

**U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NEW YORK CONSERVATION PRACTICE GUIDELINE**

**RESIDUE MANAGEMENT; NO-TILL AND STRIP TILL,
MULCH TILL, AND
RIDGE TILL**

(ACRE)

CODES 329, 345 and 346

REFERENCES

National Handbook of Conservation Practices - Codes 329 - Residue Management, No-till and Strip Till, 345 - Mulch Till, and 346 - Ridge Till

Commonly Associated Processes or Practices

The following conservation practices are commonly used in conjunction with this practice to address natural resource concerns and opportunities in New York. This does not imply that any or all of the listed practices must be included or that others may not be included in a conservation management system (CMS). Consult Section III of the Field Office Technical Guide for assistance in developing CMS.

Note: To determine whether a National or New York Conservation Standard applies to this and any other associated practices, check the following website: <http://www.ny.nrcs.usda.gov> Click on the "eFOTG" icon, and look for the Conservation Standards in Section IV.

Table A: Commonly Associated Processes or Practices

Number	Name	Job/Engineering Sheets
NY312	Waste Management System	
324	Chiseling and Subsoiling	
328	Conservation Crop Rotation	
330	Contour Farming	
340	Cover Crop	NY Jobsheet 16
344	Residue Management, Seasonal	
362	Diversion	NY ENG 22 and 23
412	Grassed Waterway	NY ENG 24 and 25, and/or 24A and 25A
585	Stripcropping	
590	Nutrient Management	
595	Pest Management	
600	Terrace	
606	Subsurface Drainage	NY ENG 28 and 29
607	Surface Drainage, Field Ditch	
633	Waste Utilization	

Conservation practice guidelines are reviewed periodically, and updated if needed. To obtain the most current version of this practice guideline, contact the Natural Resource Conservation Service.

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645	Upland Wildlife Habitat Management	
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Other References

1. RUSLE Manual and Software
2. National Agronomy Manual
3. New York Field Office Technical Guide – Agronomy Technical Reference No. 56. “Crop Residue Management To Reduce Erosion and Improve Soil Quality – Appalachia and Northeast”. USDA-ARS, Conservation Research Report No. 41. 1995.
4. Cornell Guide for Integrated Field Crop Management
5. Commercial References
 - 5.1. Seed Manual
 - 5.2. Pesticide Guides
6. Technical Specialists
 - 6.1. State Agronomist
 - 6.2. Area Resource Conservationist
 - 6.3. Cornell Cooperative Extension County Field Crop Agent
7. Equipment Manufacturer's Publications
8. NRCS - Engineering Field Handbook (EFH). Although there are no applicable sections for the 329, 345 and 346 standards, there may be a need to consult the appropriate EFH chapters, standards, specifications, guidelines, and job sheets for any associated practices.

CULTURAL RESOURCES

Cultural resource reviews will be conducted for all ground disturbing practices, components, or other activities, as per the State Level Agreement between NRCS and the New York State Historic Preservation Officer.

INVENTORY AND EVALUATION

1. Identify landowner/operator cropping goals and objectives.
2. Identify watershed and/or water quality objectives.
3. Determine soil types and fertility levels (soil test including pH).
4. Calculate current soil loss from all sources (sheet, rill, concentrated flow, wind).
5. Calculate percent (%) and distribution of residue to be expected.
6. Assess the ability of harvest machinery to distribute crop residue material as stated in the standard.

PLANNING AND DESIGN PROCEDURES

1. This is an agronomic management practice and does not require a physical layout. Associated practices included as a part of a Conservation Management System (CMS) may require field layout. Refer to applicable guidelines for associated practices.
2. Prepare plan maps with delineated fields, acres, land use, tract number(s), field number(s), highly erodible land and wetland status.

3. Obtain and utilize the soil maps and descriptions for the planned residue management system. Additional information can be found by referring to the Forage Suitability Groups for the soils found on site.
4. Review crop rotations to determine that the proposed tillage system and the resultant residue management techniques are compatible with landowner objectives, management, equipment, and forage needs.
5. Determine the residue type, amount, and height (as applicable), and the length of the management period required accruing the natural resource benefits as stated in the standard. Refer to New York Field Office Technical Guide Agronomy Technical Reference No. 56. "Crop Residue Management To Reduce Erosion and Improve Soil Quality – Appalachia and Northeast" Chapter 10, Pages 45-53 for residue planning and estimation guidance.
6. For 329C, or where there are contour strips, contour buffer strips, contour farming, or cross wind trap strips, align baseline and strip width to fit equipment and be certain that measured slope length is given adequate consideration in RUSLE.
7. Identify and treat all concentrated flow areas that may threaten residue stability and retention.
8. If post-harvest residue amounts are altered by baling flail chopping, or grazing, conduct residue transects to determine the percent residue remaining and recalculate the resulting soil loss based on the remaining residue.
9. Determine the need for additional practices required to meet resource concerns, management objectives, and landowner needs.

PERMITS AND NOTIFICATIONS

All permits, easements, and rights-of-way are the responsibility of the landowner as advised by their Technical Professional. Completion of this practice does not require subsurface disturbance below the tillage depth.

PRACTICE INSPECTION

1. The practice inspection will be in accordance with the practice being installed.
2. Calculate residue amounts after planting using the line-transect method.
3. Benchmark this practice with respect to the rotation in the conservation plan.
4. Residue shall not be left in windrows.
5. Any post harvest tillage or soil treatment shall be limited to methods that leave adequate residue cover on the surface and maintain the planned cover conditions.
6. Follow-up with the landowner annually to ensure that the practice is meeting his/her needs and expectations
7. Make plan adjustments as necessary.

DOCUMENTATION REQUIRED

1. Record notes for implementation in the Cooperator Assistance Notes (NRCS-CONS-6) or similar job log. This should also include the location of the transects, and the residue types and quantities found.
2. Document amounts applied and year applied on the NRCS-CONS-68.

REPORTING

Enter all documentation on the Conservation Plan (NRCS-CPA-68), Conservation Assistance Notes (NRCS-CPA-6/6A) and the contract document (NRCS-LTP-11), if applicable.

Report the practice and applicable components in the NRCS progress reporting system. Be certain to report benefits for all applicable resources and resource concerns as allowed in the NRCS progress reporting system.

OPERATION AND MAINTENANCE

No operation and maintenance (O&M) requirements have been identified for this practice.

REFERENCES

Conservation Technology Information Center (CTIC)

<http://www.ctic.purdue.edu/CTIC/CTIC.html>

National Agronomy Manual

http://policy.nrcs.usda.gov/scripts/lpsiis.dll/M/M_190_NAM.htm