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Abstract

Soil health indicators are commonly used by researchers to understand how various soil properties are functioning. However, many new indicators have rarely been applied on active farm conditions and whether these indicators are valuable to farmers is not well understood. This research takes an integrated approach combining social science methods and biophysical soil testing to understand the value of soil health indicators to farmers and assess the impacts of extreme precipitation on soil health and farmer decision-making in Ohio. With increasing climate variability, the collecting and analyzing of soil health data with farmers offers immediate evaluation of the effects of their management practices and could stand as a solution to complex environmental problems. Interviews will be conducted with 30 row crop farmers to gather their insights on the perceived impacts of extreme precipitation on soil health, as well as their management decisions following the 2019 growing season. Quantitative data will be collected in the form of soil health indicators. A total of 15 parameters will be measured and reported back to farmers to discuss how these data could inform their future management decisions and to understand which indicators are most useful to farmers. These data will also be used to determine if there is evidence of deficiencies in the soil health as a result of excessive precipitation in Ohio caused by climate change. Ultimately, this research evaluates if long-term weather patterns influence management practices among farmers and if the results of soil testing could encourage more sustainable management practices. Furthermore, this study highlights the importance of interdisciplinary work by integrating social and natural sciences to gain a comprehensive assessment of farmers’ perceptions and practices in relation to agricultural soil health. In doing so, the research addresses a vital issue in Ohio specifically and the Midwest more generally.

**Prabhjot Singh**

**September 18, 2020 | 2:00-3:00 PM**

Zoom Meeting ID: 989 2470 8162

<https://osu.zoom.us/j/98924708162?pwd=VFF1WWNwOGFGd2kzZWN3RXQ0Z09uQT09>

How do Ohio farmers incorporate soil health into their decision making after a season of heavy precipitation?

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**Environmental Science Graduate Program**

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