



Tyler McBlain

# IMPROVING SOIL HEALTH TAKES A SYSTEM APPROACH

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In Ontario, farmers are blessed with a diversity of soils and climate conditions that allow them to grow a wide range of crops and support different types of agriculture. To varying degrees, they face common challenges related to drainage, organic matter and fertility – but also deal with conditions unique to their topography and geographic location.

This article is part of a series of profiles highlighting different Ontario farmers, their farms and soils, and how they're addressing the issue of soil health on the land in their care.

Tyler McBlain farms with his wife and parents in eastern Brant County, growing corn, soy, wheat and oats on a combination of owned and rented land, much of it heavy Haldimand clay. The family also has a custom farming business. Tyler is the seventh generation of his family farming in his community.

**Challenges:** heavy clay soil, compaction, crusting, drainage

**Soil health practices:** no-till/strip-till; cover crops; variable rate fertilizers

## What are the biggest challenges that you face with respect to soil on your farm and how do they impact yield and productivity?

Most of our soil is heavy clay soil, so most of our decisions are based on heavy clay. We deal with crusting, compacting and drainage as significant issues. We look at soil health as a whole system approach and try not to fix just one thing; it's all tied together. Improving the soil doesn't happen overnight; it's a long-term commitment.

## What are some of your practices to promote soil health?

### NO-TILL/STRIP-TILL

We've been no-tilling soybeans and wheat on our farm since the late 1980s. We've tried no-tilling corn, but the results are not economical for us on heavy ground. Four years ago, we started strip-till. It's a happy medium to help dry the soil but only work one-third of the ground. It was an expensive decision to make, but we're very pleased with the benefits we've seen already.



### COVER CROPS

We've been growing clover as a cover crop for over 50 years, but we weren't able to no-till soybeans into clover, so seven years ago, we moved to multi-species cover crops as a way to eliminate tillage. The multi-species mix includes oats, peas, radish and buckwheat and on fields near a busy road, we often add sunflowers as it's something that the public likes. To help with costs, we grow some of our own cover crop seed.

Clay ground has to be bare in the spring or it won't dry out, so we terminate the cover crops in the fall. We're now working on a project with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) looking at overwintering cover crops in the strip-till strips in between where the crop is planted. We try to rotate cover crops with corn, soybeans and wheat but on some farms, it's not profitable to have corn in the rotation.

### VARIABLE-RATE FERTILIZER

Our fertility program is variable-rate based on zones, so we are only fertilizing what's needed and where it makes us money. We moved into variable-rate fertility in 2014. We also generally farm on a field by field basis because each one has different needs and needs to be looked at individually.





## What is the most important change that you have made on your farm with respect to soil health? Or the one that has had the biggest impact?

Switching to no-till. That was the start of our journey to improve soil health. We also set goals and have a focused mindset to achieve those goals, which is really important.

## What advice would you have for other farmers with respect to soil health?

**Start slow, start simple.** Have goals, and get out and walk the fields to see the changes that are happening. Cover crops alone won't change everything. Soil health needs a systems approach and improvement is a multi-generational goal. The soil has become degraded over generations and it will take generations to build it back up.



This project was led by Farm & Food Care with the generous cooperation of Ontario farmers. To read the full series of Farmer Profiles including our full interview with each please visit: <https://www.farmfoodcareon.org/farming-and-the-environment/soil-health/>