

Northeast Region SARE National Training and Education Program

FINAL REPORT

August 15, 1998

Project Title:

**Communication and Outreach for Sustainable Agriculture:
A Video Training Program for Extension**

Project Coordinator:

**Billie Jo Hance
Cook College
Center for Environmental Communication
31 Pine Street
New Brunswick, NJ 08901-2883**

Project Duration:

One year: February 1, 1997 - January 31, 1998 (with an extension to August 15, 1998)

Final Report

Communication and Outreach for Sustainable Agriculture: A Video Training Program for Extension

What follows is the final report for the project undertaken by the Center for Environmental Communication to document the communication and collaboration among partners in a successful sustainable agriculture program in northwest New Jersey. The project began on February 1, 1997 and was completed on August 15, 1998. The report documents the execution of planned tasks, as well as explanations for any divergence from the stated work plan. This report accompanies the final product, the videotape: *Building Sustainable Partnerships for Agriculture: A Case of Watershed Protection* and complementary materials.

Project Goal

The goal of this project was to create a training program for Extension personnel that would focus on the human dimension of sustainable agriculture by highlighting on videotape the successful communication and collaboration efforts that led to the success of the Musconetcong Watershed Implementation Project. Objectives were to 1) increase Extension personnel's overall knowledge and understanding of the importance of communication; 2) improve and refine communication and consensus-building skills; 3) increase awareness of the value of communication in encouraging farmers to adopt sustainable practices; and 4) motivate Extension personnel, through a positive example, to embark on collaborative projects.

Overall, the project reached its stated goal and objectives, as evidenced by comments given in evaluations during the pilot workshops (discussed below) and in the interest in the videotape by various groups for a range of purposes broader than we had at first envisioned. Each of the methods outlined in the original proposal will be discussed below, with particular emphasis (*in italics*) placed on 1) things that went well, and in some cases were even more effective than we had envisioned; 2) approaches we changed or adjusted based on feedback from our audience or other evidence that a mid-course correction was essential; and 3) lessons learned during the process that might be helpful to those embarking on similar projects in the future.

Advisory committee

In our proposal we included a list of people who had agreed to serve as advisors to the project (see page 15 of proposal). Typically in a research project of any kind, CEC creates an informal advisory group of different constituencies who can guide us at various times throughout the life of a project by reviewing draft materials, providing advice and feedback, suggesting relevant contacts or references, etc. (The "informal" refers to the fact that we rarely convene the group per se but rather ask different individuals at different times for feedback in areas in which they are experts.) In this project, we also added people who could critically review a rough cut of

the video and provide feedback both on content and technical issues and those who could advise and assist us with dissemination of the final video.

Our advisors played a key role in this project. Although CEC had previously made a well-received video on the communication of risks at a hazardous waste site, our research into the communication of agricultural issues was relatively new. As a result, we relied heavily on the feedback from our advisors in Extension and NRCS to: 1) help us find the correct focus for the video, and 2) advise us on approaches that would draw in--rather than turn off--our intended audience. For example, at an early meeting with an Extension agent and NRCS personnel involved with the Musconetcong project, we discovered that the idea of using didactic graphics to “teach” communication would likely be viewed as condescending by many agents and specialists who felt they already were engaged in this type of activity. The point was made that the video might serve better as an orientation to new employees, and more broadly as a trigger for discussion among mixed groups of extension and other agencies and farmers. That feedback was invaluable for the subsequent creation of a script that would highlight the communication and collaborative techniques used in the Musconetcong project while “telling the Musconetcong story.” In this way, the lessons learned would encourage those who were hesitant about communicating to begin outreach, while providing ideas to those who were more advanced on how to expand their efforts. Subsequent meetings, revisions, and pilots (outlined below) helped us focus in on the right balance of teaching and story telling without being overly didactic and prescriptive.

Our technical advisor from Rutgers’ Office of Television and Radio was invaluable in helping us translate our vision into the video medium. Often, when people decide they want to make a video, they are convinced that their technical knowledge of a topic will adapt naturally and easily into a fascinating and compelling video. In fact, the medium has its own constraints and idiosyncracies, and simply having great information--or even a great story--does not guarantee a good video (and we all have seen too many bad videos). *Our technical advisor pushed us to answer key questions before we even sat down to write an outline for the video, for example: What is the key message of the video? What do you want people to think, feel, and do after they’ve seen it? What are the key points you need to make to get people to that place? What visual information do you need to gather to illustrate those points?* This up-front thinking saves a great deal of time and money in the long run; filming without answering these questions can lead to hours and hours of unused, unnecessary footage.

We also had on our committee the director of Cook College’s Office of Continuing Professional Education, who provided us with a dual perspective: he is both a leader in delivering short courses to a wide variety of audiences and also a farmer. We relied on his advice, as well as others (see below) for ideas on the best way to disseminate the video. For example, he was able to suggest key leaders in the farm community, as well as different venues that we’re approaching to show the video in. Additionally, he was able to provide us with the names and teachers of continuing education courses into which the video might be integrated.

Musconetcong farmers also provided important feedback throughout the process. In interviews, careful attention was paid to farmers' reactions to questions, whether they understood what we were asking, whether they felt the questions were relevant, etc. This helped enormously in subsequent on-tape interviews of farmers. A few of the advisors listed in the proposal had a less involved ongoing role but were invaluable in helping us develop the original proposal and in suggesting others to contact for advice and support. These advisors have been kept up-to-date on the progress of the video and have expressed interest in the final product.

Creating an outline for the video

Before creating an outline, we conducted preliminary interviews with several partners in the Musconetcong project to find out 1) general background on the development and progress of the Musconetcong project; 2) what they felt were the important lessons learned; 3) who were the most important people to talk to about the project; and 4) in what ways did they feel communication and collaboration made the project successful and what examples did they think should be highlighted on videotape. After getting a sense of the main themes, we created an outline for the video, which we circulated among our advisors for comment. After revising the outline, we were then ready to develop a video "treatment" (an outline that includes a description of video clips either already obtained or needed) and then a script (includes all video clips, voice overs, and descriptions of background roll needed as filler), which was the most complicated, intensive, and critical part of the project. *A common mistake fledgling video producers make is to go out and film with an idea but no written treatment.* We learned this lesson from our first effort and from others' stories about their forays into video making. Even knowing this, we still had one day of filming (March 1997) that we conducted before the treatment was completed. While we were able to use some footage from that day, in retrospect, we could have been far more efficient. Also, the lack of treatment at that point prevented the videographers from giving us advice about shots because they weren't clear on where we were going with the video. This was resolved in future shoots.

We hired a professional producer for two days to help us develop a treatment that integrated our ideas with the visuals we would need to plan our filming. It was useful to work with someone who could provide this type of vision and feedback; we recommend it for those who are producing their first video. (In our next video, we will not incorporate this step, as we now are sufficiently familiar with the process.) After that treatment was circulated for comments and revised, we then went on to create a script based on the treatment. The filming and the script development took place concurrently--for us, each process informed the other. Several revisions of the script occurred as a result of ongoing feedback, the necessity to cut back the length of the video, and the collection of new footage that in some instances illustrated our points better than earlier footage. As executive producers on this project, we made final decisions on the content.

Filming

The goal of the filming was 1) to capture natural and unstaged interactions among project

participants that would illustrate the concepts of communication and collaboration and 2) and to record on film participants' views about the project in their own words. We worked closely with participants in the Musconetcong program to 1) identify farmers whose participation would illustrate the concepts we were trying to convey; 2) identify meetings among the various partners in the project that would illustrate collaboration; 3) alert us to key interactions that were likely to take place that would provide opportunities for filming (e.g., the agencies sitting down with a farm family and talking together with the family about their nutrient recommendations); and 4) provide us access for filming by explaining our project to others and obtaining their permission to be filmed. *We cannot over stress the importance to this project of the working relationship between CEC and the agency project participants. Without their help and enthusiasm, we would not have had access to and cooperation from the farmers, agricultural businesses, etc. we wanted to highlight in the video. We were extremely careful to talk to people ahead of time and answer any questions they had about the video, as well as to send them follow up thank you notes for their participation. We also included everyone who was filmed in early screenings of the rough cut of the video so they would have a chance to see themselves and be comfortable with how they were depicted or suggest changes. Only one person asked for a change, and we had already independently decided to edit that person's interview.*

In all, we scheduled 5 days for filming:

Day 1: Integrated Crop Management meeting; farmer interview; background

Day 2: "Kitchen table" meeting with agencies and farm family (for case study); personal interviews with Extension agent and project agricultural consultant

Day 3: Interview and background roll of second farmer for case study; interview with Extension IPM agent

Day 4: Interview and background roll of fertilizer dealer; interviews with project coordinators; short follow up interviews with Extension agent and project agricultural consultant

Day 5: Fill in background shooting of Musconetcong watershed area.

We spent about 1 ½ days shooting background footage to use as filler and cover for some interviews and to ask follow up questions that, upon viewing the previously shot film, would address issues our initial interviews had failed to uncover. This was an iterative process of referring to the script, thinking about the key messages, revising the interview questions, and reshooting to obtain the desired sound bites. Even with reshooting some footage, however, we were within the time we had budgeted for filming.

Preparation for filming was logistically challenging, balancing the availability of videographers with the convenience of farmers and the scheduling of others' events. Rutgers' Office of TV and Radio helped enormously in juggling their available technicians to accommodate our needs. Other preparation included preparing interview questions, which required talking ahead of time with project coordinators, and touching base with farmers and others regarding the timing. Some shoots ran late, and required our calling ahead to alert others to the delay in getting to them. Overall, everyone was very understanding and cooperative, and

we worked hard to stay on schedule to avoid taking advantage of their good nature.

Editing the video

This is the most time-consuming and agonizing part of making a video, and often is where projects of this type can get bogged down. Regardless of how efficiently you shoot, there is still a lot of footage to go through, and there are no short cuts around the tedious activity of going through the footage to write down numbers for useable clips. *Once again, without a script, this is an almost impossible task; it is like trying to navigate through unknown scary waters without a chart.* A good script defines the task and makes it as painless as it can be.

Clips watched and recorded, we headed to the studio to spend a week making a rough cut, which is like a rough draft in a written work: it has all the elements but no polish. We narrated the voice over (for final copy we used professional talent) and put the clips together with no dissolves or graphics. This is the version we used for our first round of pilot screenings. After we received feedback from a variety of audiences (see below), we edited another rough cut. We piloted that twice, and did another rough cut based on that feedback. (The second and third rough cuts were successively less intensive; by the final, we were tinkering with voice over phrasing and length.) The final step was to take the video into the studio for on-line editing, professional voice over, and addition of graphics, credits, and music.

As executive producers, CEC made all editing decisions but worked closely with our editor at Rutgers' Office of TV and Radio. Our editor's professional opinions and technical advice were critical in helping us operationalize our vision.

Piloting the video

This step occurred before the drafting of materials and took on a far greater significance than outlined in the original proposal. In fact, we had several formal and informal video "pilot workshops," both with our target audience and with other audiences, at every phase in video editing. Screenings were organized and facilitated by the CEC producer (BJ Hance), and we designed an evaluation form that viewers filled out immediately after watching the video and before engaging in a group discussion about it. The purpose of the form was to get people's first reaction to the video--what they liked and disliked, what they felt were the key messages of the video, and any other comments (evaluation form attached).

This step differs slightly from the process outlined in the proposal because it combined the pilots with the workshop/dissemination phase. There were several reasons for this deviation from the proposed methodology:

- a) Efficient editing. As mentioned previously, it became clear to us during the initial interviewing that we would have to strike a balance between telling the story and teaching. For the Extension audience, this balance was even more precarious due to the non-technical nature of

our topic. *Given that video changes are very costly, and if we missed the mark our video would end up on a shelf and not be used, we decided it was better to take the video out to our audience in its early stages and get useable feedback BEFORE it was too late to adjust or make changes;*

b) **Networking.** Discussions that focus explicitly on communication and collaboration among Extension, NRCS, farmers, and others involved in sustainable agricultural field efforts are rare, and our Center has only recently become involved (two-three years) in agricultural issues. Therefore, we saw these pilot workshops as an opportunity not only to build support for such discussions, but also to build the credibility of CEC as a resource on issues of communication. Getting out to meetings and in the field with members of the agricultural community and associated agencies--and using the video rough cut as an entre and discussion tool--increased the interest in the videotape in particular and in looking at communication issues in general.

c) **Dissemination and impact assessment.** Early interest in the video rough cuts lead to the word going around about its progress (see attached reports in Extension and NRCS newsletters), which in turn led to queries to CEC about the video before it was finished. Feedback from evaluations help us to gauge the response to the video as well as to create draft materials to go with it.

In all, we held five pilot workshops, described below. (Several in-house screenings among CEC researchers and colleagues were also held.) Each pilot differed in audience and nature of comments asked for and given, and also in the discussion about communication issues. With each new video version, the discussion focused less on the videotape itself (e.g., what changes should be made, etc.) and more on the issue of communication, other audiences that might want or need to see the video and in what venues, and what materials were appropriate to include with the training packet.

1/16/98 - This was a mixed audience of NRCS and Extension personnel and included some of the people featured in the video. Attendance was approximately 12 people and was held at the North Jersey Resource Conservation and Development Council office in Annandale, NJ. Summary of evaluation forms and discussion: The rough cut of the video was well-received. Of the 11 evaluation forms turned in, eight listed either (or both) communication/collaboration as one of the main messages of the video. In response to the question "What did you like most about the video?", a majority of responses cited the use of the participating farmers to tell the story. Others cited the flow, the narration, and the background shots of the Musconetcong valley. Least liked aspects of the video focused largely on video technical issues (e.g., sound variability, length of interview sound bites used, etc.) , and a desire to see the link between communication and successful projects made more explicit. This was reiterated in the ensuing discussion, in which people felt that viewers might see this as a video on sustainable agriculture techniques, rather than on the human dimension of sustainable agriculture. Suggestions were made about how to make communication issues more explicit, including the use of graphics and narration that brought out more clearly the communication/collaboration aspects of the case studies highlighted in the video.

1/22/98 - Eight people attended this pilot of the first rough cut at the NRCS office in Hackettstown, NJ. The audience consisted of farmers, a fertilizer dealer, an Extension agent, NRCS staff, and Farm Service Agency staff. Summary of evaluation forms and discussion: The video was also well received by this group. Interestingly, however, they saw the message of the video as being more about the positive things farmers could do and were doing to help the environment while saving money. The group also enjoyed the scenes of actual farmers doing work and hearing the views of people out in the field. Some were a bit frustrated by the lack of technical detail, and wanted more bottom line information on how many farmers enrolled, pounds of fertilizer reduced, etc. A couple of unexpected results came from this discussion, including the realization that the video had perhaps a wider audience than the initial target audience of Extension. Farmers were enthusiastic about how positively they were portrayed, and the fertilizer dealer said that he wanted a copy of the video to take to trade meetings to show other dealers. It was also suggested that the video might be used as a teaching aid in environmental classes to raise awareness about sustainable agriculture. With these comments in mind, we began to entertain the notion that mixed groups might productively use the video as a trigger for discussion (this idea had also been suggested earlier on by an Extension agent.) We also began to think that possibly slight modifications in materials for different audiences, or keeping materials general enough so they could be used by a variety of audiences.

2/19/98 - After a revision, we showed the video to a diverse group--the Raritan Basin Watershed stakeholders group. In attendance were two local watershed association directors, a representative from the League of Women Voters, two government staff (NJDEP, USGS), and the director of the NJ Water Supply Authority. No evaluation forms were circulated as this was an informal and unplanned showing that dovetailed onto the end of another meeting. However, when attendees were told about the video, several stayed to watch and participate in a discussion afterward. We found this showing to be particularly exciting, as we anticipate that our audiences will have very little time to sit down and "be trained," but if we can provide the opportunity for the video to be shown and talked about in the scope of existing meetings, it is likely to be used more. In general, comments were positive, and the video sparked a discussion of the different aspects of watershed protection and an awareness that farmers were an important group to include in the Raritan Basin's own watershed management efforts. Once again, several people felt that the communication message could be made even more explicit.

3/23/98 - A pilot with the Integrated Crop Management Committee was attended by 14 people from Extension, NRCS, and the farm community. Twelve out of 14 evaluations stated that the main message of the video was communication and partnerships among different agencies and farmers. Once again, people felt one of the strengths of the video was the way it used farmers and agency partners in the project to tell the story, and felt it contained nice scenery and flowed well. A couple of people felt that the video should have included case studies that depicted a wider variety of crops (e.g., fruit, horticultural crops). [Note: We based our selection of case studies on those that would best illustrate the concepts of communication and collaboration, those farmers most willing to participate, and those farms at which there was, at the time of filming, opportunities to film interactions.] A suggestion was made to include in the materials a

short case study of a different type of crop for discussion purposes.

7/15/98 - This was a formal pilot of the final video. A range of participants were invited to this preview (held at Rutgers) based on the following criteria: a) a recommendation that the invitee would be likely to use the video in his/her work, and b) a recommendation that the invitee might have ideas and contacts for further dissemination. Ten participants included Cook College Office of Continuing Professional Education, NJ Department of Environmental Protection (NJDEP), Rutgers Cooperative Extension (directors of agents and specialists), USDA, and the Center for Environmental Communication (CEC is coordinating a Kellogg-funded project among several universities to develop a curriculum in sustainable agriculture collaboration for both college and continuing education audiences, and are planning to use the video as part of this project). The goal of this pilot, in addition to discussing the issues of collaboration highlighted in the video, was twofold:

1. To solicit these diverse audiences' opinions on avenues for dissemination, and
2. To solicit feedback on draft materials to go with the videotape.

We received extremely useful feedback for both our materials and dissemination strategy. These ideas are outlined in the following sections.

Dissemination strategy

We received both contact names and venues as well as commitment from attendees to show the video in their work. As an example, all agreed that watershed stakeholders would be an appropriate audience for the video, as it illustrates a relatively new concept--collaboration--in environmental management. The NJDEP watershed manager in attendance invited CEC to bring the video to such a meeting the following week and allotted 40 minutes for the showing and discussion in the meeting agenda. Similarly, Continuing Education representatives suggested courses into which the video might be integrated. Also, there was discussion about how the Kellogg project might fund an adaptation of the materials to make the video appropriate for a college course. In all, we were excited about the range of possibilities people saw for the video, including:

For Extension:

- In-house department meetings of extension agents and specialists
- Kellogg participants who are in Extension departments
- Extension annual meetings and periodic specialized meetings, such as working groups for different crops, etc.
- Continuing education courses aimed at farmers and Extension
- 4-H meetings, fairs

Other audiences:

- Future Farmers of America
- Cranberry Institute
- Pinelands Preservation
- Other Kellogg-sponsored projects
- Association of NJ Environmental Commissions Environmental Congress Fall '98
- League of Municipalities
- Courses for watershed management at OCPE
- Farm-A-Syst and Home-A-Syst programs
- Watershed stakeholders
- Commodity groups
- Agricultural chemical suppliers and equipment dealers
- 4-H
- Farmland Preservation groups (county Agricultural Development Boards, etc.)
- Homeowners
- Legislators
- Health Departments

We will pursue a tiered dissemination strategy, working actively to integrate the video into a few key areas that focus on our target audience (e.g., continuing education courses, showings at conferences and meetings, networking with Extension people we know) and produce a brochure that advertises the video and send that out to a larger mailing list. In the future, we will continue to do outreach to wider audiences (see below).

Materials

The group was clear--as others have been--that materials, to be most useful, should be kept "short and sweet." There was consensus that long case studies or long explanations would not be useful, that the video as a trigger for discussion would stand on its own and need little accompanying materials. Therefore, we developed the following list of materials, based on this and previous feedback:

- Quotes of support from environmental groups and farm leaders that have viewed the video
- Overall background summary of Musconetcong project
- Lessons learned from the Musconetcong Project (both management and field lessons)
- Five pitfalls to avoid
- Discussion questions to promote group discussion
- Epilogue (e.g., how have farmers in project been successfully continuing after the initial project was over)
- Glossary of terms used in video (e.g., PSNT, nonpoint source, etc.)
- Definitions of sustainable agriculture (from Kellogg project)

Those draft materials are included with the video. We are in the process of getting

feedback on them and formatting the revised materials.

Additional workshops

There have been two other showings of the video by request:

July 21, 1998--The board of directors of the North Jersey Resource Conservation and Development Council (NJRCDC), the organization that coordinated the Musconetcong Watershed Implementation Project. This board is comprised of local farmers, regional planning board officials, NRCS staff, watershed groups, and others. The response to the video was very positive, with many attendees suggesting venues for showing the video including upcoming agricultural fairs and gatherings.

July 28, 1998--The Musconetcong Watershed Management Public Advisory Committee meeting. This meeting, sponsored by NJ Department of Environmental Protection, had a wide range of attendees, including farmers, municipal water and sewer authorities, watershed associations, community members, business. The video was shown to trigger discussion about how the concepts of communication and collaboration might be applicable to this fledgling watershed management project, and what other stakeholders might be involved. The video served well as a trigger for this type of discussion. However, showing it to a non-agriculture or Extension group required fairly detailed explanation about who the intended audience was and what the original purpose of the video was intended to be. Otherwise, there was a potential for the discussion to be centered only on agricultural activities in the watershed. Judging from the response when discussion groups reported out, the video had indeed spurred thinking about collaboration, as well as generating a list of other stakeholders might be invited to subsequent meetings.

Lessons Learned making the video

Throughout this report the lessons we learned have been put in italics. However, our experience has been that video projects of this type can get bogged down in many different places and in many different ways. Since we feel that documenting successful projects is key to more successful projects in the future, we would like to bring these lessons out here in the hope that they might be useful to others:

1. Know your audience and its needs. Ask your audience what would be the most useful product for them. Often they can tell you more about what they DON'T want than they do. Suggest ideas, formats, show them different kinds of videos and ask what they like, how long they are willing to sit, etc.
2. Get feedback and then listen to it. Don't be afraid to change gears if you think it will give you a more useful product. In our case, we found that our vision of a "training module," used successfully for another audience, was simply not appropriate for our Extension audience. Therefore, we had to find other ways to "teach" lessons we felt were important. In every phase

of this project, feedback from outside people was a critical reality check.

3. Get a professional producer to help you if you have no experience. Translating your idea into video is the job of professionals. Unless you have done it at least once (successfully), you need help.

4. Don't film without a treatment. You will waste time and money if you begin shooting video without a clear, written idea of where you're going (that has been run by others for feedback).

5. Make and preview rough cuts of the video and ask for written evaluations and open-ended discussion. It is amazing what others pick up that you can't see because you are too close to the subject material and the video in general. (For example, one of my favorite shots was of an old, run-down tool shed with wild flowers around it. However, that shot actually offended a couple of viewers, who felt it negatively portrayed local farms. Substituting another shot was easy, but I never would have known this if I hadn't previewed the rough cut.)

6. Don't be afraid to make final decisions--it has to be finalized sometime. You have the original idea of what you wanted to portray and you are the executive producer of the video. Make sure changes reflect audience concerns but don't unduly dilute your original vision and goal. It is a fine line, but you won't make a video that pleases everyone.

7. Understand that your subjects for the video are likely to be your best avenues for dissemination. Making this video was a process that began when we were garnering support for the proposal. We worked hard to keep most of these people on board throughout the process, and are involved now in working with these same people to distribute the video.

8. Remember that the video can't be all things to all people. While many have suggested to us that the video can be used on a wider audience than the Extension audience we had intended, we also see that its impact may be diluted on non-farm audiences, or that explanations must be given to explain aspects of the video that are obvious to its intended audience. As mentioned previously, we are pursuing additional funding to adapt materials to fit additional audiences and getting feedback from those audiences about whether THEY feel it is appropriate for them.

Future activities

As a result of the pilot trainings and feedback we have received, we are now in the process of disseminating the video to our target audience through networking, attendance at meetings, and through distribution by word of mouth. We are making 100 copies of the video, and are finalizing the draft materials enclosed. We also are making a brochure which we will send to an extensive mailing list, and include in continuing education mailings. We are working with members of extension here at Rutgers to get the video out to agents.

For the future, we will pursue a couple of different strategies: 1) work with the Kellogg project to raise money to adapt materials and perhaps even the video itself for broader audiences, including college students; 2) continue to solicit feedback about how the video can best be used for the broader range of audiences outlined above. We are especially concerned that the video not be taken as a prescriptive model on how projects such as this should be run, but rather as an example that might promote others to think about how they might integrate communication and collaboration into their own projects. Using the evaluations we are sending out with the video, and following up with people who have purchased the video, we can track its use and obtain useful feedback we can integrate in future development.

We are currently making multiple copies of the video. When materials are finalized, we will price the video according to how much it will cost us to reproduce it and send it out. Therefore, the cost will be very low, and, as with all CEC materials, consideration will be given to non-profit groups whose budgets cannot afford it. This has worked well for CEC over the last ten years and has allowed us to disseminate our research inexpensively but not at a deficit to our nonprofit Center.

Notes to the Facilitator

“Building Sustainable Partnerships for Agriculture: A Case of Watershed Protection” documents an ongoing project that has been a collaborative effort among agencies, farmers, and businesses in the Musconetcong watershed (see project background for more detail) to implement sustainable agriculture techniques. It describes the communication and collaboration of *one* successful project, both to reduce non-point source pollution to the Musconetcong River and to increase the viability of farming. We hope that the Musconetcong experience might promote thought, and possibly discussion, among viewers about what seemed to work well, how communication and collaboration furthered the goals of the project, and possibilities for using some of these collaborative strategies in viewers’ own efforts.

Introducing the video

To avoid misunderstanding about the purpose of the video--and to help facilitate discussion after viewing it--we suggest you tell audiences the following before the video is shown:

***Building Sustainable Partnership for Agriculture* does not aim to prescribe what partners in watershed protection or sustainable agriculture projects should do--indeed, all projects are different. Rather, it attempts to highlight how a process of communication and collaboration helped the partners in one project reach their program goals. The example used in this project is agriculture. However, the video is not about agricultural techniques themselves, or about any particular type of crop, but rather about the “human dimensions” of this project. *Building Sustainable Partnership for Agriculture* documents one project at one point in time, and is not meant to be generalizable to all projects. It is not a prescription for what you SHOULD do, but rather a tool to spark discussion about what you MIGHT do, given the circumstances of your own project.**

Leading a discussion after the video

If you plan to lead a discussion after you show the video, watch it first and think about how it may best apply to the group who will be viewing it. A list of possible discussion questions follow; you will notice that they focus on communication issues rather than technical issues. It may be helpful for you to ask your audience to think about a communication question as they are watching the video to set the tone for discussion afterward.

Materials

We have included some materials that provide more detail on the Musconetcong project. Some of these provide “answers” to some of the discussion questions raised (e.g., Pitfalls, etc). Therefore, you may want to distribute these to your group after your discussion.

What to bring

If you are planning a discussion afterward, you might want to bring an easel and newsprint to write down ideas people have during discussion, particularly if you are brainstorming ways in which some of these strategies can be used in your project.

Evaluation

We have enclosed an evaluation form with the materials. We are continually trying to improve the usefulness of our research to practitioners. We would greatly appreciate it if you would distribute and collect copies of the evaluation form and mail them back to us at:

Billie Jo Hance
Center for Environmental Communication
Cook College, Rutgers University
31 Pine Street
New Brunswick, NJ 08901-0231
(732) 932-8795 (telephone)
(732) 932-7815 (fax)

Feel free to E mail us (cec@aesop.rutgers.edu) with any additional feedback. Thank you.

The Musconetcong Watershed Implementation Project Background

History

In the early 1990s, local, state and federal agencies began to focus efforts to prevent and/or minimize agricultural nonpoint source pollution on the Musconetcong River, a trout production river. In 1993 a grant for a Water Quality Incentive Program (WQIP), the centerpiece of the 1990 Farm Bill's effort to address nonpoint source pollution, was awarded for the lower Musconetcong watershed, providing funds to be paid directly to producers for installing systems or adopting management practices which protect water quality. WQIPs are administered by the Farm Service Agency of the USDA, with technical support provided by the Natural Resources Conservation Service (NRCS).

The overall goal of the Musconetcong Watershed Implementation Project (MWIP) was to enroll a total of 5,500 acres of cropland in the Musconetcong River watershed in Total Resource Management (TRM) farm planning. The project identified twelve technical practices which, when developed into a TRM plan, would contribute to a source reduction of agricultural pollutants. A TRM plan includes soil conservation measures and soil fertility management. Integrated crop management (ICM) combines pest scouting with nutrient management. ICM plans can be developed for operations without livestock (called "cash grain") as well as for operations which have animals and consequent manure management needs. Grant funds were provided as incentive to farmers for implementing sustainable practices.

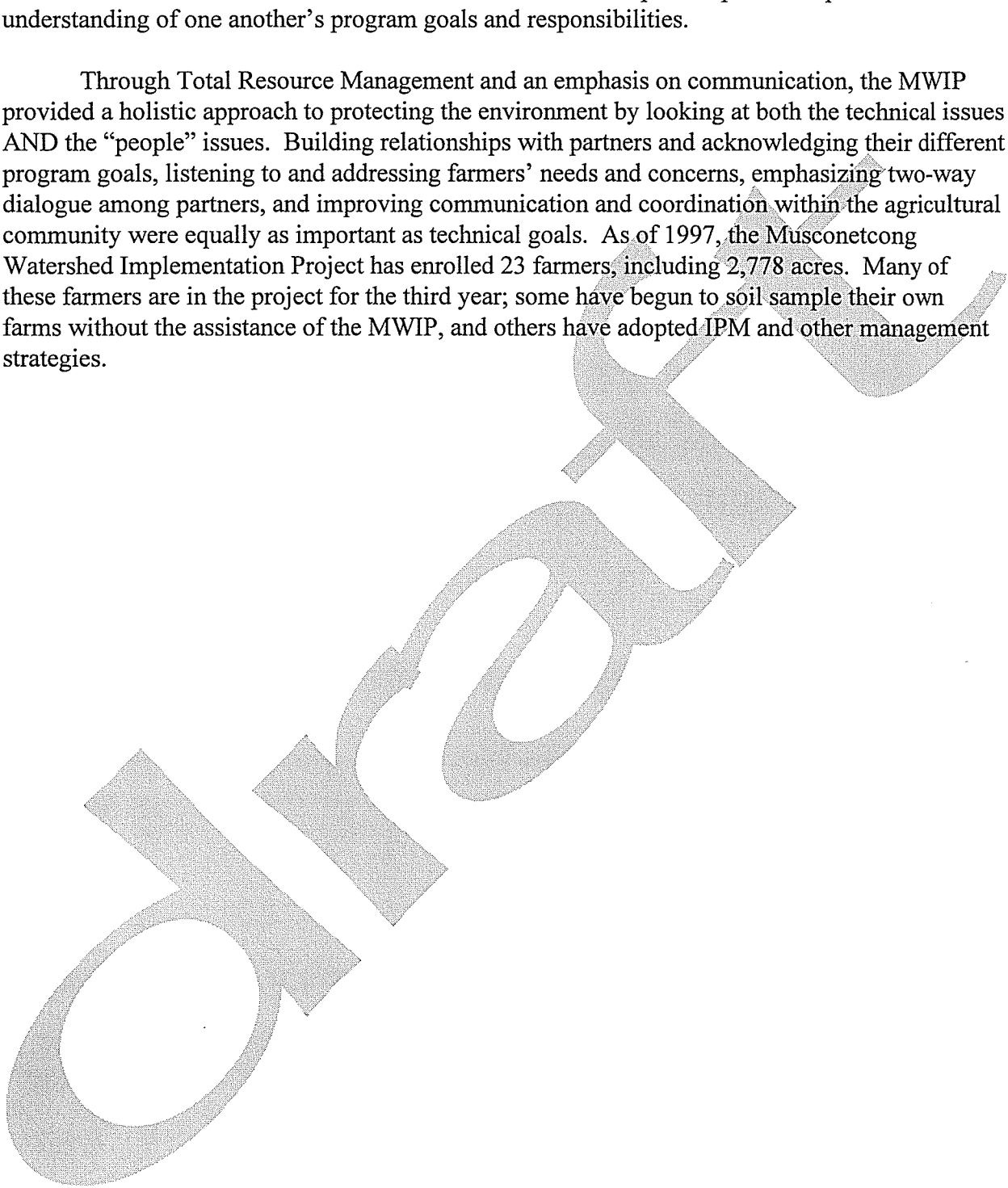
Implementation

Critical to the success of new planning techniques and best management tools was the actual *implementation* of them by farmers in the Musconetcong River watershed. Early mailings sent out to producers explaining the program yielded minimal response; almost all sign-ups were a result of farm visits made by staff. MWIP coordinators in the NRCS and the North Jersey Resource Conservation and Development Council realized that, while innovative methods were available to farmers to reduce the potential impact of their farming practices on the river, that these methodologies were unlikely to be used if not marketed properly. Farmers seemed unlikely to implement practices to protect water quality unless they could be shown that these practices were not going to negatively impact their livelihood.

Another challenge to implementation was coordination among the different agencies serving farmers: the USDA, cooperative extension, private consultants, and farm chemical dealers. Previously, a producer might have separate plans or advice from his/her soil conservationist, his/her fertilizer/pesticide dealer, his extension agent, and his/her private consultant or IPM agent. Developing working relationships helped different stakeholders

became better aware of what was contained in each other's respective plans and promoted understanding of one another's program goals and responsibilities.

Through Total Resource Management and an emphasis on communication, the MWIP provided a holistic approach to protecting the environment by looking at both the technical issues AND the "people" issues. Building relationships with partners and acknowledging their different program goals, listening to and addressing farmers' needs and concerns, emphasizing two-way dialogue among partners, and improving communication and coordination within the agricultural community were equally as important as technical goals. As of 1997, the Musconetcong Watershed Implementation Project has enrolled 23 farmers, including 2,778 acres. Many of these farmers are in the project for the third year; some have begun to soil sample their own farms without the assistance of the MWIP, and others have adopted IPM and other management strategies.



Communication and Collaboration--How did the MWIP do it?

The project explicitly addressed the importance of these communication issues through the following activities:

- **Hiring an Agricultural Outreach Specialist.** This position was created to serve as a liaison among farmers and the many agencies that served them and to work directly with farmers to promote the adoption of TRM practices. The ability to communicate effectively with a wide range of people was an explicit requirement for this position.
- **Interagency coordination and cooperation.** Through regular meetings of an interagency Technical Advisory Group, which brought together USDA, cooperative extension, private consultants, farm chemical dealers and farmers, working relationships developed so each of the different stakeholders became better aware of what was contained in each other's respective plans. This increased knowledge and cross-training among participants and promoted sharing of resources among groups. Sharing a common goal helped increase the amount of farm acreage being managed to reduce non-point source pollution.
- **Outreach to all partners.** Outreach and education efforts were directed not just at the farmer, but also at the farm family, the agricultural chemical dealers, and the private crop consultants, as well as to the various agencies.
- **One-on-one interaction with farmers.** These interactions were critical to build farmers' trust and their willingness to consider changing their farm management practices, to address skepticism and to tailor practices to individual farms. The Agricultural Outreach Specialist was the primary contact for these interactions, which also often included members of Cooperative Extension and NRCS.
- **Emphasis on timely communication follow up.** Information went beyond simply providing the farmer with a written recommendation, but included follow-up with the County Agricultural Extension Agent to provide recommendations, assistance and training of farmers in soil sampling techniques; calibrating manure spreaders; testing corn moisture and grain weight to estimate yield; and completing the Preside dress Soil Nitrate and Stalk Nitrate tests. The key was that farmers were not left on their own but rather had guidance for integrating management practices in ways that made sense to them.
- **Presentations at ongoing meetings.** The project also used opportunities afforded by other groups' meetings and tours for farmers to distribute literature and demonstrate various management practices. These included field crop twilight meetings, all-day field crop meetings, and the Musconetcong Riverfest, as well as presentations at County Board of Agriculture meetings, Soil Conservation District meetings, county fairs, and

agribusiness meetings. Attendance at these meetings helped promote communication and collaboration among the project staff and the farming community.

- **Development of written materials.** These materials were less important than ongoing personal contact, but provided back-up to one-on-one interactions. A brochure and a fact sheet were developed that announced the availability of cost-share funds for environmentally-sound management practices and explained Integrated Crop Management practices. All brochures and fact sheets contained contact information so farmers could follow up.

Draft

Lessons Learned from the MWIP

1. Building trust and a “collaborative” spirit among partners takes a lot of time, patience, and persistence by all partners.
2. Change required personal, one-on-one contact and follow-up.
3. Listening was more important than talking--to find out what farmers and other partners were currently doing and work with that rather than introduce radically new concepts right away.
4. It was important to keep asking partners throughout the project what they wanted, what they needed, and what they felt they could contribute. Sometimes the answers changed over time, so it was important to keep asking throughout the project.
5. Partners learned that there was more to the project than simply the technical aspects of agriculture. Social and political views, as well as personality, are all a part of the decision-making process.
6. A clear, shared vision of where they wanted to go help partners get there.
7. Coordinating early and effectively, including hiring of staff and project administration, benefits a project from getting off schedule down the road. Administrative start-up issues take longer than is often anticipated.
8. Flexibility and a willingness to adapt was critical. Throughout this project federal and state farm policies, programs and staff resources were always shifting. Project partners had to be willing to acknowledge problems and issues, allowing the coordinators to adapt the project to address the problem or to embrace new opportunities.
9. Food at meetings (especially lunch) greatly increased meeting attendance.

Discussion Questions

Here are some questions that may help you guide a discussion about how the themes in the video may relate to your own project:

1. How does the Musconetcong project relate to work you are doing or hope to do? If so, how? If not, how?
2. What do you see as keys to a successful watershed implementation project (whether raised in the video or not)?
3. What might be some barriers to overcome in implementing a partnership of this kind? How might you overcome them?
4. If you are undertaking a related project, what kinds of partners might be important to include? How might you find out their interests?

Participants may want to discuss some of these questions about the Musconetcong project:

1. What do you think are the key themes of the video?
2. Who were the key partners in the Musconetcong program?
3. What were their needs? Were their needs being met by the project?
4. What other partners might have been important to bring into the Musconetcong program?
5. What were some of the advantages to this approach?
6. What might be some pitfalls to this approach?
7. In this situation, what might you have done differently?

Glossary of Terms

Water Quality Incentive Program (WQIP) - A program contained in the 1990 Farm Bill to address nonpoint source pollution, which provided funds paid directly to producers for installing systems or adopting management practices which protect water quality. WQIPs were administered by the Farm Service Agency of the USDA, with technical support provided by the Natural Resources Conservation Service (NRCS). (Program has been replaced by EQIP - Environmental Quality Incentive Program)

Integrated Pest Management (IPM) - A group of practices to control insect pests which emphasizes the integrated use of a variety of options including biological control, varietal resistance, pheromones, etc. along with judicious use of pesticides as another option.

Integrated Crop Management (ICM) - The comprehensive approach to reducing agricultural chemical use, which includes components such as soil and manure testing, pest scouting, tillage, crop rotations, conservation practices, waste management, etc. in addition to the judicious use of fertilizers and pesticides.

Farm mapping - The practice of drawing the farm fields on paper and numbering them as an aid in record keeping. With a farm map, one can better visualize crop rotations and can record the specific characteristics of each field, such as topography and soil types. Frequently done with aerial photos.

Preside dress Soil Nitrate Test (PSNT) - An in-season soil test that provides information about soil nitrogen availability. The soil test measures the nitrate concentration in June, when the soil has warmed up and started to release nitrogen for the growing corn. The PSNT helps provide guidance about whether additional nitrogen must be added to corn (sidedress). If the soil sample shows a level above 24ppm, it is unlikely that additional nitrogen applied by the farmer would cause an economic response in grain yields.

Record keeping - Systematically recording on paper the work done on each field. This includes noting the dates and amounts of fertilizer and pesticide applications, tillage operations, varieties, planting dates, yields and financial costs.

Top dress - Broadcast application of fertilizer on top of an established growing crop.

Sidedress - Application of fertilizer in the crop row.

Nutrient runoff - Surface losses of nutrients in rainwater and sediment.

Crop Improvement Association - A group of farmers who hire their own agronomist for soil testing and pest scouting.

Total Resource Management (TRM) - A planning approach used by the National Resources Conservation Service which seeks to address soil, water, plant, animal and human resources.

Nonpoint source - Nonpoint source pollution can be described as pollution to water resources that does not come from a "point source" such as pipes, ditches, swales, injection wells, etc. Nonpoint source pollution includes pollutants through: urban or road runoff, broadcast applications of fertilizers and pesticides in agriculture and in lawncare, soil erosion and sedimentation, and widespread other sources, such as littering, septic systems and runoff from construction sites.

Watershed - A watershed is the total surface of the land over which water flows, draining water, sediment and dissolved materials into the body of water.

Ohio

Sustainable Agriculture: General Definitions

Compiled by Samantha Milby, CEC

The following definitions come from diverse sources, and there are consistent themes. We offer them to show the range of interpretations, rather than to select one as the “correct” definition.

1990 Farm Bill:

Sustainable agriculture is “an integrated system of plant and animal production practices having site-specific application that will, over the long term: (A) satisfy human food and fiber needs; (B) enhance environmental quality and the natural resource base upon which the agricultural economy depends; © make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; (D) sustain the economic viability of farm operations; and (E) enhance the quality of life for farmers and society as a whole.”

World Resources Institute:

Sustainable agriculture consists of practices that are ecologically sound, socially responsible, and economically viable. For the purposes of this definition, “ecologically sound” refers to environmental integrity and is based on the agro-ecological principles of diversity (crops, flora/fauna), adaptability, nutrient recycling and conservation of resources. Social responsibility pertains to the health and safety of people. The economically viable aspect is concerned with food security and the use of sound technology.

American Society of Agronomy (1989):

“A sustainable agriculture is one that, over the long term, enhances environmental quality and the resource base on which agriculture depends; provides for basic human food and fiber needs; is economically viable; and enhances the quality of life for farmers and society as a whole.”

University of California at Davis

Sustainable Agriculture Research & Education Program:

Sustainable agriculture integrates three main goals - environmental health, economic profitability, and social and economic equity.

Michigan State University - Soil Sciences:

“Our concept of sustainable agriculture includes a system of agricultural production that is resource conserving, environmentally safe, and economically viable. At the same time, it must recognize human values, provide high-quality food, and support for the family farm and rural communities as part of a healthy larger system.”

University of Nebraska & The Institute for Alternative Agriculture:

“Sustainable agriculture is a philosophy based on human goals and on understanding the long-term impact of our activities on the environment and on other species. Use of this philosophy guides our application of prior experience and the latest scientific advances to create integrated, resource-conserving, equitable farming systems. These systems reduce environmental degradation, maintain agricultural productivity, promote economic viability in both the short and long term, and maintain stable rural communities and quality of life.”



EPILOGUE

Here are some updates on producers featured in the video:

Joel Schnetzer

Spring 1997 - He soil sampled approximately 1/3 of his farm on his own. He still receives cost-share.

Spring 1998 - He enrolled 250 acres in a complete ICM program. Joel is paying for this by himself and he no longer receives cost-share.

Jake and Nancy Bilyk

In 1997, they reduced their corn starter phosphorus by 15 lbs/acre. On 500 acres, the reduction was 3.75 tons of P_2O_5 .

The Integrated Crop Management Committee