



PROGRAM OVERVIEW

Program concept: The dairy program, a module of the Climate Adaptation Fellowship, is organized in a flexible manner. By providing (1) a core set of education programs and PowerPoint presentations and (2) a menu of hands-on activities, websites with 360 tours and resources for demonstration projects and on-farm research. Specifically, we suggest using early adopters of innovative crop and livestock production practices associated with climate adaptation as participants in hands-on learning opportunities for dairy farmers.

Program objectives:

1. Farmers and agricultural service providers will have knowledge about the impacts of climate change on dairy systems in their region.
2. Farmers will have the ability to make good planning decisions that will benefit them in managing their crops and livestock in different and challenging environmental conditions.
3. Agricultural service providers will have the ability, through their existing programs and outreach efforts, to support farmers to address the impacts of climate change and evaluate opportunities

Who's involved: *Program facilitators and/or agricultural service providers* deliver core educational content, and serve as a resource for participants throughout the program. *Early adopters and farmer fellows* will be a key component of the programs targeted towards the dairy community. Peer learning through panel discussions at winter meetings or on-farm demonstrations and farm “walks” during the growing season are probably the most effective method of information transfer for dairy producers.

The materials include this overview document, teaching notes, presentation slide decks and other curriculum supports, menu of program activities, and evaluation tools. Program developers will ask program facilitators to share any evaluation materials they collect, which will be used to improve future iterations of the program.

Time commitment: The program is designed to flexibly accommodate the interests of participants. Since most dairy producers are limited in their potential to participate in traditional classroom style learning, service providers will be encouraged to use materials and resources provided as they deem appropriate, but are encouraged to facilitate knowledge transfer through demonstrations and on-farm research. Alternatively, some producers learn best or are only available to learn through one-on-one consultations.



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Table 1: Description of *primary* participant types and responsibilities

| Role | Description | Responsibilities |
|---|---|--|
| <p>Service Provider Fellows (SPF) Extension Educators, NRCS and SWCD employees, Technical Service Providers and Certified Crop Advisors</p> | <p>Their area of work should intersect with the dairy industry. The ideal SP Fellow will have an understanding and knowledge of climate change, have a good rapport working directly with farmers and be open to thinking about how climate change topics can naturally be integrated into existing programs. They should also be willing to discuss climate change adaptation with clientele, using whatever terminology is appropriate, accurate and effective.</p> | <ul style="list-style-type: none"> • • Enroll in the program with a farmer fellow partner or several farmer fellows. These Farmer Fellows would most likely be early adopters of management techniques that provide resilience in cropping and livestock management. • Lead core educational lectures, panel discussions and farm field days • Become familiar with program resources and materials • Work with farmer fellow partner to complete program activities • Participate in program evaluation |
| <p>Farmer fellows/early adopters and innovators</p> | <p>Experienced dairy farmers who have a lay-person’s knowledge of climate change and who have dedicated some time and resources towards adaptation. Ideally, they could play a leadership role in their community of farmers. They should also be willing to talk about addressing climate change through on farm practices, using whatever terminology is appropriate and effective.</p> | <ul style="list-style-type: none"> • Enroll in the program with a service provider partner • Attend core educational lectures • Become familiar with program resources and materials • Work with service provider fellow partner to participate and discuss outcomes/experiences with peers • Participate in program evaluation where appropriate |



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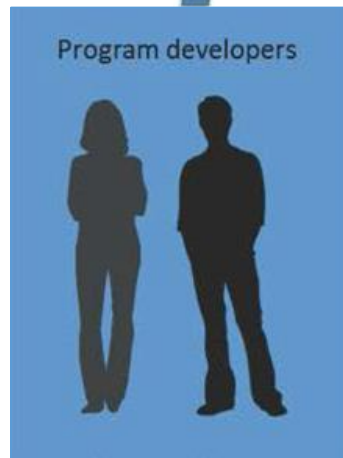
Table 2: Description of *secondary* participant types and responsibilities

| Role | Description | Responsibilities |
|---------------------------------------|--|---|
| Program developers | Agricultural advisors who collaborated on the Climate Adaptation Fellowship Curriculum Development Project <i>or</i> a significant revision of the curriculum that was created through that project. | <ul style="list-style-type: none"> • Provision of curriculum and evaluation materials to program facilitators • Willingness and ability to provide support and guidance to program facilitators over the course of a Fellowship program • Collection and synthesis of program evaluation materials from program facilitators, participants, and farmers. |
| Farmers (not enrolled in the program) | Dairy producers who engage in programing or outreach delivered by a Service Provider or Farmer Fellow. | <ul style="list-style-type: none"> • Give feedback to fellows and outreach developers about program activities they participate in. |

Primary participants in the Climate Adaptation Dairy Fellowship

Program developers provide core content to both **service provider** and **farmer fellows**, and support **fellows** to complete program activities.

Service provider and **farmer fellows** include **farmers** from their area in program activities (e.g. field days, demonstrations, conference presentations, etc.)



Farmers give feedback to **fellows** and **program developers** about the program activities that they participated in (e.g. workshop evaluations)

Service provider and **farmer fellows** participate in evaluation activities, giving feedback on the program to and **program developers**.



Program outline: The module contains two types of materials. First, there are *core materials* related to (1) climate change science, (2) climate change communication skills, (3) guidance on integration of climate change materials into existing programs and (4) climate change informational resources. Second, there is a *menu of program activities* that program facilitators and fellows can choose from, depending on their specific interests and the financial resources available.

Overview of core materials: These materials are the backbone of the fellowship module.

1. **Presentation 1: Introduction to the science behind climate change and localized impacts.** This is a power point presentation focused on climate change impacts related to dairy production in the Northeast that includes opportunities for group discussion and serves as an introduction for both service providers and farmers. The teaching notes include resources for program facilitators that will help them customize the slide deck with locally-relevant climate information.
2. **Presentation 2: Climate change communication for Service providers.** This presentation presents best practices for addressing climate change impacts with adult audiences, specifically agriculture service providers and farmers. The presentation will be designed to include group discussion, with suggestions for facilitation included in the teaching notes.
3. **Presentation 3: Integrating climate change into your work.** This slide presentation is dedicated to participant discussion. Content is specific to agricultural sector and particular adaptation practices that may be of benefit within the sector and location. This presentation will also provide some resources for specific areas of adaptation and change that are relevant to dairy farmers facing climate change impacts.
4. **Presentation 4: Adaptation and resilience for dairy producers.** This slide set is just a start for fellows to use to as they see fit with producers around a host of various topics. Fellows will need to add materials and resources around the topics listed with resources from the website (see #5) and other sources of information available to them. This can slide deck can be used to start a panel discussion, with some science and then producer panels discussing implementation strategies on their farms.
5. **Fellowship clearinghouse website:** This website, which does not yet exist and will require additional funds to create, will be designed to organize climate change resources that are relevant and useful to agricultural audiences. It will not house original content, but rather will tag content that lives on external websites and provide summaries of resources to help users find what they need. It will be designed similarly to the [NECAFS Clearinghouse website](#). All materials on the website will be available to the public. In addition, program participants will be able to create a user name and password which will allow them to access a private dashboard of localized climate information and decision support tools, customized to their needs.

Overview of the menu of activities: Program fellows can choose among as many of the following activities as they wish, according to their interests, needs, available resources and client needs.



- 1) **One-on-one farm consultations** are intended to help producers gain experience assessing climate-related risks and adaptation strategy implementation.
- 2) **Field Days** are tours with discussions held on a farm, facilitated by fellows. The audience for these meetings is other farmers, crop consultants, and other service providers. The meetings are usually organized around a topic or theme. While the topic or theme does not need to be explicitly related to climate change, fellows are expected to raise climate-related issues for consideration.
- 3) **On farm research trials** are designed by fellows to show how different management approaches work on-farm. Ideally, there should be a comparison between areas on the farm where the management approach is applied, and a control area. This will help illustrate differences between management approaches. Results from the trials should be shared, either through twilight meetings, presentations, short articles in trade publications, or other avenues as decided by the fellows.
- 4) **Demonstrations** are similar to on farm trials, but do not include the comparison between management practices. Rather, they are intended to showcase a management strategy that reduces climate-related risk on a farm. Like on farm trials, the demonstration can be shared with other farmers and agricultural advisors through twilight meetings, presentations, short articles in trade publications, or other avenues as decided by the fellows. *Time to complete: highly variable.*
- 5) **Conferences with farmer panel discussion.** Dairy producers often attend conferences and meetings during the non-growing season. One highly effective tool for information dissemination is to include farmer panels around specific topics, such as alternative crops or management techniques. The panels are often successful if moderated by a researcher, Extension Educator, NRCS employees or other professionals.
- 6) **Cost benefit analyses** of management practices that reduce climate related risks. Each analysis would address a change in management strategy relevant to the farmer fellow's operation. Fellows would decide whether or not to share the results of their analysis publicly. *Time to complete: variable depending on record keeping of the farmer and how much information is available regarding the alternative management practice.*
- 7) **Other activities** that the fellows or program facilitator decide are interesting and feasible.

Program evaluation: In order to improve the Climate Adaptation Fellowship in general, and the dairy module specifically, evaluation should be built into the program structure. Program developers will tailor the evaluation approach to best suit needs. Online or hard copy versions of evaluation tools can be used depending on the program participant preferences.