



FFAR Awards \$9.4 Million to Improve Soil Health, Optimize Economic and Environmental Results for U.S. Farmers – Background Information

About the Project

The Foundation for Food and Agriculture Research (FFAR) awarded a \$9.4 million grant to The Nature Conservancy, the Soil Health Institute and the Soil Health Partnership to conduct collaborative research to support farmers' achievement of positive economic and environmental outcomes through improved soil health.

This grant is being matched by foundations, leading companies, a commodity group, and others (see [below](#)) for a total investment of nearly \$20 million. This project, one of the largest investments in soil health to date, has potential to transform agriculture at a national scale by establishing national guidelines on soil health, increasing adoption of soil health promoting practices, and overcoming barriers to adoption.

Importance of Soil Health

An estimated 95% of agricultural production depends upon healthy soil. Soil health promoting practices protect farmers' crops and their profits from the effects of extreme weather, such as drought or variable temperatures. Healthy soil also helps to ensure clean water and air not only in rural areas but also for millions of Americans in urban centers, and stores carbon to reduce greenhouse gas emissions. Other environmental benefits of soil health and some soil health promoting practices include preventing erosion, reducing nutrient losses to groundwater and surface water, and providing a habitat for pollinators and other wildlife.

Soil Health Promoting Practices

A number of practices that improve soil health have been shown to increase productivity and provide a number of benefits to farmers and landowners. Creating national standards for soil health measurement will allow more robust and meaningful data supporting adoption of those practices. Examples of soil health promoting practices:

Reduced or no-till farming: Reducing or eliminating the practice of disturbing the soil between growing seasons, or tillage, is one proven method of restoring soil health.

Nutrient management: Managing nutrient applications using science-based techniques helps reduce fertilizer losses into nearby waterways and groundwater.

Cover crops: Growing cover crops, like legumes and grasses, in the winter helps build up organic matter, reduce erosion, and improve the soil's ability to capture and store large amounts water. Cover crops also help reduce nutrient loss by using what's left on the field between growing seasons, and then gradually releasing it back to the next crop. An additional benefit of cover crops is that they provide habitat for migratory birds and pollinators.

Objectives

The overall goal of this project is to nationally increase implementation and benefits of soil health management systems. To accomplish this goal, the project integrates development and testing of soil health measurements (Soil Health Institute), implementation and evaluation of soil health practices on

working farms (Soil Health Partnership), and expanded adoption of those practices by non-operator landowners (The Nature Conservancy).

1. Although the benefits of healthy soils are well known, there is no standardized system of measurement to allow farmers and researchers to systematically advance our understanding of best practices and build on existing knowledge. The Soil Health Institute seeks to develop widely applicable soil health measurements, standards and an evaluation program that allows farmers to measure the value of soil health in terms of productivity, economic benefits, and environmental impact.
2. Enhance the existing Soil Health Partnership farm network, currently consisting of 100 farm locations where farmers and researchers are working together to improve soil health, measure the success of on-farm practices, and learn from one another. Soil Health Partnership activities includes demonstration of best practices to engage and educate local farmers and agronomists.
3. To help drive adoption of soil health practices and metrics, The Nature Conservancy will work to improve markets for non-operator landowners and other key actors, including building knowledge on the value of healthy soils.

Broad Support

The FFAR model requires that each grant be matched by equal or greater non-federal funds; this grant is matched by the grantees and the following companies and organizations: General Mills, the Jeremy and Hannelore Grantham Environmental Trust, Midwest Row Crop Collaborative, Monsanto, Nestlé Purina PetCare Company, The Samuel Roberts Noble Foundation, Walmart Foundation, the Walton Family Foundation, and individual donors for a total investment of nearly \$20 million.

Stakeholder Engagement

This research effort will actively engage farmers, landowners, and other stakeholders. A significant portion of the research initiative will involve testing soil health promoting practices on working farms and measuring their effect on productivity and sustainability. One of the three objectives of the project is to expand adoption of soil health promoting practices. This component will include significant outreach efforts, including work with non-operating landowners to promote the value of soil health and encourage soil health practices among the farmers to whom they rent land.

About the Foundation for Food and Agriculture Research

The Foundation for Food and Agriculture Research, a 501 (c) (3) nonprofit organization established by bipartisan congressional support in the 2014 Farm Bill, builds unique partnerships to support innovative and actionable science addressing today's food and agriculture challenges. FFAR leverages public and private resources to increase the scientific and technological research, innovation, and partnerships critical to enhancing sustainable production of nutritious food for a growing global population. The FFAR Board of Directors is chaired by Mississippi State University President Mark Keenum and includes ex officio representation from the U.S. Department of Agriculture and National Science Foundation. Learn more: foundationfar.org.

About the Grantees

Soil Health Institute

The Soil Health Institute's (www.soilhealthinstitute.org) mission is to safeguard and enhance the vitality and productivity of soil through scientific research and advancement. An evolution of the Soil Renaissance, an initiative established in 2013 by the Noble Foundation and Farm Foundation to advance soil health and make it the cornerstone of land use management decisions, the Soil Health Institute serves as the primary resource for soil health information.

Soil Health Partnership

The Soil Health Partnership is a farmer-led initiative that fosters transformation in agriculture through improved soil health, benefiting both farmer profitability and the environment. With more than 100 working farms enrolled in 12 states the SHP tests, measures and advances progressive farm management practices that will enhance sustainability and farm economics for generations to come. SHP brings together diverse partners to work towards common goals. At least a ten-year scientific program administered by the National Corn Growers Association, the SHP's vision is driven by initial and continuing funding and guidance from NCGA, Monsanto, the Walton Family Foundation, the Midwest Row Crop Collaborative, General Mills and USDA, with technical support from The Nature Conservancy and the Environmental Defense Fund. For more, visit soilhealthpartnership.org.

The Nature Conservancy

The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world's toughest challenges so that nature and people can thrive together. We are tackling climate change, conserving lands, waters and oceans at unprecedented scale, providing food and water sustainably and helping make cities more sustainable. Working in 72 countries, we use a collaborative approach that engages local communities, governments, the private sector, and other partners. To learn more, visit www.nature.org or follow [@nature_press](https://twitter.com/nature_press) on Twitter.