



CONSERVATION ENHANCEMENT ACTIVITY

E328106R

CONSERVATION STEWARDSHIP PROGRAM

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

PRACTICE LIFE SPAN: 1 year

Enhancement Description

Establish a Resource Conserving Crop Rotation. Rotation must include AT LEAST one resource conserving crop as determined by the State Conservationist 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 as outlined in Plans and Specifications.
- 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). For purposes of these criteria a cover crop is considered a different crop.
- Where applicable, plan suitable crop substitutions when the planned crop cannot be planted due to weather, soil conditions, or other local situations.
- 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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- 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.
- 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.
- The crop rotation shall include at least one of the following types of resource conserving crops (refer to State Specific List of Resource Conserving Crops):
 - With at least one other crop in the rotation, include a perennial grass grown at least 2 years from time of planting;
 - With at least one other crop in the rotation, include a legume that is grown at least 2 years from time of planting;
 - With at least one other crop in the rotation, include a legume-grass mixture that is grown at least 2 years from time of planting;
 - With at least one other crop in the rotation, include a grass-forbs or legume-grass-forbs mixture, in which at least the grass component of the mixture is grown at least 2 years from time of planting, or
 - With at least two other crops in the rotation, include a small grain grown in combination with a legume, forbs or any grass-forbs mixture that is used as a green manure, whether interseeded or planted after small grain harvest. Neither the small grain residue nor the cover crop shall be harvested or grazed.

Documentation Requirements

- Conservation Crop Rotation, 328, Implementation Requirements document must be completed per the Plans and Specifications for the planned purpose.
- The current NRCS wind and water erosion prediction technologies must be used to document the crop rotation, soil erosion estimate, and SCI calculation.