







Practice Standard 329 – NoTill/Strip Till/Direct Seed

<p>No Till</p> <p>No-Till Planter</p>		 <p>85% Soil Undisturbed</p> <p>15% Soil Disturbed</p>
<p>1 PASS Strip Till or (Zone-Till)</p> <p>Zone-Till Planter</p>		 <p>70% Soil Undisturbed</p> <p>30% Soil Disturbed</p>
<p>2 PASS Strip Till or (Zone-Till)</p> <p>70% Soil Undisturbed 30% Soil Disturbed</p> <p>Zone-Till Builder</p>	 <p>First pass make strips</p>	 <p>Zone-Till Planter</p> <p>Second pass plants</p>

Practice Standard 345 - Mulch Till

<p>Mulch Till</p> <p>Examples of full width tillage implements. Allowed for Mulch Till Practice Standard.</p>		
 <p>Rota ry Harrow</p>	 <p>Aerway</p>	 <p>Turbo-Till</p>

No- Till

Leaves the soil and crop residue undisturbed except for crop row where the seed is placed in the soil. No-Till planters disturb less than 15% of the row width. This disturbance includes soil moved in the crop row plus soil dispersed or splashed. Full benefits from a No Till system are accomplished after five continuous years of this practice.

Advantages: Maximum erosion control, conserves soil moisture, improve soil organic matter, lowest fuel and labor input costs

Management Challenges: Limited nutrient incorporation may increase dependence on herbicides, soil warming may be slower in the spring especially on poorly drained soils with heavy residue levels.

Zone- Till (Strip- Tillage)

Coulters and/or row cleaners till up to 30% of the row width leaving the remaining 70% between the rows undisturbed. Zone Tillage may involve making strips in fall or spring prior to planting.

Advantages: Excellent erosion control, conserves soil moisture, allows soil warming in the row, allows in row incorporation, reduced fuel and labor costs and allows banding of P and K.

Management Challenges: May increase dependence on herbicides.

Mulch Till (Full Width Tillage)

Chisel plows, heavy disks or secondary tillage equipment such as field cultivator or lighter disks are used to till prior to planting. Tillage operations disturb the entire soil surface (full width tillage). The objectives are to minimize tillage operations and to maximize crop residues on the surface. Aerating tools (Aerways), rotary harrows and vertical tillage tools (Turbo-Tills) are considered of full width tillage.

Advantages: Allows partial incorporation of crop residues and manure, moderate erosion control, will conserve some soil moisture when residue levels are high.

Management Challenges: Minimizing burial of crop residues and moderate erosion control especially if contour planting is not used. Moderate soil moisture loss, moderate labor and fuel costs.

Additional Considerations:

Fertilizer applications (manure and commercial fertilizer) may fall within the No-till or Strip-till standard based on the amount of soil disturbance for the type of injection system used. Consult a NRCS Soil Conservationist to advise you which system is compatible with the No-till or Strip-till standard.