

Section I: Final Report, October 31, 1997

Project Number: **ENE95-10**

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**Project Title: Education of Extension Workers in Sustainable
Agricultural Practices Utilizing the PASA
Conference and Farm Visits**

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Statement of Expenditures: APPENDIX A.

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Section II.

Project Number: **ENE95-10** **Final Report, October 31, 1997**

Project Title: **Education of Extension Workers in Sustainable Agricultural Practices
Utilizing the PASA Conference and Farm Visits**

1. Objectives.

- 1). Further the understanding of Pennsylvania Extension workers about sustainable farming practices.
- 2). Provide extension workers with first-hand observations and discussion of sustainable practices implemented in Pennsylvania.

2. Abstract.

This project proposed to promote the attendance and participation of county agents at the Pennsylvania Association for Sustainable Agriculture (PASA) conference and to host two, tours which highlighted sustainable agriculture production in the Mid-Atlantic region. The PASA conference was well attended in both 1996 and 1997 by extension workers. The conference was publicized to extension workers in 1995, 1996 and 1997. Funds were provided for travel and lodging. The first of the two tours focused on sustainable fruit production and included sessions on sustainable production research which is being conducted at the Penn State Research and Extension Center and on-farm discussions and tours with two fruit growers on the impact of production and marketing have on sustaining fruit production in the area. The second tour highlighted sustainable dairy and agronomic farming and included visits and discussions with Lancaster county farmers. Also included in the second tour was a visit to Rodale's soil research plots.

3. Specific Project Results-Accomplishments

Objective 1. Further the understanding of Pennsylvania Extension workers about sustainable farming practices.

A. PASA Conference:

PASA convenes an annual conference that is attended by approximately 450 - 500 participants. The Conference emphasizes exchange of knowledge about sustainable agriculture that is based on farmer experience, research, and Extension program results. It is designed to facilitate dialogue. Conference presenters are often participants as well and include researchers, Extension personnel, farmers, distributors, and others. Although Extension Agents and Specialists have participated as panelists in the Conference, until this project the numbers were limited. The number of Extension workers attending PASA in 1996 & 1997 is listed in APPENDIX 1.

Incorporating the PASA Conference into the Extension program on sustainable agriculture offers unique advantages. It provides access to a wide array of information and resource persons without the major costs associated with organizing a conference. The Conference format fosters information exchange and dialogue between farmers and farmers and between farmers and extension personnel. It is a comfortable and informative setting for Extension workers to explore the ideas and practices of sustainable agriculture.

The Conference also provides an opportunity for growers and Extension workers to get to know each other and realize each others needs and resources. Some farmers express frustration about the lack of information on sustainable agriculture available to them from their county extension offices. Often, however, farmers are unaware both of the time and resource constraints of extension and also of the mandate to work with all constituents. Some Extension Agents perceive sustainable growers as advocates of practices which are unrealistic for full-time farmers, unprofitable, and unrealistic, with little or no research backing. The Conference provides an opportunity for Agents and growers to move beyond the myths and stereotypes, and to explore

ways the groups can work together with current resources. Extension workers plan their activities through Plans of Work (POW). A list of the POW's initiated by Pennsylvania Extension workers since this project began is contained in APPENDIX 2.

B. Sustainable Agriculture and Farm Tours

Objective 2. Provide extension workers with first-hand observations and discussion of sustainable practices implemented in Pennsylvania.

Participants had the opportunity to visit research sites and farms where sustainable agriculture practices are being implemented. They learned about the technical aspects, and had access to information and discussion on the practicality and productivity of these practices. Participants observed first-hand the soil health, crop vitality, livestock health, pest pressure levels, and farm family's economic well-being. The farm visits continued the co-learning model among extension workers and farmers by focusing on real world examples of sustainable agriculture. In this forum, the economic and environmental trade-offs of particular practices and their long-term sustainability were discussed. In addition, the underlying principles of the farmer practices, and the transferability of these practices to other farms were explored.

Farm tours focusing on dairy and agronomy and fruit production were organized in 1996 and 1997. A variety of selected farms were visited to demonstrate different levels of implementing sustainable agriculture practices. The range of farms illustrated the transition process toward a more sustainable farming and food system. Demonstration of one or more of the following characteristics were considered in selecting the farms: 1). initial steps, such as reducing a herbicide spray in moving toward a more sustainable farming system; 2). transition steps, combinations such as reducing herbicides, implementing a more diverse crop rotation and/or using cover crops; 3). organic farming; 4). employing on-farm research as a tool for evaluating and implementing more sustainable practices; 5). adding value to farm products, using innovative marketing techniques, and applying methods for keeping farms viable; and 6). farmers

representing a range of philosophical viewpoints about sustainable agriculture from minimizing chemical use to organic and biodynamic agriculture production.

Farmers discussed select practices on an individual level and then related them to the whole farm system. By focusing on individual components, such as the use of cover crops, participants learned first hand how a farmer manages a particular practice. On the other hand, discussions about the whole farm system, such as a dairy farm that produces crops without chemicals, composts manure and relies on rotational grazing, illustrated the synergy that individual components create.

Fruit Related Sustainable Agriculture Tour - 1996.

A pre-tour meeting of the extension agents disclosed the interest of the group in visiting the Penn State Fruit Research Laboratory to learn more about the sustainable agriculture research that is being conducted at this facility. The agents felt that by understanding the research basis behind the sustainable practices that are being recommended they could be more effective in discussing these new ideas with growers. The following is a description of the presentations and discussion topics which occurred at the Fruit Research and Extension Center.

June 12, 1996 – Penn State Fruit Research and Extension Center

- Horticultural Research/Sustainable Practices-Dr. George Greene/ Dr. James Travis.

These discussions focused on apple rootstocks, training systems and new varieties which will lend themselves to sustainable practices. The discussion included information on pest susceptibility and the impact on sustainability.

- Apple Post Harvest Practices and Sustainability- Dr. Cindy Barden.

Discussion focused on the impact of production practices and the environment on the long-term storage of fruit and profitability.

- Alternatives to Nematicides - Dr. John Halbrendt.

Research is being conducted to replace nematicides with cropping rape seed between orchard plantings. The techniques to make the method effective were discussed.

- Non-chemical Insect Management Strategies- Dr. Larry Hull.

Alternatives to insecticides were discussed such as biological control of mites utilizing the black ladybird beetle, and pheromones.

- Utilizing Weather Information to Replace Chemical Inputs - Drs. Carl Felland/James Travis.

Site specific weather information is the key to applying pesticides when they are needed to control insects and diseases. Access and utilization of this type of information was discussed.

- Managing Fire Blight through Non- Methods - Dr. Ken Hickey/Dr. James Travis.

Fire Blight is an epidemic in Pennsylvania apple orchards. The control most relied upon by growers is an antibiotic. This presentation stressed the need to control the disease through cultural methods such as resistant apple rootstocks and an antagonistic bacteria.

June 13, 1997 – Grower Visits

- David Kuhn, Kuhn Orchards, Box 95, Cashtown, PA 17310.

David Kuhn has a little over 100 acres of mostly fruit in southern Adams County. He discussed his efforts in establishing alternative markets and the impacts it is having on his business. Also discussed alternative production efforts he is making to improve his farm income such as trellis apples, strawberries and asparagus.

- Brad Hollabaugh, 481 Carlisle Road, Biglerville, PA 17307.

Brad Hollabaugh has a 400 acre fruit farm in Adams County. He related his efforts in seeking niche markets. He discussed the production of Asian pears on his farm and the rewards and challenges associated with diverging from the normal production schemes.

Fruit Agent Tour List of Participants and Evaluation Summary (APPENDIX 3 and 4.)

Dairy and Agronomy Tour - 1997 (List of Participants APPENDIX 5.)

Pre-tour Information Gathering. A planning meeting was organized to get input from dairy and agronomic extension agents and specialists about the type of sustainable practices to include in a farm tour. At the meeting a list of issues and topics, as well as possible sites for the tour was generated. Several agents who were unable to attend, also provided suggestions when they were contacted about the meeting. In addition to the extension personnel, Don Weaver, a farmer from New Holland, also attended the meeting. Don has contacts with a number of farmers in southeastern PA and provided helpful suggestions about practices and farms that might be included on the tour. The information from the extension personnel was used as a guide in organizing the two day farm tour.

Farmers were contacted to discuss their interest in hosting the tour. Practices to be highlighted as part of the farm visit were identified. A profile of the farming practices for each site or project was prepared and sent to the tour participants prior to the tour. This provided tour participants with background information as a context for the discussion during the visit. Farming practices that improve soil health were the focus of the first part of the tour. The last part of the tour focused on farming practices that protect water quality. Following is a short description of each site visit and the profile:

Tour Stop 1.

The Weaver Homestead has been in the family for nine generations. It is part of a 3000 acre land grant from William Penn in 1721 to three Weaver brothers from Germany.

Integrated Weed Management. The family made a decision to move towards a biological farming system in the mid - 80's. Developing an integrated weed management program was part of the overall goal of improving the health of the soil. Components of the weed management program include the following:

Soil Health. Improving the health of the soil by getting it in a balanced and microbially active state. Steps taken to improve soil health include: 1). A more diverse rotation consisting of

3 years of alfalfa - corn silage followed by a rye cover crop - soybeans - high moisture shelled corn. This six year rotation was developed with the goal of producing quality forages and eliminating corn following corn. 2). Shallow tillage is used to keep organic matter close to the soil surface. Deep tillage of green manure crops immediately prior to planting a crop was eliminated. 3). Biological breakdown of liquid manure is enhanced by treating it with a microbial product.

High Quality corn Silage Varieties. An important crop production goal is to produce high quality forages for the cows. Evaluating high quality silage corn varieties is a tool Don and Nelson are using to identify varieties that help them achieve this goal. This is the second year they are conducting a variety trial on their farm. They are looking for high yielding varieties with high digestibility and energy levels.

Tour Stop 2A.

Enos Hoover welcomed the group and gave an introduction to his philosophy of farming. He discussed the changes described in the profile that he made in his farming operation. He led the group around the farm to see a number of practices he uses:

- the composting operation using pigs to turn the manure
- a fly trap he built through which the cows pass every time they enter the barn
- fields to look at the soil and crops conditions
- the area in which the cows are milked where he discussed the herd management and homeopathic materials he uses as part of his organic milk production
- rotationally grazed paddocks where he discussed his grazing management

Enos made the switch to a cropping system based on increasing the biological activity of the soil in 1982. Soybeans were added to the rotation to break up the sequence of corn following corn. The new rotation was 2 years of alfalfa, corn, soybeans, corn and back to alfalfa. By switching from the moldboard plow to a chisel plow he was able to change from deep to shallow tillage. The only inputs in addition to manure were AgRestore applied to his soils, and a herbicide for establishing alfalfa. With these changes Enos saw an improvement in the tilth of his soils and a positive impact on yields.

In 1993 Enos became interested in the prospect of selling organic milk and began buying Jersey cows. 1996 was the first year his entire herd consisted of Jerseys. You don't have to be around Enos very long to hear his fondness of Jerseys. He finds they require less labor and are easier to handle.

As Enos began switching his herd over to Jerseys he decided to try grazing. In 1994 he converted one field to grazing and each year took an additional field out of crop production. He now has 28 acres in grass, and the remaining 27 acres in crops. His crop rotation now consists of fall seeded spelt and timothy, followed by one year of alfalfa/timothy and one year of corn. The timothy/alfalfa mix is harvested as hay, and the corn as ear corn. With the switch to grazing and this crop mix, Enos no longer uses the silos and TMR mixer.

The farm was certified organic by OCIA in 1994. He began receiving an organic premium for his milk in June 1995.

Tour Stop 2B.

Arden and Caroline Landis joined the group at the Hoover farm. Arden is one of the leaders of the Lancaster County Graziers which has been promoting management intensive grazing with pasture walks and conferences. Arden and Caroline discussed their dairy operation which is 100% grass-based, and the grazing trends and practices they see among dairy farmers in this part of the state.

Tour Stop 3.

Dr. Laurie Drinkwater, Director of the US Regenerative Agriculture Resource Center at the Rodale Institute, discussed the soil health research results of the Farming Systems Trial which has been in progress for 16 years. She explained the objectives of the Farming Systems Trial, the experimental design, and the cropping rotations of each of the treatments. The group viewed the soil conditions and crops in the three cropping systems. After seeing the experimental conditions, Dr. Drinkwater showed slides summarizing the salient soil health findings of the experiment.

Tour Stop 4.

Six Pennsylvania NRCS staff joined the group at the Groff farm. Steve gave an overview of his farming goals and philosophy and then led the group on a tour of the fields which included the following:

- soil erosion measures recently installed
- SARE funded narrow-row corn experiment
- soil conditions of fields with a history of no-till
- cool season cover crops
- warm season cover crops
- cover crop management using a rolling stalk chopper
- NT transplanting tomatoes into a cover crop of rye, crimson clover and hairy vetch which was cut and rolled with the rolling stalk chopper
- the affect of a late frost on early transplanted tomatoes
- the use of row covers for protecting early crop tomatoes

The Groff's farm 175 acres consisting of 50 acres alfalfa, 60 acres corn, 20 acres soybeans, 20 acres small grains, and 25 acres of vegetables. Farm yields per acre are 6 ton alfalfa, 150 Bu corn, 55 Bu soybeans, 75 Bu wheat, 9 ton pumpkins and 30 ton tomatoes. They also raise 40 - 45 steers each year.

Soil conservation has always been an important component in the farming operation with practices like contour strips and grass waterways on the rolling hills. Building on the conservation ethic practiced by his parents, Steve began no-tilling corn in the early '80's. Some fields on his farm have had no tillage for 15 years. In 1995 he began experimenting with no-tilling vegetables. Last year 97% of his farm was in no-till, including 23 acres of vegetables.

In 1991 Steve started using rye for winter erosion control on fields that would have been bare. Now he plants cover crops based on the succeeding crop to be planted. He uses different cover crop mixes for different crops. He has experimented with using rye, oats, hairy vetch, crimson clover, forage soybeans and German millet and continues to fine-tune the use of cover crops. Currently, in preparation for soybeans, he spins rye over cornstalks, and then rolls the stalks to shake the seed into the soil. Whenever possible he plants rye or vetch before corn.

Tomatoes are no-till transplanted into a three-way mix of hairy vetch, crimson clover and rye. At times when weather does not permit getting a fall cover crop seeded, Steve plants oats in early spring which provides a mulch for no-till pumpkins.

Steve has found the combination of no-till with rotating cover crops and harvested crops has significant benefits beyond soil conservation. He has seen a positive change in soil tilth, organic matter levels, water infiltration, moisture retention and pest problems. In addition Steve has realized a positive economic pay-off with this system. The nitrogen contribution from legumes offsets legume cover crop costs.

On-farm research with narrow row corn, supported by a Farmer Grant from the Northeast Region Sustainable Agriculture Research and Education Program, is another tool utilized by Steve to meet the goals of his farming system. In collaboration with researchers from NRCS and Penn State, Steve is interested in determining if he can reduce the herbicide rate, increase nutrient uptake, and increase yields by growing corn on 15 inch rows.

For more information, check out the Groff's website - <http://www2.epix.net/~cmfarm/>

Tour Stops 5-8.

The last segment of the tour focused on the efforts to protect water quality on dairy farms in the Pequea-Mill Creek watershed. Les Lanyon, Jerry Martin and Charles Ackley from the Pequea-Mill Creek project hosted this portion of the tour. We visited three farms where the following practices were demonstrated and discussed:

- Farmstead Evaluation as a tool for identifying farmstead practices that protect water quality, and raising awareness about management practices and structures that have a negative impact on water quality
- barnyard and stream corridor practices
- cow lanes
- rotational exercise lots

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

Fruit Agent Evaluation Summary (**APPENDIX 4.**) Dairy & Agronomy Evaluation

Summary (**APPENDIX 6.**)

5. Individuals Involved

- 44 Extension Workers
 - 24, Pennsylvania
 - 6, Maryland
 - 4, New York
 - 3, New Jersey
 - 1, New Hampshire
 - 1, Rhode Island
- 6 NRCS Personnel
- 7 Farmers
- 2 State Government Personnel

APPENDIX 2. Cooperative Extension Plans of Work (POW) FY 1996-97
National Initiative Targeted Program in Sustainable Agriculture

POW # 01	Vegetable Disease Management: Informed Decision Making by Producers
POW # 05	Enhancing Dairy Farm Management and Profitability
POW # 06	Strengthening and Supporting Rural-based Cooperatives through Leadership Development and Business Skill Education
POW # 07	Community Conflicts over Agriculture, Land Uses, and Natural Resources: Finding the Common Ground
POW # 08	Integrated Pest Management Program for Livestock, Horses, and Poultry Production Systems in Pennsylvania
POW # 09	Integrated Crop Management (ICM) for Mushroom Producers
POW # 13	Greenhouse Production and Business Management and Development
POW # 14	Sustainable Cropping Systems
POW # 16	Grape Production Education
POW # 17	Stewardship of Pennsylvania's Forests and Wildlife
POW # 22	Farm Level Decision Making
POW # 23	Increasing Profitability in PA Livestock and Livestock Processing Enterprises
POW # 24	Animal Health and Well-Being
POW # 25	Sustainable Community Development
POW # 26	Agricultural Marketing and Policy Economics
POW # 28	Urban and Community Forestry - Natural Resources of Communities
POW # 29	Integrated Crop Management Systems for Vegetables and Berries
POW # 30	Poultry Technology Transfer
POW # 31	Sustainable Turf, Ornamental, Nursery, and Greenhouse Crop Management
POW # 32	Tree Fruit Production Systems for an Evolving Fruit Industry
POW # 33	Dairy Farm Production Facilities
POW # 34	Enhancing Pennsylvania's Wood Products Industry
POW # 35	Improving Safety, Quality, and Flavor of Milk and Dairy Products
POW # 36	Implementing the HACCP (Hazard Analysis Critical Control Point) Concept throughout the Food System to Prevent Foodborne Illness and Ensure Food Safety
POW # 39	Sustainable Ground Water
POW # 40	Safe Use of Pesticides

Fruit Research and Extension Center
June 12, 1996

Number of Respondents: 9

1. Overall how valuable was this in-service to you

Not at all						Very Valuable
1	2	3	4	5	6	7

Avg.: 5.9

2. What specific items did you learn about that you will be able to use in your county program?

Enterprise apple
Dwarfing rootstocks for sweet cherries
New leafroller material - Confirm 2E (2)
New nematode forms (ours were from '92) (2)
New rootstocks and selection (5)
Postharvest Physiology work
Chance to interact with fruit researchers
More knowledge of current research projects (2)
Orchard replant problems
Fire blight management (3)
Prunus stem pitting management and site preparation for control (3)
Skybit weather program organization (2)
Grower visits
Latest pest control ideas

3. What other topics would you suggest for future in-service training?

Training systems, pros & cons, management considerations (2)
New varieties & selection including scab resistant ones (at harvest) (3)
Review of pruning techniques (2)
Use and in orchard protection of beneficial insects
Spray schedule / material update
Orchard equipment
Economic data (get this for the variety of operations statewide)
Anything
Weed management
Greater depth on Larry's work (Entomology)
More information on goals of research
Opportunity to put together grant proposals
More training on Skybit
Situation regarding mite resistance
New developments in IPM
New frost control techniques
New sprayer technology

4. Is this a good time of year for this in-service?

Yes : 8 No : 1

5. What suggestions would you make to improve this in-service?

More advance notice

More visits to commercial orchards for trouble shooting
Focus on specific areas identified by agents in advance
None - well run and planned
Keep doing more of the same
O.K. as is, good job
More lab / hands on exercises

6. Should the in-service

be more or less formal ? More : 0 Less : 1 Same : 7

This was a good combination although more field time would have been helpful

Keep it as informal as possible

I felt it was just about right. I enjoyed the orchard visits. I would include this in future programs. Everyone ends up trouble shooting on this job.

be moved to different regions? Yes: 5 No : 1 As needed : 2

This is a good location - logistics may be easier if it remains here.
Yes, only if what can be seen is as good or better than here (Biglerville).

Now and then, Biglerville is okay

Wherever we have worthwhile things to see

Has benefits of being at research center

No strong feelings either way, but I do like to meet with researchers and hear about their programs

7. Would you recommend this type of in-service to other agents?

Yes : 9 No : 0

Yes, as their calendars allow

8. What are the major concerns of growers in your area?

Pest control

Weeds

Economics / Marketing (4)

Cost of new IPM tactics

Pruning & Training (3)

Varieties / Rootstocks (5)

Loss of pesticides

IPM and Alternate control methods (2)

Profitability (2)

Problems with sweet cherry production (rots, splitting, etc..)

White rot / black rot in small trees

Improved thinning methods

Weather problems

Government regulations

Making good informational based decisions

Sustainability

Frost protection

Disease prevention / control

Land costs

9. What suggestions do you have for research topics that should be addressed?

Ways / methods to get IPM into the orchard

Let more commercial interests set the agenda

High quality disease resistant varieties

Improved rootstocks
Making weather information useful, convenient & available for all
Horticultural Crops.
Pest management and costs and practicality
Varieties / Rootstocks and disease susceptibility
Profitability
Problems with sweet cherries
White rot / black rot on small trees
Improved thinning methods
Encouraging / enhancing beneficial insect populations in orchards

10. What are the most important factors in sustaining agriculture in your area?

Cutting production costs
Economics, economics, economics
IPM that reduces pesticide use and residue on the product
Public education on IPM that reduces pesticide use and residue on the product
Profitability / Return on investment (3)
Quality Product
Marketing (4)
Ag Industry Support
Labor
Effective transfer of information to growers
Helping growers to evaluate data so they make informed decisions
Wildlife control
Disease prevention / control
Land costs
Knowing costs
Creating efficiencies by change

APPENDIX 6.

**Dairy and Agronomy Sustainable Agriculture Tour
Lancaster, PA May 21-22, 1997**

Responses – Participant Survey

NOTE: Responses shown in ()

21 Responses were received

- 1. Were the materials mailed to you prior to the tour helpful in understanding the farms and projects visited?**

Please circle the number on the scale below that represents your overall impression.

1	2	3 (6)	4 (6)	4++(1)	5 (8)
not helpful		somewhat helpful			very helpful

- 2. Did the practices demonstrated and articulated by the farmers increase your understanding of farmers' concepts about sustainable agriculture?**

Please circle the number on the scale below that represents your overall impression.

1	2	3 (4)	4 (8)	5 (9)
no increased understanding		understanding somewhat increased		understanding greatly increased

- 3. Did the sites visited increase your understanding about the role of soil health in sustainable agriculture?**

Please circle the number on the scale below that represents your overall impression.

1	2 (2)	3 (7)	4 (6)	5 (5)
no increased understanding		understanding somewhat increased		understanding greatly increased

- 4. Did the sites visited increase your awareness of the relationship between sustainable agriculture practices and water quality protection?**

Please circle the number on the scale below that represents your overall impression.

1 (1)	2 (1)	3 (10)	4 (7)	5 (1)
no increased awareness		awareness somewhat increased		awareness greatly increased

5. Think about the farms/farmers and sites/projects leaders visited. In your view, how do you rate each farm/farmer or site/project leader for each of the characteristics listed below?

Please circle the number that best presents your view.

<u>Information presented was</u>	<u>Hard to understand</u>			<u>Understandable</u>	
Farms/Projects					
Weaver Homestead Farm	1	2	3 (3)	4 (10)	5 (8)
Enos Hoover Farm	1	2	3 (2)	4 (9)	5 (10)
Arden and Caroline Landis	1	2 (2)	3 (3)	4 (9)	5 (6)
Rodale Institute Farming Systems Trial	1	2 (3)	3 (3)	4 (12)	5 (3)
Steve Groff Farm	1	2	3	4 (5.5)	5 (14.5)
Pequea-Mill Creek Project	1 (1)	2 (1)	3	4 (8)	5 (9)

<u>Practices/concepts discussed</u>	<u>Were old information</u>			<u>Created new awareness</u>	
Farms/Projects					
Weaver Homestead Farm	1	2	3 (10)	4 (6)	5 (5)
Enos Hoover Farm	1	2 (1)	3 (5)	4 (8)	5 (7)
Arden and Caroline Landis	1	2 (2)	3 (8)	4 (8)	5 (3)
Rodale Institute Farming Systems Trial	1	2 (3)	3 (8)	4 (7)	5 (2)
Steve Groff Farm	1	2	3 (1)	4 (8)	5 (11)
Pequea-Mill Creek Project	1 (1)	2 (1)	3 (5)	4 (7)	5 (5)

<u>Value of information for clients with whom I work</u>	<u>Impractical</u>			<u>Practical</u>	
Farms/Projects					
Weaver Homestead Farm	1 (1)	2 (2)	3 (7)	4 (6)	5 (5)
Enos Hoover Farm	1 (1)	2 (4)	3 (4)	4 (8)	5 (4)
Arden and Caroline Landis	1 (1)	2 (3)	3 (7)	4 (7.5)	5 (2.5)
Rodale Institute Farming Systems Trial	1 (1)	2 (7)	3 (6)	4 (5)	5 (2)
Steve Groff Farm	1 (1)	2 (1)	3 (2)	4 (8)	5 (8)
Pequea-Mill Creek Project	1 (2)	2	3 (3)	4 (7)	5 (7)

Value of the farmer/project as part of a sustainable agriculture tour

Useful

Not very useful

NOTE: Useful at #1 and Not very useful at #5 is set up in reverse order to the previous questions. Those responding may not have been aware of this change in format.

Farms/Projects

Weaver Homestead Farm	1 (7)	2 (5)	3 (3)	4 (4)	5 (2)
Enos Hoover Farm	1 (7)	2 (6)	3 (2)	4 (4)	5 (2)
Arden and Caroline Landis	1 (4)	2 (5)	3 (7)	4 (2)	5 (2)
Rodale Institute Farming Systems Trial	1 (1)	2 (6)	3 (8)	4 (4)	5 (1)
Steve Groff Farm	1 (10)	2 (2)	3 (1)	4 (2)	5 (5)
Pequea-Mill Creek Project	1 (1)	2 (8)	3 (3)	4 (2)	5 (5)

6. Did you learn anything at the tour that you have already implemented?

Describe your recent efforts.

“One small organic farm is using some piglets to rot around his compost. I’ve become more aware of manure management.”

“Being a fruit grower most of my life, without livestock crops, everything was new and different. Surely the need is there to keep our soil in the best condition so our farmland doesn’t turn into desert.”

“Working on a winter meeting to present issues to help NJ and area dairymen make the transition to sustainable/organic dairying.”

“Not yet, but working on it.”

“Pasture alley improvement.”

“Discussed Groff farm activities with fellow agent dealing with this client group. Will use information during fall and winter meeting including web site. Great!”

“Developing a program on production of organic dairy products.”

“I’ve recommended use of a rotary hoe as a weed management tool as demonstrated at Weavers. I also used some of the rotational grazing information from Enos Hoover in a presentation on rotational grazing.”

“Not yet.”

“Working with no-till vegetable transplanter demonstration plots on research farm and producers’ farm.”

7. Was there anything that should have been included in the tour that wasn’t?

“Grain Production. Other livestock production farms, i.e., chicken, hogs.”

“Alternative crops/livestock.”

“No!”

“No.”

“More economic information.”

“More on pest management.”

“I was disappointed in the Rodale tour. The composting demo could have been better. An actual demonstration would have been good.”

“There wasn’t anything about fruit growing. However, Steve Groff’s cover crop idea would be of interest to me. Rocks are a problem to us, so we don’t like to plow much. If we could get grass to grow with the rye, run the rye down, then plant our trees, that might work. We have been using IPM for almost 30 years.”

“A first rate grazing dairy farm, for example, Forrest Stricker. Composter farmers: K. Zurin, dairy; and P. Wogelmuth, poultry.”

“It may have been valuable to have some university/extension/industry types at each of the stops to put the farmers practices and situation in perspective and relate the practices to what we know from the literature.”

“I wanted to know what else was going on at Rodale.”

“Are there fact sheets on cover cropping a la Groff?”

“We went by an Amish farmer who was moving some poultry coops for pastured poultry. I can’t remember where this was, but it was near our Pequea-Mill Creek project.”

8. What opportunities could we make available that would further your understanding of sustainable agriculture?

“Would like to see researched base info on soil inoculants or stimulants ala Don Weaver.”

“Just keep going back to those folks and/or go to new farms with different situations.”

“Alternate (non-traditional) crops or livestock.”

“Things so far have been good - what about the ‘green’ industry and vineyards.”

“Rotational grazing. Other non-traditional farming techniques.”

“Challenging but what about some partial budgets comparing before/after implementation of practices.”

“In depth plans to achieve organic status.”

“Has there been a study done to show a difference between: #1. planting apple trees in the same orchard, the same year, and #2. planting grain for a year or maybe two before replanting apples. I want to know if the #2 trees will surpass #1 trees. I realize there shouldn’t be replant problems, also rapeseed will be a must for stone fruit.”

“Additional tours: (1) Dairy farms only, (2) Vegetable farms only, and (3) Fruit farms only.

“Research using beneficial insects and other alternatives to use of pesticides.”

“Additional economic information prepared by a creditable source on the production practices.”

“I’m not sure everyone had enough core knowledge of environmental science, ag economics, agronomy, etc. to see the big picture of sustainability in agriculture (I didn’t either).”

“This was great and certainly added to my understanding and ability to communicate to producers ideas and practices.”

“The on-farm tours w/farmers who have successfully implemented sustainable practices are most useful.”

“Any tours of successful implementation of ‘sustainable’ practices are helpful.”

9. Assuming a similar tour would be held again, would you recommend it to other extension agents and USDA field personnel who were interested in furthering their understanding and learning about sustainable agriculture?

Please circle the number on the scale below that represents your overall impression.

1	2 (1)	3 (3)	4 (4)	5 (13)
would not recommend		would recommend		would highly recommend

10. Additional comments or observations:

- “Great Tour.”
- “Accommodations were very nice. Enjoyed the tour very much.”
- “Tour was well-done and should have resulted in increased understanding of SA by participants. Great job!”
- “It would have been helpful to have seen the (Arden Landis) farm.”
- “There should be more of a push for farmers to implement S/A practices. I see livestock roaming through streams in too many places, polluting the water. Who cares? The guy that drinks the water downstream cares. There has been a growing trend of no-till that is noticeable in our area, so maybe the word is getting out here.”
- “Keep up the good work, I really enjoyed hearing about new and innovative techniques. Arden Landis was excellent, you could tell he was passionate about his method. Get him on a pasture walk to spread the word; visit his farm. Enos Hoover was very knowledgeable but hard to understand. Pull all that info out of him. Steve Groff was the fire, too. He was excellent. Thank you, once again.”
- “Loud speaker or similar device for all speakers. Great food. Excellent hospitality!!”
- “If someone took minutes and wrote it out, I would like a copy please.”
- “This form should have come out earlier (or maybe twice) i.e., (1) how was the tour, and (2) what have you implemented. It was a great opportunity to see what others are doing. Great.”
- “It was interesting to see the wide range of what farmer’s called ‘sustainable agriculture.’ Some farmers relied heavily on testimonial with no applied research to determine significant differences. (Landis’s went out of business in Bedford County - they had numerous mastitis problems. They now have a farm given to them at below market values - could they make it without special financial assistance?”
- “Overall, excellent tour. Very informative and worthwhile. While I don’t expect many farmers in my county to implement these particular practices it does prove sustainable practices are possible with enough determination and trial and error.”
- “Very good tour to gain additional information on sustainable production practices.”
- “Thank you for organizing the tour. It was good to see your region, and to meet other ag advisors.”
- “Would like follow up on Groff farm; that and Hoover farm were of the most interest. Would like to see some alternative crops like flowers.”
- “Excellent information presented at Pequea-Mill Creek Project.”
- “Very goo tour. Recommend repeating, perhaps in a different location.”