



Mulch Till (345) – High Intensity

Residue and Tillage Management – Dry Cropland Conservation Practice Job Sheet

ID- 345, JS- 07

Revised January 2010



What is a High Intensity Mulch-Till System?

Mulch-till systems manage the amount, orientation, and distribution of crop and other residue on the soil surface year round, while growing crops where the entire soil surface is tilled prior to or during the planting operation. Residue is partially incorporated using chisels, sweeps, field cultivators, or similar implements. Residue management is used in conjunction with crop rotation, and other practices needed on a site-specific basis, to address erosion and water quality concerns while meeting the landowner's objective.

Purpose

The enhanced mulch-till system is designed to accomplish the following conservation purposes:

- Reduce water erosion
- Increase soil organic matter and soil tilth
- Improve water quality

Practice Specifications

This practice applies to dry cropland. It includes tillage methods commonly referred to as mulch tillage or chiseling and disking. It also includes some planting operations such as hoe drills, air seeders and "no-till" drills that disturb a large percentage of the soil surface during the planting operation. All residues shall be uniformly distributed over the entire field. Residue shall not be burned.

The amount of randomly distributed surface residue needed and the amount of surface soil disturbance allowed to reduce erosion to the planned soil loss objective (at or below "T") shall be determined using RUSLE2 (sheet and rill erosion). Calculations shall account for the effects of other practices in the management system.

The planned crop rotation and tillage system must provide a rotational SCI of 0.4 or greater, and an average annual STIR value of no greater than 60 for the rotation and an annual STIR value no greater than 80. 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 in the rotation, use of cover crops and adjustment of plant populations and row spacing.

Mulch till may be practiced continuously throughout the crop sequence or may be managed as part of a residue management system that includes other tillage methods such as no till.

EQIP Requirements

Producers eligible for this practice have an identified surface water quality and/or soil erosion concern. The producer must maintain the practice for the length of the rotation used to determine the rotational SCI. If the benchmark condition already meets the STIR and SCI requirements of the practice, the producer is not eligible.

Producers must keep annual records of all tillage and crops grown, and will provide to NRCS annually. Rotations shall provide for acceptable substitute crops for weather related or economic reasons. Acceptable substitutes are crops having similar properties that meet the criteria for all the resource concerns identified for the field or treatment unit, and provide for an annual STIR rating equal to or less than the planned tillage for that year. RUSLE2/SCI updates will be required to verify that the producer is still in compliance. **Any changes to the planned rotation and tillage must be approved prior to any site preparation or planting for the year of the deviation.**

Recommended companion practices include grassed waterways, filter strips, riparian buffers, or other

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appropriate practices to fully address the water quality concerns.

The attached worksheets will document the planned rotation and tillage. The producer may use blank copies of the worksheets to keep annual records, or may use any format for record keeping that provides the required information.

Documentation will include the rotation, erosion rates, annual and rotational STIR, and rotational SCI values for both the benchmark and contracted crop rotation. The planner will attach copies of the RUSLE2/SCI evaluations.

CLIENT’S ACKNOWLEDGEMENT STATEMENT

The Client acknowledges that:

- a. The planned rotation and tillage must provide an SCI of 0.4 or greater, and an average annual STIR value of no greater than 60 for the rotation and an annual STIR value no greater than 80 and maintain average annual erosion at or below “T”. The producer must maintain the practice for the length of the rotation used to determine the SCI.
- b. The producer must receive approval of any changes to the planned rotation and tillage prior to any site preparation or planting for the year of the change.
- c. The producer must keep annual records of crop and tillage and provide copies to NRCS annually.
- d. The producer has received a copy of this practice specification and understands the contents and requirements.

Accepted by: /s/ _____ Date: _____

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| Tract & Field #s | Acres | Crop for Each Year in the Planned Rotation | | | | | | |
|------------------|-------|--|--------|--------|--------|--------|--------|--------|
| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 |
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