



CONSERVATION ENHANCEMENT ACTIVITY

E345115Z-Colorado

**CONSERVATION
STEWARDSHIP
PROGRAM**

Reduced tillage to increase plant-available moisture: moisture management

Conservation Practice 345: Residue and Tillage Management, Reduced Till

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN ADDRESSED: Insufficient Water

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description:

Establish a reduced till system to increase plant-available moisture. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations. Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface.

Criteria:

- Uniformly distribute residues over the entire field. Removing residue from the row area prior to or as part of the planting operation is acceptable.
- Do not burn crop residues.
- Field must have an annual soil loss at or below the soil tolerance (T) level for the crop rotation.
- The Soil Tillage Intensity Rating (STIR) value shall include all field operations that are performed during the crop interval between harvest of the previous cash crop and harvest or termination of the current cash crop (includes fallow periods). The crop



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STIR value rating shall be no greater than 80, and no primary inversion tillage implements (e.g. moldboard plow) shall be used. Refer to [NRCS Tillage Guide](#) for guidance on primary vs. secondary tillage equipment.

- Maintain a minimum 60 percent surface residue cover throughout the year.



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Documentation and Implementation Requirements

Participant will:

- Prior to implementation, provide NRCS with the planned crop rotation and tillage operation(s) used for each crop.

Field	Acres	Planned Crops (in sequence)	Length of Crop Rotation (years)

Field	Crop	Field Operation	Timing of Field Operation (month/year)

- During implementation, notify NRCS of any planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.
- During implementation, no residue will be burned.
- During implementation, all residues will be uniformly distributed over the entire field. Removing residue from the row area prior to or as part of the planting operation is acceptable.
- During implementation, no primary inversion tillage implements (e.g. moldboard plow) will be used.
- During implementation, maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface.
- After implementation, if changes to the rotation were made, complete the tables above to document the applied Conservation Crop Rotation for the contract period and provide to NRCS.



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NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, use information provided from the participant to calculate the soil loss, Soil Tillage Intensity Rating values, and estimated surface residue cover using current NRCS wind and water erosion prediction technologies. Verify the enrolled field(s) will have an annual soil loss at or below the soil tolerance (T) level, a Soil Tillage Intensity Rating value of no greater than 80 for each crop in the planned rotation, and the estimated surface residue cover.

"T" = _____ t/ac/year Soil erosion = _____ t/ac/year

STIR values for each crop in the rotation = _____

Estimated surface residue cover for each crop in the rotation = _____

- During implementation, evaluate planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.
- After implementation, if the applied crops, crop rotation, or field operations are different than the planned crops, crop rotation, or field operations, use information provided from the participant to calculate soil loss, Soil Tillage Intensity Rating values, and estimated surface residue cover to document that the applied rotation met the enhancement criteria.

Soil erosion = _____ t/ac/year

STIR values for each crop in the rotation = _____

Estimated surface residue cover for each crop in the rotation = _____

Colorado Documentation Requirements:

- Residue and Tillage Management, Reduced till, 345, Implementation Requirements document must be completed per the Plans and Specifications for the planned purpose of reducing tillage to increase plant-available moisture. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR.

NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date

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