



# Soil Health Testing

## Conservation Evaluation and Monitoring Activity (CEMA 216)

Soil health monitoring is a valuable tool that empowers producers, managers, and planners with essential information to refine their management practices and improve their economic, social, and environmental outcomes across all land uses.

By routinely assessing soil conditions and linking those observations to key performance indicators such as ease of management, yield and quality, or input costs; soil health becomes an integrated part of the overall management system. With well-designed sampling strategies, proper sampling and testing procedures, producers, ranchers, and foresters can tailor their decisions to support a regenerative operation on any land use.



### What is CEMA 216 Soil Health Testing?

CEMA 216 Soil Health Testing is a financial assistance opportunity for participants to hire Qualified Individuals (QI) or Technical Service Providers (TSP) to provide quantitative testing for biological, chemical, and physical characteristics of soil using approved laboratory methods. This is a powerful tool for optimizing management for all land uses to implement successful regenerative conservation practices.



### Why Test Soil Health?

Soil health testing helps producers understand what their land needs to function well. It improves water infiltration, nutrient cycling, and biological activity while reducing erosion and input costs. Healthy soil supports productive, resilient, and sustainable farms, ranches, and forests. Investing in soil health is essential for regenerative agriculture and for protecting one of our nation's most valuable resources. To make good management decisions, producers must monitor soil conditions along with environmental and production outcomes such as yield and quality and to continually improve their systems. Soil health testing works best when combined with an In-field soil health assessment. More frequent (yearly) soil health testing improves the ability to track soil health trends over time, leading to better management decisions.



### Qualified Individual (QI)

A QI is a trained reputable, competent professional who helps farmers and ranchers carry out soil health testing. They ensure proper soil sampling, packaging, timely submission to the labs, and provide data interpretation for NRCS programs like CEMA 216. QIs may be certified professionals, degree holders, or experienced technicians. Others may help with CEMA 216 implementation under QI's supervision.



### More Information

Farmers and ranchers interested in regenerative agriculture are encouraged to apply through their local NRCS Service Center by their state's ranking dates for consideration in FY2026 funding.

Applications for both EQIP and CSP can now be submitted under the new single regenerative application process.

Scan the QR Code for more info.



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## Technical Requirements

CEMA 216 requires the assessment of five soil indicators for a basic package: Soil Aggregation, Soil Carbon Cycling, Microbial Activity, Carbon Food Source, and Nitrogen Food Source; as well as Soil pH and texture. Participants who want more advanced soil health testing can also measure phospholipid fatty acid (PLFA) or soil enzymes.



## Sampling Strategy

Producer will submit three distinct composite samples.

Implement effective sample strategies to ensure the best quality results:

1. **Random sampling:** ideal for uniform fields,
2. **Stratified sampling:** for different soil types or landscapes,
3. **Problem sampling:** compare poor-performing areas with an undisturbed area. Collect three composite samples per management unit, each made from five subsamples. Take sample within a depth of 6 to 8 inches with a spade (detail available in CEMA 216).

INDICATORS	WHY IS THAT IMPORTANT TO YOU?
Wet Aggregate Stability	Shows how well soil holds together, which affects water infiltration, carbon storage, nutrient retention, and biological activity.
Soil Organic Carbon	Supports nutrient cycling, aggregate stability, infiltration, water availability, and provides food for soil organisms
Soil Respiration	Indicates how active and abundant the microbes are in the soil
Labile Carbon	Measures easily available soil carbon that is readily consumed by soil organisms
Bioavailable Nitrogen	Asses the amount of protein-based (organic) nitrogen available to soil organisms

The timing of soil sampling plays a critical role in understanding the dynamics of all land type soils. Successive sampling should be done at the same time of year and locations as the initial sampling.



## Laboratory and Handling

Use certified labs (NAPT, ANSI, ISO). Ensure that samples are stored at cool temperatures and shipped immediately. For biological tests (e.g. PLFA or Soil enzymes) ship overnight on ice to maintain integrity. This approach improves results and upholds the highest standards of quality.



Refer to [CEMA 216 Soil Health Testing](#) for exact requirements or scan the QR code.

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