

Reading the Farm

Training Agricultural Professionals in Whole Farm Analysis for Sustainable Agriculture

A Planning and Facilitation Guide



Janet McAllister
Professional Development Program Associate
Northeast SARE

Charlie White
Extension Assoc., Sustainable Agriculture
The Pennsylvania State University

Ellen Mallory
Extension Sustainable Agriculture Specialist
University of Maine

Tom Morris
Extension Soil Fertility Specialist
University of Connecticut

Seth Wilner
Extension Field Specialist, Food and Agriculture



Contents

| | |
|---|-------|
| Introduction | p. 3 |
| Reading the Farm program overview..... | p. 3 |
| Goals..... | p. 4 |
| Format..... | p. 4 |
| Basic requirements..... | p. 4 |
| Planning a Reading the Farm program..... | p. 5 |
| Outline of activities and planning tasks..... | p. 5 |
| Planning and Facilitation Tasks..... | p. 6 |
| 1. Review learning objectives..... | p. 6 |
| 2. Identify participants and facilitators..... | p. 8 |
| 3. Recruit farmer hosts..... | p. 10 |
| 4. Interview case-study farm families, prepare farm profiles and discussion guides..... | p. 11 |
| 5. Design schedule, format, and facilitation strategies..... | p. 12 |
| 6. Conduct pre-event farm visit..... | p. 15 |
| 7. Plan strategies for post-visit discussions..... | p. 15 |
| 8. Facilitate summarizing feedback to farmers..... | p. 17 |
| 9. Arrange informal gathering with farm families..... | p. 18 |
| 10. Arrange meeting space and lodging..... | p. 19 |
| 11. Send pre-event information packet to participants..... | p. 19 |
| Evaluate the program..... | p. 20 |
| Conclusion..... | p. 22 |
| Appendix A | |
| Example Reading the Farm introductions for participants | |
| Appendix B | |
| Example farmer interview questionnaires | |
| Example farm profiles from Reading the Farm programs | |
| Appendix C | |
| Example detailed Reading the Farm agendas | |
| Example observation and discussion guides for participants | |
| Appendix D | |
| Examples of post-visit discussion facilitation strategies | |
| Appendix E | |
| Example evaluation questionnaires | |
| Action plan template | |

INTRODUCTION



Often envisioned as a three-legged stool, sustainable agriculture has three objectives: farm profitability, environmental stewardship, and strong farming communities. Helping farmers improve the sustainability of their farms requires a whole-systems approach that recognizes the complex interactions among the physical, biological, economic, and social components of a farm.

Agricultural service providers and academic professionals frequently have substantial in-depth knowledge of certain components of agriculture, but have few opportunities to develop a thorough understanding of how these components work together to influence sustainability. The knowledge base of farm families tends to be broad, covering multiple fields of study; however, not every member of the farm family has the same knowledge.

Recognizing that no one person has complete knowledge about a farm and about how to increase a farm's sustainability, the Reading the Farm professional development program was designed to bring together agricultural service providers from different backgrounds to explore whole-farm interactions and sustainability through hands-on, case-study learning with farm families.

Originally developed at the University of Connecticut in 2006 for the Northeast Sustainable Agriculture, Research and Education program, it has since been adapted and used in six Northeastern states between 2007 and 2014.

Reading the Farm organizers in several of these states developed this facilitator's guide to help agricultural professionals plan, facilitate, and evaluate Reading the Farm programs.

PROGRAM OVERVIEW

Goals

The primary goal of the Reading the Farm (RTF) program is to enhance the ability of agriculture service providers to understand farms as holistic systems so they can help farmers improve the sustainability of their farms. Targeted program learning outcomes for achieving this goal include each participant improving his or her ability to:



- a. Understand the farm as a whole system rather than as discrete biological, physical, and human components.
- b. Identify farmers' goals for the whole-farm system.
- c. Identify the factors that influence farmer decision making, including production constraints and economics, environmental stewardship and quality, social factors such as labor, and family dynamics.
- d. Understand how specific changes in farm management might affect the whole farm.

- e. Use a team approach to problem solving, including asking informed questions and knowing when to seek information outside their area of expertise.
- f. Provide practical recommendations that account for the whole-farm system.

A secondary goal of the program is to build and strengthen networks among program participants.

Format

During an RTF program, a group of participants review detailed farm profiles and then visit one or more case-study farms to observe and engage in facilitated discussion. After each farm visit, participants assemble to discuss their observations, ask questions of each other and facilitators, and develop an informal report or presentation for the host farm family. The feedback to farmers includes observations about key successes and challenges related to sustainability, and it may include ideas or options for the farmer to consider. Finally, participants and host farm families meet informally, usually at a meal, and discuss the participants' observations and report.

Basic requirements



Host farms: For each RTF program, one or two case-study farms are chosen. If time and resources allow for two farms to be studied, then choose farms that provide a contrast in approaches towards farming or diversity in the type or scale of farm enterprises.

Participants: The RTF program is based on a team approach and co-learning. For this reason, participants are recruited and accepted from a range of agencies and with levels of experience from novice to expert; areas of expertise also vary, and can include agronomy, livestock, forestry, farm business, and marketing, for example. A desirable participant group size is 12 to 24, but programs have successfully accommodated 32.

Time: For one farm, allow one full day and one partial day. For two farms, plan on two full days and one or two partial days. Partial days usually fall on the evening before first day and the morning after the second day.

Coordination: This program requires one or two coordinators with a capable assistant, but ideally a small group of program advisors should also be involved.

PLANNING A READING THE FARM PROGRAM

It's helpful to consider the activities necessary to plan and facilitate an RTF program alongside the activities participants will engage in throughout the program—before, during and after the farm visit, as shown in the diagram below. We will discuss the planning and facilitation tasks outlined in the right hand column below in the following pages.

Reading the Farm Program Activities and Planning Outlines

Participant Activities

Before the farm visit:

- Review program overview, farm profiles and discussion strategies to prepare for farm visits

During the farm visit

- Tour farms for a half day, first with discussion facilitators and then with farmers
- Observe and assess interconnections and factors influencing sustainability
- Ask farmers and each other questions

After the farm visit

- Assemble off-farm to discuss observations, ask questions
- Summarize observations and suggestions for farmers
- Gather with farmers over a meal to discuss observations

Planning and Facilitation Tasks

1. Review learning objectives
2. Identify participants and facilitators
3. Recruit farmer hosts
4. Interview farmers, prepare farm profiles
5. Design schedule, format and discussion strategies for farm visit
6. Conduct pre-event farm visit
7. Plan strategies for post-visit discussions
8. Facilitate summarizing of feedback to farmers
9. Arrange informal gathering with farm families
10. Arrange meeting space and lodging
11. Send pre-event information packet to participants

PLANNING AND FACILITATION TASKS

1. Review learning objectives

Program-level objectives

All RTF programs share the same program objectives for learning, intention, and follow-up action. These are:

Participants increase their understanding of:

- The farm as a whole system rather than discrete biological, physical, and human components, and
- How specific changes in farm management might affect the whole farm.

Participants increase abilities to:

- Identify farmers' goals for the whole-farm system, and
- Identify the factors influencing farmer decision making including production constraints, economic and social factors, family dynamics, etc.

Participants:

- Use a team approach to problem solving, including
 - asking informed questions and seeking information outside their own area of expertise, and
 - collaborating with colleagues from different disciplines to make farm recommendations
- Provide practical recommendations that account for the whole-farm system.

Farm- or enterprise-specific objectives

Some RTF programs may choose to also develop farm or enterprise-specific learning objectives and these may influence the selection of participants and farmer hosts.

Here are a couple examples of enterprise-specific learning objectives from RTF programs that affected selection of participants and/or farmer hosts.

In RTF programs in Maine, there was an identified need to improve agricultural service providers' abilities to work more effectively with beginning and women farmers. This objective led the coordinators to recruit beginning farmers and women farmers as hosts.



The Pennsylvania RTF organizers identified five broad components of a dairy farming system and several subcomponents within each of the broad components (Table 1). The learning objective was that participants would increase their understanding of how each identified component of a farm system could interact with the other identified components of a farm system. To cast light on these complex connections and

achieve the learning objectives, the program needed professionals with training in agronomy, dairy nutrition, and business management to facilitate the discussion and host farms that were model systems for participants to explore.

Table 1. Components of a farming system as identified for the learning objectives in the Pennsylvania RTF program.

| Broad Components: Agronomy | Animal Performance | Business Management | Environmental Resources | Social |
|----------------------------|-----------------------------|---------------------|-------------------------|--------------------|
| Subcomponents: | Forage and grain production | Milk production | Marketing | Water quality |
| | Soil fertility | Days in milk | Farm diversification | Air quality |
| | Nutrient management | Pregnancy rate | Profitability | Soil quality |
| | Weed management | Culling rate | Income | Family involvement |
| | Insect management | Somatic cell counts | Labor | Work satisfaction |
| | | Feed quality | Farm goals | Quality of life |
| | | Replacements | | |



Conversations with potential program participants and program sponsors can help determine whether there are additional, specific learning objectives needed for your program. Defining these objectives during the planning phase will guide decisions about the types of participants and host farms needed for a successful program, as well as the focus of questions used to evaluate participants' learning.

Changes in attitude

Some programs may also aim to change specific attitudes or perceptions about farming. In the Pennsylvania program, for example, the planning team wanted the RTF program to uncover and change participants' attitudes towards certain alternative agricultural practices that the two host farms used, such as rotationally grazing dairy cows, direct marketing, pastured poultry production, certified raw milk sales, and certified organic production. In the post-program evaluation questionnaire, participants were asked retrospectively to indicate the extent to which they thought each practice was an acceptable agricultural practice *before* the program and *after* the program.

2. Identify participants and facilitators

Participant selection deserves careful consideration because the learning objectives in an RTF program are achieved through interaction, and participants will ideally have different areas of expertise.



If your program will serve an audience that is predetermined or partially predetermined, such as a group of agency employees, consider augmenting the predetermined audience with additional invited participants who have expertise in disciplines not found in the participant pool.

Experience from past RTF programs show that discussions among participants, especially when they are novices, are usually more meaningful when they are facilitated by people who are knowledgeable in agricultural disciplines relevant to the host farm's operation. For example, if the host farm is dairy or other livestock, it is best to enlist or recruit participants with in-depth knowledge about livestock production methods and records, agronomic production, and business management and marketing to facilitate discussion and help participants interpret their observations.

Below are a few questions to ask yourself as you decide how to recruit and select participants.



- Will you advertise the program widely and allow participation by anyone who is interested, will you invite selected individuals only, or do you have a predefined audience based on program sponsorship?
- Will the range of disciplines necessary to achieve your learning objectives be present at the program, and, if not, will you recruit more people from specific disciplines?
- What is the experience level of the attendees? Is it uniform across the attendees, or does it vary within the group?
- Will attendees have worked together prior to the RTF program, or will they be meeting for the first time?
- What is the potential for RTF attendees to work collaboratively after the program is over?
- How many people will attend?

There are no right or wrong answers to these questions, since the RTF model is adaptable to many situations and circumstances. In fact, the five Northeast states which have held RTF programs all approached the selection of participants in different ways.

Here are a few tips and lessons about selecting participants learned from previous RTF programs.

Experience level

Having a range of experience levels, from beginning agricultural service providers to seasoned veterans, has many positive aspects. Service providers with many years of experience can share their knowledge and skills with the less experienced participants; at the same time, beginning service providers can offer fresh perspectives on many topics. Also, an individual may be highly experienced in

one aspect of a farm system, but very inexperienced in other aspects. This is a natural result of specialization in academic training and work experience, and is one of the primary reasons the interdisciplinary RTF model was developed.

One challenge to working with participants with different experience levels is that the more experienced participants may start discussing things at a level that less experienced participants do not understand. For example, at the Pennsylvania RTF program, which focused on dairy farms, several veterinarians and animal scientists began a discussion with the dairy farmer host about the farm's feeding program. Others in the participant group who specialized in environmental sciences did not understand some of the dairy farm terminology, such as TMR, corn silage, bunker silo, mixer wagon, and feed bunk. Questions and comments asking for clarification of the terminology redirected the conversation to a level that focused on the basics of how dairy farms commonly operate.

While the conversation ended up being quite enlightening for the environmental scientists, the participants who already had a strong grounding in dairy farming basics lost time to discuss some of the more advanced topics. One suggestion that Pennsylvania participants had was to offer a primer course ahead of time on the farming systems that would be included in the RTF program. This would allow participants with a limited background to gain some basic knowledge prior to the workshop.

Recruitment strategies

There are several ways to recruit participants for an RTF program, including personalized invitations to strategic individuals, broad advertising to agricultural service provider networks, working with organizations or government agencies whose employees need agricultural training, or recruiting a pre-formed group of service providers.



Each of these strategies has been used successfully by RTF organizers. Whichever strategy you choose, ensure that all participants invited or selected receive a full description of the program and explanation of their expected role.

In Connecticut, individuals with expertise in various agricultural disciplines, natural resources management, and environmental regulation were invited.

In Maine and New Hampshire, participant groups have included people selected from open-invitation applications, the SARE Fellows (a group of extension educators from throughout the U.S.), and agricultural service providers who work with beginning and women farmers.

In Pennsylvania, recruitment took a hybrid approach. The planning team first sought participation from topic specialists and program facilitators based on preliminary, enterprise-specific learning objectives about dairy farm systems. Then the RTF program was widely advertised to agricultural service provider networks throughout the mid-Atlantic region. This resulted in participants with a wide range of expertise, from Cooperative Extension, private agricultural consulting companies, the USDA Natural Resources Conservation Service, and a multidisciplinary watershed stewardship project.

Participant numbers

In general, a minimum of 12 participants is recommended—this allows for a diversity of perspectives and the ability to form several smaller subgroups. An upper limit of 24 participants is also recommended, but larger groups can be accommodated. The Pennsylvania program had 32 participants. While this number is higher than recommended, it did allow a broad array of agricultural service providers to participate and learn from one another. Despite the challenge that arose from a few participants' lack of experience in dairy farming systems, the group functioned well through all aspects of the program.

Appendix A contains example RTF introductions to participants.

3. Recruit farmer hosts

Farm type

Successfully reaching the RTF program objectives does not depend on the types of farms visited. All farms offer excellent opportunities for improving knowledge and skills in the whole-farm approach to problem solving and assistance for farmers.



If there are no enterprise-specific learning objectives, then two different types of farms—dairy and vegetable, beef and tree fruit, or possibly organic and conventional, for example—can offer participants a broader array of production practices, business enterprises, and farmer challenges.

If there is a specific objective to learn more about a particular type of farm or farmer, as in the Maine and Pennsylvania programs, then that objective will narrow the range of farms to include.

Individual farms

Choosing the specific farms to visit is often very much directed by the relationship between the farmers and the project coordinator or key individuals on the planning team.



It is essential to provide farmers with a full explanation of the program—its objectives, scope, duration, format, and participants—so they can make an informed decision about whether or not to host. Host farmers are agreeing to open up their operations (and often their finances) to a large audience of agricultural professionals, and this requires a high level of trust in the program organizers. Open, honest communication about the program is necessary to make sure the farmers' consent is informed and that the program is an emotionally safe experience for them.

Hosting the program will also require a significant amount of time for the farmers, both before and during the program. The interviews required to develop the farm profiles may require multiple discussions with several different family members. Assembling soil tests, production and facility records, and

providing access to financial records takes time for the farmers, as does the farm visit and post-visit meeting. Farmers should receive a stipend to help compensate them for their time and effort.

4. Interview case-study farm families, prepare farm profiles

Before the training, the coordinator or program assistant should interview the case-study farm families and prepare a detailed written profile of each farm. This document includes:

- farm history and family members
- acreage and setting
- key enterprises—crops, livestock, value-added
- marketing volume and channels
- soil and water resources, noting any environmentally sensitive features
- crop and animal production practices
- production facilities and major equipment
- value-added facilities and processes, if applicable
- labor
- primary expenses and revenues
- farmer's goals for the farm
- farmer's key challenges and areas of concern



Participants should receive the case-study farm profiles one or two weeks before the event so they have ample time to review the materials and ask questions before the event.

Additional farm records to obtain for the farm profiles

Coordinators and topic specialists may work with the farmers to collect records and data that can be distilled into handouts for discussion during the training. Examples of useful records to provide in advance to participants or to have on hand during the farm visit include:

- Soil test results for some or all crop production fields
- Livestock health, breeding and reproduction records, if applicable
- Aerial map showing farm with structures and with fields delineated (NRCS can typically help prepare this map in large format for display at the visits)
- Farm financial records such as enterprise budgets, gross and net sales data, tax records. The amount and detail of financial records obtained from farmers will depend on the comfort level of the farmer with the program. The program can be successfully conducted without detailed financial records.

Multiple visits may be necessary to obtain the information for the farm profiles and gather records from the farmers.

Sample profiles and farm interview questions are in Appendix B.

5. Schedule, format, and discussion strategies for farm visit

The farm visit is an opportunity for participants to use a working farm as a model system to discover new knowledge and develop the skills and attitudes relevant to the learning objectives of the program.



The RTF program pays attention not only to the production, marketing, and business aspects of a farm operation—topics that are typical of farm visits—but also to the human and social component of the farm system, such as family dynamics, work satisfaction, and personal motivations and goals of the farmers. Below are a number of considerations for the schedule and format of the farm visit.

Time

Four to six hours are usually allotted for each farm visit so that participants have time to develop a thorough understanding of the operation. Typically, the afternoon or evening before the farm visit, or at the beginning of the on-farm visit, a short amount of time is spent with the farm family learning about the history of the farm and an overview of the farm enterprises.



Areas of farm to visit

During the planning phase farm visit, the coordinator and other team members should select three to five key areas of the farm to observe and discuss. The areas selected should represent major aspects of the farm's enterprises that contribute to the whole farm business. For example, on a vegetable and fruit farm with a retail farm market, the areas observed may include production fields, storage and processing facilities, the marketing facility, and critical infrastructure such as irrigation, hoop houses, and equipment. On a livestock farm, the areas may include animal housing and milking (if dairy), crop production fields, feed storage and handling, and manure management facilities.

Arrange the schedule to allow ample time for observation and discussion at each farm area.

Group size and number of groups



One decision that can greatly affect the dynamics of the farm visit is whether participants visit all the farm stations as one group or the group is divided into several smaller groups. RTF programs have been conducted both ways, but usually people will participate more actively in smaller groups. This is especially true for individuals who are less experienced and may feel intimidated asking questions in a large group. The recommended participant pool of 12 to 24 people should allow for 2 to 5 small groups that will still have a diversity of perspectives.

The planning implications for conducting the farm visit with several smaller groups, as opposed to one large group, are that you need to establish a schedule that factors in time for group rotations. You will also need to identify a discussion facilitator for each group who will keep the group on schedule.

Decision: Conducting the farm visit with or without the farmer

This is another farm visit decision; again, RTF programs have been successfully conducted when farmers have toured the farm with participants and when participants toured the farm without the farmers. Typically, when participants tour the farm without the farmer present, a two-step approach is followed where the groups revisit the same areas again with the farmer to ask questions they developed during the first visit.

The advantage of conducting the initial farm visit without the farmer present is that it allows participants and facilitators to be unconstrained and blunt in their observations and discussion of what they are seeing, without fear of insulting their host.

Discussion facilitation strategies

During the farm visit, participants are asked to discuss what they see (or “read”) at different areas of the farm; they also note what they see as strengths, challenges, or opportunities related to sustainability. Participants are also encouraged to identify factors influencing farmer decision-making and to consider how a change in farm management might affect other parts of the farm.



Because participants with different technical backgrounds and experience levels may read different things in the same farm area, a group discussion about the various perspectives on the farm areas becomes an important and enlightening part of the experience. Participants learn how service providers with different areas of expertise read a farm, and they are encouraged to ask questions outside their own area of expertise.

Facilitators in the RTF program are there to encourage participants to open up and share what they read in the various areas of the farm, and to express questions or concerns they might have about what they see. This might mean directing facilitators to:

- Provide a brief introduction to each area of the farm operation visited
- Seed the conversation by asking questions about the area of operation being visited
- Explain aspects of the farm operation participants are unfamiliar with
- Answer questions from participants to help them interpret their observations

It's a good idea to spend time before the event reviewing discussion strategies with the facilitators to help ensure the dialogue is open and interactive during the farm visit. Provide participants with a discussion guide with questions to help them make observations and engaging in on-farm questioning and discussion has proven helpful in past RTF programs. This guidance is a useful addition to the pre-meeting packet.

Examples of farm visit approaches

Here are some different approaches states have used to facilitate the farm visit.

In Maine and Maryland the farm owners shared an overview of their farm and its enterprises and then led the whole group on tours of their farms that highlighted the important aspects of the operation. Participants had ample opportunity to ask questions and discuss various aspects of the farm operation with the farmers. Because the participants toured the farm in one group, the program coordinators, who were familiar with the farm operations through their extension work, served as discussion facilitators. The farm visits also included time to sit with the farmers and reflect on the human and social components of the farm operation such as labor, family time, relationships, and thoughts for the future.



In Connecticut and New Jersey participants met with the two farm families over dinner the evening before the farm visits to learn about the history of each farm, the scope of the operations, and the goals and motivations of the farmers. The farm visit on the next day was divided into two parts.

In part one, the participants were divided into groups of four to six people and walked to a series of four stations on the farm, unaccompanied by the farmers. These stations were key locations such as the milking parlor, manure storage area, and production fields on one farm, and the vegetable greenhouse, farm stand, and packaging and processing area on another. The groups were strategically assembled to include specialists in a diverse range of topics, and one individual in each group was pre-selected to help facilitate discussions and keep the group on schedule. Each person in the small groups was given the opportunity to read the farm through the lens of his or her specialty and to share that reading with the group. Observations were made based on what could be seen from walking the property, from farm records that had been assembled for the workshop, and from discussions with the farmers the previous night.



In part two, the whole group toured all the stations with the farmers and had a chance to engage the farmers in discussion and ask questions that had arisen during part one.

In New Hampshire participants began each farm visit with the farm family's introduction to the farm's history and enterprises. Then the participants walked the farm without and then again with the farmers as described above for Connecticut and New Jersey.

One thing the New Hampshire organizers did differently, on one farm, was to divide participants into small groups for the first farm walk, and for the other farm the group remained as a whole group. Both the program organizers and participants expressed a strong preference for the small-group format. Discussion was much less robust during the large-group farm walk and it tended to be dominated by those with stronger or more outgoing personalities while shyer people remained quiet. Program organizers also noted more drifting away from the group and more cell phone activity during the whole group farm walk.

In Pennsylvania, the approach was a hybrid of the approaches described above. The farmers led a whole-group tour of their farms to highlight aspects of the operation that were relevant to the learning objectives established by the planning team.

Throughout the tour, members of the planning team with specialties in various disciplines were given an opportunity to read the farm from their perspective and facilitate a discussion with the farmers. For instance, while visiting the herd of milking cows, a veterinarian described his interpretation of farm records related to somatic cell counts, days in lactation, and milk production. While walking the pastures, agronomists on the team facilitated a discussion with the farmers about the pasture management and grazing practices they used. At the barn, a nutrient management specialist looked at the way manure was being handled and asked the farmers about the types of conservation practices being used to protect water quality.



Additional specialists representing entomology, farm business management, weed science, dairy science, and sociology also contributed to the Pennsylvania farm tours. In the Pennsylvania approach, the farm tour facilitators were included in the workshop planning team from the beginning.

One challenge to the facilitation approach used in Pennsylvania is that it created a divide between the program participants and the specialist facilitators. Facilitators need to be mindful of engaging program participants in the process of discovery and eliciting contributions from participants, many of whom have considerable levels of expertise as well.

6. Do a pre-event farm visit

The coordinators, members of the planning team, and, if possible, discussion facilitators should tour the host farms before the actual event to meet the farmers, see the operations firsthand, establish the logistics and timing of visits to all farm stations, and review discussion facilitation strategies for the event.



See Appendix C for sample agendas and observation and discussion guides.

7. Plan strategies for post-visit discussions

Overview of post-visit discussions

Participants debriefing together after each farm visit is an essential component of the RTF training program. This debriefing session allows participants to continue discussing and drawing connections between the various facets of the farm they visited. Questions that might have gone unvoiced or unresolved during the farm visit can be brought up and discussed.

Typically, these debriefing discussions are conducted for each farm separately, at the end of the day of the site visit, and these sessions can range from informal to highly structured. An informal debriefing may consist simply of a conversation among participants over dinner, but a debriefing with some

structure is more likely to ensure that all participants have a chance to bring their voice to the conversation.

The goal of RTF is not to develop recommendations for the host farmers, but typically the debriefing involves discussion of strengths, opportunities, and challenges, and an analysis of these from a whole-farm perspective. The discussion and analysis are usually translated into feedback to the farmers in terms of key observations and suggestions or options for consideration during the debriefing session. Farmers may be most receptive to suggestions if they address challenges and areas of concern the farmers identified.



Discussion frameworks

Planning a strategy to help participants discuss what they observed on the farm is not a step that should be overlooked or left to the last minute. Different discussion frameworks have been used in RTF programs, and the method may depend on the participants. Below are ideas for structured debriefing sessions from the RTF programs conducted to date. There may be other strategies not described in this guide that could also work well.

The Connecticut RTF program participants debriefed using a facilitated discussion where the four stations of each farm that had been visited were discussed in turn. Items for discussion included observations, insights about interactions among farm components, farmer decision processes, and strengths and challenges for sustainability. There was a discussion facilitator and recorder for each farm.

Pennsylvania and New Hampshire used a World-Café style discussion about farming system interactions and a sustainability SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of each farm. The Maryland program also used the SWOT analysis approach.

World-Café discussions

In a World-Café style discussion, participants rotate through multiple discussion stations framed around a question or set of questions. Each small group records the results of their discussion on a flip chart, with each successive group building upon the ideas of previous groups. The discussion is designed to be fast-paced, perhaps only five to ten minutes at each station. Groups disperse at each rotation and individuals move to different stations and reform into new groups. This way, participants find themselves with a new group at each station, which keeps group energy and cross-pollination of ideas strong.

In the Pennsylvania RTF training, the discussion stations focused on identifying interactions between five different components of the farm system: agronomy, animal performance, business management, environmental resources, and social elements. At each station, one component was selected as the focal component and participants identified ways that component interacted with the other four components of the system at each farm. At the end of the World-Café activity, participants created a concept map of interactions between farm system components.



In New Hampshire, each area of the farm visited was a discussion station and at each table groups considered this question :

What social, economic and/or environmental factors did you observe or learn about in this farm area that present strengths or challenges for sustainability?

SWOT analysis

A SWOT analysis is a classic strategic planning exercise that seeks to identify the internal strengths and weaknesses, and external opportunities, and threats facing a business or organization. In the Pennsylvania, New Hampshire, and Maryland RTF trainings, a SWOT analysis was done for each farm during the debriefing. In Pennsylvania and New Hampshire, the analysis was done after the World Café discussions. This analysis helped participants distill their observations and organize their thinking about each farm into a logical framework.



Because the opportunities-and-threats components focused on factors external to the farm, the SWOT analysis also helped to elucidate a broader context of how each farm system related to trends in the food system and farming industry, such as shifts in consumer preferences, food safety issues, commodity prices, and nutrient management regulations.

Discussion of options and implications



Another phase that will follow World Café, SWOT, or other observation-processing exercises is the exploration of suggestions or options for the farmer to address the strengths and challenges observed. This exploration may be a brainstorming of ideas and then a discussion of how any option suggested could potentially interconnect with or impact other aspects or enterprises of the farm. Questions to consider were:

What would the pros and cons of the option be?

Why might the option fit or not fit with the farmer's current operation or with his mental model of farming?

8. Facilitate summarizing of feedback to farmers

Towards the end of the debriefing discussion session for each farm, participants should be directed to summarize and organize the feedback about their farm visit that they will share with the farmer. It's important that an orderly presentation and written report be prepared. Facilitation by the program coordinator or discussion leaders is helpful for this step.

The SWOT analysis was found to be a useful framework for organizing the group discussions about the farm; this analysis was chosen by three programs as one of the pieces of information to include in the

reports back to the farmers. Another useful framework is organizing information into lists of key observations about sustainability strengths and challenges and suggestions for consideration. Often the information, questions, and analysis shared during the debriefing discussions will guide the participants and coordinators in their choice of format for presenting feedback to farmers.

About recommendations

Offering recommendations in the feedback to farmers, especially when unsolicited, can be a sensitive topic, and most programs have chosen to use the frameworks of strengths, opportunities and challenges for sustainability, or observations and suggestions for improvement, rather than recommendations. If farmers have shared their goals for the farm and areas they consider challenges, then recommendations concerning these goals and challenges may be received more favorably. However, in general, the subtle shift from recommendations to suggestions or options for consideration may make the sharing of feedback more comfortable for both participants and farmers.

Another caution about recommendations is that too strong an emphasis on problem-solving and identifying recommendations for improvement can detract from the RTF learning objectives, which is to help participants increase their understanding of farms as whole systems, recognize interconnections, and gain insight into factors influencing farmer decisions.

Preparing a presentation and report

It's not necessary to have a written report for farmers at the time of the reporting session – a verbal presentation, with or without slides, and informal discussion is fine, but the farmers have appreciated receiving a written report later.



Formats for written reports have included:

- PowerPoint slides, which were used in the presentation to farmers and then printed out
- A brief narrative using whatever framework was chosen for the verbal presentation, i.e. observations and options for improvement, strengths, challenges, opportunities, and recommendations for improved sustainability.
- A bulleted list using whatever framework was chosen for the verbal presentation as described above.

Appendix D offers examples of post-visit discussion facilitation strategies.

9. Arrange an informal gathering with farm families

The RTF program ends with an informal meeting between the program team and each of the farm families to discuss the team's observations and reports.



Many participants and the host farmers consider the post-visit group discussion and reporting session to be one of the most enjoyable aspects of the program. Typically, the rapport with the farmers has grown throughout the program and this makes the reporting session comfortable for all.

Below are some considerations to help you plan a session for reporting back to the farmers.

Food

Whenever possible, plan a communal meal with participants and farm families. Participants and farmers will have spent time together over the course of the program and developed a rapport. Sharing a meal together and discussing the farm visits and observations is a rewarding way to conclude the RTF experience for all.



Separate reporting sessions for different farmers (if two farms are visited)

Most farmers will be more comfortable receiving feedback separately from the other farm visited by the RTF program. Some RTF programs have held separate meals for each farm family, and some have had a common meal with both farm families and then split the participants into two groups, with each group presenting feedback to one farm family in a separate room.

10. Arrange meeting space and lodging



RTF programs typically involve one or two overnight stays, as well as a meeting space for post-visit discussions. Sometimes the lodging site can serve as the gathering place for the communal meal and reporting session with farmers. If possible, choose meeting, lodging and communal meal sites close to the farms so travel times to and from the farm are reduced for both participants and farmers.

11. Send pre-event information packet to participants

Participants benefit greatly from a comprehensive pre-meeting introduction to the program objectives and format, the host farms and fellow participants. Send a pre-event information packet to participants one to two weeks before the event to ensure they have adequate time to review and reflect on the information before the program.

Use the following checklist to assemble your RTF pre-event packet.

Reading the Farm Pre-Event Packet Checklist

- Program description including learning objectives
- Detailed itinerary, including any planned pre-farm visit discussions, the farm visit schedule, post-visit discussions and follow-up meetings with farmers
- Host farm profiles including any records and supporting documents obtained
- Guides for farm visit and post-visit discussions
- Names, affiliations and, if possible, a brief bio statement for all participants
- Travel arrangements and accommodation information, as needed



Assembling the information for the farm profile and other handouts for the information packet takes time. Program coordinators are advised to recruit a planning team that will take an active role in preparation, and if possible, enlist a capable program assistant to help with planning.

The appendices for this guide contain examples of many of the documents to include in pre-meeting information packet.

EVALUATE THE PROGRAM

The pre-event packet should also contain a full agenda for the program, and the names, affiliations and if possible, a brief biography or profile of each participant.

Evaluating the program is an opportunity for program coordinators to learn how well participants met the learning objectives, and it's also a chance for participants to reflect on what they learned and how they can use what they learned to improve their service to farmers.

It is helpful to plan the RTF program evaluation in these three steps:

1. End-of-program questionnaire
2. Action planning
3. Post-program follow-up

End-of-program questionnaire



Use evaluation questionnaires at the conclusion of the RTF program to assess participants' learning outcomes and their intentions to use the skills and knowledge gained through the program. This provides immediate feedback about the participants' sense of what they learned and what they valued most about the program. In a pro-

gram as complex as RTF, much of what participants learn may become more evident to them as they have more time to reflect on and apply what they learned.

Action planning

Often end-of-program questionnaires will ask participants how they intend to use what they learned. These questions are useful for instilling a mindset of follow-up action, but action planning is a process that takes intentions a step further. During an action-planning session, participants reflect on what



they learned and how it applies to their work, and then articulate specific ways they can use their new knowledge and skills about whole-farm system interactions in their educational programming or work with farmers. Participants are more encouraged and motivated to achieve greater follow-up actions when they leave with an action plan in hand.

Action planning should not be something tacked on at the end of a busy program when participants are looking for the exits, but instead must be budgeted into the workshop schedule. Its value to the participants lies in helping them process their learning and plan their next steps, and this should be emphasized.

The program coordinators also benefit from having participants create action plans, because copies of these plans can be returned to the participants during the six-month or one-year follow-up. Returning the plans will spark their memory about what they intended to do and give them the opportunity to assess how well they accomplished the plans envisioned at the end of the workshop. Tell participants at the end of the program that you will be following up with them later, and that you will be asking them what they have done to reach their action goals.

Post-program follow-up

Post-program follow-up evaluations are typically conducted six months to one year after the program to allow participants time to put their learning into action. The purpose of this follow-up is to assess how the participants used the knowledge and skills gained through the program in their work with farmers and with other agricultural professionals. Typical questions are:

- Did they change their approach to interacting with and advising farmers?
- Did they observe or ask questions to uncover the interconnections among management decisions?
- Did they ask questions outside of their areas of expertise more often and more confidently?
- Did they establish new partnerships or collaborations with other farm advisors to help solve farm problems?

If the program included an action planning activity, then provide each participant with a copy of their action plan and ask them to report on how well they did. Things



don't always work out as intended, so also give participants the opportunity to report other things they might have done in addition to or instead of their intended actions.

Learning about the follow-up behaviors of participants informs coordinators, and often sponsors, about the longer-term value of the program for participants and its influence on their behaviors related to advising farmers and helping them improve their sustainability. Asking follow-up questions also gives participants an opportunity to reflect on their professional practice and accomplishments and recognize within themselves how they have improved and/or what improvements they will continue to strive for.

See Appendix E for sample post-workshop questionnaires and an action plan template.

CONCLUSION

There are many good reasons to conduct a Reading the Farm training program for agricultural service providers. Many of the reasons for and advantages of the program have been described in this guide—it is for these reasons that the program has become recognized as an effective approach for training agricultural service providers in taking whole-system and team-based approaches to their work with farmers. But perhaps the best reason to conduct a Reading the Farm program comes from the participants themselves.

"I will make recommendations that are not only farm specific, but farmer specific." (Pennsylvania)

"I developed a broader network of providers, better sense of questions to ask, and who to turn to if I need someone more skilled than I to answer those questions!" (Maine)

"I now believe more in teamworking and found out that focusing on only one issue and solving only one problem may have an impact on other components of the farm operation." (Connecticut)

We hope this guide will help you facilitate the next successful Reading the Farm Program.



Appendix A

Example Reading the Farm introductions for participants

These introductions were sent to RTF participants before the training to get them oriented to the training format and expectations.

Introduction to the 2006 *Reading the Farm* Program in Connecticut

Reading the Farm is a new on-farm training program in sustainable food production that will be held in Connecticut this spring and summer. This first-of-a-kind program, sponsored by the Northeast Sustainable Agriculture Research and Education (SARE) program, will bring together farmers from two farms and twenty agricultural service providers and professors with experience in diverse subject areas to share their knowledge with one another. Participants will help one another develop an integrated understanding of farms as whole systems with the goal of improving our ability to help farmers produce food sustainably.

Agricultural service providers and professors frequently have substantial in-depth knowledge of certain components of agriculture, but have few opportunities to develop a thorough understanding of how all the components work together to influence farm sustainability. This program will provide a context in which agricultural professionals with varied expertise can learn from one another and from farmers by discussing the environmental, economic and social factors that contribute to the sustainability of two farms, a dairy farm and a vegetable farm. In so doing, program participants will gain a broader view of agricultural sustainability and will improve their ability to analyze farm systems and work effectively with farmers.

Reading the Farm program participants will meet for three days in August to visit one dairy farm (Jones Farm) and one vegetable farm (Smith Farm) in Connecticut. Prior to the meeting, participants will receive detailed information about the two farms, for example:

- a summary of physical aspects such as structures and equipment
- acres of tillable, pasture, forest, and riparian land; aerial photos with fields, acreage and soil series indicated
- soil tests for each field
- production information
- herd health information for the dairy farm.

Program participants will join both farmers and their families for dinner and an introduction to the program on the evening of Monday, August 7. Participants will then spend Tuesday and Wednesday (August 8-9) touring the vegetable and dairy farms, and will meet off-farm both nights over dinner to discuss topics of interest brought up by the farm tours. On Thursday, August 10, participants will again meet with both farmers to discuss options for increasing the sustainability of the farms. The three-day meeting will conclude Thursday afternoon with smaller group sessions aimed at developing plans to incorporate the knowledge gained during the program into each professionals' future outreach or teaching efforts.

Participants will be contacted one year following the program to discuss the ways in which the program has impacted their educational programs and to evaluate the program and suggest changes.

Northeast SARE will cover all lodging, meal and travel costs of program participation.

Introduction to Maine Sustainable Agriculture Retreat 2010

October 5th and 6th – New Gloucester, Maine

Funded by National and Northeast SARE programs

(Lodging and meals will be provided)

The main focus of the 2010 Maine Sustainable Agriculture Retreat will be a professional development program called “Reading the Farm.” This program, adapted from one originally developed by Tom Morris of the University of Connecticut, will bring together agricultural service providers from a range of agencies and with varied expertise to explore whole-farm sustainability. The retreat is also designed to build and strengthen networks among our participants. Funding is provided by the USDA Sustainable Agriculture Research and Extension (SARE) program.

This year our Maine group will be joined by a group of 7 SARE Fellows – Extension educators from around the country selected by SARE to participate in a 2-year in-depth training program in sustainable agriculture. Two representatives from SARE will also participate.

Introduction to the Maine “Reading the Farm” Program

The goal of the “Reading the Farm” program is to enhance the ability of agriculture service providers to contribute to the sustainability of individual farms, with the following targeted outcomes and components.

Each participant will:

- Improve their ability to understand the farm as a whole system rather than discrete biological, physical, and human components
- Appreciate and effectively utilize a “team approach” to problem solving on farming operations, including being able to ask informed questions and knowing when to seek needed information outside their area of expertise
- Identify and understand the factors that influence farmer decision making including production constraints, economic factors and pressures, social factors, family dynamics, etc.
- Understand how any given change in farm management might affect the whole farm
- Gain confidence in providing practical recommendations to farmers to help them improve farm sustainability

Why a team approach?

Sustainable agriculture strives to meet three objectives simultaneously: farm profitability, environmental stewardship, and strong farming communities. The multifaceted nature of sustainable agriculture and farming in general requires a whole farm approach, but no one person has complete knowledge about how to increase a farm’s sustainability. For this reason, the RTF program is based on a team approach and on co-learning. Participants with varied expertise will learn from one another and from farmers by discussing the environmental, economic and social factors that contribute to farm sustainability.

Reading the Farm activities include:

- Before the retreat
 - Review materials provided by the organizers (background information on the participating farms and an interview guide).
- During the retreat
 - Develop questions and lines of inquiry for the farm visits
 - Visit with the farm families and tour their farms
 - Assess, as a group, the major issues facing both farms; evaluate these issues from a whole-farm perspectives; and develop options for moving forward
 - Develop a report for the farmers summarizing observations and potential options
 - Join both farmers and their families for dinner and a discussion of the reports
- After the retreat
 - Participate in an evaluation of the RTF program after 6-12 months

For questions, contact either:

Ellen Mallory ellen.mallory@maine.edu (207) 581-2942
Dick Brzozowski richard.brzozowski@maine.edu (207) 780-4205

What to bring:

Clothing - October weather in Maine can be cool and wet. Bring a raincoat, warm clothes, and appropriate footwear as we will be spending a considerable amount of time touring the farms.

Laptop – Not required but if you want to bring one, please do. The Farmhouse where we will be staying has wireless available which may be useful in conducting research for our farm reports.

Accomodations:

We will be staying at the Merrill Farmhouse, one of Pineland Farms' Guest Houses. You can find information about the Merrill Farmhouse at:

<http://www.pinelandfarms.org/questhouses/index.htm>

Appendix B

Example farmer interview questionnaires

These interview questions were used by RTF program planners to glean the background information about the farm hosts. Information from the questionnaires was used to assemble the farm profiles and help plan the farm visits.

Example farm profiles from Reading the Farm programs

These farm profiles were given to RTF participants 1-2 weeks before the farm visits to provide an orientation to the farm and serve as a reference during the farm visits.

Example Vegetable Farm Interview Questionnaire for Reading the Farm

General Farm Information...

- 1) What is acreage? (how much owned v. rented? how much cropland v. forest/wetland/other?)
- 2) Go over FSA field map – verify fields and crops grown in each field.
- 3) How many acres of each crop do you grow?
- 4) Describe your farm enterprises (wholesale? farm store? custom fertilizer/spray business? greenhouse bedding plants and tomatoes?)
- 5) How has the operation changed throughout its history? (past enterprises, ownership, size, etc.)
- 6) Do you have any hopes or expectations for how the farm will change in the future?
- 7) How many and what sort of employees? (family v. non-family? paid v. unpaid? hours/duties?)
- 8) In what ways do family and/or community members support the operation?
- 9) What is the farm's relationship with the community? (e.g. community service, conflicts)

Soil Fertility and Conservation...

- 1) What are your fertilization/liming practices? (for N, P, K, and any micronutrients)
- 2) Do you use any other soil amendments? (e.g. compost, manure, green manure crops)
- 3) How often do you use soil tests? When were the most recent soil tests done?
- 4) Look at recent soil test results, if available.
- 5) What cover crops do you use and when are they planted?
- 6) What is your typical tillage sequence? (what implements? when?)
- 7) How do you control erosion?
- 8) What conservation practices have been implemented?
- 9) Do you have any highly-erodible land (HEL) on the farm? If so, how do you manage?
- 10) Are there any riparian zones / drainways / streams on the farm?
- 11) If so, are they forested? How close do you farm to them?

Pest Control...

- 1) What are the major weed, insect and disease problems on the farm?
- 2) How have you tried to address these pest problems? What IPM methods do you use?
 - a) What insecticides, herbicides and fungicides do you use?
 - b) Do you scout regularly for pests? How do you decide when to apply pesticide?
 - c) How often do you cultivate?
 - d) Do you plant any pest-resistant crop varieties?
 - e) Do you rotate crops? If so, how do you decide sequence?
 - f) What other pest control methods do you use? (e.g. PTC, rowcover)
- 3) Which of the pest problems have been the most challenging to manage?
- 4) Are there any crops you have stopped growing due to pest problems?

Facilities/Equipment...

- 1) What is the water source on the farm?
- 2) Is all of your cropland irrigated? What type of irrigation is used?

- 3) What facilities do you have for handling/storing produce post-harvest?
- 3) Where is equipment stored?
- 4) Do you have any current equipment or equipment repair needs?
- 5) When equipment needs arise, how do you decide when to purchase vs. lease, repair, finance?

Marketing/Economics...

- 1) Who do you market your produce and services to? When?
- 2) How flexible are your markets in accommodating different yields, crops and harvest times?
- 4) How do you advertise your farm products and services?
- 5) How do you promote your farm products and services? (locally grown? slogan?)
- 6) What is business structure of different farm enterprises? (sole proprietorship? partnership? limited liability corporation?). Why?
- 7) What type of record-keeping system do you use?
- 8) Who is responsible for record-keeping? Does someone else help with it?
- 3) Do you know yields for different crop?
- 9) Do you know the costs of producing different crops?
- 10) What are the major expenses for each enterprise? (relative to other expenses & as % of total)
- 11) How much does each enterprise contribute to farm income? (relative to other enterprises)
- 12) Are there other enterprises or off-farm?

Example Dairy Farm Interview Questionnaire for Reading the Farm

General Farm Information...

- 1) How big is herd? (whole milking herd? number being milked? young stock?)
- 2) What is acreage? (how much owned v. rented? how much cropland v. forest/wetland/other?)
- 3) Go over FSA field map – verify fields and crops grown in each field.
- 4) How has the operation changed throughout its history? (past enterprises, ownership, size, etc.)
- 5) Do you have any expectations for how the farm will change in the future?
- 6) What are your long-term goals for the farm?
- 5) How many and what sort of employees? (family v. non-family? paid v. unpaid? hours/duties?)
- 6) In what ways do family and/or community members support the operation?
- 7) What is the farm's relationship with the community? (e.g. community service, conflicts)

Herd Health...

- 1) What is your feeding program? (for milking herd? dry cows? young stock?)
- 2) What % P do you feed?
- 3) What feed to you produce on farm and what do you purchase? (cost/year?)
- 4) Do you do rotational grazing?
- 5) What source(s) do you use for information on nutrition? (nutritionist? feed supplier?)
- 6) Are feeds sampled? How often?
- 7) Who provides veterinarian services?
- 8) What is the average age of the milking herd?
- 8) What is the percent live birth and calf mortality rate?
- 9) What health problems have you observed during the past year? (e.g. staph or strep mastitis, displaced abomasums, foot and leg problems, milk fever, metabolic problems, difficult birth, infertility problems, ketosis)
- 10) What practices have you altered to address health problems? Have they been successful?
- 10) What is somatic cell count? (How does it compare to past years?)
- 11) What are vaccination and deworming practices?
- 12) What are dehorning practices?
- 12) What type of bedding is used? (in barns? calving pens? calf housing?)

Breeding...

- 1) Do you purchase or raise replacement cows/heifers?
- 2) Who is responsible for breeding cows?
- 3) How do you keep breeding records?
- 4) What are your heat detection methods?
- 5) What traits do you consider when choosing bulls/semen/replacements? (for first calf heifers?)
- 6) Have you noticed improvement in herd traits over time?
- 6) Are regular preg checks done?
- 7) What is calving interval?
- 8) How do you decide which cows to cull? What is herd turnover or culling percentage?

Milk Production...

- 1) What is milk production per cow?
- 2) What is fat and protein content of milk?
- 3) What is the average age of first freshening?
- 4) What is milking procedure? How long does it take?
- 5) When was your last milk inspection (from creamery, state of CT, etc.) and what were scores?

Forage Crop Production...

- 1) What forages are produced for feed? (e.g. hay, corn silage, haylage) Are any sold?
- 2) How many acres in each crop?
- 3) Do you know yields for each crop?
- 3) Do you know the costs of producing different crops?
- 4) What are your fertilization/liming practices? (for N, P, K, and any micronutrients)
- 5) What pesticides do you use? What pest problems do you have?
- 6) Do you use cover crops? If so, which ones and when are they planted?
- 7) What is your typical tillage sequence? (what implements? when?)
- 8) Do you rotate crops? If so, what is sequence?
- 9) How often do you use soil tests? When were the most recent soil tests done?
- 9) Look at recent soil test results, if available.

Facilities/Equipment...

- 1) Describe animal housing: calving area? calf housing? other?
- 2) What is water source on farm?
- 3) What is bulk tank capacity? Is your production limited by that capacity?
- 4) What is silage capacity? How many commodities can be stored? Does that limit production?
- 5) Where is equipment stored?
- 6) What current equipment needs or equipment repair needs do you have?
- 7) When equipment needs arise, how do you decide when to purchase vs. lease, repair, finance?

Manure and Compost...

- 1) What is your method of transport of manure to fields?
- 2) What is your method of application to fields?
- 3) How do you minimize nutrient loading?
- 4) What is your procedure for minimizing loss of nutrients from manure on the farmstead and in the field?

Soil Conservation...

- 1) How do you control erosion?
- 2) What conservation practices have been implemented?
- 3) Do you have any highly-erodible land (HEL) on the farm? If so, how do you manage?

- 4) Are there any riparian zones / drainways / streams on the farm?
- 5) If so, are they forested? How close do you farm to them?

Marketing/Economics...

- 1) Who do you ship milk to? How often do they pick up?
- 2) What other marketing outlets do you have for farm products (milk? value-added? compost? calves?)
- 3) How do you advertise your farm products?
- 4) How do you promote your farm products?
- 5) What is business structure of dairy wholesale business and other enterprises? (sole proprietorship? partnership? limited liability corporation?). Why?
- 6) What type of record-keeping system do you use?
- 7) Who is responsible for record-keeping? Does someone else help with it?
- 8) What are the major expenses for each enterprise? (relative to other expenses and as % of total)
- 9) How much does each enterprise contribute to farm income? (relative to other enterprises)
- 10) Are there other enterprises or off-farm employment which provide supplemental income?

Reading the Farm
Whole Farm Interview Guide
Ellen Mallory and Dick Brzozowski
September 2008

We developed this preliminary list of topic areas and questions as a tool to help guide the farm visits and interviews during the Reading the Farm program. This is not intended, by any means, to be a complete list of questions to ask. Rather, we hope it provides the beginning framework for the types of information we would want to gather to develop a whole farm perspective. You will notice that the farm sketches we provided roughly follow this framework. We hope you will add topics and questions to it.

Our thought is that this guide could potentially be developed into a tool for farmers and agricultural service providers to use to help identify areas of strength and weakness regarding farm sustainability. ATTRA currently has a “Beef Farm Sustainability Checksheets” and a “Dairy Farm Sustainability Checksheets” (available at: <http://attra.ncat.org/attra-pub/beefchek.html> and <http://attra.ncat.org/attra-pub/summaries/dairychecksheets.html>).

We will spend a little time at the retreat discussing the potential usefulness of such guides or checksheets and what they might contain.

WHOLE FARM INTERVIEW GUIDE

Draft – September 2008
Brzozowski and Mallory

FARM DATA

Farm Name _____

Contact Person _____

Mailing Address _____

Town _____ State _____ Zip Code _____

Phone number(s) _____

Email address _____

GENERAL FARM INFORMATION

List all enterprises on the farm:

Approximate acreage of: tillable land _____; pasture _____; woodland _____

How much of this is rented: tillable land _____; pasture _____; woodland _____

Number of livestock (by type):

List all people involved in the farm, their time commitments, and major roles:

Brief history:

Goals for the farm:

Top three to five strengths and weaknesses (or problems) of the farm operation:

Plans for future changes:

SOILS

Do you have soils maps for the farm?

Major types of soil:

Specific soil problems (poor drainage, compaction, etc.):

Are fields productive?

Identify specific fields that need improvement and what improvement is needed.

Is it economically feasible to try to improve these fields?

How often are soil tests conducted and when was the last test?

Are soil test results available as a reference?

Is soil pH in each field adequate?

Is organic matter adequate in each field?

Are recommendations followed?

Are fields steadily being improved?

Is any land classified as Highly Erodible (HEL)?

What soil erosion control measures are followed, on HEL or non-HEL?

WATER

Available sources of water for the farm:

When was the water last tested for the household?

Are livestock waters clean and usable?

Is water appropriate and adequate for irrigation?

Identify any potentially affected water bodies (streams, wetlands, ponds/lakes, riparian zones):

Are there any trouble spots for water pollution?

ANIMAL MANAGEMENT

Herd description (numbers of animal types, number of herds and size, locations):

Breeding goals:

Traits selected or culled against:

Herd turnover / cull cows:

Feeding rations, by type of animal:

On-farm feed production - Total amounts produced per year (include grains, forage, pasture):

Is pasture adequate and productive?

Purchased feed – Total amounts per year and sources:

Wasted feed - Estimate amount per year:

Feed storage – Describe and indicate if adequate and effective:

Estimate cost of feed compared to value of the feed.

Veterinarian services (vet and what services they provide):

Any particular herd health problems?

Bedding:

MANURE AND WASTE

Is there a working Manure Management Plan?

Is land base adequate for spreading all manure produced?

Is composting a part of the plan? Is composting appropriate for this operation?

Are high soil test P or other nutrients an issue?

CROPS AND ROTATIONS

Crops grown and approximate acreage of each:

Typical yields for each crop:

Typical rotations:

Fertility practices, by crop (sources and typical application rates):

Liming practices:

What are the most important pest pressures on this farm (weeds, insects, disease, wildlife)?

How is each currently managed and is management adequately effective?

Cover crops:

Typical tillage sequence for each crop:

FOREST

Certified forest land? Acreage?

Products harvested and when:

Is there a forest management plan for this land?

EQUIPMENT AND BUILDINGS

Are tractors and machinery of appropriate type and size?

FARM MANAGEMENT

Does the operation have a business plan?

Are business records being kept and used effectively?

Does the operation have a marketing plan for their products/services?

What are major sources of income and their relative contributions to overall income?

What are major expenses?

What portion of the workforce is comprised of hired?

Do the farm managers have the skills needed to address the major issues on their farm?

Do they have adequate access to information and/or assistance?

COMMUNITY CONNECTIONS

How are farm members connected to the community? (ex., Farm Bureau, SWCD, grower organizations, Farm Days, other?)

How is the farm operation connected with the surrounding community?

Are there any conflicts with the surrounding community?

UPCOMING CHALLENGES

What do the farmer(s) and/or operator(s) identify as the three biggest challenges their operation will face in the next 5-10 years?

What plans are there to address these?

Example 1. Smith Farm Profile for Reading the Farm in Connecticut

General Farm Information

1) Overview of enterprises: The Smith farm has 25,000 sq ft of greenhouse space with vegetable and bedding plants that are sold retail at the farm from spring through early July. Some perennials and mums are also sold at the farm stand. The Smiths also grow 3,000 sq ft of greenhouse tomatoes. Sweet corn, pumpkins and mixed vegetables are produced and sold at the farm stand. Pumpkins and sweet corn are also sold to other local small farm stands (those customers pick up the produce at the farm). The Smiths also have a business related to farming that creates income.

2) Acreage: The Smith farm consists of 210 total acres, of which 100 are rented. This includes 40 acres of hay (timothy/orchardgrass), 40 acres of pasture, 35 acres of sweet corn, 20 acres of silage corn, 5 acres of pumpkins, 5-6 acres of mixed vegetables (summer squash, cucumbers, melons, peppers, eggplants, green beans), and 65 acres of woodland/swamp.

3) History: Custom business started in 1975, at which time the Smiths were performing all crop work for dairies as far away as Long Island. In the early 1990's they downsized this operation and stopped doing all crop work except for fertilizer/lime/herbicide applications. They started growing sweet corn in the mid-1980s (when their farm stand was just a card table). Since then they have increased amount of corn and put up greenhouses for tomatoes, bedding and ornamental plants and flowers (the first greenhouse was constructed in 1991).

4) Plans for future changes: John and Anne Smith would like to retire within a few years. They have two sons – one currently works full time on the farm but isn't interested in taking over the operation after his father retires. Their other son works part-time and may have interest in taking over the operation. John also thinks the farm business might be marketable and would like to discuss this possibility further with a professional.

5) Employees: Anne and John Smith work full-time on the farm, at least 80 hours per week, doing greenhouse work, vegetables, etc. Anne keeps all of the farm records using a ledger and they have an accountant do all tax forms. Their son Jim also works full-time in all areas of the farm, working about 70 hours per week for April/May and 55-60 hours per week beginning in June. The Smiths' other son Frank works part-time in the greenhouse and does equipment operation. John's cousin also works full-time on the business related to farming, 60 hours during the busy season, and John's niece Jess works full-time in the greenhouse growing and selling vegetable plants (except during the winter). Non-family employees include Scott, a college student who works in the greenhouse growing and selling vegetable plants, 30 hours per week when school is in session and 40-50 hours per week when school is out (he has worked at the farm since he was 14). A couple of other women help with transplanting on a part-time basis. Several other people assist with operation when needed, mainly helping restock and transplant.

6) Community connections: John is active in local and statewide farm organizations, on the local planning/zoning commission, and has served on the executive committee of the New England Fruit and Vegetable Growers Association. Anne is the secretary of the Connecticut

Farm Bureau in their county. They have no conflicts with the surrounding community (their delicious sweet corn wins over all their neighbors!).

Soil Fertility and Conservation

1) Fertilization/liming practices: For vegetables, they do a soil test every other year; for grains they do a soil test every 2-4 years, and apply fertilizer accordingly. No other soil amendments are used.

2) Cover crops and crop rotation: Rye is planted in the corn fields from early September to early October. The Smiths generally don't rotate crops and haven't found that it has been necessary in most cases, but they try to rotate pumpkins every 2-3 years to help prevent disease.

3) Tillage: The Smiths use a moldboard plow and harrow on all crops. The field corn has been largely no-till for some 25 years. Sometimes they harrow lightly or disc in corn, depending on field conditions.

4) Highly Erodible Land (HEL): All HEL is in permanent pasture, except for one sweet corn field, which they make sure to have in rye by mid-September.

5) Riparian zones: Their fields border both sides of the Connecticut River for 1/2 mile or so. There were 8 feet of water on some of the corn fields this year when the river flooded! They farm fairly close to the river; there is a strip of trees and a roadway in between the fields and the river, which is thin in some places and up to 100 ft wide elsewhere.

Pest Control

1) Major pest problems: There are no crops that they have stopped growing due to pest problems. The pest pressure they have experienced is as follows:

- *Weeds* – Quackgrass and standard broadleaf weeds are in the fields – herbicides keep all of these under control.
- *Wildlife/insects* – The worst pests are birds in sweet corn and deer in late corn. Corn earworms and corn borers have also been a problem
- *Diseases* - *Plectosporium* and *Phytophthora* have been problematic, although they had good control this past year (dry weather may have helped)

2) Management of pest problems:

- *Insecticide/herbicide/fungicides used* – Warrior, Sevin, Procure, Quadris, Strategy (on pumpkins), Permit (spot-spray on sweet corn), Gramoxone (spray between plastic in vegetables), Callisto and Atrazine or Bicep and Prowl (on corn).
- *Scouting* – Vegetables are scouted regularly; Randy worked with UConn Extension Educator Jude Boucher to get training on sweet corn and pumpkin IPM and followed Jude's pumpkin spray recommendations last year. He uses perimeter trap cropping on pumpkins, summer squash and cucumbers and during the two years he has used this method he hasn't had to spray his main crop at all for pests.
- *Cultivation* – None is needed, as most of their vegetables, except for beans, are on plastic.
- *Pest-resistant crop varieties* – The Smiths use powdery mildew resistant pumpkins.

- *Other pest control methods* – The Smiths have tried to control the deer by getting crop damage permits to shoot them.

Facilities/Equipment

1) Irrigation: Some of the sweet corn is irrigated out of the river (last year half was irrigated one or two times and half was not irrigated at all). Vegetables are not irrigated because the ground is usually wet, but they could be if needed.

2) Post-harvest handling/storage facilities: The Smiths have an 8' x 10' walk-in cooler.

3) Equipment storage: Equipment is stored outside during the season. The Smiths try to put most equipment under cover in the greenhouses during the winter.

4) Current equipment or equipment repair needs: John is looking to purchase a rollover/moldboard plow, since the old one is broken.

Marketing/Economics (more information will be provided during program)

1) Advertising of farm products and services: In May the Smiths run a couple of newspaper advertisements for the greenhouse business. For vegetables only word of mouth is needed; the Smiths live on a busy road and their sweet corn attracts customers from far and wide without any advertising (they've occasionally had to turn a few customers away who were looking for sweet corn in the spring!).

2) Business structure: The business related to farming is incorporated. The other farm enterprises are structured as a sole proprietorship.

3) Relative contribution of enterprises to farm income: They don't calculate the returns from different crops, but know that some crops are more profitable than others. Cucumbers and squash, for example, are much more profitable than sweet corn (which costs \$100/acre for seed + a couple hundred dollars/acre for fertilizer, etc.), but sweet corn brings the customers in.

5) Major expenses: For sole proprietorship, 40-50% of gross is spent on labor, 20-30% of gross is spent on crop supplies, and 5% is spent on gas and oil (most of which is consumed through heating the greenhouses).

Key to Soil Types at the Smith Farm

CrC – Charlton-Hollis fine sandy loams, very rocky, 3 to 15 percent slopes

HkC – Hinckley gravelly sandy loam, 3 to 15 percent slopes

Oc – Occum fine sandy loam

PbB – Paxton fine sandy loam, 3 to 8 percent slopes

PbD – Paxton fine sandy loam, 15 to 25 percent slopes

Ps – Pootatuck fine sandy loam

Rd – Ridgebury fine sandy loam

Sg – Sudbury sandy loam

WxB – Woodbridge fine sandy loam, 3 to 8 percent slopes

WxC – Woodbridge fine sandy loam, 8 to 15 percent slopes

WyB – Woodbridge very stony fine sandy loam, 3 to 8 percent slopes

A soils map of the farm and additional supplemental documents such as soil test reports were also provided to participants before the program.

Example 2. Johnson Jerseys Farm Overview for RTF in Pennsylvania

Farm Overview

John and Mary Johnson own and operate Johnson Jerseys, a registered herd of 375 Jersey cows. The milking herd (currently 300 head) is managed using a rotational grazing system and supplemented with a total mixed ration (TMR). The herd is well known for its genetics and sales of breeding stock, bulls, and semen supplement farm income from milk sales.

One of the unique aspects of the farm is a seasonal calving system. Approximately 250 calves are born in March and April and another 150 calves are born in August. This concentrates jobs associated with calving to certain times of the year while also maintaining milk production throughout the year.

Acreage: 113 acres in pasture on the home farm support the milking herd. An additional 184 acres of hay, and 155 acres of silage corn on owned and rented ground are grown to feed the herd. The land managed by the Johnsons is in 8 different parcels spread out within a 6 mile radius of the home farm.

Annual Crop Rotation: Continuous corn

Labor: Three generations of the family participate in farm management tasks, including calf care, breeding, milking, tractor driving, and record keeping. Hired employees include 2 full-time milkers, 1 full-time tractor operator, and 3 part-time milkers. Most tasks for corn management are custom hired, including planting, fertilizing, herbicide and insecticide spraying, and silage harvesting. Manure hauling and hay baling are also hired out.

Animal Feeding: Milking cows receive 38 # of dry matter/day. When pastures are at peak productivity during the grazing season, approximately 25# of dry matter/day is fed from pasture, with the remaining supplemented by TMR. The TMR consists of grass haylage, corn silage, Ralston Purina mix (a by-product of the pet food industry), corn earlage, wet brewers grain, and a mineral mix.

Grazing System: There are 22 paddocks ranging from 3-5 acres in size. Cows are rotated to a new paddock after every milking.

Rented ground: The Johnsons farm 7 parcels of land in addition to the home farm, spread out within a radius of 6 miles from the home farm. Field maps and soil tests from these locations are included in the following pages.

Additional supplemental information including the items below was provided to participants.

- Field Map- Home Farm
- Soil Tests- Home Farm
- Feed Analysis- Pasture, Paddock 15
- Feed Analysis- TMR
- Remote Farming Locations
- Field Maps and Soil Tests for Remote Locations
- 12 month graphs of animal performance indicators that includes cull rate, milk production, days in milk, pregnancy rate, linear score, days in milk

Sun Valley Farm Profile for Reading the Farm

Farm History

Sun Valley Farm started in 1975 on a half-acre of Pick Your Own (PYO) strawberries along with some mixed vegetables. During the early years, as the farm was first getting started, the farm's income was derived from the sale of sweet corn and mixed vegetables sold at farmers markets, along with a PYO strawberry operation. As their farm grew over the years (1975 to 1983), the Jack and Dorothy Franklin sold their products out of their barn, in their fields, and also on the main streets in nearby towns.

The majority of their family's income during these years came from off farm jobs.

The Franklins originally purchased the farm in November of 1974. It had been a buttery, selling milk, butter and eggs during its heyday. The farm they purchased had a total of 28 acres, of which 18 were tillable. They also purchased another seven to eight acres of neighboring land which they refer to as the "lower meadow." The farm's land base has continued to grow slowly over time as they purchased other nearby parcels, bringing their total land base to 172 acres.

In 1984 they opened a new farm stand on the local highway. In 1987 they built a walk-in cooler, which in their minds was "hitting the big time". They continued to expand their product offerings, adding more bedding plants. The farm expanded and grew for years primarily through the profits of bedding plants.

From 1981 to 1991, Sun Valley Farm had a lucrative PYO strawberry business, but the Franklins note that the nature of PYO has changed over the years as people used to pick far more fruit and preserve it. Now people come primarily for the experience of the activity and for fresh strawberries. More customers come, but they pick less, making it less profitable. Today Sun Valley Farm is harvesting more of their own berries and selling these to retail and wholesale outlets.

Sun Valley Farm has adapted to changing circumstances over the years. From 2007 to 2014, the ornamental greenhouse enterprises continued to grow at a rate of roughly 2-5% per year but the profitability narrowed due to the increasing costs of input. Changes in the profitability of their enterprises over time demonstrated to the Franklins that they had to diversify to stay profitable, so other sectors of their farm had to grow.

Their interest in fruit and vegetable production peaked when their son Tom returned from college. This was around the same point in time when demand for local produce was increasing annually. Tom helped to develop wholesale accounts for vegetables and small fruit. This led the farm to begin significant investments in these sectors.

From 2008 and continuing through today, Sun Valley Farm has made significant investments in equipment, labor, and infrastructure to support the growth of their produce enterprises and direct sales outlets. In 2012, a major revamp of the farm stand and a major land purchase was made to further support produce production and sales. Tom purchased a farm about 15 miles down the road that consisted of 74 acres, of which 26 are tillable. This purchase has helped Sun Valley move towards their desired goals of resting land, rotating crops more effectively and enhancing their sustainable production methods and efforts.

Today, Sun Valley Farm is a highly successful business that grosses a significant amount of revenue. It grew from a “mom and pop” operation into a rather complex diversified business with appreciable assets. This evolution is a strength and a challenge.

Farm Labor:

Jack Franklin – Co-owner with his wife Dorothy. Jack leads the efforts in Integrated Pest Management (IPM), pest control, tillage and mowing. He is also the primary grower and seeder, and helps with communications and marketing (networking). Jack is also a good mechanic.

Dorothy Franklin – Co-owner with her husband Jack. Dorothy is the bookkeeper and chief financial officer. She is also a grower, scouts for pests, and takes the lead on hiring, ordering seeds, plants and supplies. Dorothy also assists in marketing and is the co-manager of greenhouse operations.

Mary Franklin – Daughter of Jack and Dorothy. Mary is the farm stand manager, and co-manager of the greenhouse operation. Mary also shares a lead role in ordering seeds and supplies, and also assists in hiring farm labor.

Tom Franklin – Son of Jack and Dorothy. Tom is the co-manager of the field crew; he is also the wholesale manager (in charge of sales). Tom too is a grower (grafts tomatoes with Jack) and he manages Natural Resources Conservation Service and Farm Service Agency contracts.

Fred Turner – Fred is the only non-family member of the management team. Fred has been working at Sun Valley Farm since he was 11 years old; he is now 43 years old. Fred is the lead mechanic, co-manager of the field crew, repairs anything, and assists the farm in numerous ways. Fred is one of the “go to” people at Sun Valley Farm.

Farm Goals

Sun Valley Farm is at a point where transitioning to the next generation (Mary, Tom and Fred) is a high priority. Dorothy and Jack possess a great deal of knowledge, some is written, but much resides in their head. Teaching Mary, Tom and Fred their numerous skills and topics is a goal they seek. Likewise, evolving the farm to meet Mary’s, Tom’s and Fred’s goals is of importance to Dorothy and Frank.

Additionally, all the managers at Sun Valley want the farm to be nimble and diversified enough so they can follow evolving market trends. They feel that this will allow them to maintain a critical profit level enabling them to retain a workforce at good wages. The managers at Sun Valley desire to pay their workers a living wage with benefits, and to reward them for their hard work in as many ways as they can afford.

The management team also desires to ramp up their systems so they can enhance their decision making and run the farm as the business it has grown to become. As Jack Franklin says, “We want to work smarter not harder.”

Self-described Strengths and Weaknesses

Strengths

- Very knowledgeable growers
- Diversity in products and services
- Well-liked in their community and region

- Strong brand recognition known for high quality
- An engaged and vested workforce
- Great infrastructure and equipment (“40 years of accumulated crap,” says Frank)
- Location – not only from a retail standpoint, but also for availing themselves of services and materials
(tractor sales and repair down the road, fertilizer dealers nearby, etc.)
- Good natural resources (river, ponds, good soils, etc.)

Weaknesses and Challenges

- Diversity in products and enterprises
- Management systems need to be updated to adapt to growing business
- Need enterprise analysis to enhance business profitability and decision making
- Labor (total number and allocation to enterprises)
- Limited land
- Nutrient management
- Weeds

Issues and future challenges

- Life balance & Quality of life issues
- Next generation starting families, as are some key laborers
- Passing on knowledge from current management and brain trust to the next generation. (Jack and Dorothy have great knowledge in their heads and if something happens to them it will significantly handicap the farm.)
- Sufficient land base to be able to rest land and rotate as needed
- Low soil organic matter levels

Community Connections

The Franklin's are very active and supported in their community. Jack and Dorothy serve on numerous Boards of Directors for community and grower organizations.

Sun Valley Farm donates significant crops to community organizations. They also work with Coop community to help promote agriculture. Sun Valley has hosted numerous open farm days for area schools.

In addition to this community work, Jack has done a great deal of on-farm research, including numerous SARE grants and projects.

Soil Fertility and Conservation

The farmers at Sun Valley Farm take conservation and sustainability very seriously. Jack is one of the leading experts in biological controls. He and others on the farm are diligent about eco-friendly farming practices. They cover-crop extensively, use sod covers in the summer, interseed mixes including tillage radish in-between sweet clover, and are experimenting with oats to see if it is a good nurse crop with tillage radish. Jack has experimented with fall cover crops, the use of mustard for both biomass and biofumigation, and other such practices. He

uses all the standard cover crops as well, including peas, oats, rye vetch, Sorghum and Sudan for soil retention and biomass production.

The growers at Sun Valley understand the complexity of cover cropping. As much as they enhance the soil and ecosystem processes, cover crops can also significantly contribute to the weed seed bank. The farm uses manures when possible and any on-farm generated compost they can produce.

Soil test

They soil test fairly regularly but the problem is that they have fields within fields (blueberries and high pH loving crops for example). They are not in love with the Cornell Soil Health Test, but have used it in the past.

They test yearly, but not all plots. Every field is tested every 2-3 years though. Greenhouses are tested annually using a saturated media test.

Fertility Program

Their fertilizer program is continuously moving and switching towards organic fertilizers to get away from soluble salts because Jack feels these are not good for soil fauna and flora. This adds a considerable expense though, according to Jack, but believes this approach is better for soil health.

The soil tests further guide their liming practices.

Tillage

Sun Valley has highly varied tillage practices. Because of their limited land base and the variety of crops they grow that have minimal residue, they use minimum tillage machinery.

They are trying to reduce the amount of passes with equipment in a field so they only do tillage practices when they need to for cultivation. They have multiple tools including a rotovader, soil spader, mold board plows, heavy harrows, and a field cultivator.

Cultivation

Sun Valley Farm seeks to balance what they do to the soil with mechanical cultivation and use of herbicides while thinking of weed seed bank management. This requires different strategies for different crops.

For example, if they know they are going to grow strawberries next year, they use a simple rotation so they would not put in potatoes and Solanaceous crops which serve as hosts for various pests that affect strawberries. They would put in corn or a grain cover crop and spray an herbicide and plant behind the corn.

If they have a weed problem and generated a lot of weed seed then they would not put in a crop that will be hurt by this.

They have a basket weeder with lely tines, a reggie finger weeder for single row crops and strawberries, and they are gradually switching the rest of their equipment onto steerable cultivators to be more precise and do less damage. This reduces the amount of specialized equipment they need to maintain.

Pest Management

They use IPM and trap crops, beneficial insects, and pesticides when necessary. They have a diversified operation and so they cannot be locked into one thought process. So they use a “full tool bag” according to Jack. They do have an extensive beneficial insect program in their greenhouses that results in almost total pest control. They have gone years when they used no sprays, except for plant growth regulators in ornamentals.

Equipment

Too much to list but they will show this on their farm

Facilities

- 27 greenhouses
- Packing shed that doubles as a retail area during spring bedding plant season
- Three walk-in coolers
- Four Pole barns for storage
- Farm stand with commercial kitchen

Marketing and Economics

Retail gets brings the highest margin and is their main focus and primary objective.

The major market outlets for Sun Valley Farm are listed below. The percentages of gross income are listed in black for fiscal year 2013.

- Farm stand - **29.3% of gross income**
- Greenhouse retail center - **35.8% of gross income**. This does not include greenhouse materials sold at the farm stand.
- Whole sale – **25.6% of gross income**. This sector has almost doubled since Raymond joined the farm and has growth potential.
- PYO strawberries - **3.7% of gross income** (last year was an off year due to weather. PYOP strawberries typically contribute close to 7% of gross income. This figure does not include wholesale nor retail sold at the farm stand).
- CSA's – 120 members - **5.5% of gross income**

Major Enterprise Profit Drivers for Sun Valley (Note that these are interconnected)

- The greenhouse retail operation operations (profit and cash flow)
- Retail sales through the farm stand
- The wholesale operation
- The CSA
- Strawberries and fall raspberries – this includes PYO, retail through the farm stand and wholesale (a great draw for greenhouse products and the farm stand)
- Tomatoes
- Blueberries and raspberries and other small fruit

Business Structure – LLC

A soils map of the farm and additional supplemental documents such as soil test reports were also provided to participants before the program.

Appendix C

Example detailed Reading the Farm agendas

Provided to participants before or at start of the program. Note that some agendas provide suggestions for features to observe and discuss at farm stops.

Example observation and discussion guide for participants

Tools such as this can provide participants of all experience levels a framework for observations and ideas for framing questions to farmers.

Program Overview & Detailed Agendas for CT Reading the Farm Program

PROGRAM OVERVIEW

Monday, August 7, 2006 (Hotel)

6:30 – 7:00 PM Welcome and introductions
7:00 – 9:00 PM Dinner with farm families followed by discussion

Tuesday, August 8, 2006 (Jones Farm)

10:00 – 3:00 PM Tour the Jones Farm

Wednesday, August 9, 2006 (Smith Farm)

8:00 – 3:45 PM Tour the Smith Farm

Thursday, August 10, 2006 (Hotel)

11:00 – 12:30 PM Group discussion of observations with farmers
12:30 – 1:30 PM Lunch with farm families

DETAILED AGENDA FOR THE JONES FARM.

Morning

10:00 – 10:15 am – orientation to farm layout/landscape in tent
10:15 – 10:45 am – four groups observe/record observations at 4 locations in barnyard (see back)
10:45 – 11:00 am – milking parlor, discuss equipment and somatic cell count, sanitation, milk production, butterfat, price
11:00 – 11:30 am – free stall barn, discuss animal health, ventilation, manure management
11:30 – 11:45 am – silo, management of leachate, making silage, unloading silage, spoilage
11:45 – noon - calf hutches/young stock, discuss calf management, number of replacements needed
Noon – 12:15 pm – machinery shed, machinery, discuss machinery needs, machinery repair, water management in barnyard, building needs, layout, pesticide storage and handling

Lunch – 12:15 – 1:00 pm at tent

Afternoon

1:00 – 1:30 pm – Discuss family goals for farm, relationship of farm to community, succession plans; Discuss farm economic information, recordkeeping, marketing
1:30 – 1:45 pm – woods, discuss wildlife on farm
1:45 – 2:15 pm – grazing paddocks, discuss pasture management, species, animal differences,
2:15 – 2:45 pm – lower fields, stop by woods in shade, soil pits, discuss corn management, soils and soil health, wet soils, lack of riparian zone on farm
2:45 – 3:15 pm – compost area, discuss compost production, marketing, economics, regulation

3:30 pm - leave for hotel

4:15 pm – arrive hotel

4:15 – 5:00 pm – Record on flip chart the most important observations from each stop so we have record of discussions from tour. Observations in terms of the three areas of sustainability: economic, environment and social or community

Locations for stops for groups at Jones farm

Objective: Use observation skills and obtain interaction within group for learning. Save observations for tour with farmer and for discussion on Thursday morning about potential ways to improve the sustainability of the farm.

Stop 1. Milking parlor and free-stall barn

Suggested topics for discussion (Participants can substitute their own topics)

Layout of parlor

Sanitation

Cow comfort. Ventilation. Access to water for cows.

Manure management in barn

Layout of barn.

Stop 2. Bunker silo

Suggested topics for discussion (Participants can substitute their own topics)

Location of silo in relation to barn

Leachate

Condition of the silo

Stop 3. Calf area/young stock

Suggested topics for discussion (Participants can substitute their own topics)

Calf and young stock comfort

Water supply

Manure handling

Stop 4. Barnyard setting

Suggested topics for discussion (Participants can substitute their own topics)

Layout

Water management

Dust management

DETAILED AGENDA FOR THE SMITH FARM

Morning

10:00 – 10:15 am – orientation to farm layout/landscape in tent
10:15 – 10:45 am – four groups observe/record observations at 4 locations at farmstead (see back)
10:45 – 11:15 am – greenhouses, go to mums and then to tomatoes, discuss types of crops produced, disease and insect control, fertility management, cost of operation,
11:15 – 11:45 am – farm stand, discuss marketing, hours, layout, history, needs, wants
11:45 – 12:15 pm – machinery shed, machinery, discuss equipment needs, repair, water management in barnyard, building needs, layout

Lunch – 12:15 – 1:00 pm at tent

Afternoon

1:00 – 1:30 pm – discuss family goals for farm, relationship of farm to community, succession plans; Discuss farm economic information, recordkeeping, marketing
1:30 – 1:45 pm – walk down road in back of farm stand. Discuss sweet corn management, discuss wildlife (crop circles), soil
1:45 – 2:15 pm – continue walking down road to mixed vegetables and riparian zone, discuss vegetable management, fertility, pesticides, IPM, soil health, use soil probe to examine Pootatuck soil
2:15 – 2:30 pm – ride in bus to upper fields, first stop hay field above air strip, hay management, 2:30 – 2:45 pm – pumpkins next to air strip, discuss pumpkin management, marketing, economics
2:45 – 3:00 pm – sweet corn fields in back of barn/house, discuss differences in soils compared with floodplain, management of sweet corn
3:00 - 3:15 pm – view pasture area and beef cows, discuss management of pasture with legumes and management of beef animals

3:30 pm - leave for hotel

4:30 pm – arrive hotel

4:30 – 5:15 pm – participants write down list of strengths and weaknesses of farm related to the three areas of sustainability, economic, environment and social or community

Locations for stops for groups at Smith farm

Objective: Use observation skills and obtain interaction within group for learning. Save observations for tour with farmer and for discussion on Thursday morning about potential ways to improve the sustainability of the farm.

Stop 1. Greenhouses

Suggested topics for discussion (Participants can substitute their own topics)
Irrigation

Layout of benches

Layout of greenhouses in relation to farm stand

Ventilation

Stop 2. Machinery/mechanic shed

Suggested topics for discussion (Participants can substitute their own topics)

Repair area

Square footage of machinery shed

Location

Stop 3. Farm Stand

Suggested topics for discussion (Participants can substitute their own topics)

Visibility from road

Appearance

Parking efficiency and safety

Layout

Stop 4. Farmstead setting

Suggested topics for discussion (Participants can substitute their own topics)

Layout

Water management

Dust management

Maine Sustainable Agriculture Retreat and Reading the Farm

- Sponsored by National & Northeast SARE -

October 5 & 6, 2010, New Gloucester, Maine

Agenda

Prior to retreat – Read information packet (farm sketches and other material)

Tuesday, October 5

- | | |
|----------------------|---|
| 6:45 to 7:45 AM | Breakfast (Merrill Farmhouse) |
| 8:00 to 8:45 AM | Introductions and overview of the training (Merrill Farmhouse) |
| 9:00 AM | <i>Leave Farmhouse and travel to Adams' Farm, Springfield, Maine</i> |
| 10:00 to 12:30 | Tour Adams' Farm and talk with Sam Adams (diverse livestock operation) |
| 12:30 to 1:30 PM | Lunch at farm, with more discussion |
| <i>about 2:00 PM</i> | <i>Leave Adams' Farm and travel to Merrill Farmhouse</i> |
| 3:00 to 5:30 PM | Discuss Adam's Farm and begin preparing report (Merrill Farmhouse) |
| 5:30 to 6:30 PM | Prepare supper together, mingle, relax, etc. |
| 6:30 to 7:30 PM | Supper together (featuring local foods) |
| 7:30 to 8:30 PM | View portions of "Food Inc." with group discussion or work on farm report |

Wednesday, October 6

- | | |
|------------------------|--|
| 6:45 to 7:45 AM | Breakfast (Merrill Farmhouse) |
| 8:00 AM | <i>Leave Farmhouse and travel to Laurel Dale Farm, Freeport, Maine</i> |
| 8:30 to 12:30 AM | Tour Laurel Dale Farm and talk with Jane and Todd Johnson (diverse vegetable and flower operation) |
| 12:30 to 1:30 PM | Lunch at Broad Arrow Tavern, Harraseeket Inn, Freeport, Maine |
| <i>1:30 to 2:00 PM</i> | <i>Leave Harraseeket Inn and travel to Merrill Farmhouse</i> |
| 2:00 to 5:30 PM | Discuss Laurel Dale Farm and begin preparing report. Divide into two groups to finish farm reports. (Merrill Farmhouse) |
| 6:00 to 8:30 PM | Supper together with farm families at Merrill Farmhouse. Present and discuss reports (in 2 groups). |
| Adjourn | SARE Fellows will spend one more night at the Farmhouse. Maine Reading the Farm participants are also welcome to spend the night or leave to go home, as they wish. Breakfast will be available Thursday morning. |

READING THE FARM ON-FARM DISCUSSION GUIDE

What we see when we visit a farm is affected by what we know and what we don't know. Extension educators and specialists frequently have in-depth knowledge and expertise in certain areas, but have few opportunities to develop a thorough understanding of how all the components of a farm work together to influence farm sustainability.

This program aims to provide a context in which agricultural professionals with varied expertise can learn from one another by discussing the environmental, economic and social factors that contribute to the sustainability of a working farm. In so doing, program participants will gain a broader view of agricultural sustainability and will improve their ability to analyze farm systems and effectively work with farmers.

You will visit three areas of the farm, first in small groups without the farmer, then as a whole group with the farmer.

At each farm area:

- Consider Social, Environmental and Economic factors that may be influencing productivity and sustainability. Note factors that appear to be strengths as well as challenges.
- Share what you see and what you are thinking with others in your group.
- Ask questions if you see something you don't understand or want to know more about. Someone else in the group with different expertise than you may have the knowledge and background to address your question. Or it may be a question to ask the farmer.
- Aim to leave each stop with at least one question in mind for the farmer.

| Social Factors to consider | Environmental Factors to consider | Economic Factors to consider |
|--|--|---|
| <ul style="list-style-type: none">- Family- Labor- Time management- Work-life balance- Stress- Community connections or relations, etc. | <ul style="list-style-type: none">- Soil quality- Soil management- Nutrient management- Pest management- Composting or waste management- Water supply- Water quality- Sensitive natural features- Ecological diversity, etc. | <ul style="list-style-type: none">- Enterprise diversity- Efficiency of production Practices- Product quality- Profitability of enterprises- Return on investment (time and \$\$)- Record keeping- On and off-farm resource use- Inventory and condition of land, equipment and facilities, etc. |

Examples of ways to pose questions for the farmer

These types of open-ended questions are conducive to opening up dialogue and learning about the thinking behind farmers' decisions and their mental models about farming.

- ❖ What problem have you had with _____? How did you go about addressing it?
 - ❖ If you made this change _____ to increase these strengths _____ or meet these challenges _____, what effect would that have on other enterprises at the farm?
 - ❖ I notice that you have/do _____. What type of things have factored into that choice or that way of doing _____?
 - ❖ Can you tell me what led you to _____? What type of things did you consider when you made that decision?
 - ❖ You seem to feel strongly about _____? Can you tell me a bit more about why you feel strongly about it?

Appendix D

Example Post-Visit Discussion Strategies

The first discussion guide was used to facilitate small group and whole group discussions and organize feedback for farmers at a Reading the Farm program in New Hampshire. Groups recorded their discussion notes on flip charts and sticky notes. Also included is an example SWOT analysis handout.

READING THE FARM POST FARM VISIT DISCUSSION SESSION

| Dairy Farm Areas for Visit | Vegetable Farm Areas for Visit |
|---|--|
| Forage/Silage Production & Nutrient Management | Soil health, crop rotations, cover cropping (Lower Meadow) |
| Cows –milk production/herd health/feed program/cow comfort/breeding | Farm Stand, Value Added & Retail Sales |
| Milk processing and bottling/value added products | Packing Shed/Processing/Wholesale & FSMA |
| Bunker silo & manure pit – feed programs | Greenhouse retail operation |

1. World Café Discussion (45 min)

There will be 4 tables, one for each area of the farm

Each table considers this question:

- ❖ What Social, Economic and/or Environmental factors did you observe or learn about in this farm area that present strengths or challenges for sustainability?

| Social Factors to consider | Environmental Factors to consider | Economic Factors to consider |
|---|--|--|
| <ul style="list-style-type: none"> – Family – Labor – Time management – Work-life balance – Stress – Community connections or relations, etc. | <ul style="list-style-type: none"> – Soil quality – Soil management – Nutrient management – Pest management – Composting or waste management – Water supply – Water quality – Sensitive natural features – Ecological diversity, etc. | <ul style="list-style-type: none"> – Enterprise diversity – Efficiency of production Practices – Product quality – Profitability of enterprises – Return on investment (time and \$\$) – Record keeping – On and off-farm resource use – Inventory and condition of land, equipment and facilities, etc. |

Instructions for Tables

Each person spends a minute or two at the beginning and writes down strengths or challenges on sticky notes:

Yellow = strengths

Pink = challenges.

Go around table and share thoughts - each person has a chance to share something.

Place sticky notes on flip chart under headings for Social, Environmental and Economic.

Write down and share additional thoughts on sticky notes as conversation goes on.

10 min. per table

Groups disperse and form new groups at a new table.

Final group at each table takes 5 extra minutes to organize notes and select key strengths and challenges from all groups.

2. Review of Key Strengths and Challenges from World Café (15 min)

Last group at each table shares brief summary of strengths and challenges from that farm area.

BREAK (10 min)

Flip charts from World Café available for viewing during break

3. Exploring Whole Farm Interconnections (45 min)

- 1) Facilitator reviews the farmers' self-identified goals, challenges and improvement objectives.
- 2) Which observed Strengths and Challenges related to the farmers' goals does the group consider most likely to be actionable and helpful for the farmer to address?

Record ideas on flipcharts

- 3) Brainstorm options for what the farmer might do to:
 - amplify the identified strengths
 - address the identified challenges

Are there changes in enterprises, practices, markets, labor or management that could be considered?

Are there untapped opportunities he could explore or take advantage of?

Record options on flipcharts.

- 4) For any option suggested, discuss how this action could potentially interconnect with and/or impact other aspects or enterprises of the farm.

What would the pros and cons be?

Why might it fit or not fit with the farmer's current operation or with his mental model of farming?

4. Summarize Feedback to Farmer (40 min)

What feedback will the group give to the farmer?

Create a Summary List of Observations or Findings – these can include areas of strength and challenge

Create a Summary a list of Options for Consideration

With the farm's Economic, Environmental and Social Sustainability in mind....

What are strengths of the farm?

What are weaknesses/challenges for the farm?

What opportunities for improved sustainability does the farm have?

What threats to sustainability does the farm face?

Appendix E

Example Evaluation Questionnaires

There are multiple examples of end-of-program and post-program follow-up questions to aid in selecting questions appropriate for evaluating your RTF program.

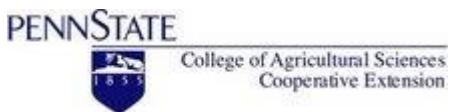
Action Plan Template

Program organizers in Pennsylvania kept copies of action plans completed by participants and sent the plans back to participants when they conducted follow-up surveys.

Reading the Farm

Workshop Evaluation

August 9-11, 2010
Chambersburg, PA



ASSESSING A WHOLE-FARM SYSTEM

1. In this workshop we used several skills to conduct an assessment of a whole farm system. On the left, circle how confident you were in performing each skill BEFORE the workshop. On the right, circle how confident you are in performing each skill NOW, after the workshop.

| Confidence Before | | | | Skill | Confidence After | | | | |
|-------------------|-----------|------------|--------------|---|------------------|------------|-----------|------------|--------------|
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Identify farmer's goals for <i>the whole farm system</i> | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Ask questions with <i>a whole farm systems perspective</i> | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Discover how farmer decisions relate to the <i>whole farm system</i> | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Know when to seek needed information outside your area of expertise | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Ask informed questions outside your area of expertise | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY | Provide recommendations that take into account the <i>whole farm system</i> | | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |

WHOLE-FARM SYSTEM INTERACTIONS

2. A farm system has many components that can interact. Listed below and on the next page are several components of a farm system that were discussed during the workshop. On the left side, circle your level of understanding of *how* each component could interact with other components of a farm system BEFORE the workshop. On the right side, circle your level of understanding of *how* each component can interact with other components of a farm system NOW, after the workshop.

| Understanding Before | | | | Farm System Components | Understanding After |
|----------------------|---------|----------|--------------|---------------------------|--|
| Agronomy | | | | | |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Forage & Grain Production | NON-EXISTENT MINIMAL MODERATE CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Soil Fertility | NON-EXISTENT MINIMAL MODERATE CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Nutrient Management | NON-EXISTENT MINIMAL MODERATE CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Weed Management | NON-EXISTENT MINIMAL MODERATE CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Insect Management | NON-EXISTENT MINIMAL MODERATE CONSIDERABLE |

Continued →

WHOLE-FARM SYSTEM INTERACTIONS (CONTINUED)

| Understanding of Interaction Before | | | | Farm System Components | Understanding of Interaction After | | | |
|-------------------------------------|---------|----------|--------------|--------------------------------|------------------------------------|---------|----------|--------------|
| Animal Performance | | | | Animal Performance | | | | |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Milk Production | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Days in Milk | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Pregnancy Rate | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Culling Rate | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Somatic Cell Counts | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Feed Quality | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Replacements | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| Business Management | | | | Business Management | | | | |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Marketing | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Farm Diversification | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Profitability | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Income | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Labor Management | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Farm Goals | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| Environmental Resources | | | | Environmental Resources | | | | |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Water Quality | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Air Quality | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Soil Quality | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Biodiversity | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| Social | | | | Social | | | | |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Neighbor Relations | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Family Involvement | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Work Satisfaction | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | Quality of Life | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |

MAKING RECOMMENDATIONS TO FARMERS

3. Recommendations made to farmers can affect multiple parts of a farm system. On the left, please circle your level of awareness of how recommendations about one part of a farm system could affect other parts of a farm system, BEFORE the workshop. On the left, circle your level of awareness of this effect NOW, after the workshop.

| Awareness Before | | | | Awareness After | | | |
|--|---------|----------|--------------|-----------------|---------|----------|--------------|
| NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE | NON-EXISTENT | MINIMAL | MODERATE | CONSIDERABLE |
| Effect of recommendations on other parts of a farm system | | | | | | | |

4. As a result of this workshop, will you change how you make recommendations to farmers? If so, please describe in what ways you will change your recommendations. Be as specific as you can.

WORKSHOP METHODS

5. Several formats and methods were used at the workshop to explore whole-farm system interactions. How effective was each format or method in helping you to *discover whole-farm system interactions* that you did not fully understand beforehand?

| <u>Format/Method</u> | <u>Effectiveness</u> | | | |
|--|----------------------|-----------|------------|--------------|
| | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Farm Visits | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Discussions w/ the farmers | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Discussions w/ the facilitators | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Discussions w/ other workshop participants | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| World Café De-Briefing Activity | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Developing recommendations for farmers | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Information packet about the farms | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |
| Having Print Resources available for pick-up | NOT AT ALL | MINIMALLY | MODERATELY | CONSIDERABLY |

6. Have we forgotten something? Please comment here:

QUESTIONNAIRE FOR END OF PROGRAM OR A SHORT TIME AFTER PROGRAM

Reading the Farm 2010 Evaluation - 2month

1. On a scale of 1-5, how much did the Reading the Farm program improved your ability to:

| | not at all | moderately | substantially | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Understand a farm as a whole system | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Identify farmers' goals for the whole farm system | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Listen to and ask appropriate questions of farmers | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand the factors influencing farmer decision-making | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Understand how any given change in farm management might affect other parts of a farm system | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Know when to seek needed information outside your area of expertise | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ask informed questions outside of your area of expertise | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Provide recommendations that take into account the whole farm system | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Help farmers make changes in management that lead to greater sustainability | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Comments

Reading the Farm 2010 Evaluation - 2month

2. How likely are you to use the knowledge and/or skills gained from the Reading the Farm program in your work with farmers and other agricultural professionals?

- Not likely
- Likely
- Very likely
- N/A - Did not gain new knowledge

Please give examples of how this knowledge will be (or already has been) useful in your work.

3. Did the Reading the Farm training increase the extent to which plan to use a team approach in your work with farmers (i.e. collaborate with professionals from outside your area of expertise)?

- Yes
- No

Please provide examples of how you expect to use a team approach. If you have already used a team approach since the training, please also comment on how effective it was.

4. As a result of participating in this program, did you expand your network of colleagues who could help you in your work?

- Yes
- No

If so, please give examples of how you expect those connections to help you in your work, or how they already have.

Reading the Farm 2010 Evaluation - 2month

5. Do you expect that what you gained from this program will help you provide more effective service to farmers and/or others in the agricultural community?

Yes

No

If so, please give examples of how you expect it will help (or already has).

6. How effective were these components of the Reading the Farm training at helping you learn about using whole system and team approaches to farm issues?

| | not at all | somewhat | moderately | greatly | extremely |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Farm Profiles | <input type="radio"/> |
| Farm visits | <input type="radio"/> |
| Discussion among the training group | <input type="radio"/> |
| Preparation of the farm reports | <input type="radio"/> |
| Presentation of farm reports and discussion with the farm families | <input type="radio"/> |

Comments

7. Do you have any suggestions for how to improve this program in the future?

QUESTIONNAIRE FOR RTF PROGRAM FOCUSED ON WOMEN FARMERS

2013 Reading the Farm Training 1-month Evaluation

This survey is 3 pages in length and addresses the knowledge/confidence you gained, changes or actions you've made, and any impacts these changes have had on farmers.

KNOWLEDGE AND CONFIDENCE

1. Please rate your understanding before and after the training of the following concepts:

| | BEFORE the training | AFTER the training |
|--|----------------------|----------------------|
| Farms as whole systems whose parts influence each other | <input type="text"/> | <input type="text"/> |
| The unique issues and challenges for women farmers | <input type="text"/> | <input type="text"/> |
| How these issues and challenges are influenced by their farm partner status (ex., single, partners with spouse, partners with parent, ...) | <input type="text"/> | <input type="text"/> |
| The factors and preferences that can influence how women farmers make farm decision, as compared to men farmers | <input type="text"/> | <input type="text"/> |
| The generalized learning style preferences of women farmers | <input type="text"/> | <input type="text"/> |
| The resources available to women farmers | <input type="text"/> | <input type="text"/> |

2013 Reading the Farm Training 1-month Evaluation

2. Please rate your confidence before and after the training to:

| | BEFORE the training | AFTER the training |
|---|----------------------|----------------------|
| Listen and identify farmers' goals for their whole farm system | <input type="text"/> | <input type="text"/> |
| Recognize your own personal biases regarding gender and farming | <input type="text"/> | <input type="text"/> |
| Provide practical recommendations and resource information to women farmers | <input type="text"/> | <input type="text"/> |
| Design and deliver educational programs that address women farmers unique needs and learning styles | <input type="text"/> | <input type="text"/> |

3. Is there anything else that you learned or gained confidence in from the training? (Note - questions on the next pages will address any changes or actions you've made)

ACTIONS

2013 Reading the Farm Training 1-month Evaluation

4. As a result of this training, have you done any of the following:

| | Yes | No | No, but I intend to. |
|---|--------------------------|--------------------------|--------------------------|
| Made an effort to use equal opportunity language (both genders). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Asked about farm partners and involve them whenever possible in visits, meetings, and events. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Made an effort to reach and include women farmers. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Advertised programs/events in places women are likely to see | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Acknowledged women partners and families in awards and recognitions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Provided child care or ways to keep kids occupied so both farm partners can participate in meetings and events. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Made an effort to accommodate both farm partners when scheduling meetings and events. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Listened more, talked less in consultations with farmers. Let them share their key issues and solutions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Actively pursued female expert guest speakers whenever possible. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If you answered "yes" to any of the above, please estimate how many and what type of farmers this has affected.

5. As a result of this training, have you:

| | Yes | No | No but intend to |
|--------------------------------|--------------------------|--------------------------|--------------------------|
| Offered an all female class | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Initiated a women farmer group | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If yes to either of the above, please describe what you've done and indicate the number and type of Farmers this involved

2013 Reading the Farm Training 1-month Evaluation

6. As a result of this training, have you:

| | Yes | No | No, but I intend to. |
|---|--------------------------|--------------------------|--------------------------|
| Incorporated new information into your programs, fact sheets or other technical resources | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shared new information with farmers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shared new information with colleagues | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shared new information in newsletters or other media outlets | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If yes to any of the above, please describe what you've done and indicate the number and type of farmers or colleagues who were affected.

7. As a result of the training, have you contacted or worked with anyone new?

- Yes
- No
- No, but I intend to

If yes, provide details of the situation, who was involved, and what impacts resulted.

8. As a result of this training, have you made any other changes ?

- Yes
- No
- No, but I intend to

Please describe what other changes you have made or intend to make.

IMPACTS

2013 Reading the Farm Training 1-month Evaluation

9. Have any of the farmers you work with made changes as a result of what you learned and shared from this training?

- Yes
- No
- Do not know

If yes, please describe each change and for each indicate any known impacts for the farmer.

10. Do you have any other impacts, comments, or suggestions to share?

You are done! Thanks for completing the survey!

ONE-YEAR POST PROGRAM FOLLOW-UP QUESTIONNAIRE

Reading the Farm 2009 Evaluation - 1yr

3. Have you incorporated any concepts about whole farm systems in your educational programs or materials? (see question 1 for examples of concepts)

Yes

No

If yes, please give examples.

4. Since the training, have you used a team approach in your work with farmers (i.e. collaborate with professionals from outside your area of expertise)?

Yes

No

If yes, please provide examples and comment on how effective a team approach was. If no, please explain why not.

5. As a result of participating in this program, did you expand your network of colleagues who could help you in your work?

Yes

No

If so, please give examples of how those connections have helped you in your work.

6. Has the Reading the Farm training helped you provide more effective service to farmers and/or others in the agricultural community?

Yes

No

If so, please give examples.

Reading the Farm 2009 Evaluation - 1yr

7. How effective were these components of the Reading the Farm training at helping you learn about using whole system and team approaches to farm issues?

| | not at all | somewhat | moderately | greatly | extremely |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Farm Profiles | <input type="radio"/> |
| Farm visits | <input type="radio"/> |
| Discussion among the training group | <input type="radio"/> |
| Preparation of the farm reports | <input type="radio"/> |
| Presentation of farm reports and discussion with the farm families | <input type="radio"/> |

Comments

8. Do you have any suggestions for how to improve this program in the future?

Reading the Farm Participant Action Plan

The following worksheet is to help formulate a plan for including information on whole-farm system interactions in your educational programming for farmer clientele and others.

YOUR NAME:

WHO: Who will be your target audiences or clientele for your programs on whole-farm system interactions?

WHAT: What are the three most important whole-farm system interactions that you will integrate into your activities?

What kinds (e.g. field days, demonstrations, conferences, bulletins, websites, articles, etc.) and how many activities on whole-farm system interactions will you organize or participate in over the next 2 years?

What kind of informational materials on whole-farm system interactions will your target clientele receive?

WHERE: Where will you conduct these activities or programs? If articles or bulletins, where will they be published?

WHEN: When will you produce electronic or written materials, or conduct programs, demonstrations or activities that incorporate information on whole-farm system interactions?