

Definitions

Tillage Type Definitions

Conservation tillage is any cropland system that leaves at least one-third of the soil covered with crop residue after planting. Conservation tillage types include no-till/strip-till, ridge-till and mulch-till.

The **no-till** concept has evolved as technology has changed. With no-till, producers disturb only the minimal amount of soil needed to ensure a good stand and yield. Variations under the no-till umbrella include the following:

Midwest **strip-till**¹ usually involves a mole knife to till a zone approximately 10 inches wide and 4 to 5 inches high in the fall. Some combination of nutrients is usually applied at the same time. The following spring, planting occurs in the tilled strip.

Southeast **strip-till**¹ is used on the Sandy Coastal Plain soils (soils that naturally compact) in the Southeast portion of the U.S. A ripper runs about 14 inches deep ahead of or with the planter.

Vertical tillage¹ is used with a narrow ripper about 12 to 14 inches deep, usually in the fall, which causes very little surface soil disturbance. Planting occurs directly over the tilled strip.

Fluffing harrows¹ “fluff” the residue, allowing excess moisture in the seedbed to evaporate and improve planting conditions.

Other conservation tillage practices include the following:

Ridge-till involves building 4- to 6-inch high ridges during row cultivation and scraping off 1



Strip-till tool bar.



Vertical tillage tool.



Fluffing harrows.

to 2 inches of the ridge during planting.

Mulch-till is a full-width (100 percent of soil surface disturbed) tillage system that usually involves one to three tillage passes. Implements such as chisel plows, disks, field cultivators and combination tools are used.

No-till (including all variations mentioned), ridge-till and mulch-till fall under the conservation tillage umbrella.

NOT Conservation Tillage

Reduced-till systems are somewhat similar to mulch till in that they involve full-width tillage, use the same implements and may use one to three tillage trips. Reduced-till, however, leaves 15-30 percent residue on the soil surface after planting.

Intensive-till or conventional-till involve full-width tillage and may involve one, three or perhaps up to 15 tillage passes. There is less than 15 percent residue on the soil surface after planting. Moldboard plowing and/or multiple tillage trips are involved.

¹ These implements must be used properly in order to qualify as no-till. Multiple trips or excessive soil or residue disturbance (see STIR rating, page 9) may not meet the no-till criteria.

Allen County Ind SWCD

Allen County Ind SWCD

Allen County Ind SWCD