



# DATA-DRIVEN DECISION-MAKING SUPPORTS STRIP TILL CONVERSION

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Innovation and creating a sustainable farm for future generations is at the core of what Cornelissen Farms is all about. The Lambton County family farm had its start as a dairy farm in 1953, and today the Cornelissen family raises poultry and grows row crops alongside running a greenhouse operation.

They began their transition to conservation tillage in 1987, when George Cornelissen planted his first no-till corn crop. And over a decade ago, they decided to add strip till technology, which not only let them better plan their cropping workload around their other farming activities, but has also delivered soil health benefits.

## Benefits of Strip Tillage

Strip tillage is a tool bar with row units that tills strips of soil eight to 14 inches wide using shanks, coulters or a combination of both. The tilled strip is able to warm up and dry out more quickly than the rest of the soil, and fertilizer can be banded or mixed in. The undisturbed strip helps reduce erosion and can leave the cover crop undisturbed, fostering soil health.

“Strip tillage is the perfect mixture where you’re getting that benefit of conventional tillage and getting fertilizer in place, but combined with the benefits of no-till,” says George’s son Mike Cornelissen. “It takes time to learn it but it’s a very good system that works in a broad spectrum of soils.”

## Strip Tillage Technology

The Cornelissens take a very data-driven approach to their business and have an active research trial decision-making process. Even after using strip till technology for more than a decade, they’re still making adjustments every year, he notes.

Their early focus was on getting strip till to work in their farming system and now, the goal is to boost efficiency. That means improving speed and building consistency for uniform seed beds that will allow for consistent seed depth.



Fall field work involves strip tilling with a coulter unit after harvest and the spring program is built around planting and spraying. They have done plots with spring strips, but after three years of trials, both the yields and the economics showed no benefit.

“A stale seed bed is the most economical way to go. It doesn’t yield any different so if you’re considering hitting it again in the spring, think about your costs. You’re not gaining any days in the field, and the yields are the same, so refreshing strips in the spring from what we can see has no benefit,” he says.

## Side-dressing Nitrogen

What they have noticed is that their corn strip tilled into wheat stubble is a healthy crop with a more uniform stand and yields similar to conventional tillage. It also gets off to a quicker start, he adds.

The Cornelissens don’t incorporate their nitrogen in their strip till ground. Instead, they focus on side-dressing nitrogen as quickly as possible after planting so it has time to get to the roots, which in strip till grow straighter into the ground than with conventionally planted corn.

“Change can be hard and expensive, but if it can make you more money down the road, it’s worth it,” he says. “Take your time, and take small steps.”



Mike Cornelissen is one of four Ontario farmers featured in an in-depth video series exploring strip tillage in Ontario. The videos are available at <https://www.farmfoodcareon.org/farming-and-the-environment/strip-tillage/>.

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