

WHAT DO MICHIGAN FARMERS THINK ABOUT SOIL HEALTH?

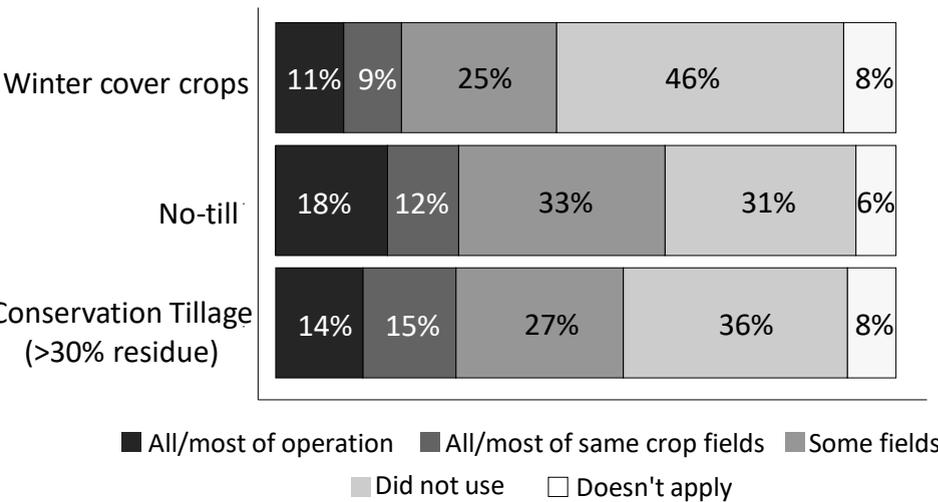


Early results from 2019 and additional farmer interviews in 2021

January 2022

Hello! I'm a graduate student at Michigan State interested in soil health. As part of my research, I am using the survey data you completed in 2018 (thank you!) to better understand how farmers think about and manage for soil health. In 2018, we surveyed 479 Michigan farmers about their thoughts on soil health in the Michigan State University Panel Farmer Survey. And, in 2021 I conducted follow-up interviews with 20 farmers in southwest Michigan to gather more detailed insights. We found these results interesting and hope you do too! This project will help inform Extension efforts that are better suited to help Michigan farmers understand and manage for soil health.

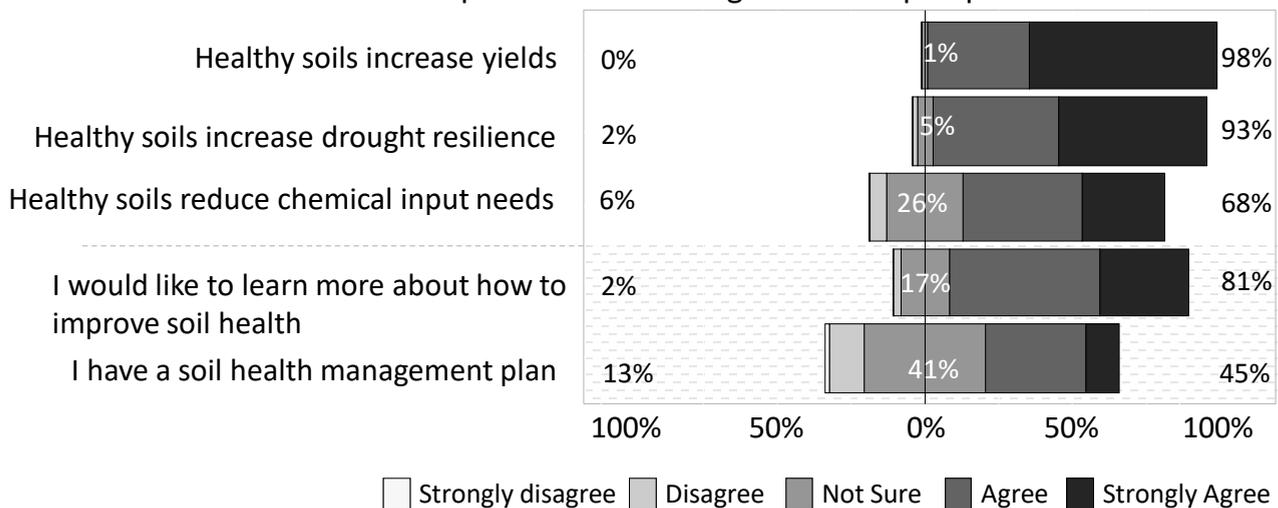
Use of soil health practices



In the spring of 2018 we asked what soil health practices you used on your fields. In Michigan, many (> 45%, combined dark bars) farmers are using cover crops, no-till, and conservation tillage on at least some fields on their operation. Winter cover crops had the lowest adoption, with 46% of farmers not using the practice.

Confidence and Management of Soil Health

Even though adoption of some soil health practices is low, we found that over 90% of Michigan farmers have confidence that healthy soils can increase yields and drought resilience! And most of you (81%) want to learn more about how to improve soil health. Still, many farmers are unsure if their practices qualify as a soil health management plan. This suggests that Michigan farmers believe in the benefits of soil health but are seeking more information and may be unsure about what practices improve soil health the most. We hope this is something we can help improve in the future.

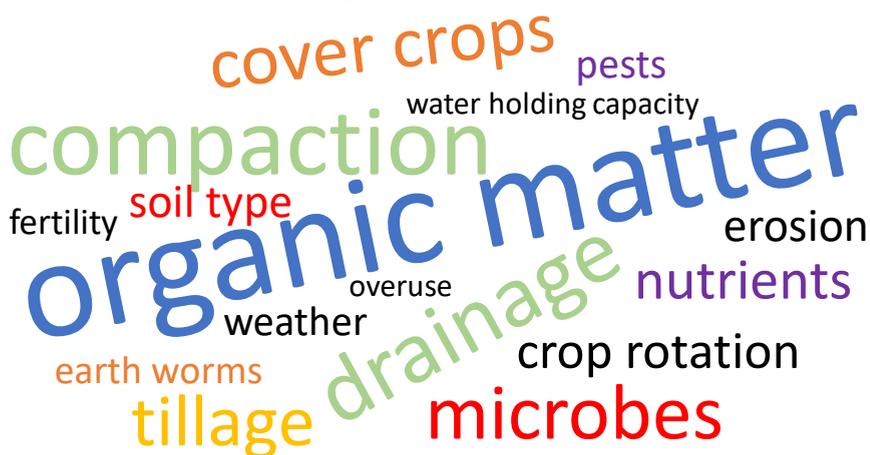


In Spring of 2021 we conducted interviews with 20 farmers in southwest Michigan to learn more about soil health. This project is ongoing, but here is some of what we learned:

What Impacts Soil Health?

We asked farmers what things they think impact 'soil health'. Organic matter was mentioned by 80% of the farmers interviewed.

Compaction (70%), drainage (45%), tillage (75%), cover crops (40%), and microbes (40%) were also frequently mentioned.



the larger the word, the more often it was mentioned

We also asked what farmers would like to do for soil health and why adoption may be challenging.

Wishlist

- cover crops & aerial seeding in perennials
- variable rate nutrient applications
- conduct own soil tests
- increase manure additions
- change tillage (no-till, vertical-tillage)
- diversify crops and move away from monocultures

Challenges

- long-term benefit difficult with soon retirement
- equipment costs are prohibitive
- not worth the investment for small farm
- herbicide resistant weeds complicate no-till
- little evidence that practice/product works
- not enough support from Extension
- markets not available for more diverse crops

Farmers' questions about soil health

These questions will be shared with scientists and Extension to help guide future research and activities.

- How do soil microorganisms impact soil health? Positives and negatives?
- Is microbial activity linked to certain farming practices?
- Why do some soils require more fertilizer than others?
- We need local experts to help measure soil health and consult about what to do with results.

THANK YOU!

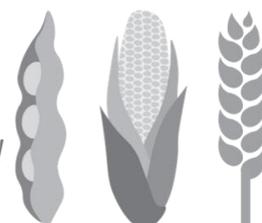
We really appreciate your participation in the survey and hope you found these results interesting! The results from this study will be used to communicate with agricultural advisors about what Michigan farmers' concerns and hopes are for soil health. We hope this study will help make measuring and managing for soil health easier in the future.

If you have additional questions/comments that you'd like us to know about, or would like to know more about this study, please feel free to contact me. I'd be delighted to hear from you!

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*As a reminder...
this is YOUR work!*



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