

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.
- Reduce soil erosion from wind.
- 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 equipment 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.

Additional Criteria To Reduce Sheet And Rill Erosion

The amount of residue needed to reduce erosion within the soil loss tolerance (T) or other planned soil loss objective meeting quality criteria in Section III of the Field Office Technical Guide (FOTG), shall be determined using the Revised Universal Soil Loss Equation (RUSLE), in the Field Office Computing System (FOCS) or Florida Agronomy Field Handbook (FAFH).

Residue calculations shall account for the effects of other practices in the conservation management system.

Partial removal of residue by means such as baling or grazing shall be limited to retain the amount of residue 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.

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

Additional Criteria To Reduce Soil Erosion From Wind

Crops shall be selected that produce adequate residue, at the appropriate time, to control erosion to within the soil loss tolerance (T), crop tolerance (cT), or other planned soil loss objective.

The amount of residue needed shall be determined using current approved wind erosion prediction technology. Procedures are found in the FAFH and FOCS, Wind Erosion Equation (WEQ).

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service or visit our website at www.seweb.ga.nrcs.usda.gov/fl/.

Calculations shall account for the effects of other practices in the conservation management system.

Partial removal of residue by means such as baling or grazing shall be limited to the amount needed to meet the planned objective. 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.

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

Additional Criteria To Provide Food And Cover For Wildlife

Residue height, amount, and time period shall be determined using the habitat evaluation procedures found in the National Biology Manual (Florida Amendment, Part 519).

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

Selection of crops will be consistent with Management For Wildlife, published by Florida NRCS, 1979.

CONSIDERATIONS

Excess removal of plant residue by baling or grazing often produces negative impacts on resources. The 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 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.

Moisture for germination can be increased by completing tillage and planting in a single operation, or by performing primary tillage no more than three days before planting.

If Residue Management, practice standard Code 329A, B, or C is planned for the following year crop, then adequate residue should be left to meet the minimum required for that practice standard.

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

Selection of crops for forage value may increase the value for livestock feed.

Increased residue will effect water quality and quantity by increasing infiltration and decreasing runoff. Surface water quality will benefit from reduced runoff and reduced erosion. Greater infiltration provides more water in the soil profile for plant use.

Increased infiltration will also increase the chance of nutrient leaching.

Plant production will benefit from increased organics and moisture in the soil.

Soil tilth and structure is improved with increased amounts of residue.

Air quality will be benefited by maintaining ground cover on the surface especially during the critical wind erosion period(s).

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 Operation & Maintenance described in this standard.

Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation. Examples of these records are found in the FAFH.

After harvest, leave crop residues undisturbed or shred, chop or lightly disk only, leaving at least 30 percent ground cover on the soil surface.

If the crop is harvested for silage (corn or sorghum) or baled and removed (soybeans or peanuts), or if a crop failure results in an insufficient amount of residue being produced, a cover crop must be planted that will provide sufficient ground cover to achieve the purpose of the practice.

Crop residues, from either last year's crop or from cover crops, will remain on the surface until seedbed preparation begins for the next crop.

OPERATION AND MAINTENANCE

No operation and maintenance requirements have been identified for this practice.

REFERENCES

Section III, FOTG
Florida Agronomy Field Handbook
Management For Wildlife, 1979, Florida NRCS
Field Office Computing System
National Biology Manual