



## Mulch Till (345)

### Residue and Tillage Management – Irrigated Cropland Conservation Practice Job Sheet

ID- 345, JS- 08



#### What is a 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 mulch-till system is designed to accomplish the following conservation purposes:

- Reduce water, wind, and/or irrigation-induced erosion
- Increase soil organic matter and soil tilth
- Improve water quality

#### Practice Specifications

This practice applies to irrigated 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), SISL (surface irrigation induced erosion) or WEQ (wind erosion). Sprinkler-induced erosion will be determined through visual assessment. Calculations shall account for the effects of other practices in the management system.

The planned crop rotation and tillage must result in an improvement in the soil-conditioning index. 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

The minimum contracted period for this practice is three years. The contracted years of the rotation should not contain alfalfa or permanent cover, although the entire rotation used to calculate the SCI may contain these.

Producers eligible for this practice have an identified surface water quality and/or soil erosion concern. The appropriate NRCS tools will be used to assure that the planned crop rotation and tillage results in an improvement in the soil-conditioning index compared to the benchmark condition. The average annual soil loss for the planned rotation must be at or below "T". The producer must maintain the practice for the length of the rotation used to determine the rotational SCI.

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

# Mulch Till (345)

## Residue and Tillage Management – Irrigated Cropland

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 appropriate practices to fully address the water quality concerns.

The attached worksheet will document the planned rotation and tillage. The producer may use blank copies of the worksheet 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 STIR, and rotational SCI values for both the benchmark and contracted crop rotation. The planner will attach copies of the RUSLE2/SCI evaluations.

### CLIENTS ACKNOWLEDGEMENT STATEMENT

Have you received payments for a residue management practice (e.g., ridge till, mulch till, no till) from any local (e.g. Soil Conservation District), state, or federal entity in the last ten years? Note: You are not eligible for EQIP payments if you have received financial incentives within the last 10 years for any type of residue management practice.

YES

NO

The Client acknowledges that:

- a. The planned rotation and tillage must provide an improvement in the SCI, and result in 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: \_\_\_\_\_

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications (202) 720-2791.

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

# Mulch Till (345)

Residue and Tillage Management – Irrigated Cropland

Natural Resources Conservation Service - Idaho

October 2007

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

