Reduced tillage to reduce tillage induced particulate matter

Conservation Practice 345: Residue and Tillage Management, Reduced Till

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN ADDRESSED: Air Quality Impacts

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description:

Establish a reduced tillage system to reduce tillage induced particulate matter. Field(s) must have a soil loss at or below the soil tolerance (T) level for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to document soil loss and STIR calculations.

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.

- 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 STIR value rating shall be no greater than 40, and no primary inversion tillage implements (e.g. moldboard plow) shall be used.

- Reduce or modify tillage operations that create dust, especially during critical air quality periods.
• Adopt tillage practices that reduce particulate emissions.
Documentation and Implementation Requirements

Participant will:

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

<table>
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<tr>
<th>Field</th>
<th>Acres</th>
<th>Planned Crops (in sequence)</th>
<th>Length of Crop Rotation (years)</th>
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☐ 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.
Prior to implementation, verify that the field to be establish in no-till has a soil loss at or below the soil tolerance (T) level for water erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation.

“T”= _______t/ac/year  Soil erosion = _______t/ac/year  STIR values = ______________

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 = ________________

**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