

**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.

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.
- 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 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.

Residues shall not be burned.

Additional Criteria to Reduce Sheet and Rill Erosion

The amount of residue needed to reduce erosion within acceptable soil loss 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.

Any tillage that occurs during the management period shall be limited to methods which leave a minimum of 30% of soil surface covered by residue evenly distributed on the surface between harvest and spring planting. (Appendix 1)

Corn or sorghum stalks may be shredded or small grain stubble may be clipped when pest control is needed, provided adequate amounts of residue are left on the soil surface for protection.

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 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 the Wildlife Upland Habitat Management Standard (645).

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resource Conservation Service.</p>

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.

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. (See Appendix 1 and current Penn State Agronomy Guide)

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 crop standing at intervals across the field.

PLANS AND SPECIFICATIONS

The following information will be included in the specifications:

- Percent residue cover
- Acceptable tillage operation(s) and timing
- Acceptable grazing period (if applicable)

OPERATION AND MAINTENANCE

Protect residue from unmanaged livestock access.

APPENDIX 1
Residue Management Seasonal
Code 344

Guidelines For Estimating Amounts Of Residue By Yield Of Crop

Corn	60	pounds of residue per bushel of grain
Wheat	90	pounds of residue per bushel of grain
Oats	60	pounds of residue per bushel of grain
Barley	70	pounds of residue per bushel of grain
Rye	90	pounds of residue per bushel of grain
Soybeans	90	pounds of residue per bushel of grain
Sorghum	60	pounds of residue per bushel of grain

**Guidelines For Estimating Reduction In Crop Residue Left On Soil Surface
After Each Pass Over The Field With Tillage Or Planting Equipment**

<u>Implement</u>	<u>Percent Reduction in Soil Surface Residue</u>
Moldboard Plow	>90
Offset disk 24-inch disk blades	60-80
Chisel plow with twisted shanks	50-60
Chisel plow with straight points	30-50
Tandem disk	40-50
Field Cultivator	30
Paraplow	20-30
V-Ripper or subsoiler	20-30
Ridge Till Planter	20-30
No-till Planter	>10