

**Natural Resources Conservation Service  
Conservation Practice Standard**

**RESIDUE MANAGEMENT, MULCH TILL  
(Ac.)  
CODE 329B**

**DEFINITION**

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year round while growing crops where the entire field surface is tilled prior to planting.

**PURPOSE**

This practice may be applied as part of a conservation management system to support one or more of the following:

- Reduce sheet and rill erosion.
- Maintain or improve soil organic matter content and tilth.
- Provide food and escape cover for wildlife.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all cropland and other land where crops are grown.

This standard includes tillage methods commonly referred to as mulch tillage. It applies to tillage for annual planted crops and to tillage for planting perennial crops.

**CRITERIA**

Residue to be retained on the soil surface will be uniformly distributed on the soil surface. Combines will be equipped with spreaders capable of redistributing residue over at least 80 percent of the working width of the header. Residue will not be burned.

Tillage implements will be equipped to operate through plant residues without clogging. Planters, disks, or air seeders will be equipped to plant in residue distributed on the soil surface.

The number, sequence, and timing of tillage and planting operations will be managed to leave at least 30 percent residue cover on the soil surface after planting.

The tillage system, needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, will be determined using current approved erosion prediction technology. Partial removal of residue by means such as baling or grazing, will be limited to retain at least 30 percent residue cover after planting. Calculations will account for the effects of other practices in the conservation management system.

**CONSIDERATIONS**

Mulch till may be practiced continuously throughout the crop sequence, or may be managed as part of a residue management system which includes other tillage methods such as no-till.

Production of adequate amounts of crop residue necessary for the proper functioning of this practice can be enhanced by selection of high residue producing crops and crop varieties in the rotation, use of no-tilled cover crops, and adjustment of plant populations and row spacings.

Where improvement of soil tilth is a concern, use of undercutting tools will enhance accumulation of organic material in the surface layers.

The value of residue for wildlife habitat can be enhanced by leaving rows of unharvested grain standing at intervals across the field.

**PLANS AND SPECIFICATIONS**

Specifications for establishment and operation of this practice will be prepared for each field or treatment unit according to the criteria and considerations described in this standard. Specifications will be recorded using approved specification sheets, job sheets (approved by the state agronomist), or narrative statement in the conservation plan.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

