



CONSERVATION ENHANCEMENT ACTIVITY

E329114Z-Colorado

CONSERVATION STEWARDSHIP PROGRAM

No till to increase plant-available moisture: irrigation water

Conservation Practice 329: Residue & Tillage Management, No Till

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN ADDRESSED: Insufficient Water

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

Establish a no 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 20. 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

- Residue shall not be burned.
- All residues shall be uniformly distributed over the entire field. Removing residue from the row area prior to or as part of the planting operation is acceptable.
- No full-width tillage is performed from the time of harvest or termination of one cash crop to the time of harvest or termination of the next cash crop in the rotation regardless of the depth of the tillage operation. The Soil Tillage Intensity Rating (STIR) value shall include all field operations that are performed during the crop interval between harvest or termination of the previous cash crop and harvest or termination of the current cash crop (includes fallow periods). The crop STIR value shall be no greater than 20.



- Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface.

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Additional Considerations to Increase Plant Available Moisture

- Maintain a minimum of 60% residue cover on the soil surface throughout the year
- Leaving stubble taller than the 10-inch minimum will trap more snow
- Variable height stubble patterns may be created to further increase snow storage.
- Performing all field operations on the contour will slow overland flow and allow more opportunity for infiltration.



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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 full-width tillage may be performed from the time of harvest or termination of one cash crop to the time of harvest or termination of the next cash crop in the rotation regardless of the depth of the tillage operation.
- 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 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 Tillage Intensity Rating values and estimated surface residue cover using the NRCS wind and water erosion prediction technologies. Verify the enrolled field(s) will have a Soil Tillage Intensity Rating value of no greater than 20 for each crop in the planned rotation, and the estimated surface residue cover.
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 the Soil Tillage Intensity Rating value, and estimated surface residue cover to document that the applied rotation met the enhancement criteria.
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, No Till (329) Implementation Requirements document must be completed per the plans and specifications for the planned purpose of increasing plant available moisture.

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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