



Gerald Schuller

GETTING BETTER WITH LESS

BY: LILIAN SCHAER

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 is one of a series of profiles highlighting Ontario farmers and how they're addressing soil health on the land in their care.

Gerald Schuller grows cash crops - corn, soybeans, wheat and hay - on a combination of owned and rented land in Niagara Region. He farms with his wife and works closely with two other farmers to share field work. Most of the land he farms is heavy clay soil.

Challenges: clay soil, lack of tile drainage, much land is rented

Soil health practices: no-till, cover crops, rotation, soil testing, zone sampling

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

I farm a lot of rented land that is heavy clay, but I do a lot of custom work too, so I work a wide area. At the north end of our zone, the soil gets a bit loamier. One of the big things that is a challenge for us is that a lot of farms we work don't have tile drainage. Drainage is a key thing, it's really important for clay.

The other big challenge we have is keeping strict rotations. It is hard to grow corn on clay and to keep a strict rotation if the weather changes.

What are some of your practices to promote soil health?



NO-TILL

My motto is “tillage when necessary, but not necessarily tillage”. We no-till our soybeans and a lot of our corn. We’ve been no-tilling into clover for quite a few years on a portion of the acres. It’s a bit later in the season, but we’ve had good success with that. Some years we cut some of the clover off for feed for a local farmer with cattle. My heaviest tillage is vertical tillage with vertical tillage disc. The biggest thing is making sure the land is smooth. When we do tillage, it’s just before corn; we do a lot of no-till corn into a stale seed bed after wheat or into soybean ground. As a rule, we never plant corn on corn. I heard Horst (Bohner, soybean specialist with the Ontario Ministry of Agriculture, Food and Rural Affairs) say at Southwest Agricultural Conference that he believes tillage gives a bit of yield and I don’t think I would disagree with that, but you also have to consider the cost of doing tillage and whether it makes sense. There are a lot of extra economics that go into that.

MANURE

We have access to poultry and cattle manure. To incorporate manure means tillage, but we are starting to question whether we need to. Are there ways we can get a nice even spread and let nature take its course with it? I will do minimum tillage as late in the fall as possible and then try to get some poultry manure spread in the spring to good impact on the corn. We also do a fair bit of manure after wheat comes off and work it into the wheat ground. A lot of our land is marginal, so we are always looking at ways to improve it and if we grow wheat, we can do different things to improve not just the soil, but also the drainage.

COVER CROPS

We had gone away from clover, but we’ve been using it again for the past four to five years to help build soil structure and we’re seeing a lot of improvement in the soil. We’ve also played around with other cover crops like radishes but nothing for the last couple of years. We’re going to focus more on cover crops going forward, so we’re looking at other potential crops we could use. We normally plant 50% of our wheat acres in clover, but on the fields that we want to fix up, we want to do more cover crops. I want to no-till in the spring so do we use crops that over-winter or ones that die out like oats and peas? It’s a challenge when it’s wet in the spring.

ROTATION

Several years ago, we weren’t planting a lot of corn, more just soy and wheat. We were happy we had a rotation, and you need to be profitable, but soybeans on soybeans isn’t the answer. We always found a good response after wheat, so we started experimenting a bit with corn. We like it because it builds organic matter faster than some other crops. The fields with better rotation are improving more quickly than something that has shorter rotation.



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?

Definitely moving to no-till. Our ground can be a lot more mellow when it hasn't had tillage for a number of years, but that's only a part of the equation. Soil health takes more time if pH levels aren't good and nutrients aren't balanced. For us, an important part of improving soil is making sure soil pH is good, so we start with that when we try to fix a farm up. Over the last few years, we've also been getting more into zone testing, overlaying yield and topographical maps and working with agronomists to go out and test zones.

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

I like to talk to a lot of different people. We can learn a lot from each other and from trying different things. I like to see what other people are doing by going to the conferences and I love it when farmers are on panels because you can always pick up an idea or two. At the end of the day, we are stewards of the land and if you take care of the land, it will take care of you. Anything you can do for soil improvement is worth it.



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/>