JOB SHEET

Ridge Till Residue Management

Oklahoma Conservation Practice Job Sheet ***329C***

USDA Natural Resources Conservation Service (NRCS) **May, 2003**

Landowner_____

WHAT IS RIDGE TILL RESIDUE MANAGEMENT?
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

- Reduce sheet and rill erosion
- Reduce wind erosion
- Maintain or improve soil organic matter content
- Manage snow to increase plant-available moisture
- Modify cool wet site conditions
- Provide food and escape cover for wildlife

HOW IT HELPS THE LAND
Ridge till residue management provides for the management of crop residue year round to protect the soil against wind and water erosion. It also provides a source of organic material for improving soil tilth.

WHERE THE PRACTICE APPLIES
This practice applies to all cropland and other land where crops are planted on pre-formed ridges and ridges are maintained by row cultivation after planting. It does not include no till planting on ridges or bedding or listing operations that bury residues.

WHERE TO GET HELP
For assistance with this practice, contact your local Natural Resources Conservation Service office or your local Conservation District office.

APPLYING THE PRACTICE
Following crop harvest, residues should remain on the surface until planting.

Crop residues left on the field after harvest should be uniformly distributed on the soil surface. Combines should be equipped with straw spreaders capable of distributing residue over at least 80 percent of the working width of the header

Ridge height should be maintained throughout the harvest and winter seasons by controlling equipment or livestock traffic on the ridges.

After planting, residues should be maintain in the furrows until the ridges are rebuilt by cultivation. Ridges will be rebuilt to their original height and shape during the last row cultivation operation.

Cultivation and planting equipment designed to operate on ridges shall be used, such as cultivators equipped with ridge-building attachments, and planters equipped with ridge-planting attachments such as row-cleaning devices and guidance systems.

Planting and fertilizer placement should disturb no more than one-third of the row width. Any soil or residue removed from the top of the ridge should be moved into the furrow between the ridges so that it can be used to rebuild the ridges.

When ridges direct runoff to areas of concentrated flow where erosion can occur, stable outlets with erosion resistant grass or conservation practices such as grassed waterways, water and sediment control basins, underground outlets, or any other suitable practice needs to be installed to protect these areas.

CONSIDERATIONS

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

Ridge till may be practiced continuously throughout some crop sequences, or may be managed as part of a residue management system that includes other tillage and planting methods such as mulch till or no till. In mixed systems, ridges must be periodically re-established.

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 cover crops, and adjustment of plant population and/or row spacing.

Since row cultivation is typically used for weed control and to reform ridges, this practice has the potential to reduce herbicide requirements.

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 or traffic areas.

Field borders planted to permanent vegetation can assist in unobstructed turning, elimination of end rows and in providing travel lanes for farming operations.

Not harvesting crop rows at intervals across the field can enhance the value of residue cover and food for wildlife.