



SOIL HEALTH NEWS

FALL 2017 – Volume 2, Number 2

► INSIDE THE INSTITUTE

Dear Friends,

One of the many opportunities I have is traveling throughout this beautiful country. When doing so, the field observer in me always seems to naturally, and often subconsciously, kick in. From an airplane window, I relish in the perspective of observing landscape scale processes on our earth's geomorphology. I will admit that I also enjoy the challenge of mentally mapping soils from 30,000 feet. Once back on land, I study roadcuts for insight into the local soils and how their morphologic properties change with landscape position. I often find myself amazed at the diversity of crops, native vegetation, animals, climates, and management systems across these different soils and landscapes. It is at this point that I sometimes have to pause – to refrain from becoming overwhelmed with the complexity of the interacting biological, chemical, and physical processes – both known, and especially those not yet discovered, that are occurring right under my feet.

I believe we need to more fully understand these processes and interactions to safeguard and enhance the vitality of our soils, and indeed, life on earth; and it is both reassuring and inspiring to know that so many of you think so, too. Thanks to the many who shared their ideas, insight, and expertise, the Soil Health Institute unveiled *Enriching Soil, Enhancing Life: An Action Plan for Soil Health* at the National Press Club in May, providing a comprehensive plan and specific steps to address priorities in research, measurement, economics, communications/education, and policy. In July, more than 250 individuals from 160 organizations participated in our 2nd Annual Meeting, "Powering Up Our Soils," and thanks again to so many of you, the greater soil health community now has 130 more volunteers contributing their expertise to 19 new Action Teams to improve soil health.



It is crystal clear to those of us at the Soil Health Institute that these and other accomplishments described in this Newsletter are yours. It is also equally clear that it will take all of us continuing to work together, in a strategically coordinated manner, to achieve our collective goals of safeguarding and enhancing the vitality and productivity of soils – in short, to understand and manage

these processes rather than become overwhelmed at their complexity. I believe our goals are far greater than what any of us could achieve alone. Please know that the Institute exists to serve you in this effort.

Many thanks to all who have participated thus far. For those interested in becoming more involved, numerous opportunities exist, so please drop us a note: <http://soilhealthinstitute.org/contact/>.

With deepest appreciation,

C. Wayne Honeycutt, Ph.D.
President and CEO

► RECENT PRESENTATIONS

SHI at Sustainable Brands '17 Detroit

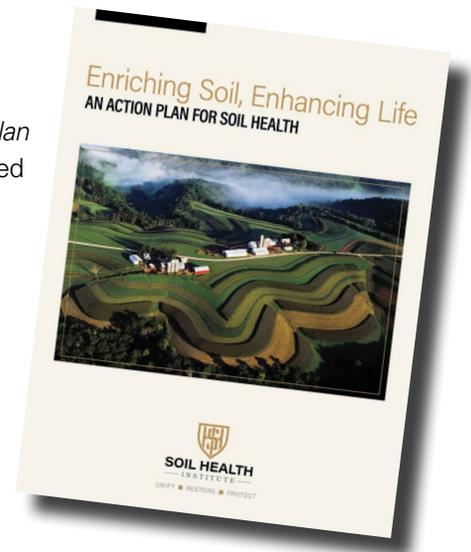
"Investments in practices in soil health are investments in sustainability," stated Wayne Honeycutt, SHI President and CEO, at the Sustainable Brands Conference held in Detroit in May. Companies such as General Mills, Nestle Purina, Wrangler/MF Jeanswear and many others increasingly see soil health as a business imperative. The increased water-holding capacity, reduced greenhouse gas emissions, improved nutrient use-efficiency and drought resilience are among the many benefits that align with the UN Sustainable Development goals embraced by many large national and multinational companies.

Soil Health Action Plan Released in Washington, DC

On May 18, the Soil Health Institute unveiled *Enriching Soil, Enhancing Life: An Action Plan for Soil Health* at the National Press Club in Washington D.C. The nationwide plan evolved after four years of stakeholder input, beginning with the Soil Renaissance in 2013.

"It's become increasingly recognized that soil health represents one of those rare win-win situations where what is good for the farmer or the rancher is also good for the environment," said Wayne Honeycutt, President and CEO of SHI. "To achieve more advances in soil health, we will require science-based information."

The 48-page plan outlines actionable steps to achieve goals in Research; Measurement, Standards & Assessment; Policy; Economics; and Communications & Education. Agricultural industry thought leaders, farmers, ranchers, scientists, government agency leaders, and non-governmental organizations all provided input.



Joining Wayne Honeycutt at the Action Plan's release were Bill Buckner, President and CEO of The Samuel Roberts Noble Foundation and Noble Research Institute; Keith Alverson, a sixth generation farmer on the Board of Directors for the National Corn Growers Association; Leonard Jordan, Acting Chief of USDA's National Resources Conservation Service; Jerry Lynch, Vice President and Chief Sustainability Officer at General Mills; and Michael Doane, Director of Working Lands at The Nature Conservancy. Bruce Knight, former NRCS Chief and Principal/Founder of Strategic Conservation Solutions, moderated the announcement and panel discussion.

Download the complete Action Plan [here](#); video from the press conference [here](#); and articles published in AgriPulse and CSR Wire [here](#) and [here](#).

Soil Health Literature Grants Awarded

This summer, SHI received 45 grant proposals for the 2017 Soil Health Literature and Information Review Grants and selected five for funding. These review articles will support the SHI Action Plan, and the bibliographic information will be added to the freely accessible Soil Health Research Landscape Tool. Specific projects and recipients include:



Congreves

Soil health management practices & biogeochemical cycling in intensive cropping systems

Dr. Kate A. Congreves, *College of Agriculture and Bioresources, Dept. of Plant Sciences, University of Saskatchewan*



Kane

Influence of soil organic matter and management on soil water dynamics and crop yield resilience

Mr. Daniel Kane, *School of Forestry and Environmental Studies, Yale University*



McDaniel

β -glucosidase – Phenol Oxidase Ratio: A Soil Health Index that Isolates Management Effect from Noise

Dr. Marshall Douglas McDaniel, *Dept. of Agronomy, Iowa State University*



Xia

Review Novel Soil Indicators and Environmental Impacts of Soil Health Promoting Management Practices

Ms. Yushu Xia, *Natural Resources and Environmental Sciences, University of Illinois*



Xu

Grazingland Management Impacts on Water Infiltration, Nutrient Use Efficiency, and C Sequestration

Ms. Sutie Xu, *Dept. of Animal Science, Michigan State University*

2nd Annual Meeting in St. Louis

There were more than 250 registered attendees for SHI's 2nd Annual Meeting in St. Louis representing more than 160 organizations from the United States, Canada, Mexico and South America. On Day 1, keynote and plenary speakers addressed contemporary soil health topics on harnessing the phytobiome to build disease-suppressive soils, carbon sequestration, policies and legislation influencing adoption, monetization of soil health, public education and more.



On Day 2, 130 attendees engaged in SHI Action Teams leading 19 targeted efforts to enhance soil health in Research; Measurement, Standards & Assessment; Economics; Policy; and Communications & Education. These teams are advancing soil health by identifying long-term agricultural research sites in the U.S., Canada, and Mexico for evaluating soil health measurement; designing regionally specific plans for nutrient recommendations in soil health management systems; identifying literature to accelerate the development of disease suppressive soils; evaluating and developing case studies on policies that affect soil health; developing a partial budget template for producers to compare profitability of soil health management systems; and more. For a full list of Action Team activities, and videos and summaries of each presentation see the Institute's [Annual Meeting Final Report](#).



In support of these Action Teams, SHI is working to provide a digital framework for more effective online collaboration across Teams. Prospective volunteers or colleagues interested in joining the soil health movement and participating in SHI's Action Teams are encouraged to sign up on the SHI website under [subscribe](#).

Long-Term Agricultural Experiment Sites

The Institute continues to make steady progress in cataloguing all long-term agricultural experiment sites in the U.S., Canada and Mexico. This effort will support an evaluation of new soil health measures; development of a comprehensive soil health evaluation tool for national deployment and interpretation; and, eventually, an assessment of our nation's soils and the establishment of a baseline for future improvements. SHI is currently working with a company specializing in Geographic Information Systems to develop an online database for evaluating soil health measurements and new assessment tools. To contribute information on your long-term site (10 yr minimum), please click [here](#).

Coordinating Coalition for Soil Health Update

Early this summer, the Coordinating Coalition for Soil Health met with USDA leadership in Washington D.C. to discuss key research, education and adoption issues for advancing soil health. The Coalition was convened by SHI in 2016 to develop a network of synergistic partnerships, share advice and input to minimize redundancies and ensure efficiency, and identify strategies to pursue a future in which soil health is the foundation for managing our natural resources. This ongoing effort is evidence of the type of collaborations that are required to make broad advances in soil health.

For a complete list of Coalition Members and a summary of our efforts please see the complete report [here](#).



Participants pictured above include (left to right): Jim Gulliford (Soil and Water Conservation Society), Beth Mason (National Association of Conservation Districts), Lara Moody (The Fertilizer Institute), Allison Thomson (Field to Market), Cristine Morgan (Global Soil Security), Wayne Honeycutt (Soil Health Institute), Rob Myers (Sustainable Agriculture, Research and Education), Karl Anderson (American Society of Agronomy-Crop Science Society of America-Soil Science Society of America), Chad Watts (Conservation Technology Information Center), Michael Doane (The Nature Conservancy), and Nick Goesser (Soil Health Partnership). Participants not pictured included Jeremy Peters (National Association of Conservation Districts), Lexi Clark (Field to Market), and Jennifer Conner (The Nature Conservancy).

▶ PARTNER NEWS

- ▶ “New Federal Research Grant to Study Impact of 4R Nutrient Stewardship”
- ▶ “New national research initiative aims to improve cover crops”
- ▶ “OFFRF is pleased to release our Request for Proposals (RFP) for 2018 research grants”
- ▶ “A Field-Deployable Magnetic Resonance Imaging Rhizotron for Modeling and Enhancing Root Growth and Biogeochemical Function”

▶ SOIL HEALTH NEWS & STUDIES

August & September

- ▶ Case Studies Show Big Economic Benefits of Soil Health Practices
- ▶ Soils: The Foundation of Life Proceedings of a Workshop – in Brief
- ▶ Cover crops show yield increases in corn and soybeans for fifth consecutive year
- ▶ Water-Soil Health Connection

▶ UPCOMING SOIL HEALTH EVENTS

WHAT	WHEN	WHERE
American Society of Agronomy, Crop Science Society of America and Soil Science Society of America 2017 Annual Meeting	October 22-25	Tampa, FL
2017 Sustainable Agriculture Summit	November 15-16	Kansas City, MO
2017 National Conference on Cover Crops & Soil Health	December 7-8	Indianapolis, IN
2018 Ag Biotech Summit	February 20-21	Chapel Hill, NC
2018 Soil Health Institute 3 rd Annual Meeting	August 1-3	Albuquerque, NM

Complete details for upcoming soil health-related events hosted or attended by the Institute or its partners in the Coordinating Coalition for Soil Health can be found under the [Events](#) section on the Soil Health Institute website.

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Soil Health Institute Endorses 19 Soil Health Measurements

After the Annual Meeting, SHI endorsed 19 soil health measurements after three years of collaboration to help scientists, farmers and ag policy makers answer one fundamental question: Just how healthy (or unhealthy) are the nation’s soils?

The Institute invited any Institute stakeholders who attended at least one Measurement, Standards & Assessment or Research Meeting since 2012 and anyone who attended the 2016 Annual Meeting to participate in a survey that led to this endorsement. To hear the Institute’s Chief Scientific Officer Dr. Steve Shafer speak about this process, please see [this link](#).

Through the Soil Health Institute’s partners and stakeholders, the Communications and Education Action Team will be reaching out to laboratories throughout the United States, Mexico, and Canada to begin a conversation about implementing these Tier 1 measurements.

Tier 2 and Tier 3 measurements may be added to the endorsed list in the coming years following additional research and consensus.

Additional research will help SHI better understand regional differences in interpretation, establish thresholds, and develop management recommendations based upon interpretation to improve soil functioning.

To see the complete press release and list of 19 endorsed measurements please see [this link](#).

