

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**RESIDUE MANAGEMENT, SEASONAL**

(Acre)  
CODE 344

**DEFINITION**

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during part of the year, while growing crops in a clean tilled seedbed.

**PURPOSE**

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

1. Reduce sheet and rill erosion
2. Provide food and cover for wildlife

**CONDITIONS WHERE PRACTICE APPLIES**

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

This standard includes residue management methods practiced during the part of the year from harvest until residue is buried by tillage for seedbed preparation.

**CRITERIA**

General Criteria Applicable to all Purposes Named Above

Loose residue to be retained on the field shall be uniformly distributed on the soil surface. Where combines or similar machines are used for harvesting, they shall be equipped with spreaders capable of redistributing residue over at least 80 percent of the working width of the header.

Residue shall not be burned.

Additional Criteria Applicable to Sheet and Rill Erosion for Non-Highly Erodible Cropland

If partial removal of residue by means such as baling or grazing occurs, enough residue shall be maintained to reduce erosion to within the soil loss tolerance (T). The remaining residue shall be maintained on the surface through periods when

sheet and rill erosion has the potential to occur, or until planting, whichever occurs first.

The amount of residue needed and duration of the management period shall be determined using current approved erosion prediction technology. Calculations shall account for the effects of other practices in the conservation management system.

Any tillage that occurs during the management period shall be limited to methods which leave residue on the surface and maintain the planned cover conditions.

In Louisiana, a minimum of 30 percent cover of any combination of crop remains and/or volunteer vegetation shall be visible/measurable on the soil surface from harvest until the end of the residue management period. Following are the earliest dates for beginning seedbed preparation:

Rice	January	15
Corn	February	15
Grain Sorghum	February	15
Cotton	February	15
Soybeans	February	15
Sugarcane	February	15
Oats	September	1
Wheat	September	1
Rye	September	1
Ryegrass	September	1

Since some crops produce large amounts of non-fragile residue and some implements leave more residue on the soil surface than others, a light soil disturbing activity may be done after harvest as long as 30 percent cover is visible/measurable immediately following soil disturbance.

Where bedding is desired, it shall be done simultaneously with seedbed preparation. However, for cotton, rows may be hipped around cotton stalks after harvest if the stalks are shredded immediately after hipping and as long as the 30 percent ground cover is maintained and is measurable immediately after the soil disturbing activity.

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

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Where fall tillage is performed on riceland and less than 30 percent cover is left on the soil surface following tillage, levees should be closed immediately and remain closed until 30 percent cover is provided by volunteer vegetation. Once a 30 percent cover of volunteer vegetation is established, levees may be reopened and the cover shall be managed until the above specified date.

#### Additional Criteria for Highly Erodible Cropland

Delayed seedbed preparation is an effective method of substantially reducing sheet and rill erosion on cropland for complying with the Highly Erodible Land Conservation provisions of the 1985 Food Security Act, as amended.

In delayed seedbed systems, crop residue and volunteer vegetation shall be maintained on the soil surface until 3 weeks before the succeeding crop is planted. A minimum of 30% ground cover from either crop residue, volunteer vegetation or cover crops shall be visible/measurable on the soil surface from harvest of the previous crop until approximately 3 weeks prior to planting. All other criteria contained in this standard apply to delayed seedbed systems except the dates listed under Additional Criteria for Non-Highly Erodible Cropland.

In cases where cover crops or volunteer vegetation produce large amounts of biomass, which might not decompose during the 3 week period, it is permissible to kill the vegetation with herbicides earlier, as long as the soil disturbing activities are delayed until 3 weeks prior to planting.

#### Additional Criteria to Provide Food and Cover for Wildlife

The amount of residue, height of stubble, and length of management period necessary for meeting habitat requirements for the target species or wildlife populations shall be determined using the Louisiana Wildlife Habitat Evaluation for Resource Management Systems.

Tillage shall be delayed until the end of the management period to maintain the food and cover value of the residue.

## **CONSIDERATIONS**

### Residue Removal

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

### Residue Amounts

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, by the use of cover crops and native vegetation, and by adjustment of plant populations and row spacing.

When planting on a clean seedbed, exposure to erosion can be minimized by completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting.

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

### Plans and Specifications

Specifications shall be prepared for each field according to the criteria and O&M described in this standard and recorded in narrative statements in the conservation plan. Agronomy Job Sheet No. 12 provides additional information on managing crop residues.

Residue amounts shall be determined using the line transect method. Directions for estimating residue cover using the line transect method can be found in the National Agronomy Manual (Subpart E - Crop Residues) "Estimating Crop Residue Cover," pages 503-21 through 503-25.

Residue amounts shall be recorded using narrative statements in the conservation plan or either of the Crop Residue Measurement Worksheets in Subpart E of the National Agronomy Manual.

## **OPERATION AND MAINTENANCE**

Information concerning retention and burial of crop residue can be found in the National Agronomy

Manual (Subpart E – Crop Residues, Table No. 3, “Residue Retention – Burial, Implement Operating Data,” pages 503-16 through 503-20).