



SOIL HEALTH — INSTITUTE —

NEWS RELEASE

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National Soil Health Measurements to Accelerate Agricultural Transformation

Soil Health Institute Endorses 19 Soil Health Measurements after 3 Years of Collaboration

RESEARCH TRIANGLE PARK, NC, Aug. 7, 2017 - For scientists, farmers and ag policy makers, one nagging question has yet to be completely "unearthed:" Just how healthy (or unhealthy) are the nation's soils?

"We can't really know the answer to that question until we have a set of common soil health measurements that scientists and farmers can compare and track over time," said Dr. Wayne Honeycutt, CEO of the Soil Health Institute. "But we believe our endorsement of 19 measures today will help us seek and track that common ground - and ultimately answer that important question."

The concept of soil health is gaining widespread attention because it promotes agricultural practices that are not only good for the farmer, but also good for the environment. An abundance of research shows that improving soil health boosts crop yield, enhances water quality, increases drought resilience, reduces greenhouse gas emissions, increases carbon sequestration, provides pollinator habitat, and builds disease suppression. To help implement widely-applicable, consistent measures of soil health, the Soil Health Institute announces its endorsement of 19 national soil health measurements.

Over the last three years, scientists from public and private sectors, farmers, field conservationists, soil test laboratories and many others provided input to develop a "Tier 1" list of recommended soil health measures, considered effective indicators of soil health. These specific measurements are regionally defined, have known thresholds, and help define management strategies to improve soil function - like providing nutrients and water.

"Establishing these measurements of soil health will allow a broad group of stakeholders to speak the same language," said Honeycutt. "This will go a long way in mobilizing further efforts to improve sustainability of our food production systems."

"The National Association of Conservation Districts believes a shared, foundational understanding of how we measure soil health is critical to advancing the adoption of conservation management practices countrywide," NACD President Brent Van Dyke said. "We anticipate that through our own Soil Health Champions Network, and supported by the measurement efforts of the Soil Health Institute, our nation's agricultural producers will be better equipped than ever to sustainably grow America's food, fuel, and fiber in an era of unprecedented global demand."

Soil health, like human health, is a complex and holistic concept. For example, when a person goes to a medical doctor, their health is not judged by blood pressure alone. Instead, many tests are used to assess their health. In a similar way, soil health is based on numerous chemical, physical, and biological measurements.

Examples of the specific Tier 1 measures include organic carbon, pH, water-stable aggregation, bulk density and available water holding capacity. A complete list of all 19 endorsed soil health measurements is available at www.soilhealthinstitute.org.

"Many of these Tier 1 measures have proven effective to help producers achieve high yields for decades," Honeycutt said. "Consequently, many of the soil test laboratories and field conservationists are already using these measurements. Currently, the Soil Health Institute is reaching out to those organizations to explore additional implementation opportunities."

"We support the widescale adoption of these soil health indicators, recognizing the robust process and scientific collaboration behind them," said Nick Goeser, director of the Soil Health Partnership, and National Corn Growers Association director of soil health and sustainability. "We encourage farmers and agronomists to regularly test soil, use these indicators as business management tools for greater insight, and adopt practices that will improve soil health, like reducing the intensity of tillage to build soil organic matter."

"The Soil Science Society of America supports development of scientifically-rigorous methodologies to quantify soil health, foster research, and promote outreach of reliable metrics to ranchers and farmers," added Dr. Andrew Sharpley, President, SSSA.

Work continues with the agricultural industry to add more measurements to the Tier 1 classification - currently being researched as Tier 2 and Tier 3 measurements. They require additional research to elevate them to Tier 1 usefulness. Such research may involve understanding regional differences in interpretation, establishing thresholds, and developing management recommendations to improve soil functioning.

"In particular, several biological measurements have significant potential to help suppress diseases naturally, improve water quality, build drought resilience, increase carbon sequestration, and reduce greenhouse gas emissions," said Dr. Steven Shafer, Chief Scientific Officer with the Soil Health Institute. "However, additional research is needed to evaluate Tier 2 and Tier 3 measurements and interpret their contributions to soil health in different climates, soils, and production systems."

"We are working with numerous partners to advance that research and are already making plans to get it into the hands of farmers and ranchers," added Honeycutt.

For further information, visit www.soilhealthinstitute.org.

About the 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.

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