

**UNITED STATES DEPARTMENT OF AGRICULTURE  
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 a specified period of the year, while planting annual crops on a clean-tilled seedbed, or when growing biennial or perennial seed crops.

**PURPOSES**

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.
- ◆ Reduce off-site transport of sediment, nutrients or pesticides.
- ◆ Reduce soil erosion from wind.
- ◆ Provide food and escape cover for wildlife.

**CONDITIONS WHERE PRACTICE APPLIES**

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

Seasonal residue management includes managing residues of annual crops from harvest until the residue is:

- Buried by tillage for seedbed preparation
- Removed by grazing, or
- Mechanically removed

It also includes the management of residues from biennial or perennial seed crops from the time of seed harvest until regrowth begins the next season.

**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 residues over at least 80 percent of the working width of the header.

Residues shall not be burned.

A minimum of 50 percent of the soil surface shall be covered with crop residue from harvest until 45 days prior to planting of the next crop. (Additional crop residue is often needed to reduce soil erosion levels to the soil loss tolerance ("T") value or to meet other resource objectives.

**Additional Criteria to Reduce Sheet and Rill Erosion**

The amount of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective, shall be determined using current approved erosion prediction technology. Partial removal of residue by means such as baling or grazing, shall be limited to retain the amount needed. 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. 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 that leave residue on the surface and maintain the planned cover conditions.

### **Additional Criteria to Reduce Soil Erosion From Wind:**

Partial removal of residue by means such as baling or grazing shall be limited to retain the amount needed to reduce wind erosion damages. The remaining residue shall be maintained on the surface through periods when soil erosion by wind has the potential to occur, or until planting, whichever occurs first. 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.

### **Additional Criteria to Reduce Off-site Transport of Sediment, Nutrients or Pesticides.**

The amount and orientation of residue required to reduce off-site movement of agricultural chemicals during the specified period shall be determined using the appropriate assessment tool(s) [Windows Pesticide Screening Tool (WIN-PST), Phosphorus Index (PI), Leaching Index (LI), erosion prediction technologies, or other recognized tools] for the site conditions.

### **Additional Criteria to Provide Food and Escape Cover for Wildlife:**

The amount of residue, height of the stubble, and length of the management period necessary for meeting habitat requirements for the target species or wildlife population shall be determined using an approved habitat evaluation procedure.

Residues shall not be removed unless it is determined by the habitat evaluation procedure that such removal will not adversely affect habitat values.

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

### **CONSIDERATIONS**

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, animal, plant, and air resources.

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 by adjustment of plant populations and row spacing.

When planting in a low residue seedbed, completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting can minimize exposure to erosion; and in limited moisture areas, can conserve moisture for germination.

Leaving standing stubble taller than the six inch minimum will increase the amount of snow trapped.

Leaving one or two rows of unharvested crop standing at intervals across the field can enhance the value of residue for wildlife habitat. Unharvested crop rows have the greatest value when they are adjacent to other cover types, such as grassy or brushy areas or woodland.

Follow NRCS state policy for considering cultural resources during planning and maintenance.

### **PLANS AND SPECIFICATIONS**

Specifications for establishment and operation of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and O&M described in this standard.

Specifications shall be recorded using approved certification sheets, guide sheets, narrative statements in the conservation plan, or other acceptable documentation methods.

Residue amounts will be determined using the line transect method as described in the National Agronomy Manual.

### **OPERATION AND MAINTENANCE**

All pesticides used in residue management shall be labeled for their intended use and recommendations will be in accordance with the directions and guidelines of the Alabama Cooperative Extension System.

**REFERENCES**

ALABAMA PEST MANAGEMENT HANDBOOK:  
ACES, Current Edition

SOIL TEST FERTILIZER  
RECOMMENDATIONS FOR ALABAMA;  
AUBURN UNIVERSITY, AGRONOMY AND

SOILS DEPARTMENT, Publication # 178, May,  
1994

NATIONAL AGRONOMY MANUAL

REVISED UNIVERSAL SOIL LOSS  
EQUATION; Section I, FOTG