

**“Diggin’ Into Soil Health”:
Reflections and recommendations from Michigan farmers and agricultural advisors**

Introduction

There is wide recognition from the agricultural community on the importance of soil health in agricultural landscapes. However, there are many ways to define and manage for soil health. To address these diverse perspectives, we hosted a workshop to explore how soil health—and adoption of soil health practices—are talked about by agricultural advisors and farmers, with a goal of collaboratively identifying opportunities to improve soil health outreach and adoption.

Workshop Overview & Goals

The “Diggin’ Into Soil Health” workshop, held on June 29th, 2022 at the Michigan State University W.K. Kellogg Biological Station included 33 agricultural advisors, agricultural researchers, and Michigan farmers. Participants represented many organizations, including USDA Farm Service Agency, Soil Water Conservation Districts, Michigan Agricultural Advancement, Michigan Agriculture Environmental Assurance Program, Natural Resources Conservation Service, The Nature Conservancy, National Wildlife Federation, Michigan Environmental Council, and independent crop consultants.

There were four main activities during the workshop: 1) a mental modelling activity to help participants consider how their unique experiences and knowledge inform their understanding of soil health; 2) a research presentation sharing data from surveys and interviews with Michigan farmers about their perceptions of soil health; 3) a farmer panel to better understand producer needs for soil health programming and monitoring; and 4) a group discussion to identify gaps, opportunities, and next steps for soil health programming and action.

The goals for the day were to:

- 1) strengthen professional relationships among those engaged with soil health across Michigan;
- 2) develop a shared understanding of soil health communication best practices with farmers; and
- 3) share current research findings on Michigan farmers’ perspectives of soil health.



Farmer panel during the workshop

Findings

Conversations during the workshop led to several key recommendations that could help farmers better manage for soil health, including suggestions for how to improve soil health tests and their translation to management, engagement and research, and policy and programming efforts.

Recommended changes for soil health tests & improved translation to management

- Couple quantitative soil health assessments with agronomic and nutrient tests that farmers already receive. Farmers are familiar with soil nutrient test results, and would like to know how other indicators of soil health (e.g. biological soil health) relate.
- Link soil health tests to farmers' perceptions and experiences of soil health on their fields to better inform management decisions. For example, comparing the soil health of high and low producing fields, rather than "one-off" tests from different sites on their operation.
- Provide a diagram that describes each soil property and indicator of soil health, with guided recommendations summarized by soil type of how they could be improved with targeted management. On its own, soil health was considered too broad to be useful for guiding specific management practices.

Recommended opportunities for engagement & research to aid in farmers' management of soil health

- Provide farmers with one-on-one advising and on-the-ground help to evaluate soil health and make guided, field-specific recommendations.
- Offer farmer-to-farmer exchanges to discuss soil health management efforts. Farmers want to hear from their peers who have successfully implemented a practice before seeking input from agencies or advisors.
- Engage with advisors prescribing crop fertility plans so they better understand the role soil health plays in crop health and production and how synthetic fertilizers interact with soil health.

Recommended opportunities to improve policy & programs for soil health

- Inform policymakers on the challenges to evaluating and managing soil health for quantified outcomes to better allocate state funds.
- Leverage Michigan's Soil Health Task Force to elevate the importance of soil health state-wide.
- Allocate additional funds to conservation and agricultural agencies to:
 - Increase capacity for one-on-one farmer meetings and advice (field days alone are not enough for many farmers to shift management practices).
 - Provide staff with more on-farm experiences, improved trainings, and in-service activities to help build farmer trust and improve recommendations.
 - Increase staff benefits and compensation to reduce turnover, which can hamper building trusting relationships with farmers.
 - Invest in farmers' labor needs to implement time-sensitive soil health practices (for example, cover crops).

