

# MOSH explores soil health solutions



*Steve Peterson, former director of sustainable sourcing at General Mills, delivers a keynote speech at the Minnesota Office for Soil Health's (MOSH) stakeholder forum April 16 at the University of Minnesota's St. Paul Campus.*

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Mary Juhl, BWSR

A BWSR, U of M collaboration, the Minnesota Office for Soil Health aims to improve soil health by working with farmers, organizations, companies, LGUs



Clean water depends on healthy soil, and healthy soil depends on conservation practices such as reduced tillage and native plantings that filter water and hold the soil in place. The Minnesota Office for Soil Health (MOSH) strives to connect farmers with the resources they need to enhance soil health and fertility.

University of Minnesota Extension research shows 1 teaspoon of soil contains billions of microorganisms such as fungi, bacteria, insects, earthworms and nematodes. These organisms make soil healthy by breaking down dead plant and animal matter, turning it into nutrients plants need to thrive. A healthy soil ecosystem gives growing plants access to air, water and nutrients.

“In our agricultural systems, we’ve been able to bypass biology in some ways by using chemicals



**Cates**

and machinery. But we can work with the biology to make farming a leaner operation,” said Minnesota Soil Health Specialist Anna Cates, who has a doctorate in agronomy.

MOSH’s mission is to build local expertise to promote soil health and water conservation by developing the knowledge, skills and abilities of local conservationists to promote sustainable soil and land management. It’s a collaboration formed in 2017 by the Minnesota Board of Water and Soil Resources (BWSR) and the University of Minnesota’s Water Resources Center (WRC), which is housed within the College of Food, Agricultural and Natural Resource Sciences (CFANS).



**Clockwise from top:** The MOSH logo represents soil health. **Courtesy Image** Attendees at the April 16 MOSH stakeholder forum meet in small groups to discuss strategies for improving soil health. **Photo Credit:** Mary Juhl, BWSR Signs break down soil health principles. **Photo Credit:** Mary Juhl, BWSR

“MOSH seeks to provide practical, science-based information to help farmers manage their soil and water resources,” said Jeffrey Peterson, director of the Water Resources Center, who has a doctorate in agriculture and resource economics. “The goal is to find site-specific practices that lead to economic as well as environmental sustainability.”

Producers can cut their costs, Cates said, through conservation practices that promote healthy soil. For example, farmers who reduce their tillage by using strip-till or no-till practices can cut fertilizer and fuel costs. In the long term, Cates said fertile soil can support beneficial insects, which can reduce pest-control costs.

“BWSR and local conservation staff have long appreciated the work of our farmers, ranchers, foresters and urban landowners to protect and conserve our soil and water resources, and we continue to strive to find ways to help them grow their soil health practices,” said BWSR Executive Director John Jaschke.

“That is why we are investing our money, time and energy into this effort to further develop expertise on soil health, which can be shared with Minnesotans across

our state’s diverse landscape,” Jaschke said.

MOSH Coordinator Ann Lewandowski said the office functions as a central point of contact for stakeholders including farmers, nonprofits with an environmental focus, private companies and government entities.

Lewandowski said hiring Cates in June 2018 as the state’s first soil health specialist was a major accomplishment since MOSH opened two years ago. Today, the office focuses on networking, outreach and education centered on soil health issues. Cates regularly leads trainings for local government staff and gives presentations at conferences.

As part of its outreach, MOSH held a forum April 16 at the University of Minnesota’s St. Paul campus. There, stakeholders representing agriculture and conservation discussed their vision for public-private partnerships in soil health.

“We see MOSH as a neutral space for all these diverse stakeholders to come together, and it was really energizing to be in that group of committed partners,” Lewandowski said. “We want to strengthen all of their work.”

The forum initiated conversations about developing a state soil health action plan. Small-group discussions covered a range of soil-health topics.

“We appreciated the opportunity to attend the forum and discuss the many ways corn growers are investing in soil health with the organizations who share our goal of increased sustainability on the farm,” said Bryan Biegler, a Lake Wilson area farmer and a Minnesota Corn Growers Association board member.

Now, MOSH staff members will continue to raise awareness about their young organization and the resources it offers. They plan to launch a new website this summer. MOSH will help host the University of Minnesota Extension’s annual Conservation Tillage Conference this December in St. Cloud. Cates said MOSH will continue to connect producers with elected officials, nonprofit staff and private-sector professionals who bring unique soil-health perspectives to the table.

“Soil health bridges cropping systems and soil biology work, so having someone specifically focusing on soil health gives you a point person between those worlds,” Cates said of her role at MOSH.