Organic Trade Association
Climate-Smart Commodities Partnership Proposal Summary

The Organic Trade Association is seeking to submit a proposal for the Climate-Smart Commodities program that assesses total soil carbon on certified and transitional organic farms. The program will consist of three elements: soil testing, technical assistance, and a climate-smart designation on organic certification.

Through a Climate-Smart Commodities partnership program, we can scale up previous studies on carbon sequestration so more farms can participate in soil data collection. The previous study was a citizen-scientist effort in which over a thousand soil samples were collected from organically and conventionally managed farms. Northeastern University's National Soil Project assessed humic acid and total soil organic carbon within the soils and found increased capacity for organically managed soils to sequester carbon over time. The study found organic growers who adopted best management practices increased their soil organic carbon by 18%. It is also known that practices like using cover crop, organic soil amendments, and crop rotations improve soil microbial communities, which in turn can improve important climate-related function in the soil like carbon sequestration and nitrogen cycling. This study would test soil function parameters beyond soil organic carbon to get a more holistic understanding of how climate smart practices are working to mitigate climate change or need modification.

1. Pilot of climate-smart agriculture on a large-scale

The climate-smart practice implemented on the farm will be specific requirements for organic certification under the National Organic Program, including cover crops, low-till weed management, and crop rotations. This proposal will encompass both certified and transitioning organic farms. Participants in the pilot program will be reimbursed for costs associated with adopting the climate-smart practice. The notice of funding states farmers cannot receive payment under a pilot project for practices they already receive payments for from other USDA programs. However, enhancements to existing practices may be funded as part of these pilot projects.

OTA will develop a webpage with information on the pilot program and a form for farmers to enroll. While the goal is to reach all organic and transitioning farmers, this pilot project will begin with partnerships that allow access to hubs of farmer participants. These hubs will be selected strategically to maximize geographic representation across regions and commodities, numbers of acres of agricultural land, and will focus effort on incorporating typically underrepresented organic farming regions.

2. Quantification and verification of climate results

Soil Testing

Soil testing protocols will be developed in collaboration with Colorado State University to streamline efficient, effective, and fool proof soil testing to capture accurate data on soil organic carbon. Enrolled participants will receive soil sampling kits at no cost to the farmer. Farmers, certifiers, or technical assistants will collect soil samples during each year of the program. Samples will be mailed to testing labs for analysis of total soil organic carbon (SOC) including results calibration with bulk density samples and geospatial data crossed with USDA soil maps. While measurements of SOC indicate the potential for carbon sequestration, testing for microbial indices of carbon and nitrogen cycling will more precisely examine how soil function is responding to implemented climate-smart practices. For instance, quantifying microbes that nitrify or denitrify will inform how to modify practices to reduce nitrogen losses. All soil testing results will be used to ground-truth and calibrate existing predictive modeling tools like COMET-farm for organic systems.

Technical Assistance

Farmers will be reimbursed for any costs associated with gathering or mailing soil samples. Certifiers will collect soil samples at annual inspection. Alternatively, technical assistance providers will visit each farm to train farmers on how to collect soil samples. Upon testing of samples, technical assistance providers will meet with farmers in person or over video to discuss sample results and consult farmers on practices to increase their soil organic carbon.
OTA will partner with OpenTEAM to utilize their open-source Ag Data Wallet to gather and log farm history and practice information. The history and practice information are critical for soil test result interpretation and can inform technical assistance provider consultation with farmers on continuous improvement.

Certifier Verification

Certifier partners will verify employment of the climate-smart practice on participating farms. The climate-smart practice will be documented in each farm's Organic System Plan and enrolled farms will receive a climate-smart designation on their organic certificate.

3. Market Development and Commodity Promotion

The Organic Trade Association will organize a consumer campaign promoting organic as climate smart. Marketing partners can use climate-smart designated organic certificates to make climate claims to their supply chain partners. Retail marketing partners can promote climate-smart organic commodities with shelf advertising. Brand marketing partners may update their product labeling to reflect producer enrollment in the program or adoption of climate-smart practices. Finally, the industry will explore embedding a climate-smart claim on the USDA organic label at the conclusion of the project.

Key Objectives

- Reward early adopters for continuous improvement
- Create an easy to use, affordable and scalable soil health measuring tool for all organic and transitioning farms
- Integrate soil health and carbon sequestration data into the Organic System Plan and organic certification
- Reward organic farmers for sequestering carbon and improving soil health through an acknowledgement on their organic certificate and organic seal by designating them as "climate-smart"
- Provide free technical assistance for farmers participating in the program to improve their practices year over year
- Measure the impacts of climate smart practices (crop rotation, cover cropping, lower tillage intensity, use of organic soil amendments, reduced pesticide application) on carbon sequestration and other soil health metrics for organic and transitioning farms
- Quantify impacts of long-term organic management