

# SOIL HEALTH | HUMAN HEALTH CONFERENCE

## SPONSOR BRIEF

### CONFERENCE on CONNECTIONS BETWEEN SOIL HEALTH and HUMAN HEALTH

**Tuesday, October 16<sup>th</sup> – Wednesday, October 17<sup>th</sup>, 2018**  
**Doubletree by Hilton, Silver Spring, MD**

Planned for 150 Attendees (Half Invited, Half Open Registration)

#### **Goal: Establish the State of the Science in Soil Health | Human Health Relationships**

#### Summary

Soil *quality* has long been considered in terms of its measurable physical and chemical attributes. Recent advances in technologies and methods for soil biology have allowed the field of soil **health** to become increasingly meaningful. Soil health is defined as “the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans.” Healthy soils contribute to a range of ecosystem functions as appropriate to the environment, such as sustaining plant and animal productivity and biodiversity, maintaining or enhancing air and water quality, and supporting human health and habitation.

Many in the community of agriculture and food sciences, as well as some in the human and veterinary medicine communities, see potentially major benefits from an improved understanding of connections between soil health (and the farming practices that promote it) and human health. Such connections may occur through the impact of land management, crop and livestock production, commodity processing, and other aspects of food production on the nutritional quality of foods, food safety, environmental quality, the human microbiome, and other factors.

This topic was addressed in brief among many others at a recent conference, “Soils: The Foundation of Life” hosted by the U.S. National Committee for Soil Sciences of the National Academies of Sciences, Engineering, and Medicine in Washington, DC in December 2016. However, there has been no major conference focusing specifically on the topic, especially as techniques for studying the soil and human microbiomes have advanced both areas of science.

In an effort to bring together two scientific communities that interact all too infrequently, a national conference on soil health-human health connections is proposed for late 2018. This conference will offer the opportunity to:

- hear from scientific leaders who can address the known and potential connections between the relevant agricultural and human health sciences;
- provide a forum for interdisciplinary discussions;
- identify areas of research that should be conducted;
- create interdisciplinary teams to address those research needs; and
- propose funding mechanisms that will lead to scientific findings that can ultimately benefit health of agricultural systems, the environment, and the public.



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To do this, an interdisciplinary team of agricultural and human health scientists has organized the agenda and has begun to identify the best speakers.

The agenda will offer:

- keynote addresses from experts in the soil health and human health communities to provide broad perspective;
- technical sessions on specific aspects of connections between soil health and human health, featuring overview speakers and panelists discussing current research and knowledge gaps;
- breakout sessions to identify high priorities for research and strategic connections among different disciplines;
- a session on the connections and disconnections between food/agriculture policies and human health policies;
- a panel discussion among representatives of public- and private-sector organizations that may consider funding new research on human health-soil health connections;
- development of a consensus on next steps to further promote and implement research on soil health-human health connections.

The conference is planned for 150 attendees to come from the agricultural, medical, and veterinary sciences. Approximately 75 will be invited speakers, panelists, and general participants in attempt to achieve a balance between soil health and human health interests and expertise. The remainder will self-select by open registration until 150 people have registered.

Donors are being solicited to cover major costs of the conference. Major costs include:

- meeting spaces in the hotel;
- registration waivers for invited speakers
- travel cost support for invited speakers;
- meals, breaks, and a reception.

A registration fee of \$200 (estimated) is anticipated to defray costs not covered by donors.

Donors are invited to sponsor one or more breaks, one or two lunches, or a reception; or other direct costs of the conference. Please contact the Soil Health Institute for more details on sponsorship. Programs and advance information material will prominently feature donors' logos.

A draft agenda is attached.

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## PLANNING AGENDA

### CONFERENCE on CONNECTIONS BETWEEN SOIL HEALTH and HUMAN HEALTH

**Tuesday, October 16<sup>th</sup> – Wednesday, October 17<sup>th</sup>, 2018**  
**Doubletree by Hilton, Silver Spring, MD**

Planned for 150 Attendees (Half Invited, Half Open Registration)  
Speaker invitations and confirmations are in progress.

**Conference Goal: Establish the State of the Science in Soil Health | Human Health Relationships**

#### **Day 1 – Tuesday, October 16 (8:30 a.m. – 5:15 p.m.; reception following)**

##### **Morning – Plenary**

Welcome, Goals, and Overview of the agenda (10 min)

Keynote Addresses (60 minutes)

Keynote 1 – Soil Health-Human Health Connections: Introduction from the Medical Community (30 minutes)

Keynote 2 – Soil Health-Human Health Connections: Introduction from the Soil Health Community (30 minutes)

Technical Session 1 (70 minutes) – The Influence of Soil Health on Human Nutrition

Overview speaker (20 minutes)

Panel: 4 experts x 10-minute presentations: 3 slides each on a prescribed template: a) topic/issue, b) current research, c) research gaps/needs (40 min)

Q&A (10 min)

Break (15 minutes)

Technical Session 2 (70 minutes) – The Influence of Soil Health on Food Safety

Overview speaker (20 minutes)

Panel: 4 experts x 10-minute presentations: 3 slides each on a prescribed template: a) topic/issue, b) current research, c) research gaps/needs (40 min)

Q&A (10 min)

Lunch – Networking opportunities (60 minutes, on-site)

Technical Session 3 (70 minutes) – Chemistry, Bioavailability, Fate, and Transport of Toxins in Field Soils

Overview speaker (20 minutes)

Panel: 4 experts x 10-minute presentations: 3 slides each on a prescribed template: a) topic/issue, b) current research, c) research gaps/needs (40 min)

Q&A (10 min)

##### **Afternoon – Plenary**

Technical Session 4 (70 minutes) – Interconnections of the Soil-Food-Human Microbiome



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Overview speaker (20 minutes)

Panel: 4 experts x 10-minute presentations: 3 slides each on a prescribed template: a) topic/issue, b) current research, c) research gaps/needs (30 min)

Q&A (10 min)

Break (15 minutes)

Technical Session 5 (70 minutes) – Implications of Soil Health for Human Populations and Communities - Epidemiology

Overview speaker (20 minutes)

Panel: 4 experts x 10-minute presentations: 3 slides each on a prescribed template: a) topic/issue, b) current research, c) research gaps/needs (40 min)

Q&A (10 min)

Wrap-up from Day 1 (15 minutes)

Adjourn

Reception (90 minutes) Dinner (on your own)

## Day 2 – Wednesday, October 17 (8:30 a.m. – 4:05 p.m.)

### Morning – Plenary and Breakout Sessions

Keynote: Emerging Topics Connecting Human Health to Soil Health (20 minutes)

Breakout Sessions and Responses (180 minutes)

Plenary – Relevance of Day 1 and Charge to Breakout Sessions: Identifying Priorities, Information Gaps, and Potential Roadblocks to Progress (15 minutes)

Move to Breakout Sessions (15 minutes)

Concurrent Breakout Sessions – Facilitated – 20 people per session assigned to ensure a mix of SH vs HH expertise in each. Discussion questions assigned. A different mix of questions for different groups (90 minutes)

Return to Plenary (15 minutes)

Plenary – Open Mic: One Major Point from each Breakout, and brief commentary as time permits (45 minutes)

Lunch – Networking opportunities (60 minutes, on-site)

### Afternoon – Plenary

Policy Panel (60 minutes) – Food/Ag Policies and Human Health Policies: Intersections and Disconnections

Overview speaker (10 minutes) and panel discussion with 4-5 panelists representing Federal, State, and Local policy makers or experts (40 minutes)

Q&A (10 min)

Panel discussion with reps of research funding organizations: impressions, concerns, recommendations (45 minutes)

Break (15 minutes)

General discussion of future research, untapped areas of inquiry, ways to establish new collaborations (30 minutes)

General discussion of Conference documentation and next steps (30 minutes)

Speaker: Recap of Main Findings and Conclusions (15 minutes)

Adjourn



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