SOIL HEALTH INSTITUTE

Enriching Soil, Enhancing Life

How healthy is my soil? How healthy can it become?





Healthy soils look different from region to region. Our benchmarking approach reveals what optimal soil health looks like for a specific soil type and area, helping growers and advisors see how much healthier their soils can be — and set achievable goals to improve resilience and productivity.

WHAT DO WE MEASURE?

You can get a complete picture of your soil health with just four essential indicators. These practical, affordable indicators — selected through a three-year project across 124 long-term agricultural research sites — work across soils, climates, and production systems in North America. You can use them to track how your management affects your soil.

Our essential indicator		Why it matters
	Soil organic carbon	Carbon helps make nutrients and water more available to crops, making soil more productive.
	Carbon mineralization potential	Measures the activity of soil microbes. An active microbiome provides nutrients to crops and breaks down crop residue to improve the soil.
	Aggregate stability	Small clumps in soil create needed space for water, air, and roots. Our free Slakes app tests how well they hold together. When aggregates are strong, they prevent erosion and let the field absorb water.
	Available Water Holding Capacity (AWHC)	When AWHC improves, soils can hold more water to provide to crops, improving drought and flood resilience. We can calculate AWHC using soil organic carbon and your soil's sand/clay content.

OUR BENCHMARKING APPROACH

We compare three types of management to show how soil health practices are improving soil across North America.







BASELINE:
The common agricultural production management system in the region

SOIL HEALTH:
Fields where producers have adopted practices such as decreasing tillage, increasing living roots, and leaving plant residue in the fields beyond the baseline system

REFERENCE:
Minimally disturbed sites such as orchards, pastures, hayfields, or forests that show how healthy the region's soil can become

By evaluating our essential indicators across these management types, we can show what's possible.

HOW CAN I USE SHI'S BENCHMARKS?

Our regional reports show the optimal soil health found in reference sites, revealing what practices are moving cropland closer to reference values and where there's opportunity for improvement.

Has your region been benchmarked yet?
Scan the QR code or search "benchmarking" on **soilhealthinstitute.org** to find out.

Interested in partnering to benchmark a region? Reach out to us at **info@soilhealthinstitute.org**.

