

The Dirt on Soil Health: Virtual Programming for Producers for Improving Soil Health

Abstract

OSU Extension's Agronomic Crops Team developed a Soil Health Committee in 2020 in response to increasing demand from stakeholders to know more about soil health. The committee's first project was a virtual webinar series titled *The Dirt on Soil Health: Digging Beneath the Surface*. The objectives of the webinar were to provide research-based information to enable producers to implement practices to improve soil health on their farms, and to identify needs for future programming on soil health. The webinar included eight sessions held on a weekly basis with recordings available to registrants who could not attend live sessions. A total 2,858 registered for the webinars, representing 72 Ohio counties, 20 states, and 9 nations. 1,517 attended the live sessions with 1,055 views of the recorded sessions to date. On the program evaluation 95.3% of respondents reported that they learned new information as a result of attending, and 88.7% reported that they plan to use the information they learned to improve soil health on their farm.

Educational Objectives

OSU Extension's Agronomic Crops Team developed a Soil Health Committee in 2020 in response to increasing demand from stakeholders to know more about soil health. The goal of the committee is to provide practical research-based information on soil health assessment and management.

Due to COVID-19, the committee chose to focus efforts for the winter of 2021 on developing and delivering a virtual webinar series titled *The Dirt on Soil Health: Digging Beneath the Surface*.

The main objectives of the webinar series included:

- Improve participants' understanding of soil health;
- Improve participants' awareness of research-based information available to inform soil health assessment and management;
- Provide training and resources to enable producers to identify practices they can implement to improve soil health on their farms;
- Identify resource and educational needs related to soil health for the committee to focus on delivering in the future to help producers achieve their soil health goals.

Program activities

The webinar included eight sessions held on a weekly basis. Sessions focused on a variety of topics in order to inform producers interested in a variety of management interests and soil health goals. Producers goals through improving soil health range from improving environmental sustainability by reducing erosion, improving moisture retention, increasing biological activity in the soil; to improving economic sustainability by decreasing input costs and increasing yield.

Speakers with a range of perspectives were invited to participate including university specialists, farmers, industry, and agency representatives. Both scientific research and issues of practical application were addressed. Topics and speakers included:

- *Does It Pay to Improve Soil Health on Your Farm?* Nathan Brown, Highland County Farmer; Matt Falb, Wayne County Farmer; Les Seiler, Fulton County Farmer
- *What Can Soil Health Tests Tell You?* Dr. Steve Culman, Ohio State School of Environment and Natural Resources
- *Can Improving Soil Health Improve Yield?* Dr. Jordon Wade, University of Illinois at Urbana-Champaign
- *Cover Crop Management for Soil Health*, Hans Kok, Indiana Conservation Cropping Systems and Eric Neimeyer, Delaware County Farmer
- *Compaction Solutions*, Dr. Scott Shearer, Ohio State Food, Agricultural and Biological Engineering and Dug Radcliffe, Pickaway County Farmer
- *Using Ohio Data and Research to Improve Soil Health*, Dr. Steve Culman and Dr. Elizabeth Hawkins, Ohio State University Extension
- *What's the Return on Investing in Soil Health?* Rick Clark, Indiana Farmer
- *Programs and Funding to Support Soil Health*, Eric Schwab, NRCS; Mike Thompson, Indigo Ag; Terry Mescher, Ohio Department of Agriculture

Teaching methods

Live sessions were held on a weekly basis over Zoom webinar, with recordings available to registrants who could not attend live. Sessions were one hour in length. The first half of each session was a prepared presentation delivered by a guest speaker, with the entire second half of each session devoted to Q&A between the audience and guest speaker. The series included a diverse range of guest speakers including academics, farmers, government agencies, and industry representatives. Several sessions were co-presented by academics and farmers with the goal of providing research-based information with practical perspectives. Direct quotes from participants reflect appreciation for this pairing:

"Very useful discussion involving both researcher and farmer about practical issues."

"The webinar blends real world perspective with academic research. It all sounds good on paper until you try it on a real farm. [The farmer] brought that side of research out."

"Good webinar with a good mix of research and data plus producer perspective."

"I appreciate the interaction with academics and growers alike."

"I like the sharing of data plus the nuts and bolts of getting the job done."

The extensive Q&A period was intended to create an interactive environment between guest speakers and attendees, and to provide practical information to follow up on research-based information presented during the first half of the session. Direct quotes from participants show that this format was appreciated:

"Excellent prioritized use of question and answer period - addressed many producer questions unlike other webinars that just give presentations with less interaction."

“The most useful part was the open discussion with the speakers during the Q&A.”

“The Q&A at the end was the most valuable part along with a good presenter.”

In attempt to facilitate interaction between attendees, each session began with a question for attendees to answer in the chat to share something about their operation related to the topic of the day. Additionally, a poll question related to the topic was shared at the beginning of each session. At the end of each session, upcoming programs and networking opportunities related to soil health were shared, and a voluntary program evaluation popped up as participants exited the webinar.

The program evaluation included space for participants to submit the questions they had about the following week’s topics. Evaluations including participants’ questions were sent to the following weeks’ speakers, so they were able to get an idea of the knowledge level and priority interests of the group. Speakers then prepared Frequently Asked Questions slides to incorporate into their presentation based on the interests expressed by attendees.

Results

Registration and attendance numbers demonstrated a clear demand for Extension education on soil health. Eight sessions were attended live by 1,517 total attendees (average 190/session), including participants from 72 of Ohio’s 88 counties, 20 US States, and 9 countries. Each live session was recorded, and recordings were made available to all who registered and could not attend the live sessions. Total registration for the webinar series was 2,858 (average 357/session). The recorded sessions have 1,055 views to date (average 150 views/session to date).

At the end of each session a voluntary program evaluation was administered. 556 responses have been received. 95.3% of respondents reported that they learned new information as a result of attending, and 88.7% reported that they plan to use the information they learned to improve soil health on their farm. Direct quotes from attendees include:

“Attending this webinar made me excited to try something different. I’m looking forward to not only the next session but all of the next sessions.”

“This webinar has been such a motivator, I always enjoy hearing the things presented on this topic. I hope to be in a position that some of these [speakers] are someday”

“[The speaker] really gave me a boost and made me refocus on where I am going and what I am trying to achieve.”

“This made me think ‘don't be scared to try new things.’”

Impact statement

2,858 participants from 72 Ohio counties, 20 US States, and 9 nations registered for the webinar series. 1,517 attended the live sessions with 1,055 views of the recorded sessions to date. On the program evaluation, 95.3% of respondents reported that they learned new information as a result of attending, and 88.7% reported that they plan to use the information they learned to improve soil health on their farm.

Evaluation

A voluntary program evaluation was distributed to participants at the conclusion of each program. Program evaluations continue to be submitted through the end of March, 2021. Currently, 556 evaluations have been completed and indicate that the programs met educational objectives. Evaluation was voluntary, seeking to measure knowledge gained, changes in behavior, and gather information about future programming needs related to soil health.

Information was also collected on the most useful thing learned at the program, goals producers have for improving soil health, management practices producers have questions about related to improving soil health, and research/education that OSU Extension can provide to help producers meet soil health goals in the future. Responses will be used to guide future research and outreach efforts of the Soil Health Committee.