

**Natural Resources Conservation Service
Conservation Practice Standard**

**RESIDUE MANAGEMENT, NO-TILL, AND STRIP TILL
(Ac.)
CODE 329A**

DEFINITION

Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round, while growing crops in narrow slots or tilled strips in previously untilled soil and residue.

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.
- Conserve soil moisture.
- 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 and planting methods commonly referred to as no-till, zero till, row till, or strip till.

CRITERIA

Surface residue will be uniformly distributed on the soil surface. Where combines or similar machines are used for harvesting, they will be equipped with spreaders capable of distributing residue over at least 80 percent of the working width of the header. Where cotton pickers or similar machines are used for harvesting, the stalks will be mowed after harvest, except where flooding is a problem. Corn or grain sorghum residue will be more effective if the residue is mowed after harvest.

Residue will not be burned or disturbed by tillage operations except as follows:

Planters or drills will be equipped to plant directly through untilled residue or in a tilled seedbed prepared in a narrow strip along each row by planter attachments such as rotary tillers, sweeps, multiple coulters, or row cleaning devices.

If row cultivation for weed control becomes necessary, tillage will be limited to undercutting operations which minimize destruction of surface residue.

The amount of residue 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 baling or grazing will be limited to leave adequate amounts of residue and/or native vegetation to control soil erosion.

Seedbed preparation, planting, and fertilizer placement shall disturb no more than one fourth of the row width. On soils with a K factor of .37 or higher, soil disturbance should be held to an absolute minimum.

CONSIDERATIONS

No-till or strip till may be practiced continuously throughout the crop rotation or may be managed as part of a system which includes other tillage methods such as mulch till or reduced till.

Production of adequate amounts of crop residues 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-till planted cover crops, and row spacings.

Maintaining a continuous no-till system will maximize the improvement of soil organic matter content. Also, when no-till is practiced continuously, soil reconsolidation provides additional resistance to sheet and rill erosion.

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

The value of residues 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 statements in the conservation plan.

