

**Natural Resources Conservation Service
Conservation Practice Standard**

**RESIDUE MANAGEMENT, RIDGE-TILL
(Ac.)
CODE 329C**

DEFINITION

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops on pre-formed ridges alternated with furrows protected by crop 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 and tilth.
- Modify cool wet site conditions.
- 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 ridge till or ridge planting. It does not include no-till planting on ridges, or bedding or listing operations which bury crop residues.

CRITERIA

Following crop harvest and any secondary residue removal, residues will be maintained until planting with no additional disturbance except for normal weathering.

Where cotton is grown, 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.

Ridge height will be maintained throughout the harvest and winter season by controlling equipment or livestock traffic.

After planting, residues will be maintained in the furrows until the ridges are rebuilt by cultivation. Ridges will be rebuilt and shaped to their original height (usually 6 to 12 inches) during the last row cultivation.

Residues to be retained on the field will be uniformly distributed on the soil surface. Cultivation and planting equipment designed to operate on ridges will be used such as cultivators equipped with ridging attachments and planters equipped with ridge planting attachments such as row clearing devices and guidance systems.

The amount and placement of residue and the orientation of ridges in relation to the contour will be determined using current approved erosion prediction technology. Calculations will account for the effects of other practices in the conservation management system. Partial removal of residue by means such as baling or grazing will be limited to retain adequate amounts of residue and/or native vegetation needed to control soil erosion.

Where ridges direct runoff to areas of concentrated flow, these areas will be protected by grassed waterways, water and sediment control basins, underground outlets or other suitable practices.

Planting and fertilizer placement will disturb no more than one third of the row width. Soil and residue removed from the top of the ridge will be moved into the furrow between the ridges.

After planting the top of the ridge will be maintained at least three (3) inches higher than the furrow between the ridges.

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 ridge will be shaped to prevent erosion along the row by directing runoff to the protected furrow area.

CONSIDERATIONS

Burning of plant residue or excessive removal of residue by such means as baling or grazing often produces negative impacts on the resources. These activities should not be performed without full evaluations of impacts on soil, water, animal, plants and air resources.

Ridge till may be practiced continuously throughout the crop rotations or may be managed as part of a residue management system which includes other tillage and planting methods such as mulch till or no-till. In mixed tillage systems, ridges must be periodically reformed.

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

Where improvement of soil tilth is a concern, continuous ridge planting will allow organic material to accumulate in the surface horizon. Reconstruction of ridges in the same row area year after year will maximize organic matter buildup and biological activity in the row.

Soil compaction may be reduced by controlled traffic where wheel traffic from all operations is limited to the area between designated rows and traffic areas.

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 statement in the conservation plan.

