

Watson spoke about developing "new tools" and practices for producing food and talked about the new breed of entrepreneur who are integrating such things as aquaculture and agriculture.

Watson concluded by saying systemic changes need to be made in agriculture and he encouraged agriculturalists to be

honest and courageous in making some fundamental changes. He reflected on the fact that we needed to develop food systems and the ability to look at the world differently to solve problems.

"Get beyond the reductionist, linear approach to solving problems and take a broader view. Look at it systemically, and understand the way things happen in this world."

# Rotating crops can reduce pests naturally

By Gus Howe

Ruth Hazzard, University of Massachusetts Cooperative Extension System, said that crop rotations are an important element in terms of building an ecological agriculture system.

"Crop rotations have many positive effects in a farm system, such as building soils, reducing weeds and fostering beneficial organisms," said Hazzard at the Changing Technologies and Changing Values Conference held in Waterville Valley, N.H., March 29-30.

"Other cultural practices can be integrated with crop rotation to further reduce the success of pathogens and herbivores in colonizing the crop," said Hazzard.

Before understanding how helpful crop rotation will be in reducing the pest below damaging levels, one must understand the

biology of each insect or pathogen.

**Host range:** a crop rotation is more effective if the pest has a narrow host range. One must consider what crop families, specific crops, or cultivars it feeds on, as well as non-crop plants that may be hosts.

**Overwinter:** Where does the pest overwinter and how well does it survive outside the host? Hazzard said common overwintering sites and off-crop habitats include soil, stubble, crop residue, or weeds in the field; litter, soil, weeds or woods outside the field; or other regions outside New England.

**Common life stages for overwintering/resting include insects:** late stage of larval growth, pupa, adult or egg; pathogens: as toughened chlamydospores or sclerotia; as fungal or bacterial growth inside crop

tissue; in seeds; in insect vectors.

**Colonization:** One must consider when and how does the pest colonize the crop, what its dispersal range is, what environmental conditions favor successful dispersal, whether or not the pest actively orients to the crop, and how rapidly and

successfully the pest reproduces and spreads through a crop. Rotations will be less effective if the pest has a wide host range; overwinters away from the host; has a long dispersal range; is a migratory pest; or is a non-soil-borne pathogen.

## Crop rotation lowers costs

Continued from p. 20.

Following different rotations: 1) an animal base, with wheat, oats, clover, corn and soybeans; 2) a legume base, with barley, soybeans, corn, and clover; and 3) a corn and soybean rotation.

In system 1, said Janke, both clover and corn were utilized as sources of nitrogen. In system 2, the clover was frost-seeded into wheat or vetch.

"In both of the first two systems we relied on weed competition and cultivation for weed control, which was fairly successful," said Janke.

For the first three years of the trial, corn was the only crop that increased

in yield, yet after that initial transition period, the yields averaged the same from year to year. With the other systems yields averaged the same from the beginning.

"When comparing the different cropping systems we learned not to start a rotation with corn, but to start with a different crop," said Janke. "All in all, the variability was higher with the conventional system versus the low input system."

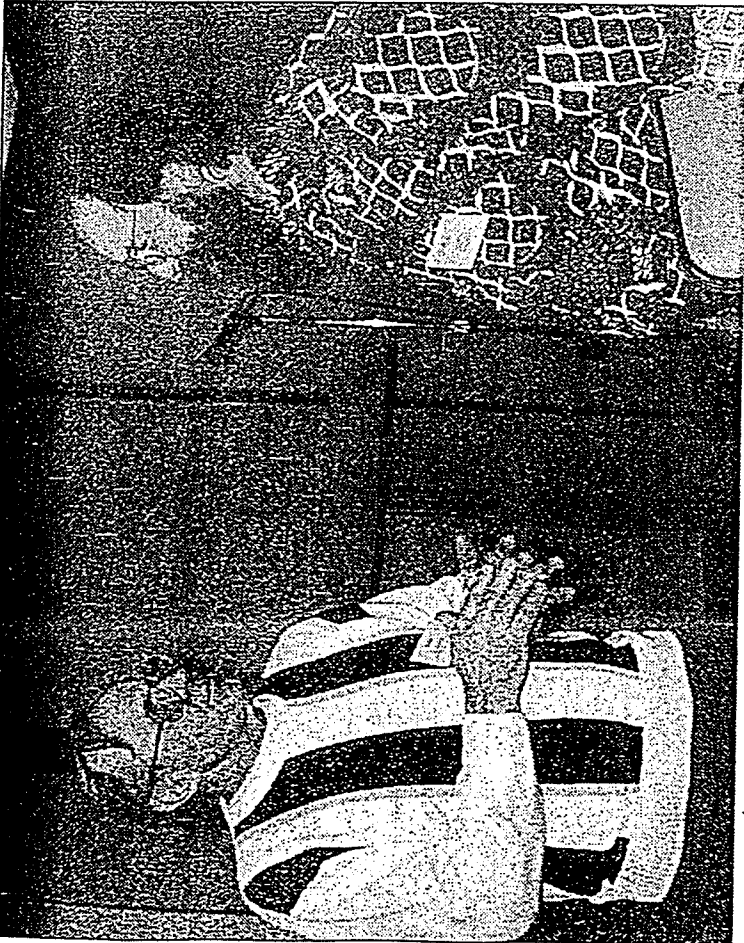
The short-term cash value of rotations is that a farmer can spend less money on production costs and can still achieve consistent yields, making more money with less input.

Soil quality, said Janke, is relative to crop production, environmental quality, and health/food quality.

"We found that soil carbon went up slightly with the first system, increased in the second, but in the third system with corn and soybean rotation we failed to maintain even the organic matter that we started with," said Janke.

"Therefore rotations affect soil stability and water filtration rate, which is relative to the holding stability, tilth, aeration, and biological activity of the soil."

Janke said researchers plan to continue to look at the water aspect of the soil quality equation.



## West meets East

Fred Kirschenmann, of Windsor, N.D. (left), talks to Don Minto of Jamestown, R.I., during the Changing Technologies Conference in Waterville Valley, N.H., March 29-30. Kirschenmann addressed the meeting on sustainable agriculture as ecological farming.

• See stories, pages 20-23.

20 New England Farmer, May 1995

## Crop rotation offers advantages

By Gus Howe

Crop rotation can change your life. At least that's the position taken by Rhonda Janke, who spoke on the subject at the Changing Technologies and Changing Values Conference.

The conference was held March 29-30 in Waterville Valley, N.H.

Sustainable Agriculture Extension Specialist, told farmers that soil quality, yield and economics are all improved by long-term crop rotation.

According to Janke, switching to crop rotation improves economic, environment, consumer health and quality of life by: lowering costs and

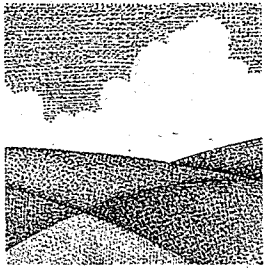
regenerating the resource base, improving food quality, and improving personal and family relationships and self-reliance.

"Rotations are all about efficiency, substitution and redesign," said Janke. A farm systems trial with 120-day corn and an average rainfall of 42



Rhonda Janke (left) with Ruth Hazzard, who also spoke to the group about crop rotation.





# Cultivating Connections

The Newsletter of the Center  
for Sustainable Agriculture  
at the University of Vermont  
& State Agricultural College

VOLUME I / NUMBER 3

AUTUMN 1995

## FROM THE DIRECTOR

### Linking Agriculture and the Community

There are many types of connections that affect the sustainability of agriculture. Ecological connections on the farm are a central focus of the sustainable agriculture "movement." For example, connections among pest, crop, habitat and predator are the basis of biological pest control; connections among soil biology, physical condition, nutrient cycles and organic matter underlie soil stewardship; and connections among forage species, grazing intensity, climate, and livestock are key to pasture productivity.

Recognizing and gaining understanding of such on-farm connections are critical to the long-term health of agriculture. But that is not enough. Agriculture does not take place in a vacuum; it is intertwined with our social and economic fabric. Therefore, to be truly sustainable for generations to come, a healthy agro-ecosystem must be accompanied by markets that allow for profitability and public policies that are supportive of farms and farmers.

Conservative disciples of sustainable agriculture argue that the concept does not include socio-economic issues. The irony of such an argument is that while substantial progress is being made on farm-level issues of ecology, we're losing ground on social and economic issues that are not supportive of those who choose agriculture as a way of life. Across the country, land grant colleges, farmers and others are developing ecologically-sound agricultural practices that are productive and also protective of natural resources. But to gain ground toward stable, vibrant, productive and healthy farms, we

(Continued on next page.)



## Ag Agencies Learn New Approaches to Planning and Decision-making

Recently, Extension, Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA) personnel from throughout New England gathered to learn about a new approach to planning and decision-making. About 50 agency employees attended one of two workshops on Holistic Resource Management (HRM) held during the last week of September. HRM is a comprehensive goal-setting, decision-making and monitoring process. It is a tool being adopted by more and more farmers, agencies, families, and communities throughout the country.

The Center for Sustainable Agriculture organized the workshops as part of the New England Sustainable Agriculture Extension Training Program. This program, funded through the Northeast Sustainable Agriculture & Education (SARE) Program is aimed at providing professional development opportunities in sustainable agriculture for Extension and other USDA agency personnel. The planning committee overseeing the project includes extension and agency personnel from all six New England states and staff from the Maine Organic Farmers & Gardeners Association and the Northeast Organic Farming Association of Vermont.

In March of this year, the New England project sponsored a regional conference called *Changing Technologies, Changing Values* in Waterville Valley, New Hampshire, attended by about 250 Extension, NRCS, FSA employees and farmers. The purpose of the conference was to train extension and other USDA agency personnel in sustainable agriculture concepts and practices.

(Continued on next page.)

(“Linking Agriculture and the Community,” continued from page 1.) must fully incorporate socio-economic issues into our agricultural agenda, alongside production issues. Just as farmers must integrate market, labor, regulatory, business and family issues with production, so too must academia, agencies and government become more cognizant of the context in which farming takes place.

*Cultivating Connections* attempts to put into practice this broad vision. We will include coverage of progressive agricultural research (see *The Road to Developing Greenhouse Biocontrols*, p.3) and extension programs (*Ag Agencies Learn New Approaches to Planning and Decision-making*, p. 1). You will also find articles about youth education (*Institute Sows Seeds of Understanding and Educational Change*, p.4) and about networks of people working on specific issues. Plus, we’ll do our best to alert you to courses, farm meetings, tours and conferences related to sustainable agriculture (see calendar insert), although by no means can we list all such events. And finally, we include a “farm profile” (*The Farm Between*, p.5) that tells a true-life story of how production and social connections are integrated on a farm.

While it is difficult to describe all the ways in which farms connect with society, the strongest links between farming and other aspects of life in Vermont have in common their dependence upon our “working landscape.” ~~The well-must also fully incorporate socio-economic issues into our agricultural agenda,~~ being of our farms and forests is inextricably tied to the maintenance of Vermont’s working landscape.

*Cultivating Connections*, a newsletter of the Center for Sustainable Agriculture at the University of Vermont and State Agricultural College, is produced quarterly to encourage people with a diversity of interests to collaborate in fostering an understanding of agricultural issues that will lead to personal, institutional, organizational, and community decisions that encourage farming in Vermont.

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The University of Vermont Extension System and U.S. Department of Agriculture, cooperating, offer education and employment to everyone without regard to race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status.



(“Ag Agencies Learn New Approaches to Planning and Decision-making,” continued from page 1.)

One of the recommendations for further training needs of participants was information on whole systems approaches to farm management and planning.

Many of the people who attended the trainings were looking for new tools to use as they work with farmer clients facing ever more complex situations regarding the management of their resources. The decisions farmers and their advisors face are no longer simple production-based decisions. They are complex and, at times, laden with conflicting goals and pressures. The HRM process helps people begin planning and decision-making by identifying the values upon which their decisions will be based. Users are then encouraged to develop a comprehensive goal which includes the quality of life they hope to achieve for themselves and their families, based on the forms of production available to them and what they want their future landscape to look like.

Cathy Roth, an Extension faculty member from the Berkshire region of Massachusetts commented that, “By using the model, people learned that they can make decisions based on what’s important to them. The people in this workshop were able to really see how values and goals could drive decisions.” Some of the NRCS employees who attended could see the possibilities of HRM being useful as they work with farmers. Heidi Smith from Dover, New Hampshire hopes to use HRM as she works on conservation plans with farmers.

Some participants challenged the value of the process relative to existing methods. There was considerable discussion about this issue. HRM trainers emphasized, however, that new and more comprehensive methods were needed to deal with the economic, environmental, and community pressures that farmers in New England face.

FSA district director Bruce Lake from Woodsville, New Hampshire agreed. Lake stated, “It was refreshing to learn about this HRM process and see its potential for agriculture. To me, this is what sustainable agriculture is all about. . . and learning about HRM helps me break down old barriers and limitations to see the whole picture and helps guide me in a more positive, productive direction.”



## FOCUS ON RESEARCH

*This issue of Cultivating Connections marks the beginning of a column we plan to include as a regular segment in this newsletter: Focus on Research. We will look at innovative research projects conducted in Vermont that aim to enhance agriculture in the state and beyond.*

# The Road to Developing Greenhouse Biocontrols

The UVM Entomology Research Laboratory is an international leader in research for management of pear thrips, a pest that surfaced as a serious defoliator of Vermont maple stands in 1988. The research team, composed of entomologists Bruce Parker and Margaret Skinner, insect pathologist Michael Brownbridge, and a handful of lab technicians and graduate students, work closely to study entomopathogenic or insect-killing fungi as a pest management tool. These fungi, originally found by the team in Vermont forests, attack and kill select insects including pear thrips.

## Fungi as Greenhouse Control

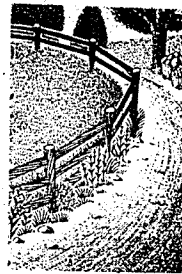
The team has since expanded its research to investigate the use of entomopathogenic fungi to combat two major greenhouse pests: western flower thrips and sweet potato or silver leaf whitefly. These insects attack greenhouse-grown ornamental and vegetable crops in the northeast, but are of world-wide significance on a wide range of economically important crops. The team focused on greenhouse pests for a couple of reasons. Currently, there are few reliable controls for greenhouse insects except synthetic insecticides, and many greenhouse producers rely heavily on these pesticides. In fact, the greenhouse industry is currently the largest user of pesticides in U.S. agriculture in terms of active ingredient per acre. The threat of pest resistance to these chemicals, and concerns about environmental quality and worker safety lead the team to search for an alternative pest management tool that is safe and effective. Although there are many "beneficial" insects (predators and parasitoids) available for use "under glass," these insects are often pest-specific and can be difficult to manage effectively.

"Some of these beneficials do not provide reliable control throughout the year," said Michael Brownbridge, "and there are often problems related to quality control of shipments which critically affect their performance."

The team also believes that the information they generate in their research can be utilized beyond Vermont and even internationally, as many large greenhouse producers are located throughout Europe.

Their ultimate goal is to find a way to fit the fungal control method into current greenhouse production systems, be they conventional, chemical-intensive management systems or ones which use a variety of "alternative" controls like predacious insects. "There is no such thing as a 'silver bullet' in insect control," stated Brownbridge, "It is becoming increasingly clear that no single strategy is going to solve all greenhouse problems. We must look at a total approach to pest management not just our one component."

## Research Takes Time



The team has identified several effective-fungal strains to control each greenhouse pest and is presently evaluating these for control of whitefly on poinsettia plants and thrips on chrysanthemum. The road to developing the fungi as a pest management tool is complex and challenging. "Our research is a long-term process," said Bruce Parker, the research team's leader. "We needed to answer some very basic questions about the pests before even thinking about how to develop a control for them." The team is studying the life cycles of the greenhouse pests to determine population thresholds and when, in their development, they might be most susceptible to the fungi.

"In order to deliver an effective pest management tool, we must first research all variables involved," said Margaret Skinner, "and the number of variables we are dealing with is astounding." In order to determine the optimal way to use fungi in a pest management strategy, the team is looking at several aspects. They will examine how best to target fungal preparations against the insects. They need to find out which method of formulating the fungi works best against the target pests--for example, fungi can be formulated as wettable powders, in oil, or as granules--and at how dose rate (and hence the amount of material required to control the pests) affects performance, and how temperature affects efficiency of the fungi. In addition, the team is looking at the impact of different spray equipment on efficacy.

They are also investigating how compatible the fungi are with other pest management strategies, both chemical

and biological, to determine how the different control tactics can be used together in an integrated pest management approach.

"Coming up with solutions takes time," said Parker, "and we feel it is important to communicate our results with the industry at each step along the way." During this phase of their research, the team is soliciting input from greenhouse operators to help them gain an understanding of management issues. "Research does not happen in a vacuum," said Margaret Skinner. "In order to have an effective, usable end product, we must include the industry." Tom Doubleday, head grower of Claussen's Greenhouse, one of the largest greenhouse operators in the state, serves as a liaison between greenhouse growers and the research team. In addition, the team has formed a regional advisory group, made up of growers, extension specialists, and researchers, to help them better identify growers' needs and implementation of new management strategies.

### Team Approach is Key

All three researchers agree that a team approach is key to the success of their research. The complexity of the research requires an interdisciplinary approach.

"Everything is inter-related," said Margaret Skinner. "To understand and enhance the efficacy of the fungus, we must understand the biology of the target insect, so entomologists and insect pathologists must work closely to put together the pieces of the puzzle."

Thrips and whiteflies continue to account for major economic losses in the greenhouse industry. Chemical control options are decreasing as a result of resistance and increased restrictions on chemical pesticide use. Consumer pressures to have "chemical free" plants are also fueling the need to look beyond the single chemical component pest management approach.

Entomopathogenic fungi may not totally replace chemical insecticides, but their use will ultimately contribute to minimizing chemical inputs in greenhouse production. Results from the research at the Entomology Lab indicate that insect pathogenic fungi show great promise for use in a biorational IPM program, and will promote more sustainable, cost-effective management strategies that are safer for humans and the environment.



## K-12 SUSTAINABLE AGRICULTURE EDUCATION

# Institute Sows Seeds of Understanding and Educational Change



by David Rogers

*David is a lecturer in the Department of Animal and Food Sciences at the University of Vermont and co-organizer of the UVM Agroecology Institute.*

The second UVM Agroecology Institute for high school teachers and students was held this summer from July 9-15. Twenty high school students and twelve high school science, math, and social studies teachers from all over Vermont spent a week living on campus and investigating important ecological and social aspects of food production, marketing and consumption. The institute, a project of the Center, is designed to increase Vermonters' awareness and understanding of the food system.

It was a busy and diverse week of activity on the farm, in the field, laboratory, and community. Teachers and students worked in teams, analyzing their meals and food purchasing decisions. They studied plant and soil relationships, investigated IPM techniques, were introduced to innovative composting technologies, and conducted surveys of Burlington food programs. They discussed food preferences in other cultures, sustainability of ocean fishstocks, and the importance of developing and supporting local food systems. Over twenty faculty and staff in the College of Agriculture and Life Sciences were involved in developing and delivering the institute.

A major goal of the institute is to stimulate and support Vermont high school teachers and school systems in developing new curricula and teaching methods using the food system as a central theme. In the weeks following the institute, most of the teachers created new units and curriculum initiatives using a variety of ideas, content, and teaching methods featured at the institute.

For example, Lisa Davidson of Mill River High School in North Clarendon, Vermont returned from the institute to plan a school-wide cafeteria composting project with her environmental science students. At the Putney School, Lisa

Holderness developed food and consumer surveys for use in her rural studies class. These and other initiatives are being implemented in Vermont high school science and social studies classes this fall. Institute staff will be available throughout the year to help teachers locate technical information, faculty, and resource people, and to provide other resources needed to successfully implement and further develop institute-related teaching and learning.

By any measure, this year's Agroecology Institute was a great success. Without exception, participants found the week to be personally rewarding and valuable, "a real consciousness-raiser." As participant Alyson Mahony, social studies teacher at Chelsea Public School, put it, "The connections between saving farmlands and small farms, feeding the poor, restoring damaged soil and clean water, and living sustainably world-wide seem obvious after a week at the Agroecology Institute. At this point, it seems vital for institutes and programs like this to be offered around the world." We heartily agree and hope to secure funding to support continued development and delivery of the Agroecology Institute next year...and beyond.

For more information about the institute, contact Elizabeth Seyler.

The 1995 Agroecology Institute was funded by grants from the Vermont Institute for Science, Math and Technology; the Vermont Department of Education Higher Education Program; the American Agriculturist Foundation, Ltd.; the ES-USDA-Renewable Resources Extension Act; and the Windham Foundation.

## FARM PROFILE

# The Farm Between

**J**ohn and Nancy Hayden operate The Farm Between, on Route 15 in Jeffersonville, Vermont. On 18 acres, they raise poultry, pork, lamb, organic vegetables and berries. They try to use production practices that build and maintain healthy soils and marketing strategies that create strong links with the local community.

Through a "client membership" program, people can order locally grown animal products ahead of time. Currently, 22 families sign up annually for lamb, pork, chicken, turkey and/or horticultural products by making a \$50 deposit by the first of May. The deposit goes toward production costs. Membership is not required to place an order, but it guarantees receipt of items that are in limited supply and entitles the member to a 5% discount on produce.



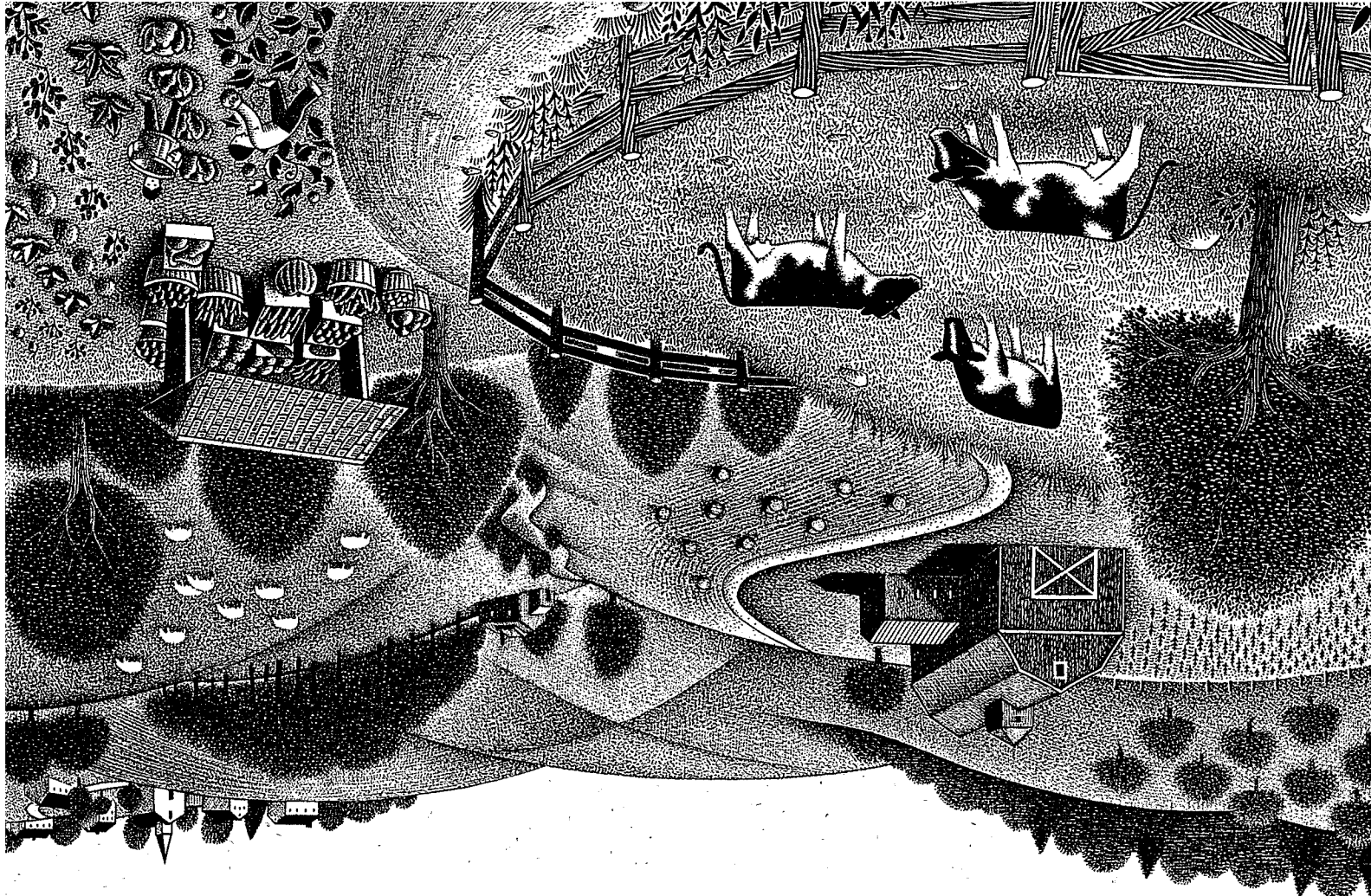
John notes that his prices for poultry are quite a bit higher than ones found in the supermarket but, "there's no comparison in terms of quality of flavor and texture of our pasture-fed birds." The labor-intensive nature of poultry pasturing requires the price premium. "People who buy our birds know that we raise them in uncrowded and humane conditions, which are quite different from how conventional birds are reared in factory-like situations." Their grass-finished lambs and fresh pork also have that home-grown quality, but the prices are more comparable to conventional ones because the labor inputs are lower.

John slaughters all the poultry in a converted milkhouse--about 500 chickens and 120 turkeys this year. The state allows up to 1,000 birds of each species to be sold directly from the farm. While there is no official inspection requirement in his case, John invited the state meat inspector out from the Vermont Department of Agriculture to look things over.

The Haydens have been pasturing poultry for 3 years, and John feels it works well to convert grass into a marketable product. It also leaves the soil well-manured for following vegetable crops like pumpkins. The pasturing pens are 10 x 14-foot hoop houses made from 1" PVC tubing attached to pressure-treated skids. The top of the tubing is covered with plastic and chicken wire is attached around the sides. Used lumber tarps laid over the plastic provide shade. Two pairs of lawnmower wheels rigged together are placed under the frame, enabling one person to move the hoop houses to fresh pasture.

In addition to memberships and local restaurant sales, this year a retail stand was opened on the farm. In 1996, it will be open from strawberry season until mid-October. The farm stand is part of an informal partnership with David Marchant, who farms in Fairfax, about 8 miles west of Jeffersonville along the Lamoille River. He provides the strawberries, lettuce, tomatoes, sweet corn, melons, and other "big ticket" items. John and Nancy raise the "odds and ends," like flowers, herbs, cherry tomatoes and raspberries.

John's varied professional experiences have provided a strong base for his innovative farming and marketing approaches. He earned a Master's degree in entomology from Michigan State University, was in the Peace Corps in Mali, West Africa, and worked in pest management and water quality extension positions before coming to Vermont in 1992. He is currently a member of the Vermont Vegetable and Berry Growers' Association and Northeast Organic Farming Association of Vermont (NOFA-VT),



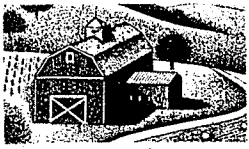
*The Center for*

# **Sustainable Agriculture**

*at the University of Vermont and State Agricultural College*

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# Sustainable Agriculture Calendar of Events

*All events are held in Vermont unless otherwise indicated.*

<b>Date</b>	<b>Event</b>	<b>Place</b>	<b>Contact</b>
October 14	Connecticut River Valley Grazing Conference	Bradford	Jean Conklin, (603) 787-6944
October 18	PMOP <sup>1</sup> Pasture Walk: Butterworks Farm	Westfield	Joshua Silman, 656-0641
October 18, 21	Herbs and Winter Health: The Herbal Approach to Building and Maintaining Winter Wellness	Hinesburg	Barbara Nordozzi, 482-3500
October 19	Sustainable Rural Community Development Seminar: The New England Experience	Burlington	Nancy Koenig, 656-1018
October 21	Cattle Sale	E. Middlebury	Allen Hitchcock, 763-2319
October 21- November 11	Women's Ag. Network <i>Growing Places</i> Course	Berlin	WAgN Office, 656-3276
October 23-25	Generating Wealth from the Land HRM Course	Hyde Park	Joshua Silman, 656-0641
October 26	RFFVVRP Rural Health & Safety Conference	Colchester	Kathy Mason, 773-3349
October 26-28	National Agrability Project Workshop	Burlington	Kathy Mason, 773-3349
October 27	Vermont's Troubled Waters: Issues and Opportunities for Community Action	Montpelier	Christine Negra, 223-2328
October 27-28	Growing Home: An Introduction to Permaculture Design & Bioregional Living	Brinkhaven, Ohio	Bill Wealand, (800) 282-0740
October 28	Education for a Green World: Integrating the Environment and School Curriculum for the 21st Century	Rutland	Vermont Academy of Arts and Sciences, 235-2302
November 2	SNR Seminar Series: <sup>2</sup> Institutional Racism in Natural Resources	Burlington	UVM School of Natural Resources, 656-8683

<b>Date</b>	<b>Event</b>	<b>Place</b>	<b>Contact</b>
November 3, 10, 17	Agricultural Financial Management Course	White River Junction	Rick Wackernagel, 656-1020
November 4-5	Farmer to Farmer Conference	Bar Harbor, ME	Maine Organic Farmers & Gardeners Association, (207) 622-3118
November 5-8	North American Symposium: Linkages among Farming Systems & Communities	Ames, Iowa	Sue Jarnagin, (515) 292-6802
November 8-9	1995 Income Tax School	Colchester	Chuck Bigalow, 656-1021
November 11	Conifers Workshop	South Burlington	Friends of the Hort. Farm, 864-3073
November 13, 20, 27	Agricultural Financial Management Course	Newport	Rick Wackernagel, 656-1020
November 14, 21, 29	Agricultural Financial Management Course	Rutland	Rick Wackernagel, 656-1020
November 15-16	1995 Income Tax School	White River Junction	Chuck Bigalow, 656-1021
November 15, 22, 29	Agricultural Financial Management Course	Montpelier	Rick Wackernagel, 656-1020
November 16	SNR Seminar Series: Native American Perspective on Natural Resources Management	Burlington	UVM School of Natural Resources, 656-8683
November 16-17	"Environmental Enhancement through Agriculture" Conference	Boston, MA	William Lockeretz, (617) 627-3223
November 10-12	10th Annual Sustainable Agriculture Conference	Black Mountain, NC	Marjorie Bender, (919) 968-1030
December 12-14	New England Vegetable and Berry Conference and Trade Show	Sturbridge, MA	Vern Grubinger, 257-7967

<sup>1</sup>PMOP. The UVM Pasture Management Outreach Program

<sup>2</sup>SNR Seminar Series. The UVM School of Natural Resources seminar series. This year series focuses on appreciating diversity in natural resources.

*The Sustainable Agriculture Calendar of Events is published quarterly by the Center for Sustainable Agriculture at the University of Vermont and State Agricultural College, 590 Main Street, Burlington, Vermont 05405-0059. If you would like to post an event, please contact Debra Heleba at (802) 656-0233.*



## APPENDIX F

### Post-conference evaluation results

## Changing Values and Changing Technologies Conference Evaluation Results

98 evaluations returned. Figures are # of actual responses.

### 1. How would you rate this conference overall?

1- 21

2- 47

3- 24

4- 3

5- 1

#### Comments:

- Eventually, the workshops got to the point at hand but much of the conference lost focus on reality.
- Though provoking discussion of agriculture philosophy; would have liked more concrete information on methods related to workshop titles.
- Too much philosophies and "farmers should do this." The connections in our state were wonderful. Didn't come away with a lot of hands-on info. from the presentations.
- I expected this conference to be more instructional and informational with less concentration on dialogue and discussion.
- I wish the study circle times were shorter, enabling one to see more talks.
- Much info. did not apply.
- Doesn't deal (enough? at all?) with sustainability in workshops. Conventional presenters (for the most).
- It is not up to my expectation or what the conference title says.
- The farmers invited to this conference were, in my opinion, not mainstream farmers. It would be very beneficial to have farmers who do not have the same view point on sustainable agriculture This would have made the study groups very interesting.
- I believe that too many topics were covered. Fewer topics with more in-depth discussion would be beneficial in the future.
- Was very grateful that I was asked to attend, should have been held earlier in the year.
- Good start.
- Very inspirational and gave vision for the future.
- Need more farmers in relation to Extension Service and agency people.
- An excellent start. Very well organized and a good balance of lecture versus study group time.
- Very well organized, good speakers.
- Could have used more formal information delivery.
- Very well organized. A nice blend of people including women in agriculture and agencies.
- Very well organized. Good spectrum of participants.
- Study circles and participant exchange of ideas were very valuable.
- What exactly is a PARADIGM?!
- Well thought out and implemented.
- A lot of fun. Felt like people were motivated to take action instead of just talking and complaining.
- Want to see it extended to state follow-up of ideas.
- From standpoint of organization [was rated excellent] but was anybody listening??
- A little too long. Should have stopped at Thursday lunch.
- We should have focused on Fred Kirschmann's definition of sustainable agriculture. He ignored his own definition.
- Too oriented toward cooperative extension staff, etc. which is fine and necessary. As a farmer, I am glad to participate.
- Very nicely done! Good job! Some of the moderators didn't keep track of time.
- Good facilitators.

-Thank you for the opportunity to attend and participate.  
-I was able to do a lot of networking with people in my state. I feel our conversations were much more productive in this medium. I hope the actions we've decided to take within our state (and NE) happen--and soon!!

## 2. How would you evaluate keynote speakers?

*Fred Kirschenmann*

*Greg Watson*

1- 42

1- 30

2- 22

2- 34

3- 20

3- 24

4- 8

4- 3

5- 3

5- 0

### *Comments:*

- Fred Kirschenmann-Controversial. Greg Watson-Dynamic.
- These were wonderful, thought-provoking keynotes, commonly referred to in other contexts throughout the conference. I'd love to have each speak for more time and lead discussions at upcoming conferences. They were great.
- Greg speaks too fast and too long. I was also at the end of concentration to really hear him.
- Both speakers were very eloquent. Greg was at the end of a long day and shouldn't have taken questions.
- Fred's all or nothing approach serves to drive a wedge between producers who should instead be able to pick and choose between his two categories and not what fits their farm region, etc. Seems the ability to be profitable and continue farming is an important criteria he overlooks.
- Fred's talk should have been more applicable to New England agriculture and not corn and soybeans.
- Keynote speakers provided me with motivation.
- Fred Kirschenmann-Boring.
- Fred was excellent! Outstanding.
- John Ikerd gave a much better overview of sustainable agriculture I did not really understand what we were doing until his talk.
- Speakers should not have used overheads if people could not see them, should have had professionally developed slides.
- Maybe a little "light" on solid content or new insights/perspectives.
- In a vacuum, their comments have merit, in the real world, they appear to be hopelessly out of touch with traditional agriculture.
- Fred's [?] story was inappropriate; unfortunately, he did not realize there were 2 sides to the room!
- Fred Kirschenmann-I think he antagonized some more "industrial" farmers by labelling them.
- Fred Kirschenmann-Needs better overheads. Greg Watson-Spoke too fast. Better use of microphones, repeat questions from audience, should have had a hand out copy of speaker's overheads (Fred's) so it is easier to follow along.
- Fred should have been used more, may not have agreed with him but he had some good basic philosophy about sustainability. His comments could be discussed further in small groups.
- Robert from RI gave a nice closing statement.
- Greg's presentation is always worth hearing.
- Greg Watson was interesting and conveyed enough energy to keep us awake after supper late at night.
- Fred: Good on paradigm. Should have taken enough time to link to own farm. Greg: Missed chance to talk about how farmers/environmentalists can link up at local level. Robert Miller: Too resigned to letting industrial model hold sway/New England as an enclave.
- Need speakers that can relate to the agricultural make-up of the area. They come to speak in--there must be local speakers who can relate better.

- Helpful with paradigm shift--enthusiastic.
- Fred a bit sexist--at least "exclusive", good job describing two paradigms. Felt he misses total food cycle loop and community. Thought Fred's optimism, encouragement and emphasis on holism and developing human community was excellent.
- Fred Kirschenmann-Needs a lesson in overheads.
- I disliked Fred's judgements of all "production = bad" and "holistic = good" bullshit.
- Fred Kirschenmann-Captivating but a bit unrealistic in some expectations.
- Robert Miller-Excellent closing [rated "1+"].
- Fred had a good definition of sustainable agriculture; however, I see no value in emphasizing the impossibility of progress through compromise and incremental change.
- Greg's presentation was too late in the evening--would have been better as a luncheon speaker.
- I really liked Fred's summary. Very succinct and to the point.

### 3. How would you evaluate the workshops?

Improved Decision-Making	Eval. Altern. Products & Enterprises	Building Consumer Enthusiasm	Crop Rotations	Diversifying Markets
1- 4	1- 7	1- 9	1- 5	1- 10
2- 17	2- 19	2- 10	2- 22	2- 11
3- 14	3- 11	3- 5	3- 11	3- 3
4- 7	4- 3	4- 5	4- 1	4- 3
5- 1	5- 0	5- 2	5- 0	5- 0

What Leads to Change on the Farm?	Quality of Life	Environmental Issues and Regulations	Participatory Research	Managing Animals for Health
1- 4	1- 6	1- 7	1- 8	1- 3
2- 12	2- 13	2- 18	2- 5	2- 13
3- 13	3- 7	3- 10	3- 7	3- 6
4- 3	4- 3	4- 4	4- 1	4- 2
5- 0	5- 3	5- 0	5- 0	5- 1

#### Comments on workshop presenters:

- Most suggestions were too general--not specific enough.
- BST and confinement dairy farming isn't sustainable. The dramatic different philosophies of the presenters was uncomfortable in the animal health workshop.
- Some were effective, others were not.
- Theresa who talked about her family's dairy and farmstand was the star of the entire program. Her enthusiasm and practical advice is more of what this conference should have contained.
- No time to analyze their ideas. They are selling a religion and expect you to believe without analysis.
- Some speakers did not hit the target on subject matter.
- Frustrated, I wandered from workshop to workshop during the third session, didn't relate to any presenter/presentation, didn't find any expertise valuable to my own experience and very little openness to changes (in values, systems, techniques, etc.).
- What leads to change? I was looking for ideas on how to reach people--this did not meet by expectations.
- Consumer Enthusiasm: No time to share with each other--presenters were good though. Went to Thursday "Consumer" discussion group--group was too divided to be useful.

- It would have been nicer to have less no. of workshops and more time for each individual one. It would have more impact if workshops cover specific areas rather than generalizing everything thereby losing context.
- Should have invited more farms with opposite views, i.e., industrial paradigm.
- The goal of the workshop is very important. The workshop titles were interesting to me but I believe that the presenters' discussions did not meet the idea the title implied.
- The farmer presenters were often the best presenters. They could be improved by having less "college lecture" presentation styles.
- Farmer presentations were very good. Need to remember that New England has a lot of expertise. People from away aren't always better.
- If speakers provided summarized handouts of their presentations, they could be useful for review and resource file.
- I liked the lively ones with controversy.
- John Gerber's interactive approach with farmer was good (better than two separate presentations.)
- Improved Decision-Making: This workshop did not present the material as listed in the course descriptions. I was very disappointed with this session.
- Well, people certainly were looking for improved quality of life on the farm.
- Whole Farm Analysis: Spent the whole time selling the concept of setting goals. Would be better to have examples of different goals, examples of different plans, how to relate plans to goals.
- Quality of Life: Did not talk about topics as written up.
- Most presenters were very good. However, they did not have enough lecture time. Some presenters did not adequately present their topics relative to the agenda titles.
- Evaluating Alternatives: Budget analysis (Mike Sciabarrasi) was dry--classroom delivery--no audience participation. Grower presentation (Paul Pieri) was excellent.
- Too little time for presentations. Either less presenters in each workshop or more time to present.
- Managing Animals: Liked David Hoke a lot--HRM links to Kirschenmann's "ecological" approach.
- Consumer Enthusiasm: Too general, need more care on language to not alienate. Whole Farm Analysis: Too general, no focus that encouraged actions. Environmental Issues: Alienating, language created more barriers than were overcome.
- Must stay on topic subject, not stray to subject of one local interest.
- Workshop speakers spoke often of HRM and never really explained what it was, if I'd had some of that knowledge prior to the conference, I might have felt more of a participant.
- Building Consumer Enthusiasm: Disappointed in selection of Lynda Simpkins as panelist. She seemed to have a haughty attitude and was on a different level from the listeners.
- The speakers for Building Consumer Enthusiasm and Quality of Life missed the point of the topic. In the Consumer Enthusiasm group, the woman from Natick was too exclusionary.
- The presenters and speakers put a wedge between two sectors of agriculture. The two sectors need to work cooperatively not adversarially. In reality, industrial agriculture has been driven to where it is by movement from rural to urban areas. Who is going to feed all these people? I doubt they will all move to rural areas and work toward becoming sustainable. But I may be wrong.
- Diversifying Market: Lynda does an excellent job of using real life examples on niche marketing...I could see her program expanded.
- Enjoyed the working farmers most.
- Sometimes it was difficult to relate the presentation to the theme of the concurrent session.
- Diversifying Markets: This me frustrating because the moderator did not limit the speakers not give time for Q&A.

*Comments on workshop content:*

- Crop rotations was a perfect model of research results, extension work and how does the farmer do it.
- More emphasis on science-based research.
- Maybe more emphasis should have given on changing technologies. Many attendees might have loved to listen to latest developments in research and taking their impacts or influence or role on

changing values.

- I would like to see a real tight interaction between the presenters in a workshop then a direction develop before speaking, and smaller group discussions of specifics.
- Would have liked to have seen more "traditional" farmers in the group for more idea exchange and better understanding between farmer groups.
- What Leads to Change: Needed more focus on the topic.
- Participatory Research: Well done but kind of a waste of time for growers--it's an obvious message. Audience for this should be the researchers. John ordered Tony around a lot--it was the same old hierarchical thing.
- Good cross section of subjects.
- Good idea to pair up Extension and farmers.
- Building Consumer Enthusiasm: Was not specific enough. Speakers were good but didn't offer concrete ways to meet this workshop subject. I understand the second day study circle was more effective.
- Leave time for study circles.
- Didn't enjoy the theoretical depths of Quality of Life. Let's get real and talk about day-to-day life on a farm.
- Crop Rotations: Excellent topic and presenters but this could have been its own conference!
- Managing Animals: Really brought out conventional versus new approach without "blows".
- Need a slightly heavier balance of farmers to gain critical balance in each group.
- Pull together Evaluating Alt. Products, Diversifying Markets, and Building Consumer; and Whole Farm, Crop Rotation, Environmental Issues, and Participatory Research.

*5a. How would you rate the value of the study circle format as a participatory learning model?*

- 1- 27
- 2- 42
- 3- 21
- 4- 2
- 5- 0

*Comments:*

- I think it's a great way to explore an issue and hear other view points. Dawn did an excellent job, by the way.
- Facilitators did not review the theme of the meeting. This led to wandering and listing everything whether pertinent or not.
- Worry less about training facilitators...focus on just a basic outline of how to focus the group.
- Caucuses need working groups formed and need following meeting of caucus group after working groups have met to ? and regroup.
- Good way for growers to discuss positive and negative aspects of their operation--even if it was tangential to actual topic.
- The best part!
- I loved the variety of people and experiences. The circle format allowed for a lot of interaction and sharing of wonderful ideas.
- Study circles (and maybe the conference as well) was not evenly balanced among farmers, extension, and "regulators."
- Promotes/forces interaction.
- Somewhat large to work effectively. Need space where circles don't overlap--too distracting.
- Study circles gave us time to get to know each other, more free time (other than meals) to get together informally would be good.
- Participants were very satisfied when all were able to speak and the group focused on the subject of the study circle. I enjoyed facilitating at this conference.

- Too much time allowed, some weren't well organized.
- Need to have facilitators try to keep discussion more focused on the subject at hand.
- 20 is too many in a circle--10 is ideal.
- The quality of the study circles depends on the quality of the facilitators.
- Facilitator's role is key, size of the group need to be kept down.
- I can't think of any better way to create a truly interactive atmosphere. However, I think moderators could have helped direct the conversation more. At times, discussion was diverted for too long by one or two people wanting to serve their own need.
- An excellent approach if it had been kept on track--but perhaps a high level of focus was not desired?
- Moderators need to make sure that a few people aren't allowed to dominate the talk.
- We often didn't stay on topic but it didn't matter.
- Excellent exchange--idea sessions!
- Excellent because everyone got to contribute. Sometimes the best ideas come from the quietest people.
- Frustrated me.
- Good process--Jeff and Karen make a great team! State caucus follow-up most critical--great!
- Need to make sure facilitators are trained and experienced in running these groups. Make sure that there is a full non-judgmental exchange of ideas.
- Generally well done but could have been better facilitated to cover each idea.
- Study circles stimulate participation and listening.
- The skills of communicating in a study circle varied with the group's members and many need more practice!
- Good idea, but participants found it hard to focus. It is really hard to come up with action items in such a short time.
- Dominated by special interest view points, but brought ideas to you.
- It is useful to have a discussion, but it is too much to expect a group to come up with an action plan after one and one-half hours on such wide ranging topics.
- The study circles I was in did not directly elaborate on the topic of the presentation mostly because the presentations were general and we wanted more specific examples to sink our teeth into.
- Excellent, as long as the facilitators do what they are supposed to do! The Mass. caucuses were facilitated very poorly.
- Some tendency to meander and get a bit "mushy"--maybe have a resource person pull things together at the end in a diagnostic framework?
- Depends heavily on the facilitator--does he/she allow people to go where they want with comments.
- Structure excellent, for some reason they didn't seem to click all the way.
- Not focused enough. Too much complaining and personal stories instead of problem solving. Need to define a charge or question, brainstorm issues, identify action.
- Mixed feelings--one group went well, other didn't, one was controlled by agency/extension folk, other wasn't, needed more discussion between organic/inorganic farmers.
- The study circles were not well run. There was not a clear focus or direction to the study circles. A better direction is needed.
- I feel the study circles are an excellent tool--but the rules should allow for a limited debate on "hot" issues. In one case, the facilitators did not stick to the subject, but allowed the group to go off on an unrelated issue(s).
- A facilitator with a good background or lots of experience in a specific area could help and bring more discussion to study circle. (This is a bit lacking in this conference.)
- Works well if mix is right!
- The facilitators did a great job, and it was not always easy. It could be a learning tool. It was a debate tool. What I learned is the hurdles in administration and agencies for changes. And they are the one supposed to propose/promote a model!
- Important to allow the participants to bring out their viewpoints as well, not just be lectured to by some rather questionable speakers.
- The study groups can work well or be a frustrating experience, based on the skill of the facilitator--

quality varied here.

-It was great for crop rotation but poor for animal health. It depended on the quality of the workshop to inspire good discussion.

-Best part.

-Works in most cases--can get a bit robust at times.

-Excellent diversity of people in group, unfortunately some of the ground rules were not effectively facilitated.

-Greatly improved the workshops--most valuable portion of seminar.

*5b. Will you use study circles in any of your own programs in the future?*

*Yes- 57*

*No- 14*

*Maybe- 6*

*Comments:*

-Probably.

-Perhaps, but select well-trained, competent facilitator.

-Have in past, not new idea.

-It's not new, been done, eg. farmer to farmer (MOFGA) organic agriculture conference.

-Maybe.

-In different formats.

-Already do, concept isn't new.

-Not sure.

-Possible.

-Maybe.

-Not yet.

-Perhaps.

-Vermont will use to follow up.

-Some elements of process.

-Maybe.

-Hope to.

-I have encountered successful use of study circles in the past.

*5c. Would you be interested in a two day training session on facilitating study circles?*

*Yes- 28*

*No- 57*

*Maybe- 1*

-Two days? Maybe one day.

-Maybe, I would like more information on how it works over a longer time.

-As I have used group process, focus groups, brainstorming mucho, I do not see need for 2 days.

-Already do.

-Not 2 days!

-Putting too much effort into this [facilitating].

*5d. Were you a study circle facilitator at this conference?*

*Yes- 9*

*No- 88*



6. *As a result of this conference, are there some things you will do differently when you go back to work in your home state?*

-I will try to use study circles.

-Yes, I am better acquainted with my CE counterparts and will make an effort to improve working relations. Listening to farmers told me that all of us have to do a better job listening! Lastly, agriculture has to be promoted as part of the community, not an appendage of some sort.

-Have food for thought about change.

-Yes, I will continue to encourage other people! I will try to educate myself on learning the sustainable agriculture process. I like the concept. But must learn the means!

-Possibly.

-Work more on getting the word out to the media.

-Yes, it will definitely have some impact on how I do my job.

-Town visioning group for role in agriculture in the community.

-As a grower, I have made extension contacts which will change how I go about growing in the sense that normally I do not use extension people in my growing practices.

-Continue to do more intensive holistic resource management teaching and living. It fit into this conference so well and is so effective in learning and decision making. Remain optimistic.

-No.

-Need to work to clarify underlying assumptions, areas of agreement/disagreement, get issues out on table.

-Yes, I will strive to give producers the confidence that we in USDA can offer them a source of information and a way to network openly across all types of agriculture.

-More concern about over-all farm. Make farming more environmentally sound.

-Yes, try to make legislature more aware of the importance of funding Extension, etc. Get their involvement in their community farms. Encourage a more ecological and holistic approach to farming. Encourage more consumer awareness to the benefits of sustainable agriculture and its produce.

-I am a grower. I would like to take the action of gathering the growers in our town to band together and break down barriers between organic/conventional, etc. -- support each other.

-Learn who does what at USDA, EPA, etc. Invite environmental groups to "converse" with agriculture industry.

-Yes.

-No.

-I heard someone (a grower) say that he will go back to his farm looking at all his enterprises in a holistic sense (to the extent of combining all the economic records, etc.) instead of separately. I will go back thinking of agricultural folks (farmers, researchers, extension, agency) in a more holistic sense.

-Hope to network more with other farmers and help set up these networks.

-Hard to say at this point.

-I don't know yet.

-Yes, more farmers input in design of trials. Hope to improve consumer agriculture education.

-Will consider using enterprise analysis and crop rotations. Cover crops as green manure as well as soil protection.

-Yes.

-Evaluate values more often. Adjust/manage operation to meet goals.

-Promote seasonal dairy.

-Emphasis that farmer needs to be integrated into community activities...and get out myself and talk to farmer about it.

-More HRM, more farmers together, more getting farmers and local community to dialogue and develop relationships.

-Try to facilitate discussion between groups who may feel antagonistic to each other.

-Yes.

- Yes, but I think this is something that needed to be better thought out. How are we going to bring this home and implement new ideas.
- Open up communications at local and state levels.
- Probably I will attempt to diversify my farm and get involved with educating non-farm people about agriculture.
- Yes, focus on bridging or helping to bridge conventional versus non-conventional type farmers.
- Actually what I am already doing is confirmed by the conference.
- Yes.
- Definitely. This conference helped me define what my role can be professionally and personally with regard to sustainable/holistic agriculture.
- Use study circles. Be sure to have representatives of sustainable agriculture in presentations.
- Attempt to define some focus for sustainable agriculture
- Change technological outlook.
- Yes, crop rotation will change.
- Talk to all farmers, environmental groups.
- Yes.
- We need to stop the division between organic versus traditional [agriculture]. We must view agriculture as a whole, not divisions there of.
- Work on facilitating communications.
- Insure that the viewpoints of traditional agriculture are not ignored.
- Will cast things in broader "environmental" decision frame. Will try to link more closely to New England and national farm economic planning and sustainable agriculture circles. Will be using in overseas consulting and volunteer work.
- Yes, try to work closer with agriculture agencies.
- Yes, will have a little broader, more open view of production agriculture
- General awareness development.
- Talk to anyone who will listen about the importance of sustainable agriculture
- Redefine "sustainable agriculture" and try to promote to more "industrial" farmers. Help farmers improve their community relations and build coalitions.
- Yes, will take the ideas of state caucus meetings.
- Yes, I will incorporate ideas that I heard into my philosophy. The workshops provided several ideas that I can use in my activities.
- Yes, whole farm planning.
- I have always believed that the purpose of agriculture research and education is to form betterment of agriculture and farm community.
- I see myself as a proactive (farmer, educator, organizer, artist) person. And I want to keep going this way with what I believe in.
- The conference essentially has reinforced my planning philosophy. It has motivated me to head out in directions at a pace that I may not have had, had I not attended the conference.
- I won't come to any more meetings. I would be better off working in the office.
- Encourage farmers to become more involved in the regulatory procedure.
- Nothing, I was surprised to see how far behind the other NE states were is sustaining agriculture, in comparison to NH.
- More marketing education for local growers as well as diversifying their markets.
- Yes, work more closely with other farmers and extension in Rhode Island.
- Learn more in order to communicate where people buy food is a political act; importance of promoting, educating about sustainable agriculture
- Yes.
- Yes.
- Yes, more communication and interaction.
- Yes, some goals and values were shared that I can and will promote through program leadership and administrative encouragement.
- Yes, try to communicate better, have respect for others' values/goals.

7. Please rate the conference facility.

How would you rate the conference site overall?

1- 38

2- 47

3- 9

4- 2

5- 0

-Conference organizers did a super job and were very friendly and helpful as well.

*the meeting rooms?*

1- 18

2- 45

3- 27

4- 3

5- 2

-Temperature control. Tables would be nice.

-No windows, hot.

-Smoke from utility area poured into classrooms--ugh!

-Cool.

-Conference rooms were extremely cold!!

-Poor ventilation.

-Stuffy.

-Some too small.

-No windows.

-Too hot.

*the food?*

1- 20

2- 31

3- 29

4- 10

5- 6

-Lunch was inadequate. Glasses dirty. Breakfast was good.

-Poor quality, not enough lunch first day. Organic? Local?

-It made me ill and uncomfortable.

-Terrible coffee.

-Poor food.

-Local? Sustainable? We have to walk the path we talk, eat the food we want to promote!

-Excellent except Thurs. lunch inadequate.

-Good that we were not over-fed.

-Quality was excellent, lunches were a little light for people doing a lot of traveling in same day.

-Would be good to have food be more local to reflect the principles of the conference.

-No choice.

-Quality excellent, selection poor. Need more than coffee/tea at breaks--some of us drink neither. Allergic to bean soup--no other option. Does planning group not eat dessert? Meat? Milk?

-Poor second day lunch.

-What happened to Thursday's lunch.

*helpfulness of staff?*

- 1- 30
- 2- 46
- 3- 11
- 4- 3
- 5- 0

-They would rather remove dirty dishes than serve food.

*the sleeping accommodations?*

- 1- 39
- 2- 46
- 3- 5
- 4- 1
- 5- 1

- Room smelled moldy.
- Whoaah, impressive.
- Too far from center.

*8. Did this conference meet your expectations?*

- Yes, it was great!
- Yes, once I better understood what the conference and study circles were about!
- Yes.
- Yes and beyond! It has challenged me!
- Yes.
- Yes, great networking opportunity.
- Yes, sustainable agriculture and agriculture community building and web forming was excellent.
- Going in I did not know what to expect. I think it was good to have contact between 3 groups (sustainable/conventional/extension). However, as an organic grower what I consider to be sustainable is totally different from a large scale dairy farmer.
- Yes, except as noted earlier.
- Yes! and then some.
- No, I am leaving this conference with the feeling that I never really belonged here in the first place. Most topics were carried out with a vagueness that made understanding the purpose of the conference difficult to grasp.
- Yes.
- No, a good deal of diversity; it took almost to the end to get people to talk across boundaries. This needs to happen earlier/more often/everywhere. Content of workshops very mixed.
- Yes, well coordinated and put together.
- Yes, it was very well organized and a very good strategy to involve many people in feeling they "own" the success of the conference. Pairing farmers with educators as speakers was great, having a variety of facilitators and moderators and the keynote speakers exposed all of us to a variety of people and abilities to interact with and feel comfortable with people of different values and professions.
- Still didn't tackle basic definition of sustainability.
- For the most part, yes. I think it gave agriculture agency personnel some clear directions.
- Definitely.
- A little overwhelming with the size of the group. But when I got into the sessions, the conference seemed more manageable.
- Yes, it met goal to educate CES/agency people--farmers were/seemed disappointed.
- Yes.
- Somewhat.

- Yes.
- Yes.
- Yes.
- Yes, in the sense of having the opportunity to interact with all types of agriculturalists. But no, in the sense of coming out with clear action steps.
- Yes.
- Yes, the interactions with such a varied group was very rewarding.
- Yes.
- Yes.
- No--exceeded!
- Yes.
- Yes.
- Heavy on extension--should have had more farmer participation.
- I don't like the assumptions made that all production agriculture is bad. I think both ideas are neither right or wrong.
- Expect nothing, seldom disappointed.
- Yes.
- No, I thought topics on animal health would be more specific; grass tetaracy[?]; organic needs versus conventional; disease prevention without drugs.
- Going away with Vermont caucus committed to follow-up action better then expectations.
- Networking, relationships great, too.
- Learned a great deal. Stimulating.
- More than met them.
- Yes.
- Yes.
- Yes.
- Yes and kept the flow moving smooth.
- Yes +.
- No, but that is not a disappointment. I expected to be listening, discussing more about specific products. But, happily, the greatest lessons were of a broader nature.
- Yes.
- Yes.
- Probably exceeded. I enjoyed and got a lot out of the interaction and exchanges.
- Had hoped for a lot of sources/contacts to take back to my organization to "spread the good word" in a non-threatening way. Hoped to be able to convince "industrial model" producers that sustainability is not a dirty word.
- Yes, some conversations got off topic but what came out was interesting and useful.
- Somewhat, reflected the wide divergence of views of what is agriculture as well as sustainable agriculture.
- More so.
- Yes.
- No, nothing new, basically a review of already started ideas, slow in making points. Willie Gibson as a panelist was not prepared, did not run the study on quality of life: poorly, never answered the questions even when asked.
- Yes.
- More so.
- Yes.
- No!
- Expected more content-more "meat".
- It's hard to say because I can't honestly say what my expectations were. Coming from a mainstream/traditional farming background, I sensed that people have biases against traditional agriculture and many participants seem to think they know what is best for traditional farmers.
- yes, not only the substantive contents but also I was inspired by seeing so many well motivated people who are blending ideals with practical realities and congenial to idea-sharing--a sharp contrast

to many circuits these days.

-I was told Wendell Berry would speak!

-Yes.

-Yes.

-Yes.

-Yes and no, too targeted to organic type farmers. Needed to better define goal of the conference in the beginning.

-Yes.

-The conference was not what I expected but it was informative. I expected more research and less opinion.

-Yes.

-Yes, you had the best moderator/facilitators.

-No, may be my expectations of this conference were different.

-No, left with more questions and felt less hopeful.

-Not at all--what is sustainable about BST use (animal health) or in "business as usual"? You have to wake up, the system promoted here was not sustainable.

-Yes and no, several of the workshops did not specifically address the topic.

-Poorer quality than I thought.

-No, I had hoped to learn more about how things could be accomplished rather than philosophical discussions of how an ideal world should approach agriculture's future (models, etc.)

-Yes.

-Yes.

-No, looked for it to build bridges between various organizations and producer types. Instead I found it to be divisive, even to the point of encouraging unnecessary confrontation.

-In some respects, but I expected to take away more information and to learn more rather than raising questions and issues.

-No, it was good to get away and network with folks.

-Yes.

-Yes.

-Yes.

-Yes, excellent level of participation; interaction and encouragement to be more reflective and effective in sustainable principles.

-Yes.

-No, expected more lineal equation. But now have better understanding of a systems approach and the experience has been successful in creating this awareness.

### *9. Do you have any suggestions about how the conference could be improved?*

-Use local New England foods at meals/breaks--cider/apples afternoon break, cranberry juice AM, etc. Ben and Jerrys ice cream, milk at meals.

-More accurately describe workshop goals and ideas, develop an ultimate goal of the conference.

-A hard one; if we could figure out a method to get the "sideline watchers: and non-involved to engage in the discussion and process, it would be super. This is a tall order and probably not possible?

-Do it again.

-More discussion time.

-More "how to" presentations and results of research in the field. Less philosophy of what is sustainable agriculture (only the keynotes should philosophize).

-The roving camera person with the bright lights was intrusive--the light annoying.

-NE agriculture is rather small, we have to find ways to work together and accept ways others choose to be sustainable. Each farmer and farm is different. Keynote speaker in morning 1st days of session set the wrong tone of us/them.

-Discussion groups could be smaller to stimulate more back and forth.

- More thorough analysis of ideas.
- Should not be proposed again!
- Invite a more diverse group of farmers including the "industrial types".
- Invite/ensure more industrial paradigm proponents.
- The program on whole farm analysis was not what I expected. Program write-up could be improved.
- More farmers that are not organic or CSA should have been included. The ideas of the traditional farmer may not be too different than the philosophies of the conference.
- Have more farmers attend. Establish rules and guides for government agencies. Topic/titles were often what was covered in the presentations.
- More traditional farmers. Improve study circles. Need to deal with the bad feelings sustainable agriculture has created with traditional agriculture
- This is the best organized, smoothest running conference I've attended.
- No, good organizations, good mix of participants.
- Maybe do more to involve bankers, input suppliers, and other commercial people who are inclined to do things in a sustainable agriculture context...on hears of some who are viewing at agriculture practices in this broader way...could influence others.
- Invite more mainstream/traditional farmers.
- Too much on organic versus corporate farming (not in New England).
- Lunches and other meals--would help to have people sit together by groups--state caucuses one meal, commodity groups the next.
- Start the process of installing efforts and ideas.
- Two more breaks and earlier shut down at night.
- Hopefully this was recorded to pass info. along.
- End earlier at night.
- Decrease opportunities for polarization within agriculture community for certain big issues like community support of agriculture and agriculture marketing.
- Seemed to fit in quite a bit in just 2 days--perhaps cover less in that period or make the conference longer.
- Study groups should each have their own space and not have the distraction of sound conflict from the other study group sharing the room.
- Focus on the reality of sustainable agriculture concepts. How can we work to encourage sustainable agriculture practices and make them easier for growers to try.
- Get a place with windows.
- Warmer rooms.
- Emphasize and celebrate successes. Closer look at marketing.
- Nothing that really bothered me.
- Combine field trips.
- More success stories. Smaller meetings. Round table meetings with farmers.
- Being a dairy producer trying to make a living as a farmers with no other income, I felt the suggestions by the "experts" to "change everything" away from the industrial model was pushed way too hard. Their farms that were used as models was supported by their off-farm wage. Their farms were less self-sufficient than industrial models. If a farm is not economically viable, it is not sustainable. A few examples were, but most weren't. More speakers were needed to show why we are where we are today and how to get people more towards the ideal, rather than throwing everything away.
- Not at the moment--excellent as is.
- Have the post-supper keynote speaker after lunch instead.
- Greater up front focus on fewer, more specific goals. The general interactions were good but the study circles seemed, although interesting, unproductive.
- Include follow-up. Will the people from each state meet (with others from the state) to continue the discussion and really identify action steps and design implementation steps?
- More time for discussion at end of workshops.
- By including a broader and more representative selection of farmers.
- If you have more farmers, you should then have more farmer to farmer networking/sharing

opportunities. I feel this conference is more designed for Coop. Ext. types to learn from farmers, rather than the other way around.

-More farmers/environmental groups/consumer groups invited.

-More farmer input, more examples of successful sustainable operations with slides.

-A few more keynote speakers.

-No, it was a quick two days to me.

-Drop from 4 - 3 sections, each with study circles. Start meeting with state caucuses so there's more continuity and then caucus again at end (this was time okay). Fewer presenters at workshops. No summary at conclusion.

-Time for out-door sit-in-the-sun session.

-More farmers so you can get more real feedback.

-I think extension management needs to define sustainable no to limit appeal, but to give everyone a place to start from. Fred and Greg had important things to say ((new to a lot of people) but their remarks were never used in a workshop of define sustainability.

-Get the detailed descriptions of the conference goals and discussion topics out to participants in advance--offer focus to prepare before attending.

-Pick the speaker and let them determine the topic, not vice versa.

-Show that there can be more give and take between "industrial" and "ecological" agriculture.

-Have a follow-up...or have a similar gathering in each state. Encourage sharing of this information with all of us who attended this conference.

-Limit to one day.

-Improve logistics to reduce rushing between sessions. Facilitators must facilitate. Keep on involving farmers. Don't move around as much.

-Not really, it was good!

#### *10. What was the most valuable experience for you over the last two days?*

-Networking with people from all states.

-Meeting and talking to counterparts and farmers from my state and other states.

-Renewed faith in sense of community.

-Time to talk, discuss ideas, brainstorm, set up goals.

-Interactions with various people.

-Refocusing my energy on the larger agricultural issue.

-Bringing together "traditional" and "non-traditional" farmers for an open dialogue. Unfortunately, in some circle discussions, there were heated conversations that got out of line, we need to talk more to work on bridging gaps.

-Having the usefulness of input appreciated.

-Growers and extension discussing positive and negative ideas and trying to muddle through to a new paradigm for both.

-Meeting a lot of interesting people and coming to realize that our sustainable agriculture movement is taking form faster than I realized in many sectors. I enjoyed laughing with people.

-Most valuable experience is realizing that this conference doesn't understand the tenacity and personality of the traditional New England farmer who has always practiced "sustainable agriculture".

-Info. received by circle discussions.

-Getting issues onto table. Contacts with other states.

-Connecting with others in our state and region.

-Seeing people, being part of the groups that shared ideas, goals and lifestyles.

-Interaction with several groups of people--agency, farmers, etc.

-Interacting with agriculture agency personnel and speakers. Having a vehicle through which we can effect changes in agriculture policy.

-Keynote address. Conversations at meals (i.e., the gathering of these people and the focus of the gathering). Conflict resolution in study groups (people communicating real feelings).

-Interacting with regional public peoples and private producers.



- Discussions in and out of study circles.
- Crop rotation.
- I met some interesting people.
- Farmer's input.
- Being able to express my feelings about extension to a large number of agents.
- The interaction with people from many different facets of agriculture.
- The Thursday morning study circle after "Building Consumer Enthusiasm for Agriculture" and the thoughts that were triggered in my mind as a result of it.
- Farmer interaction with agencies.
- New contacts, different perspectives/viewpoints, new knowledge.
- Met some good people who I'll continue to visit with.
- Meeting people.
- Animal health.
- Interaction with other representatives.
- Long visit with good friend and other good friends made, study circle were excellent too.
- Meeting/networking with the people.
- To know the direction sustainable agriculture is taking.
- Discussion groups--diversity of attendees.
- Getting a chance to talk with individuals with whom I work, would like to work, should work and just strengthen friendships and alliances.
- Farmer participation was encouraged for insight.
- Interaction with other states, hearing the voices of state and federal "reps." and their views on sustainable agriculture and the future.
- I gained some insight toward reconciling farmers with different philosophies but similar goals.
- Getting a better feel for how people are coming to define sustainable agriculture.
- Reconfirm direction and renew contacts in the sustainable world. State caucuses were excellent!
- Networking with others in my state and coming up with a draft action plan with commitment from others.
- Networking.
- Talking with people.
- Networking.
- Sharing with other farmers.
- Meeting other people with same interest, new ideas about marketing products.
- Introduced to concept of HRM.
- State caucus meetings.
- The mix of people present.
- Hearing from mainstream/traditional farmers who have made advances in sustainable agriculture. They may have not gone to the extreme but each in his/her own way, have made changes that have improved their operations.
- Individual get-togethers over meals, between sessions.
- An overall feeling for how sustainable agriculture ideas and more conventional or commercial practices can be blended to help agriculture, i.e. environment and family duality of life.
- Opportunity to listen and speak.
- Networking with other farmers in our state and beyond! It's nice to know you're no alone.
- Talk by John Ikerd.
- The concerns of state meetings, gained a more open understanding of sustainable agriculture that it does not and should not exclude any type of agriculture.
- Meeting others and exchanging ideas.
- Networking with CES, NRCS, CFSA and growers.
- To listen to the new ideas/concepts (which aren't really new) that effect agriculture.
- Meeting some nice, interesting people with lots of ideas.
- Quality of life workshop. State caucus meetings.
- Exposure to all of the discussion relative to sustainable agriculture.
- That farmers are their own worse enemy. All farming is threatened and they need to work together.

- Networking.
- Talking with others.
- Contacts made outside of meetings.
- The diversifying markets session.
- Getting to know other growers and how they do it; both from my home state (state meetings were great) and others.
- Interaction--very positive overall.
- Networking with other agriculture related groups and farmers.
- Meet other N.E. people. Learn about similar and common problems and issues that relate to all of N.E. agriculture.
- Listening and hearing the views, conflicts and needs expressed.
- Ability to see the values and perceptions of people who think and see things differently than I.
- Understanding of sustainable ag--no one way of doing things, incorporating many ideas, values, methods, practices. Greater acceptance of diversity of agriculture.

# EVALUATION FORM

Changing Technologies and Changing Values  
Sustainable Agriculture Conference  
March 29-30, 1995  
Waterville Valley, New Hampshire

	excellent		fair		poor
	1	2	3	4	5
1. How would you rate this conference overall?	1	2	3	4	5

Comments?

2. How would you evaluate keynote speakers?

Fred Kirschenmann	1	2	3	4	5
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Greg Watson	1	2	3	4	5
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Additional comments?

3. How would you evaluate the workshops?

	excellent		fair		poor
	1	2	3	4	5
Improved Decision-Making through Whole Farm Analysis	1	2	3	4	5
Evaluating Alternative Products & Enterprises	1	2	3	4	5
Building Consumer Enthusiasm for Agriculture	1	2	3	4	5
Crop Rotations to Manage Nutrients, Pests & Markets	1	2	3	4	5
Diversifying Markets for Economic Survival	1	2	3	4	5
What Leads to Change on the Farm?	1	2	3	4	5
Quality of Life: How Can Farmers Get More of It?	1	2	3	4	5
Environmental Issues & Regulations: A Pro-Active Approach	1	2	3	4	5
Participatory Research	1	2	3	4	5
Managing Animals for Health	1	2	3	4	5

Please feel free to add any further comments on the workshop presenters.

... or, further comments on the workshop content ...

(over please)

	excellent		fair		poor
	1	2	3	4	5
5a. How would you rate the value of the study circle format as a participatory learning model?					

Comments?

5b. Will you use study circles in any of your own programs in the future? yes no

5c. Would you be interested in a two day training session on facilitating study circles? yes no

5d. Were you a study circle facilitator at this conference? yes no

6. As a result of this conference, are there some things you will do differently when you go back to work in your home state?

7. Please rate the conference facility.

	excellent		fair		poor
	1	2	3	4	5
How would you rate the conference site overall?					
the meeting rooms?					
the food?					
helpfulness of staff?					
the sleeping accommodations?					

8. Did this conference meet your expectations?

9. Do you have any suggestions about how the conference could be improved?

10. What was the most valuable experience for you over the last two days?

## Changing Values and Changing Technologies Conference Evaluation Results Summary

98 evaluations returned.

### 1. How would you rate this conference overall?

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 22%	2- 49%	3- 25%	4- 3%	5- 1%

### 2. How would you evaluate keynote speakers?

*Fred Kirschenmann*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 44%	2- 23%	3- 21%	4- 9%	5- 3%

*Greg Watson*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 33%	2- 37%	3- 27%	4- 3%	5- 0%

### 3. How would you evaluate the workshops? (Ratings scale: 1 = excellent, 3 = fair, 5 = poor)

Improved Decision-Making	Eval. Altern. Products & Enterprises	Building Consumer Enthusiasm	Crop Rotations	Diversifying Markets
1- 9%	1- 17%	1- 29%	1- 13%	1- 37%
2- 40%	2- 48%	2- 32%	2- 56%	2- 41%
3- 33%	3- 27%	3- 16%	3- 28%	3- 11%
4- 16%	4- 8%	4- 16%	4- 3%	4- 11%
5- 2%	5- 0%	5- 7%	5- 0%	5- 0%
What Leads to Change on the Farm?	Quality of Life	Environmental Issues and Regulations	Participatory Research	Managing Animals for Health
1- 13%	1- 19%	1- 18%	1- 38%	1- 12%
2- 37%	2- 41%	2- 46%	2- 24%	2- 52%
3- 41%	3- 22%	3- 26%	3- 33%	3- 24%
4- 9%	4- 9%	4- 10%	4- 5%	4- 8%
5- 0%	5- 9%	5- 0%	5- 0%	5- 4%

5a. How would you rate the value of the study circle format as a participatory learning model?

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 29%	2- 46%	3- 23%	4- 2%	5- 0%

5b. Will you use study circles in any of your own programs in the future?

Yes- 74%      No- 18%      Maybe- 8%

5c. Would you be interested in a two day training session on facilitating study circles?

Yes- 33%      No- 66%      Maybe- 1%

5d. Were you a study circle facilitator at this conference?

Yes- 9%      No- 91%

7. Please rate the conference facility.

How would you rate the conference site overall?

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 40%	2- 49%	3- 9%	4- 2%	5- 0%

*the meeting rooms?*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 19%	2- 48%	3- 28%	4- 3%	5- 2%

*the food?*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 21%	2- 33%	3- 30%	4- 10%	5- 6%

*helpfulness of staff?*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 33%	2- 52%	3- 12%	4- 3%	5- 0%

*the sleeping accommodations?*

<i>excellent</i>		<i>fair</i>		<i>poor</i>
1- 42%	2- 50%	3- 6%	4- 1%	5- 1%

8. Did this conference meet your expectations?

Yes- 82%      No- 18%

## APPENDIX G

### Follow-up survey results

Influence of Attitudes on Impact of Sustainable Agriculture Extension Trainings

An evaluation report by David Conner  
University of Vermont  
Spring, 1996



## Introduction.

Sustainable Agriculture (SA) continues to be a contentious issue among all Americans, despite growing acceptance of SA, as evidenced by the establishment of the Sustainable Agriculture Research and Education program (SARE) in the USDA. One part of SARE, known as Chapter 3, provides funds to provide Cooperative Extension agents with training in SA. The first such training conference in New England was called "Changing Technologies, Changing Attitudes," and took place in Waterville, NH on March 29-30, 1995. The results of an evaluation of this conference show that there continues to be a great polarity of opinion among extension agents in New England, and that the opinion one holds has an impact on the usefulness and impact of the conference.

This polarity of opinion was anticipated by the conference's planning committee, according to Project Coordinator Kate Duesterberg of the Center for SA at the University of Vermont. Two goals of the conference were to introduce the agents to SA and to Participatory Learning, an extension technique that encourages teamwork and cooperation between agents and producers. There was concern among the planners that a straightforward presentation of these topics would turn off one faction, the SA "sceptics," for whom SA and PL are largely foreign ideas that do not conform to the extension style that these agents learned and have practiced throughout their careers. The strategy was to take a more "backdoor" approach, presenting these ideas in a more subtle and non-threatening form, with the other faction the SA "supporters," helping to sway the opinion of their colleagues. This report, which details the results of an evaluation survey, will demonstrate that the polarity of opinion between sceptics and supporters, continues to exist and to influence both the participants' attitudes and assessment of impact of the conference.

## Methodology

In the spring of 1996, participants of the conference were sent a survey that attempted to gauge the changes in attitude toward SA and PL, and the impact the conference had on their extension work regarding SA and PL. The response rate was rather low: 50 out of 137 (36.5%) surveys were returned and evaluated. One explanation for the low rate may be that the survey was sent out over a year after the survey. The data were analyzed using SPSS. All bivariate analysis was conducted with cross tabulations, using the chi square test. When a relationship or difference is termed "significant" in this report, it means that a null hypothesis of no relationship between the two variables can be rejected with a 90% confidence or greater.

## Survey Results

This section will begin with a presentation and discussion of the frequencies of responses for each survey questions. Following this will be a similar discussion of bivariate cross-tabulations, revealing important correlations among variables in the survey.

Respondents were first asked to rate the conference's usefulness as it pertains to their extension work. Slightly more than half of the respondents (54.1%) said that the conference was useful or very useful, but 43.8% said it was not at all or slightly useful.

Response	Percent
Not at all	6.3
Slightly	37.5
No opinion	2.1
Useful	45.8
Very useful	8.3
Total	100.0

Next, the respondents were asked to rate their understanding of SA both before and after the conference. While 18.8% of respondents said they had a “slight” knowledge before the conference, only 2.1% said they had a slight knowledge after. Meanwhile, 52.1% said they had an “extensive” or “thorough” understanding after the conference, while only 37.5% said they had this knowledge level before the conference.

Response	Percent Before	Percent After
None	0	0
Slight	18.8	2.1
Moderate	43.8	45.8
Extensive	29.2	43.8
Thorough	8.3	8.3
Total	100.0	100.0

Another variable was computed, subtracting the “after” value from the “before” value. More than three-fourths of cases (77.8%) showed no change, while the remainder (22.2%) showed a difference between the two values.

When asked how the conference contributed to their knowledge of SA, 71.4% said it contributed “somewhat” or “substantially,” and 28.5% said it contributed “very little” or “not at all.”

Response	Percent
not at all	6.1
very little	22.4
somewhat	59.2
substantially	12.2
Total	100.0

There was also an increase in the number of people who said they include SA in their extension work with farmers more than half the time. When asked to gauge how often they include SA in their work before the conference, 55.6% said they included it more than half of the time; this value increased to 68.9% when asked how often they included SA in their work after the conference. The percentage of those who “never” used it was cut in half, from 4.4% to 2.2%.

Response	Percent Before	Percent After
Never	4.4	2.2
<25%	20.0	15.6
26-50%	20.0	13.3
51-75%	28.9	33.3
>75%	26.7	35.6
Total	100.0	100.0

A another variable was computed to measure the difference in responses between the before and after values. Again, the most common value (68.8% of cases) was 0, meaning no difference in the two values. One case actually uses SA less now (a negative value) , while 29.2% of cases showed a positive value, indicating an increase in their use of SA.

These values are borne out in part by the results of the question asking them to gauge both the change in their use of SA and the conference’s impact on this change. One half (50.0 %) of respondents said that they use SA more now than before the conference, and that the conference was a reason or a major reason for this change; 8.3% said they use SA more but that the conference contributed little to the change Meanwhile, 41.7% stated that they use SA the same amount now as before. The reason for discrepancies between these values and the value

obtained by subtracting the before from after values may be due to the fact that the before and after values are divided into categories, and a change large enough to be noticed by the agent may not be large enough to cause a change in categories.

Table 5. Impact of conference on change in using SA at work	
Response	Percent
Use SA less now	0
Use SA same amount	41.7
Use SA more, conference contributed little	8.3
Use SA more, conference was part of change	45.8
Use SA more, conference was a major reason	4.2
Total	100.0

Next, respondents were asked how important they believe it is that New England producers adopt sustainable farming techniques. Over 90% (93.6%) said they think it is important or very important, while 2.1% said it is slightly important and 4.3% have no opinion.

Table 6. Importance of SA for New England producers	
Response	Percent
Not at all	0
Slightly important	2.1
No opinion	4.3
Important	38.3
Very important	55.3
Total	100.0

While this table seems to contradict the existence of “skeptics,” it is necessary to understand that different people have different definitions of SA. All agriculture, all enterprise of any, kind must be, in the long run, sustainable. Yet this vague term leaves open a broad range of interpretations: many of the conventionalists focus on the purely economic aspect of sustainability, eschewing the ecological and social aspect that other SA advocates include. Many of the written comments of the survey bear out these differences in definition of SA. One stated that this survey question opened a “Pandora’s Box,” of divisiveness on the interpretation of “sustainable;” others railed against the term sustainable being co-opted by extremist “whacks” that associate it with vegetarianism, organic cultivation and regional self-sufficiency.

Others criticized those that lump sustainable with organic due to a “ false perception on food safety .”

In a similar vein, respondents were asked the importance of PL in addressing farmers’ information needs. Nearly two-thirds (66.0%) said “a great deal” and 24.0% said it was “somewhat” important. Only 2.0% stated it had “very little” importance, and 8.0% had no opinion.

Table 7. Importance of PL in addressing farmer’s information needs	
Response	Percent
Not at all	0
Very Little	2.0
No opinion	8.0
Somewhat	24.0
A great deal	66.0
Total	100.0

In a follow-up question, 70.8% said that the conference influenced their perception of PL’s importance “somewhat” or “a great deal.” However, 25.0% said it had none or very little impact.

Table 8. Influence of conference on view of PL	
Response	Percent
Not at all	10.4
Very little	14.6
No opinion	4.2
Somewhat	47.9
A great deal	22.9
Total	100.0

Respondents were than asked to gauge the impact of the conference on their work in regard to PL. A slight majority (51.0%) said that they include PL into their work more now than before the conference, and that the conference was part of this change; 40.8% said there was no change, and 8.2% said they include SA more now but the conference contributed little to the change.

Table 9. Impact of conference on using PL at work	
Response	Percent
Use PL less now	0
Use PL same amount	40.8
Use PL more, conference contributed little to change	8.2
Use PL more now, conference was part of change	51.0
Total	100.0

Even though many participants did not change their behavior or said the conference was not especially useful, most would still be interested in attending a follow-up conference on SA issues: 83.3% said they would be interested, while 16.7% said they would not. When asked to list topics they would like to see included in such a follow-up, common answers included Holistic Resource Management and soil protection.

The frequency tables above provided a good overview of the responses to each question of the survey. But to reach a better understanding of the relationship of how responses to one question correlate to responses to another, cross tabulation are necessary.

To begin, a bivariate analysis of the data was done to determine how knowledge of SA before and after the conference influenced the respondents' view of the conference's usefulness. No significant differences were found between knowledge before and usefulness, but a statistically significant difference was found between knowledge after and usefulness. All respondents who had only slight knowledge after the conference said the conference was slightly useful. Similarly, all those who said their knowledge was extensive, 70.0% found the conference useful or very useful. Of those with moderate knowledge, a slight majority (52.4%) said the conference was useful, while 47.6% said it was not at all or slightly useful. Interestingly, of those with thorough knowledge, half said the conference was slightly useful. This analysis provides a first glimpse of the polarity among agents. The most obvious difference is between those with slight and extensive knowledge: those with a low level of knowledge had little use for the conference, while those who knew more were more likely to find the conference useful.

Table 10. Usefulness of Conference by Knowledge of SA before conference					
Knowledge of SA	Usefulness of conference				
	None	Slight	Moderate	Extensive	Thorough
	Percent				
Not at all	0	0	4.8	5.0	25.0
Slightly	0	100.0	42.9	25.0	50.0
No opinion	0	0	0	0	25.0
Useful	0	0	52.4	55.0	0
Very useful	0	0	0	15.0	0
Total	0	100.0	100.0	100.0	100.0

Another significant difference is seen when analyzing how the perceived impact of the conference upon use of SA in one's work compared with his or her assessment of the overall usefulness of the conference. Of those who stated they use SA the same amount before as after the conference, 80% said the conference was "slightly" or "not at all" useful. However, among those who said they use SA more now and the conference was a major part of the change, 86.4% said the conference was "useful" or "very useful." Again, we see a difference between those willing and able to incorporate SA and those not, as borne out by their overall impression of the conference.

Table 11. Impact of conference on SA at work vs. usefulness of conference				
Usefulness of conference	Impact of conference on using SA in work			
	Same amount	Use more, conf not why	Use more, conf part	Use more, conf major reason
	Percent			
Not at all	15.0	0	0	0
Slightly	65.0	50.0	13.6	0
No opinion	5.0	0	0	0
Useful	15.0	50.0	72.7	0
Very useful	0	0	13.6	100.0
Total	100.0	100.0	100.0	100.0

A similar, though not statistically significant relationship is seen when comparing responses about the impact of the conference on use of PL compared to the overall usefulness. Of those that said they use PL the same amount now as before, 68.4% said the conference was not at all or slightly useful, but of those that answered that they use PL more now as a result of the conference, 76.1% said the conference was useful or very useful.

Table 12. Impact of conference on PL at work vs. usefulness of conference			
Usefulness of conference	Impact of conference on using PL in work		
	Same amount	Use more, conf not why	Use more, conf part
	Percent		
Not at all	15.8	0	0
Slightly	52.6	50.0	23.8
No opinion	5.3	0	0
Useful	22.7	50.0	57.1
Very useful	0	0	19.0
Total	100.0	100.0	100.0

The stated importance of PL is also a factor that significantly influences the perceived usefulness of the conference. Of those who said that PL is important “a great deal,” 71.0% also said the conference was useful or very useful. However, of those giving any other response to PL’s importance, 73.5% said the conference was not at all or slightly useful.



Table 13. Usefulness of conference vs. importance of PL		
Usefulness of conference	Importance of PL	
	Very important	Not “very important”
	Percent	
Not at all	0	17.6
Slightly	29.0	52.9
No opinion	0	5.9
Useful	58.1	23.5
Very useful	12.9	0
Total	100.0	100.0

A slight but not significantly significant difference is seen when comparing how the participants view the importance of SA and how they rated the conference’s importance. To begin, 53.3% said they think SA is very important to NE farmers, and only 46.7% gave any other response. Of that 46.7%, slightly more people said the conference was not at all/slightly useful (52.4%) than useful/very useful (47.7%). But of those saying SA was very important, the responses saying the conference was useful/very useful outnumbered those saying it was not at all/slightly useful nearly two to one (61.5% to 31.3%). This is further evidence that attitudes about SA has an influence on perception of the conference’s usefulness.

Table 14. Usefulness of conference vs. Importance of SA		
Usefulness of conference	Importance of SA	
	Very important	Not “very important”
	Percent	
Not at all	8.3	4.8
Slightly	25.0	47.6
No opinion	4.2	0
Useful	50.0	42.9
Very useful	12.5	4.8
Total	100.0	100.0

Another analysis was done to see how the importance of SA affects the conference's impact on the use of SA at work. First, the importance of SA responses were recoded into those who said it is very important and all other answers. These responses were compared to those of the impact. The results show an interesting but not significant difference. Of those who said SA was very important, 60% said that they use SA more and the conference was a reason or major reason for the change; 49% said the use SA the same amount, or more but the conference did not contribute to the change. In contrast, of those who gave any other response than SA is "very important," only 40% said they use SA more and the conference contributed; 60% of these people say they use SA the same amount or than the conference did not influence the change. While these differences are not statistically significant, they do provide perhaps the best evidence to the polarity hypothesis.

Table 15. Importance of SA vs. impact of conference on SA use		
Impact of conference	SA is "very important"	SA is not "very important"
	Percent	
Same amount	36	45
Use SA more, conference not why	4	15
Use SA more, conference contributed to change	52	40
Use SA more, conference a major reason	8	0
Total	100	100

This analysis provides the best evidence of the "preaching to the choir" scenario. Those that had a favorable view of SA's importance were more likely to notice a change in their work habits and attribute it to the conference. As noted in table 5, only about half of all respondents attributed a change in work habits with the conference, meaning the other half saw no impact. Additionally, those who did see an impact were predisposed to view SA favorably at the start. Therefore, I conclude that the conference had no demonstrable impact on about half the participants, and that half is primarily composed of those SA skeptics.

The participants' attitudes toward SA also correlated with their attitudes about PL. Again, SA attitudes were divided into "very important" and "other," while PL attitudes were recoded as "a great deal" important and "other." Of those who said PL is "a great deal" important, 71.0% also said SA is "very important." Yet of those who responded other than "a great deal," 75.0% also said PL is not "a great deal" important. This is a significant difference.

Table 16. Importance of PL vs. Importance of SA		
Importance of SA	PL a great deal important	PL not a great deal important
	Percent	
SA very important	75.0	29.0
SA not very important	25.0	71.0
Total	100.0	100.0

Similarly, the importance of PL influences the conference's impact on PL use, though the difference is not significant. Of those who said PL is a great deal important, 60.0% also said they use PL more and the conference contributed to this; meanwhile, those who answered other than "a great deal," only 31.1% said they use PL more due to conference.

Table 17. Importance of PL vs. Impact upon use of PL use		
Impact	PL a great deal important	PL not a great deal important
	Percent	
Use SA same amount	30.3	62.5
Use SA more, conf not why	9.1	6.3
Use SA more, conference contributed to change	60.0	31.3
Total	100.0	100.0

A final cross tabulation examines the relationship between prior knowledge of SA and the conference's impact. Of those with slight knowledge, 87.5% said they use SA more due to the conference. But that percentage drops to 60% of those with moderate knowledge, 28.6% of those with extensive knowledge and none of those with thorough knowledge. This is a significant difference.

Table 18. Knowledge of SA before conference vs. Impact of conference				
Impact on SA use at work	Prior knowledge of SA			
	slight	moderate	extensive	thorough
	Percent			
Use SA same amount	12.5	30.0	57.1	100.0
Use SA more, conf not why	0	10.0	14.3	0
Use SA more, conference contributed to change	75.0	60.0	28.6	0
Use SA more, conf a major reason	12.5	0	0	0
Total	100.0	100.0	100.0	100.0

### Conclusions and recommendations

The results of three of the frequency table demonstrate the mixed effectiveness of the conference and the existence of the “preaching to the choir” syndrome. The results are fairly evenly split on three important questions: roughly equal numbers found the conference not useful as useful; the same holds with the impact on use of SA and PL. Since one major point of the conference was to enable the agents to use these techniques, the overall effectiveness of the training is mixed, and largely dependent on the individual’s attitudes.

As seen in the cross tabulations, even though the differences of some of the differences are not statistically significant, they do reveal an interesting pattern. The participants’ attitudes had a large influence on the conference’s impact upon them. Given the already demonstrated and discussed “polarity” among the group, it seems clear that the conference had a different impact on each. First, consider the “skeptics.” From the divisive keynote speaker to the conference’s emphases on the ecological/social aspects of sustainability and the unorthodox method of PL, these individuals did not have favorable attitudes at the beginning and the conference did little to change them. Those who began with less favorable attitudes were less likely to note a positive

impact of the conference, either in PL or SA, nor, unsurprisingly, did they find the conference especially useful. In some cases, it may have planted a seed that may come to fruit in the future, providing an introduction to SA and PL to which they may eventually add. However, it seems equally likely that they have made up their minds, that they are not about to “shift paradigms” anytime soon. It is difficult to see why they came in the first place, excepting curiosity or pressure from supervisors. I would submit that any follow-up conference along the lines of the first would be of little value to them.

In contrast, for the “believers,” who had favorable attitudes of SA and PL to begin with, the conference at least served the function of providing a “pat on the back,” a confirmation of their faith in these novel techniques by like-minded individuals. In addition, they were more likely to find the conference useful and to notice a change in behavior that the conference caused. But even among these people, a number of them did not change their behavior or demonstrate an impact as measured by this survey. Most interesting in this regard is the data from table 18, which indicates that the greater one’s prior knowledge of SA, the less was the impact of the conference. While it could be argued that the presence of the most knowledgeable people was to provide the sort of pat on the back mentioned earlier, the actual impact on them was minimal.

Given this analysis, I would make the following recommendations to planners of future SARE chapter 3 trainings in New England.

1. Perhaps the mass audience method should be abandoned. People with different attitudes about SA have different training needs, and the mixture clearly was not conducive to the needs of all—or, arguably, to more than a small percentage of participants. Therefore, I would recommend dividing the group into at least three groups: “skeptics,” “beginner believer,” and “advanced believer.” The skeptics could be introduced to SA and PL issues in a less threatening, more gradual forum, if indeed they are trained with Chapter 3 funds at all. The beginners knowledge of SA could be augmented with intermediate level information and an introduction to putting these techniques to work. The advanced believers could be provided with specific, hands-on strategies on using SA and PL in the work place. This format is merely a starting point, and a thorough needs assessment should be done to better determine the information and training needs of each group.
2. The advanced folk could be used as mentors for the beginners; they could be invited to trainings to share real life experiences of incorporating SA and PL into their work, or to lead discussion groups, field trips or brainstorming sessions. This would provide the advanced ones with an acknowledgment of their efforts in the field, as well as providing the beginners with a glimpse of what such trainings can provide.

### Suggestions of Further Research

The most important unanswered question posed by this report is: how do individuals arrive at such disparate attitudes about PL, and especially, SA? What factors shape these attitudes? In addition, a more detailed definition of each category (skeptic vs. believer, and all smaller divisions within each of those) would enable agents and training planners to determine which type of training is appropriate.

Another important question is, exactly which definition of SA shall be used in such SARE trainings? Will the social and ecological factors be emphasized, or will a strictly economic model be used? Also, why did the participants go to the training? What was their motivation?

What do they see as their training needs in SA? Only about half of the participants found the conference useful, yet over 83% said they were interested in a follow up; what do they hope to gain from such a follow up?

Another vein of needed research is to develop more precise means of measuring use of PL or SA on the job. In this case, it was left to each individual respondent to use his or her own definition of "using SA or PL," and judge how often they do so. This lack of consistent definition certainly limits the internal validity of the survey, given that one person's idea of using SA or PL is not the same as another's.

Given that SA is controversial, and the emphasis on it is in its fledgling state, it is not surprising that so many agents view it with some skepticism. Also not surprising is that many agents are initially uncomfortable with PL, given that it is not the model in which they were trained and have worked throughout their careers. Nonetheless, I question whether the watered down, be all things to all people approach is the most effective one. As stated above, people with different attitudes about SA and PL have different training needs, and a training that tries to fill all these needs at once may actually fill the needs of none.

# Changing Technologies and Changing Values

March 29-30, 1995

Waterville Valley, New Hampshire

TO: Extension & USDA agency participants in the New England Sustainable Ag Conference at Waterville Valley  
FROM: Kate Duesterberg, project director  
DATE: 19 April 1996  
RE: post-conference evaluation

This letter is being sent to all Extension and USDA agency personnel who attended the New England Sustainable Ag conference at Waterville Valley, NH last March. As you recall, this conference was funded by the USDA Sustainable Ag Research & Education (SARE) program. The New England-wide effort is continuing and the conference planning committee is eager to evaluate the effectiveness of the program thus far. We feel it is useful to get some feedback on the conference after participants have had a chance to incorporate what they learned into their work.

A UVM graduate student named David Conner has taken on the evaluation task as a semester project. David's major is Extension Education, and he has had program development and evaluation experience with extension programs in the Peace Corps. We have worked with the conference planning committee to develop this survey.

As you fill out the brief evaluation form, keep in mind the conference goal to build capacity to promote *sustainable agriculture*. The conference objectives were to:

- \* increase our knowledge about sustainable farming practices;
- \* provide a forum for farmers and agency personnel to interact as collaborators;
- \* identify specific information needs that will lead to more sustainable farming; and
- \* use innovative educational methods suited to dealing with complex community issues.

During the preliminary stages of the project and in planning the conference the organizing committee sought to formulate a new model for preserving and enhancing agriculture in the region. In this new model, scientists, extension educators and agency personnel have a critical role to play as collaborators and facilitators, in addition to their traditional roles as experts and advisors. The format of the conference emphasized these new roles, with a particular focus on a *participatory learning* approach to understanding, analyzing, and identifying strategies to develop a sustainable agricultural system. The most unique aspect of this conference was the use of "study circles," one method of participatory learning. Study circles actively involve group members in discussing topics and issues by calling upon members' own experiences, understanding, and knowledge rather than solely relying on information provided by experts.

(over please)

*Project Planning Committee: Vern Grubinger, Sid Bosworth, Kate Duesterberg, Deb Heleba - UVM; Stephen Herbert, Cathy Roth - UMass; Tim Griffin - UMaine; Stephanie Gilbert, ME SWCD; Will Reynolds - URI; Bill Zweigbaum - UNH; Roy Jeffrey, Tom Morris - UConn; Carol Giesecke - New England Cooperative Extension Consortium; Eric Sideman - MOFGA; and Enid Wonnacott - NOFA/VT*

During the conference, extension and USDA agency personnel and farmers learned together through technical presentations on topics such as farm production methods, community involvement and environmental policies, followed by study circle group discussions. Conference planners hoped that the study circles would help participants develop a broader understanding of sustainable agriculture by capitalizing on the regional expertise of the 250 people who attended the conference. They are also interested to learn whether this method was used after the conference to stimulate community discussions on agricultural issues around New England.

**Please take a little time to fill out the evaluation and return it in the envelope enclosed by May 10th.** Your input will be extremely useful as we plan and carry out the next phase of the regional project. Thank you for your timely response.



**POST CONFERENCE EVALUATION**

**1. As you reflect back on the *Changing Technologies and Changing Values* conference, how would you now rate its usefulness, as it pertains to your extension work? (circle one)**

- a. Not useful at all    b. Slightly useful    c. No opinion    d. Useful    e. Very useful

Comments:

**2a. How would you rate your understanding of sustainable agriculture issues and principles BEFORE the conference?**

- a. None    b. Slight    c. Moderate    d. Extensive    e. Thorough

**2b. How would you rate your understanding of sustainable agriculture issues and principles AFTER the conference?**

- a. None    b. Slight    c. Moderate    d. Extensive    e. Thorough

**2c. To what extent did the conference contribute to your understanding of sustainable agriculture?**

- a. Not at all    b. Very little    c. No opinion    d. Somewhat    e. Substantially

Comments:

**3. BEFORE the conference, how often did you include sustainable agriculture (issues & practices) in your extension work with farmers?**

- a. Never  
b. Less than 25% of the time  
c. 25-50%  
d. 51-75%  
e. More than 75% of the time

**4. AFTER the conference, how often do you include sustainable ag in your extension work with farmers?**

- a. Never  
b. Less than 25% of the time  
c. 25-50%  
d. 51-75%  
e. More than 75% of the time

**5. How important do you think it is that New England producers adopt sustainable farming techniques?**

- a. Not at all    b. Slightly important    c. No opinion    d. Important    e. Very important

Comments:

6. Which of the following statements best describes the impact of the conference upon your work?

- a. I incorporate sustainable agriculture into my work less now than before the conference.
- b. I incorporate sustainable agriculture into my work the same amount now as before the conference.
- c. I incorporate sustainable agriculture more into my work now, but the conference contributed little to this change.
- d. I incorporate sustainable agriculture more into my work now, and the conference was a part of this change.
- e. I incorporate sustainable agriculture more into my work now, and the conference was a major reason for this change.

7. How much did the conference influence the view you expressed in question # 6?

- a. Not at all
- b. Very little
- c. No opinion
- d. Somewhat
- e. A great deal

8. How important do you think *participatory learning* is in addressing farmers' information needs?

- a. Not at all
- b. Very little
- c. No opinion
- d. Somewhat
- e. A great deal

Comments:

9. How much did the conference influence the view expressed in #8?

- a. Not at all
- b. Very little
- c. No opinion
- d. Somewhat
- e. A great deal

10. Which of the following statements regarding *participatory learning* best describes the impact of the conference upon your work?

- a. I incorporate *participatory learning* into my work less now than before the conference.
- b. I incorporate *participatory learning* into my work the same amount now as before the conference.
- c. I incorporate *participatory learning* more into my work now, but the conference contributed little to this change.
- d. I incorporate *participatory learning* more into my work now, and the conference was a part of this change.
- e. I incorporate *participatory learning* more into my work now, and the conference was a major reason for this change.

11. Would you be interested in attending another conference on sustainable ag issues as a follow-up to the first?

- yes
- no

12. If you were to attend a follow-up conference, what are the 3 topics you would most like to see included?

- 1.
- 2.
- 3.

Thank you!!!

## APPENDIX H

### Study circle evaluation results



UNIVERSITY OF MASSACHUSETTS  
COOPERATIVE EXTENSION SYSTEM

BERKSHIRE REGION COOPERATIVE EXTENSION CENTER  
44 Bank Row  
Pittsfield, MA 01201-6202  
(413) 448-8285 Fax: (413) 442-0304

May 1, 1995

Dear Study Circle Facilitator,

*Kate - FYI*

Thank you for taking the time to return the study circle evaluation. I heard back from 20 out of 28 of you. Enclosed please find a summary of your comments. The planning committee is meeting toward the end of May to evaluate the whole event and talk about the next steps. Your comments will be valuable for that review. I found them very helpful. Thanks for your thoughtful answers, suggestions, and frankness.

It is exciting to see that several of you are using or planning to use study circles in your work, school or community. Enclosed is an article by Senator Bill Bradley on civil America that I thought you might find of interest.

Thank you for all of the time, interest, and effort you have contributed to this project. I've enjoyed working with you and hope that we will continue using study circles and incorporate your suggestions in the second year of SARE funding to help Extension and other USDA personnel learn more about sustainable agriculture.

Best regards,

A handwritten signature in cursive script that reads "Cathy".

Cathy Roth  
Program Coordinator  
Economic and Community Development

*See you May 24.*

## **SUMMARY OF STUDY CIRCLE EVALUATIONS**

### **1. What went well?**

The observation in the majority of study circles was that there was good participation, plenty of discussion and interaction, people were interested and eager, and there was a good mix of people and general enjoyment of the exchange of ideas. In addition there was lively discussion, people listened to each other, and there was a sense of positive learning and forward direction. Lastly, among the things that went well was that lots of action agenda items generated by the circles made it to the state caucus discussions and into actual plans for action.

### **What was the Basis of This Success?**

Many facilitators felt that the atmosphere of courtesy, tolerance for differences, and full participation in the discussion in the study circles that went well were the result of presenting and sticking to the ground rules and the facilitator's skill, direction, and overall guidance. Results were particularly productive when a specific example or "case study" was the focus. Discussion seemed most satisfying and informative when people spoke from their own practical experiences and shared about their own situation rather than gave advice or kept the discussion on a philosophical basis. Demonstrating a positive way of sharing information seemed to come from an atmosphere of openness in the room, from someone who spoke early and was a good model of this, and the ability/personality of some people to take to this kind of learning situation. The good mix of participants (when it happened) was partly the result of a good selection process which divided up participants to get a more diverse group. Lack of conflict and/or ease with conflict seemed to result when people were free to exchange ideas in an open environment and no one polarized the discussion with an attack, diatribe, or hardened position.

### **2. What didn't go well?**

General observations about problems included the following: some people hid behind their titles, roles, and agency policies; "hot" issues caused some very edgy, antagonistic discussions; facilitators had to shout to stop arguments; 1-2 people monopolized the discussion; people quickly got off-topic; bad feelings were left in the group following conflict/attack/antagonism; people talked down to others in group; private discussions/multiple conversations were held at the same time as someone was speaking; workshop leader/panelist dominated discussion; people walked out in frustration; not staying focused on topic; spending too much time on someone's individual details; too few farmers in some groups; distraction of another group in same space.

### **What were Possible Reasons For Problems?**

Agency people are sometimes locked into roles or positions as a result of limited funds, performance requirements, or real and self-imposed boundaries; too large a group (30); too small a group (7); people sat down in first circle in the room rather than assigned group; people bring their grudges with them; some people aren't there to learn; some workshop leaders were weak, didn't cover the topic, and generated disappointment; putting more than

one study circle in a room; farmers and agency people often speak different languages and some seemed to be talking mostly to each other.

### **3. What Did You Learn That You Want to Pass On?**

All study circles are different; encourage/give a speaker a chance to develop his/her idea if it doesn't seem quite developed; dogmatism is a serious threat to a study circle - be direct with people who have grudges to bear or all the answers; identify different approaches to a problem as a good focal point of discussion; remain flexible/follow the flow of the group; be confident enough to intervene, jump in to correct "mistakes", refuse to allow attacks, dogmatism or blood-letting; the people who contributed and felt that their ideas/perspective were valued rated study circles higher than people who didn't.

A strong beginning is important, as is a summary/tying up ending; prepare as a team in advance; taking notes was very important, gave weight to purpose/review of notes provided perspective; limit size of group, but ensure big enough; identify common points of view in group.

Set a relaxed tone from the start; use humor; if group doesn't suggest an alternate view point on subject, bring one up; be sure all participants are answering the same questions, are on the same topic; I don't think study circles work very well as one time events, use for longer-term educational efforts; make sure the workshop leaders provide the springboard for discussion/plan for more interaction with invited speakers to maintain conference focus and direction; work on inclusive, non-judgmental, open-minded thinking and language/avoid the tired old dichotomies (good/evil, black/white, ecological/industrial); it takes time to get a discussion started, but all people have something to say if facilitators can keep the central topic on the table; remember every group has to "storm and form"; have faith in the process, use it, it doesn't happen by itself.

### **4. Improving Study Circle Facilitator Training**

Hand out much less paper - simplify the instruction - make less complicated; maybe less training would be better; use a mock study circle without interruption for full 1½ hours; provide training in handling real conflict, people who are uncompromising; provide more practice, less process ; throw us in and help those who flounder; have your overall (conference) program solidified first; add a focus on differences between short and long term study circle process, different tools, different potentials; throw in a few "hostile reactors;" conduct one practice circle on a technical topic; use different problem situations and debrief on study circle problem-solving/how problems can be handled.

### **5. Plans For Using Study Circles:**

Facilitators sited plans for using study circles on the following issues/topics:

Barriers to sustainable agriculture in our county (ME)

How the RI Center for Commercial Agriculture can implement some of the ideas generated at the conference (RI)

Topics generated in our State Caucus (VT)

Sustainable Agriculture Topics (CT)

Farmer/Environmental Group Discussion (CT)

Farmer/Legislative Group Discussion (CT)

Continued internal Extension (staff) education (NH)

Farmer to Farmer Discussion (VT)

Mending rift between "conventional" and "sustainable/organic/ecological" folks (ME) (MA)  
Extension education/research/field programs (MA) (ME)  
Food Systems/Food Shed Groups (MA)  
Use daily in teaching (VT)  
Increasing collaboration among various state and regional agriculture leaders/groups (NH)  
(MA)

## 6. Other Comments

It was fun.

This felt like an active group of people with good ideas trying to do good things. I was glad to be part of it.

The location was great.

I think long-term groups will allow study circles to work the best.

It was a great idea to divide up registrants by agencies/farmer and by different states.

The conference helped clarify "sustainable" for me.

I learned a lot.

First exposure to ideological concepts combined with lack of knowledge of differing points of view made for a tense/frustrating experience for some people.

This was just a first step.

Most important to me are the questions captured in the study circle training materials: "What experiences or beliefs would lead a reasonable and caring person to hold those views?", and "What is in that view that I can live with?"

This was an opportunity to chip away at some more of the negative stereotypes about sustainable agriculture.

I'm excited about the idea of producers helping to train Extension and USDA staff.

I found it uplifting.

Thank you for inviting me.

Thank you for the generosity, for providing a stipend and for covering all costs.

Thank you for all your work.

## STUDY CIRCLE EVALUATION

FACILITATOR (name) \_\_\_\_\_

STUDY CIRCLE(s) 1. \_\_\_\_\_

2. \_\_\_\_\_

1. What went well in your study circle(s)? What seemed to be the reasons(s) for this?

2. What didn't go as well as you would have liked? What might have been the reason(s) for this?

3. What did you learn that might be important to pass on to others?

(Over)



4. What would you do differently to train study circle facilitators?

5. What are you doing next with study circles through your state caucus or other activities?

6. Additional comments?

**Thank you.** Please return by **April 18** to Cathy Roth, UMass Cooperative Extension,  
44 Bank Row, Pittsfield, MA 01201