

Residue & Tillage Management – Reduced Till

Virginia Conservation Practice Job Sheet

345



Definition

Managing crop residue on the soil surface while limiting soil-disturbing activities in systems where the field surface is tilled prior to planting.

Conditions Where Practice Applies

Includes full-width tillage by operations such as chisel plowing, field cultivating, disking, or vertical tillage. Also includes some systems with no full-width tillage, but that do not fully meet the criteria for the VA 329 Standard for Residue and Tillage Management – No Till.

Criteria Applicable to All Purposes

Residues shall not be burned.

Residues shall be uniformly distributed.

No primary inversion tillage (moldboard plows or substantively similar tools).

Reduced till crops fall into two categories based on extent and type of soil disturbance:

1. Reduced-till (strip till / ST):

No-full width tillage, but too much soil disturbance to qualify for VA 329 No Till. Tillage in strips or slots only, no wider than one third (33%) of the row width. Multiple strip-till passes and/or post-plant row cultivation allowed. Soil Tillage Intensity Rating (STIR) value for crop 40 or less. Rule of thumb: tillage in strips or slots only that also leaves at least

30% residue after planting will achieve STIR 40 or less.

2. Reduced till (mulch till / MT):

No primary inversion tillage (e.g., no moldboard plows or similar allowed) allowed. STIR value for crop 80 or less. Rule of thumb: any combo of three or fewer passes with non-inversion tools that also leaves at least 30% residue after planting will achieve STIR 80 or less. Examples: chisel+disk+plant; disk+disk+plant; rip+vertical till (“turbo till")+plant; etc.

Additional Criteria to Reduce Soil Erosion/Particulate matter

Immediately after planting, soil surface must be protected by an overall average of at least 30% raindrop-intercepting residue cover.

Planners may adjust this target residue level up or down based on evaluation of cropping system with erosion prediction technology. Document calculations if residue below 30% is planned.

Additional Criteria to Improve Soil Quality and/or Reduce Energy Use

Immediately after planting, soil surface must be protected by an overall average of at least 60% raindrop-intercepting residue cover.

Planners may adjust this target residue level up or down based on evaluation of cropping system with applicable soil organic matter trend or energy prediction technology. Document calculations if residue below 60% is planned.

Additional Criteria to Conserve Plant-Available Moisture

Immediately after planting, soil surface must be protected by an overall average of at least 60% raindrop-intercepting residue cover.

NOTE: This summary does not address all requirements and considerations in the VA Reduced Till Conservation Practice Standard (VA-345). Consult the Conservation Practice Standard for further details.

General Information	
Client: _____	County: _____
Field Office: _____	Contract #: _____
Farm #: _____	Tract #: _____
Field # and acreage: _____	

Client's Purpose(s) (check all that apply)
<i>Note: Some purposes trigger additional requirements to include in Specifications – see page 1 or Standard for details.</i>
<input type="checkbox"/> Reduce sheet, rill and wind erosion
<input type="checkbox"/> Reduce tillage induced particulate emissions
<input type="checkbox"/> Maintain or increase soil quality and organic matter content
<input type="checkbox"/> Reduce energy use
<input type="checkbox"/> Increase plant-available moisture

Practice Specifications
Follow all specifications and recommendations below for practice implementation.
<u>General Criteria Required by Standard in All Cases for Reduced till Crops</u>
<ol style="list-style-type: none"> 1. Residue shall not be burned and shall be uniformly distributed. 2. No full-width inversion tillage (moldboard plows or substantively similar tools) shall be used. 3. Soil disturbance shall be limited as follows: <ol style="list-style-type: none"> a. For reduced till (strip till / ST) crops: No full width tillage; tillage in strips or slots only that are no more than 1/3 of row width; multiple passes and row cultivation allowed; STIR value of 40 or less. b. For reduced till (mulch till / MT) crops: Limited full width tillage allowed; STIR value of 80 or less.
<u>List and/or Description of Planned Reduced Till Crops & Extent of Soil Disturbance Allowed</u>
<i>Specify which crops will be reduced till (ST) or reduced till (MT). Describe the extent and type of soil disturbance allowed. Consider using and attaching Cropping System Specification Sheets to describe crop rotation and timing/frequency of reduced-till crops (see VA NRCS Tech Note for Cropping System Spec Sheet document).</i>
<u>Additional Criteria Required by Standard – Minimum % Cover</u>
<i>Consult page 1 or Standard for guidance. Refer to attached Cropping System Specification Sheet if needed. Specify above if different residue targets required for different reduced till crops in rotation.</i>

Immediately after reduced-till planting (from planting until two weeks after), soil must be protected by residue cover of at least:

%

Additional Site-specific Recommendations

List any additional recommendations related to tillage, residue management, or complementary practices (crop rotation, cover crop, etc.) to achieve conservation objectives. Refer to attached Cropping System Specification Sheet if needed.

Operation & Maintenance (O&M)

Carry out the following to ensure that the planned mulch-till practice functions as intended after initial implementation.

Minimum O&M Requirements:

Evaluate crop residue quantity and distribution for each crop to ensure planned residue targets are being achieved and adjust management as needed.

If water or wind cause residue movement and uneven distribution, spread residue as needed prior to planting so it does not interfere with planter operation.

Additional O&M Recommendations

Provide any additional practical guidance for actions to ensure the long-term effectiveness of practice.

Planner Certification

The Reduced Till management practice planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 345.

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Signature Title Date

Certification of Practice Completion

The Reduced Till management practice planned in this job sheet has been completed according to Virginia NRCS specifications (indicate in Practice Specifications any changes to planned activities and acreage).

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Signature Title Date

