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Do soil health tests match farmer experience?

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Dr. Christine Sprunger taking a soil health sample in the survey. Photo by Brendan O'Neill.

Soil health testing offers a new paradigm for managing soils to support key ecosystem functions that can increase environmental sustainability. These tests have been tailored to detect differences in soil management practices, often based on data from controlled experimental trials, which do not reflect the large field variability seen on working farms.

New research in the *Soil Science Society of America Journal* assesses whether soil health test scores align with farmers' experiences of their self-identified "best" and "worst" fields across three distinct cropping regions in Michigan. To translate soil health testing into on-farm management decisions, the results should reflect soil differences across farmer's fields.

The researchers found that soil physical and biological health indicators scored higher on farmers' "best" fields; however, the sensitivity of different indicators in distinguishing field types varied by region and soil type. In addition, by having farmers choose fields to test, the researchers were able to clearly identify which measures of soil carbon best reflect field performance.

The study suggests how farmer experience can improve implementation of soil health testing on farms and how results from testing can be tailored to individual regions and farms.

Dig Deeper

O'Neill, B., Sprunger, C.D., & Robertson, G.P. (2021). Do soil health tests match farmer experience? Assessing biological, physical, and chemical indicators in the upper Midwestern United States. *Soil Science Society of America Journal*.

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