Request for Proposals

Soil Health Sampling


Purpose

This request for proposals (RFP) is to solicit vendors to perform sampling and shipping soil health samples from agricultural fields. The full project anticipates approximately 6,000 soil samples distributed across the Midwest, Great Plains, and Southeast United States with sampling occurring between February and April of 2025, 2026, and 2027.

Key Dates

- Proposal Release: July 3, 2024
- Q&A Period: July 3, 2024 to July 24, 2024
- Posting of Q&A responses: July 29, 2024
- Final Proposal Submission Deadline: August 14, 2024, 5 pm CST

Background

The Soil Health Institute (SHI) is a sub-awardee (Prime Grant Agreement NR233A750004G016) in a USDA-NRCS Partnerships for Climate-Smart Commodities grant led by Truterra, LLC. Under the award, SHI is participating in a unique farm-level study of the long-term adoption of soil health-advancing practices on working farmlands spanning from the Great Plains across the Midwestern prairies and including the Southeastern United States, which includes federal fire ant quarantine zones. SHI is seeking external soil sampling vendors which can operate in the regions of interest.

The total project area is divided into three regions, as shown on the below map. A shapefile of all counties within each sampling region can be provided upon request. Soil sampling in each region will be organized around the USDA-defined boundaries for Major Land Resource Areas (MLRAs). Each region will include between three and five MLRAs, with each MLRA requiring the collection of 400 to 600 soil samples distributed across 10 to 20 groups of farms. These groups of farms are expected to be within 80-mile diameter circle. In total, we expect 2,000 (+/- 400) soil sampling points will be sampled within each region, totaling 6,000 soil sampling points for the entire project.

Region 1 will be sampled Spring 2025, region 2 will be sampled Spring 2026, and region 3 will be sampled Spring 2027. Because this RFP is part of a field-level study of working farmlands that is dependent upon producers’ enrollment and eligibility verification into a USDA-supported program, the exact locations of sampling sites are not yet known. For each region, SHI will provide final sample locations to chosen vendors via ESRI shapefiles or equivalent file types 4 to 6 weeks prior to anticipated sample start dates.

Vendors may elect to submit proposals for all regions, individual regions, or combinations of counties within regions and do not need to submit a proposal for a complete region or all regions to be considered. For example, a proposal for sampling region 1 and parts of region 3 will be considered even if the proposal does not include region 2. However, preference will be given to vendors that provide sample coverage for complete or mostly complete regions.
Specific Requirements

The Soil Health Institute requests proposals for sampling and shipping soil to SHI-selected laboratories. The aim of this sampling is to quantify SHI’s minimum suite of recommended soil health measurements on the soil samples. The sampling points will be determined by SHI and will include row crop fields and perennial locations (e.g., fencerows) for reference.

At each sampling point, samples will need to be collected following SHI’s soil sampling SOP (SOP_SoilSampling-v1.2.pdf (soilhealthinstitute.org)). Specifically, each sample point will require the following set of soil samples:

1. Two bulk density samples (0 to 15 and 15 to 30 cm depths) collected using a 7.5 cm (3 inch) diameter core (AMS-samplers, SKU: 4004.45)
2. Two composite samples (0 to 15 and 15 to 30 depths) collected using a 2.54 cm (1 inch) diameter push probe (AMS-samplers, SKU: 425.52)
3. One composite sample of intact aggregates collected via a small trowel slice (0 to 7-cm depth). Shipping the sampled aggregates in a 50 ml (about 1.69 oz) falcon tube. Refer to the above-mentioned sampling SOP for sampling, shipping, and handling intact aggregate samples.

In addition to soil sample collection, SHI also requests that vendors collect the following sample-site metadata for each sampling location.

1. Required farmer notification at minimum 24 hours prior to sampling. Farmer email and phone number will be provided.
2. GPS coordinates of sample location.
3. A photo of the sample location including a shovel slice of the soil up to 30 cm depth.
4. A brief written note describing the condition of the field (e.g. “no-till corn field, soil is dry and hard”).

After soil sampling, and within two days of collection the chosen vendor will be responsible for shipping the samples to an SHI-selected laboratory. Shipping costs will not be covered by SHI.

Proposal Requirements

Submitted proposals should consist of two components: 1) a written proposal narrative (maximum of three pages) and 2) a budget.

The proposal narrative must specifically address the following:

1. Identify which regions or parts of a region are covered by the proposal by providing a list of counties with its FIPS code.
2. Provide evidence of recent successful large-scale soil sampling work including examples of recent projects/clients. Examples should include descriptions of types of soil sampling, sample collection timeline, total number of samples.
3. Address how data transfer will occur between the vendor and SHI for communication sample site meta data and sample progress. Vendors should briefly describe their sample handling and tracking procedures. Preference will be given to vendors that utilize an electronic labeling system for sample labeling and be willing to work with SHI-selected lab for smooth data transfer. SHI has an existing QR-code system, preference will be given to vendors that can utilize QR-codes for labeling.
4. Provide contact information for three references from former/current clients.
5. Vendors will be required to cover the costs of shipping and should describe their shipping protocol in the proposal.
6. Demonstrate vendor’s ability to finish sampling in the months of March and April for region 1 and region 3. For region 2, the sampling must be completed in the months of February and March. For all soil sampling, requirement to complete sampling prior to each region’s summer crop planting. No entry allowed in fields that have been planted without explicit prior written approval from farmer.
7. Describe plans and capabilities to record high-quality sample notes and site metadata following SHI specifications (see above).
8. Describe the sample handling protocol to maintain biological integrity in the proposal. At a minimum this means keeping samples away from sun and heat and shipping promptly. For example, SHI samplers place soil samples in a simple cooler with a few ice packs.
9. Include a description of provisions for shipping/handling intact aggregate samples to avoid sample disturbance and maintain natural soil aggregates during shipping. SHI has instructions and supplies that can be used in the SOP.
10. Must describe provisions to follow the selected lab APHIS requirements for sample locations subject to fire ant quarantine.

The proposal budget can be included in the same document as the proposal narrative or be submitted as a separate document. Proposal budgets do not count against the proposal narrative page limit. Submitted budgets must include:

1. A total rate to conduct the work including the number of samples covered in that rate.
2. An estimated rate per sample. Vendors may submit a range of per sample rates if rates are expected to vary based on sample intensity or location. When ranges of per sample rates are submitted, vendors should include descriptions of the circumstances leading to ranges on per sample rates and provide guidance to understand how rate may change with changing sample locations.

**Pilot testing**

In addition to the above-mentioned proposal requirements, the selected vendor must also conduct pilot sampling, shipping and data transfer on a single field in November 2024. Due to the unique nature of our sampling SOP and high data quality standards, SHI will be requesting that the selected vendor undergo pilot sample evaluation prior to final contracting. The goal of this evaluation is to ensure reliable sample collection, handling, and data transfer with candidate vendors. Pilot testing will consist of sampling 3-5 sample sites in a single field within the vendors chosen sampling region and will occur October/November of 2024. SHI will not contract with any vendors that do not successfully complete the pilot test. As part of the pilot testing, the chosen sampling vendors must obtain a video of their in-field sampling, sample packing and shipping process. SHI has funds to reimburse pilot testing costs.
Submission, Q&A Period, Review.

Proposals are to be submitted to Dr. Ayush Gyawali, Research Soil Scientist, at the following address: agyawali@soilhealthinstitute.org. Please include “Sampling vendor” in the subject. The deadline to submit the proposal is August 14, 2024, 5 pm CST.

Prior to proposal submission, interested parties can submit written questions to Dr. Gyawali. Questions received prior to the close of the Q&A period on July 24, 2024 will be answered in writing and posted on the RFP webpage on July 29, 2024. Answers to all submitted questions will only be provided via the posted Q&A document.

Written proposals will be evaluated by SHI’s selection committee based on the following criteria (listed in descending order of importance): budget, ability to complete the project in the required timeline and following SHI’s specifications, capacity to deliver high quality soil sampling, metadata collection, and efficient data delivery, and positive evaluation of vendors from prior clients. Preference will be given to vendors that can deliver sampling for the complete project area and can utilize QR-codes for sample labeling that are compatible with the SHI-selected lab.

The Soil Health Institute retains the right to accept any or none of the proposals submitted.
Regions to be sampled

List of counties selected per region:

Region 1
Region 2
Region 3