



Organic Food and Farming Research Program for Soil Health and Climate Change

Science-based best management practices for healthy soil on organic farms **Cost: \$45,000**

Collaborator: University of Maryland

A project is currently underway to review the science that evaluates organic methods for building soil health for scientific publication, and create and disseminate a farmer focused companion document that summarizes the results of the review. Funding will ensure effective dissemination of the results and farmer-focused publication.

Investigating the impacts of organic management on carbon sequestration **Cost: \$80,000**

Collaborator: University of Maryland

This project would leverage the comprehensive review of the scientific literature that evaluates organic compliant methods for optimizing soil health to assess the effect of different soil building practices on soil mineralizable carbon.

Impacts of organic soil-building strategies on yield **Cost: \$85,000**

Collaborator: University of California, Riverside

Different soil building practices do not necessarily have an equitable effect on yields. While most farmers are committed stewards of the land, many operations maintain thin margins of return. Thus, when considering the adoption of new practices, it is important for farmers to be able to evaluate which practices are most likely to promote environmental sustainability while simultaneously maintaining (or increasing) their bottom line. This project will quantify the interaction between different management practices on soil health and yield.

Reducing nitrogen loss on the field **Cost: \$150,000**

Collaborator: University of Virginia

Nitrogen loss from agricultural soils is a major source of environmental disruption, and can contribute to climate change and water pollution, among other ecological disturbances. This project will identify leverage points that can be used to reduce nitrogen loss into our waterways and atmosphere.

Net-positives of organic management on climate change mitigation **Cost: \$45,000**

Collaborator: Harvard University

A project is currently underway to examine the areas where organic food and farming best support climate change mitigation. Preliminary results show that organic management can not only reduce the amount of greenhouse gases introduced into the atmosphere, but act as a sink for greenhouse gases – mitigating climate change through organic management. Funding will ensure that these results are shared thoroughly with target audiences including consumers, industry members, and policy makers.

Net-positives of organic management on soil health **Cost: \$95,000**

Collaborator: Harvard University

This project will identify the areas where organic is having the greatest positive effects on soil health, using a cradle-to-grave approach to investigating the impacts of organic food. The net positive



impacts will allow organic farmers and industry members to showcase the regenerative properties of organic farming, and identify areas where additional research is needed.

Future Project Focus Areas

In addition to current project descriptions, there are several continued gaps in our knowledge about the impacts of organic food and farming on soil health and climate change, as well as unfilled farmer needs for applied challenges to implementing best on-farm soil-building and climate mitigation practices. Additional projects will be sought through a Requests for Applications from academic and governmental institutions to address the following focus areas. Suggested time limits for proposed projects is up to 3 years, with suggested funding limits between \$100,000-\$500,000

- Resilience in the face of climate change
- Methods for increasing carbon sequestration while decreasing nitrous oxide release
- Understanding and supporting the soil microbiome's part in carbon and nitrogen cycling

In addition to stand-alone funding for projects, these funds will be able to be leveraged as matching requirements for government grants, such as the Organic Research and Extension Initiative (OREI) and the Organic Transitions program (ORG).