

2014-2017 Northeast SARE State Program Project Plan for University of Maine

Project Title: Building Knowledge, Skills and Networks for Soil Security in Maine

PROJECT TOPIC AND JUSTIFICATION OF TRAINING NEED

Protecting and improving soil health is recognized as a key goal for sustainable agriculture yet many ag service providers feel ill-equipped to help farmers make informed decisions about adopting specific soil health strategies. They cite a lack of region-specific information and concrete local examples of successful cover cropping, reduced tillage, and rotational practices. Farmer focus group meetings held throughout the state by NRCS on February 18, 2014 in conjunction with national Cover Crops Conference found that farmers want more information on: costs and benefits of soil health strategies; cover crop species characteristics and uses; cover cropping “recipes” for specific crops and areas; detailed instructions on seeding and termination methods; and tillage options and equipment. Individual interviews with Extension educators and NRCS staff echoed these and other educational needs for them to feel confident making recommendations to farmers.

The Maine SARE Soil Health PDP will establish local teams of ag service providers that will increase their capacity to help farmers make informed decisions about adopting specific soil health strategies for our three main cropping systems:

- Potato-grain systems in northern Maine
- Dairy cropping systems in central Maine
- Mixed vegetable cropping systems in south-central Maine

This project will compliment and expand the NRCS initiative in this area by providing practical training and developing a collection of detailed profiles of local cover crop/soil health farmer practices and demonstration trials that will include field data and specific how-to information. An advisory board was formed in April to help guide project development and implementation.

5. BENEFICIARY AUDIENCE DESCRIPTION and RECRUITMENT EFFORTS

Beneficiaries

This project will target two levels of participants – “core team members” who will commit to participate fully in the professional development training and “associates” who will be invited to the winter workshops and field days. This two-tiered approach will create a core group of expertise as well as increase general capacity in the state.

Core Team Members: 18 ag service providers from Extension, NRCS, Soil and Water Conservation Districts, Dept of Ag., crop consultants, and non-profits.

Associates: 18 ag service providers from the same organizations.

Recruitment Efforts

An email invitation will be sent to ag service providers from the above organizations that outlines the benefits of participating as a “core team member” (ex., increased knowledge; team approach to address local soil health issues; technical and financial support for on-farm demonstrations and case studies; attendance to regional cover crop conference ...) and the expectations (ex. one on-farm demonstration or case study per year). The invitation will also include the option to join an email list for “associates.”

3. LEARNING OUTCOMES

Participants will increase knowledge, skills and confidence to provide education and recommendations to farmers about soil health strategies in these areas:

- Effects of soil health on crop productivity and environmental impacts
- Biological, chemical, physical components of soil health
- Soil health tests
- Cover crop species characteristics and “windows of opportunity” in current cropping systems
- Cover crop implementation details (machinery, seed rates, ...)
- Reduced tillage strategies
- Local examples of cover cropping, reduced tillage, rotations including impacts on crop production, soil health, nutrient conservation, costs and revenues.

4. EDUCATIONAL ACTIVITIES PLANNED

- Individual viewing of selected archived presentations from the National Cover Crop Conference and other webinars as introduction.
- Winter workshops (1 per year) that include presentations by outside experts and participants, farmer panels, and group work.
- Core team meetings for each focus area two or more times per year to identify needs, plan/coordinate activities, and review outcomes.
- Creation of UMaine Extension Soil Health/Cover Crop website, organized by focus area cropping systems, where detailed written and video examples of successful soil health practices and summaries of on-farm demonstrations will be posted.
- On-farm demonstrations conducted by core team members. Summaries with photos and data to be posted on Extension soil health website. (15 per year)
- Detailed written profiles of successful soil health/cover cropping practices used by farmers to be created by core team members and shared via the Extension soil health website. (6 per year)
- Detailed video profile of successful cover cropping strategies. 1 per focus area group.
- Northeast SARE Regional Soil Health/Cover Crop Conference to be held during the winter of 2015/16.

SEE ATTACHED MILESTONES FOR YEARS 1, 2 AND 3

VERIFICATION OF LEARNING OUTCOMES

- All participants will complete a pre-project survey to gauge their level of knowledge and confidence in soil health principles and strategies.
- Participants will answer a selection of these questions in end of Year 1 and 2 surveys, and the full suite of questions at the end of Year 3.

2a. AG SERVICE PROVIDER ACTIONS PROJECT PERFORMANCE TARGET

18 ag service providers (“core team members”) who gain in-depth practical knowledge and skills in soil health strategies and their implementation will work with at least one grower each year to implement a soil health strategy on their farm (54 farmers total) and will reach an additional 5 farmers each through educational programs or one-on-one assistance (270 farmers total).

18 additional ag service providers (“associates”) who gain familiarity with soil health strategies help at least two growers each year make an informed decision about implementing soil health strategies on their farm (108 farmers total).

2b. INDICATORS OF AG SERVICE PROVIDER ACTIONS

- Number of ag service providers who deliver educational programming or provide one-on-one assistance to farmers related to soil health strategies and implementation.
- The number and types of programs or services they deliver.
- Number of farmers they reach and acreage managed.

VERIFICATION OF PERFORMANCE TARGET

- Team members and general members will respond to surveys at the end of each year that will collect the ag service provider action information above and assess learning outcomes and the ways in which the training can be improved.
- Team members will include a discussion of training effectiveness and needs in one of the winter team meetings each year after results from the above survey are available.

1a. FARMER ACTIONS DESIRED

Farmers will:

- Test the health of their soil by sending to soil testing lab that has soil health tests (UMaine, Cornell or Haney), doing in-field procedures (penetrometer, infiltration, ...), or both.
- Adopt one or more soil health practices:
 - Cover cropping
 - Reduced tillage – frequency or intensity
 - Delay tillage to spring
 - Soil improving rotation

1b. INDICATORS OF FARMER ACTIONS

- Number of farmers who test their soil for soil health for the first time and number of acres affected.
- Number of farmers who adopt or expand their use of soil health practices and number of acres affected.
- The types of practices adopted.

VERIFICATION OF FARMER ACTIONS (optional)

The ag service providers will record the above information in a template provided to them.