



**CONSERVATION ENHANCEMENT ACTIVITY**

**E328106I- Colorado**

**CONSERVATION STEWARDSHIP PROGRAM**

**Improved resource conserving crop rotation for soil organic matter improvement**

**Conservation Practice 328: Conservation Crop Rotation**

**APPLICABLE LAND USE: Crop (Annual & Mixed)**

**RESOURCE CONCERN ADDRESSED: Soil Quality Degradation**

**ENHANCEMENT LIFE SPAN: 1 year**

**Enhancement Description**

Improve an existing Resource Conserving Crop Rotation. Must enrich an existing rotation which already includes AT LEAST one resource conserving crop in a minimum three year crop rotation. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures.

**Criteria**

- Crops shall be grown in a planned sequence. The crop rotation shall include a minimum of two different crops in a minimum three year crop rotation. Rotation must include AT LEAST one resource conserving crop (refer to State Specific List of Resource Conserving Crops). For purposes of these criteria a cover crop is considered a different crop.
- Crop rotation must produce a positive trend in the Organic Matter (OM) subfactor value, as determined by the Soil Conditioning Index (SCI) calculated using current NRCS wind and water erosion prediction technologies. (management SCI value)



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- Design the crop sequence to provide sufficient diversity in plant family and species as well as timing and type of field operations to suppress the pest(s) of concern, which may include weeds, insects, and pathogens. Use land grant university or industry standards to determine a suitable crop sequence.
- Select crops, varieties of crops, and the sequences of crops based on local climate patterns, soil conditions, irrigation water availability, and an approved water balance procedure.
- Where applicable, plan suitable crop substitutions when the planned crop cannot be planted due to weather, soil conditions, or other local situations.
- The improved resource conserving crop rotation shall include at least one of the following:
  - Increase the number of years of a perennial legume and or/grass in the rotation.
  - Substitute a perennial grass, legume or grass/legume mix for an annual crop in the rotation.
  - If current perennial resource conserving crop is a legume, transition to a perennial grass or grass/legume mixture. Perennial crops must be grown at least 2 years from the planting date and must be part of a crop rotation with annual crops.

### **Colorado Criteria:**

Attach RUSLE2 or WEPS outputs that document crop rotation, soil erosion estimates and SCI ratings for both baseline and planned operations. Attach additional sheets as needed.

Complete Cover Crop (340) Implementation Requirements when applicable.



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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. Note all improvements to the existing Resource Conserving Crop Rotation (show improvements from benchmark data to planned output).

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.
- 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 in selecting crop rotations or substitute crops that would meet the criteria of the enhancement.
- Prior to implementation, verify that the crop rotation includes at least two different crops in a minimum three year crop rotation.
- Prior to implementation, verify the crop rotation includes at least one resource conserving crop (refer to State Specific List of Resource Conserving Crops).



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- Prior to implementation, verify the planned crop rotation improves the current Resource Conserving Crop Rotation.
- Prior to implementation, use information provided from the participant to calculate the management Soil Conditioning Index (SCI) value using current NRCS wind and water erosion prediction technologies. Crop rotation must produce a positive trend in the Organic Matter (OM) subfactor value.  
**Management SCI Value = \_\_\_\_\_ 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 crop rotation is different than the planned crop rotation, use information provided from the participant to calculate SCI value to document that the applied rotation met the enhancement criteria.  
**Management SCI Value = \_\_\_\_\_ OM subfactor value = \_\_\_\_\_**

### 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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