**alliance practice worksheet**

virginia

RESIDUE AND TILLAGE MANAGEMENT, NO TILL (329)

*The conditions and specifications below are adapted from the Natural Resources Conservation Service. Producers who are installing these practices under the Alliance will use the conditions and implementation guides below but are exempt from NRCS verification and certification. Completing the Purposes and Practice Specifications on this document is sufficient to self-verify practice installation and completion.*

# Farm Info

|  |  |
| --- | --- |
| Producer Name |  |
| County (Farm Location) |  |
| FSA Farm Number |  |
| FSA Field Number(s) |  |
| FSA Tract Number(s) |  |
| Practice Status:*If a practice has not yet been implemented, select Planned**If a practice has been implemented, select Applied* | [ ]  Planned | [ ]  Applied |
| Planned Date of IMPLEMENTATION: | Date Practice was APPLIED: |

# PRACTICE: residue and tillage management, no till (329)

**DEFINITION**: Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.

**MINIMUM REQUIREMENTS FOR RESIDUE AND TILLAGE MANAGEMENT, NO TILL (329):**

<https://efotg.sc.egov.usda.gov/api/CPSFile/544/329_VA_CPS_Residue_and_Tillage_Management_No_Till_2017>

**This practice applies to all croplands.**

# GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

* Residue will not be burned.
* All residues will be uniformly distributed over the entire field.
* No full-width tillage is allowed during the time interval from harvest/termination of the previous crop until harvest/termination of the NT crop. The only soil disturbance allowed during this time interval is tillage in strips and slots. Tilled strips must be no wider than one third (33%) of row width.
* Acceptable soil disturbance includes stand-alone pre-plant strip tillage or other tillage in strips and slots (e.g., minimum disturbance subsoiling) operations and the planting operation.
* The Soil Tillage Intensity Rating (STIR) associated with any NT crop must be 20 or less.

# 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 (SCI) or energy prediction technology. Document calculations if residue below 60% is planned.
* Use the following to guide interpretation of SCI:
	+ A system predicted to maintain total organic matter should have score of 0.00 or greater.
	+ A system predicted to improve soil organic matter should have score of +0.25 or greater.
* Use the following for energy use assessment:
	+ Plan residue targets below 60% only if a drop in energy use of at least 25% compared to the baseline condition can be achieved.

# 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 No Till Conservation Practice Standard (VA- 329). Consult the Conservation Practice Standard for further details.*

# PRODUCER PURPOSE(S)

*Check all that apply.*

|  |
| --- |
| [ ]  Reduce sheet, rill and wind erosion and excessive sediment in surface waters |
| [ ]  Reduce tillage-induced particulate emissions |
| [ ]  Reduce energy use |
| [ ]  Maintain or increase soil health and organic matter content |
| [ ]  Increase plant-available moisture |

# PRACTICE SPECIFICATIONS

*Follow all specifications and recommendations below for practice implementation.*

**GENERAL CRITERIA REQUIRED BY STANDARD IN ALL CASES FOR NO-TILL CROPS**

1. Residue will not be burned and will be uniformly distributed.
2. All tillage must be in strips and slots less than one-third of row width.
3. The Soil Tillage Intensity Rating (STIR) value for any NT crop must be 20 or less *(see Standard for guidance on STIR determinations)*.

**LIST AND/OR DESCRIPTION OF PLANNED NO-TILL CROPS & EXTENT OF SOIL DISTURBANCE ALLOWED**

*Consider using and attaching Cropping System Specification Sheets to describe crop rotation and timing/frequency of no-till crops (see VA NRCS Tech Note for Cropping System Spec Sheet document).*

|  |
| --- |
|  |

**ADDITIONAL CRITERIA REQUIRED BY STANDARD – MINIMUM % COVER**

Refer to page 1 or Standard for details. Refer to attached Cropping System Specification Sheet if needed. Specify above if different residue targets required for different reduced till crops in rotation.

|  |  |
| --- | --- |
| Immediately after NT planting (from planting until two weeks after), soil surface must be protected by residue cover of at least: | **%** |

# RECOMMENDED OPERATION & MAINTENANCE (O&M)

*Carry out the following to ensure that the planned NT practice functions as intended after initial implementation.*

**MINIMUM O&M RECOMMENDATIONS**

* Evaluate crop residue quantity and distribution for each crop to ensure planned residue targets are being achieved and adjust management as needed.
* Limited tillage may be allowed after or before NT crops to level ruts from harvesting. The amount of disturbance allowed will be determined on a case-by-case basis by NRCS field personnel. In no case may more than 10% of the field be tilled for this reason.
* If water or wind causes residue movement and uneven distribution, spread residue as needed prior to planting so it does not interfere with planter operation.

# PRODUCER SELF-CERTIFICATION

By signing below, I certify that I have reviewed all required documentation, and the information outlined above meet all criteria and requirements as defined in the Natural Resources Conservation Service **RESIDUE AND TILLAGE MANAGEMENT, NO TILL (329)** standard and specifications for the identified acres or animal units.

Further, I agree that:

[ ]  I have not received a payment for this conservation practice on these fields and acres from another USDA Conservation Program or another USDA Partnership for Climate-Smart Commodities grant partner.

[ ]  I will retain all practice documentation to support this certification for up to 12 months following practice adoption and will provide this documentation to the Alliance if selected for a spot check. *(Up to 10% of enrolled Alliance participants will be randomly selected for spot checks).*

|  |  |
| --- | --- |
| **Producer Name:** |  |
| **Date:** |  |