

How to Achieve Successful Strip-Till

It's a fact of life that change is not always easy, especially when tried-and-true methods bring solid results. But there may be room for improvement in your farming operation if you are overlooking strip-till. It's a cropping system that operations of all sizes have been trying as an alternative to conventional, minimum, and no-till methods.

Strip-till conserves water, combats erosion, facilitates faster soil warm-up, and helps alleviate soil compaction—and those are just a few of the major benefits.

The best of both worlds

Strip-till combines the benefits of conventional tillage with the benefits of no-till. As with conventional tillage methods, strip-till methods warm the soil up faster. No-till offers many of the same benefits as strip-till, but with the downside of soils that may warm more slowly in the spring, delaying planting. Because less residue covers the fields in strip-till, soils warm more quickly.

Keep the cover, conserve moisture and nutrients



Residue strips help facilitate soil warm-up, allowing you to get into the fields faster.

Typical strip-till operations maintain a 60% residue cover on fields. The 2012 drought is a perfect example of how moisture conservation benefits a crop. The residue left on the surface of the soil through the use of strip-tillage can help prevent moisture from evaporating out of the soil.

On top of this, the residue cover prevents nutrients from leaching out of the soil and increases the organic matter content of the soil. The strips provide a refuge for earthworms, which provide natural aeration within the soil.

More benefits for your soil



Strip-till prepares the soil, creating the ideal seedbed for emerging plants.

The strips of residue that are left in the field help combat erosion by keeping soil in place. When a heavy rain comes, the strips hold the soil instead of letting it wash away. Like no-till, strip-till allows you to make fewer passes through the field, helping you to save time and fuel, while also alleviating soil compaction.

The right equipment is crucial

To optimize strip-till operations, growers depend on the right equipment.

- For [residue managers](#), choose models that spread residue evenly.
- Coupling strip-till with [fertilizer application](#) is a time-saving option. Look for versatile equipment that can apply NH₃, liquid, or dry fertilizer, or a combination of these fertilizers, into the strips you've just built.
- When considering strip-till, also consider GPS technology. With GPS-aided guidance, it is much easier to make

strips day or night. And during planting, it is easier to plant in the center of the strip.¹

- A chopper or [stalk roller](#) can reduce the size of residue, which helps speed residue breakdown.
- Vertical tillage is a practice that can be paired with strip-till to improve microbe exposure and aid in residue breakdown. [Vertical tillage](#) machines are used ahead of strip-till machines to size and level the field before making strips.



It is important to use the correct equipment to ensure fertilizer is placed directly into the root zone.

Technology and strip-till

There has been an increased awareness over the past decade about the utilization of technological advances in agriculture. Variable rate fertilizer mapping can help you cut down on input costs by pinpointing needed fertilizer rates across different areas of your fields. This technology also improves placement accuracy, ensuring your fertilizer is applied right into the strips where plants can readily utilize it.

Advanced unmanned aerial vehicles (UAVs), commonly called drones, can generate 3D images that reveal patterns you cannot see from the ground. These images can provide insight to help you plan your strip-till operation, as well as herbicide or fertilizer applications, like never before. Thanks to powerful cameras, UAVs “can cover hundreds of acres in an hour and provide a birds-eye view of fields down to canopy level.”²

Making the change to strip-till

Many factors play into successful strip-till—it is a process that can be affected by residue management, fertilization, and the tillage equipment you choose. A strip-till cropping system can save time and money while producing excellent yields when growers are committed to careful management. Though change isn’t always easy, the benefits of strip-till may make it the next step for your operation.

Endnotes

1 K.M. Foley, C.C. Shock, O.S. Norberg, and T.K. Welch, “Making Strip Tillage Work for You: A Grower’s Guide,” March 2012, <http://www.cropinfo.net/Strip_Tillage_EXT_CrS_140.pdf>, accessed July 2, 2013.

2 John Dobberstein, “Drones Could Change Face Of Strip-Tilling,” May 24, 2013,

<<http://www.stripstillfarmer.com/pages/ExperiencIT/SPRE---News--Drones-Could-Change-Face-of-Strip-Tilling-May-24,-2013.php>>, accessed July 2, 2013.

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