



CONSERVATION ENHANCEMENT ACTIVITY

E345106Z - Colorado

CONSERVATION STEWARDSHIP PROGRAM

Reduced tillage to increase soil health and soil organic matter content

Conservation Practice 345: Residue and Tillage Management, Reduced Till

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN ADDRESSED: Soil Quality Degradation

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description:

Establish a reduced till system to increase soil health and soil organic matter content. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The crop rotation must achieve a soil conditioning index (SCI) of zero or higher and produce a positive trend in the Organic Matter (OM) subfactor over the life of the crop rotation. The current NRCS wind and water erosion prediction technologies must be used to document STIR and SCI calculations. Residue shall not be burned, grazed, or harvested.

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 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



CONSERVATION STEWARDSHIP PROGRAM

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.

- Evaluation of the cropping system using the current approved soil conditioning index (SCI) procedure results in zero or higher and results in a positive trend in the Organic Matter (OM) subfactor value over the life of the rotation (management SCI value).



CONSERVATION STEWARDSHIP PROGRAM

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.
- 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.

NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.



CONSERVATION STEWARDSHIP PROGRAM

- Prior to implementation, use information provided from the participant to calculate the soil loss and the Soil Tillage Intensity Rating values 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 for the crop rotation and a Soil Tillage Intensity Rating value of no greater than 80 for each crop in the planned rotation.
"T" = _____ t/ac/year Soil erosion = _____ t/ac/year STIR values = _____
- Prior to implementation, use information provided from the participant and the approved soil conditioning index (SCI) procedure to verify the SCI is zero or higher and results in a positive trend in the Organic Matter (OM) subfactor value over the life of the rotation. **SCI value = _____ and OM subfactor value = _____**
- 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 and the Soil Tillage Intensity Rating values to document that the applied rotation met the enhancement criteria.
Soil erosion = _____ t/ac/year and STIR values = _____
- 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 conditioning index (SCI) and Organic Matter (OM) subfactor values to document that the applied rotation met the enhancement criteria. **SCI value = _____ and OM subfactor value = _____**

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 soil health and soil organic matter content and 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

USDA is an equal opportunity employer, provider and lender.