



CONSERVATION ENHANCEMENT ACTIVITY

E340106Z4

CONSERVATION STEWARDSHIP PROGRAM

Use of soil health assessment to assist with development of cover crop mix to improve soil health and increase soil organic matter

Conservation Practice 340: Cover Crop

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN ADDRESSED: Soil Quality Degradation

PRACTICE LIFE SPAN: 1 Year

Enhancement Description

Use of a soil health assessment to evaluate impact of current conservation crop rotation in addressing soil organic matter depletion (primary assessment made in Year 1). Soil health assessment results and client’s objectives will be utilized to determine a multi-species cover crop mix that will be added to the crop rotation. During Year 3 a follow up assessment will be completed to allow time for the addition of a cover crop to increased soil organic matter.

Criteria

- Plant species, seedbed preparation, seeding rates, seeding dates, seeding depths, fertility requirements, and planting methods will be consistent with applicable local criteria and soil/site conditions <REFER TO STATE SPECIFIC LISTS>.
- Determine the method and timing of termination to meet the grower's objective and the current NRCS Cover Crop Termination Guidelines.
- Select species that are compatible with other components of the cropping system.
- Ensure herbicides used with crops are compatible with cover crop selections.



CONSERVATION STEWARDSHIP PROGRAM

- Cover crops may be established between successive production crops, or companion-planted or relay-planted into production crops. Select species and planting dates that will not compete with the production crop yield or harvest.
- Do not burn cover crop residue. Do not harvest the cover crop.
- If the specific rhizobium bacteria for the selected legume are not present in the soil, treat the seed with the appropriate inoculum at the time of planting.
- Cover crop must provide soil coverage during ALL non-crop production periods in the annual crop rotation.
- Soil health assessment will be used to evaluate impact of current conservation crop rotation in addressing soil organic matter depletion, as well as additional soil health objectives of the individual grower (primary assessment made in Year 1). During Year 3, a follow up assessment will be completed to allow time for the addition of a cover crop and other management activities to have an impact on soil health. No specific soil health assessment type is required or recommended by NRCS, but at a minimum the assessment must account for soil organic matter. The specific assessment selected should provide the grower information based on their soil health objectives.
- Minimum 4 species cover crop mix will be selected on the basis of producing higher volumes of organic material and root mass to maintain or increase soil organic matter. The cover crop mix must be compatible with the local soil, climate, and cropping systems.
- Planned crop rotation including cover crops, biomass produced, and associated management activities must achieve a management soil conditioning index (SCI) of zero or higher and results in a positive trend in the Organic Matter (OM) subfactor value over the life of the rotation.

Additional criteria when livestock are included in the system:

Cover Crops may only be grazed in a manner that retains or enhances the purpose of increasing soil organic matter.

- Before cover crops are grazed, they must have produced enough biomass to allow for grazing while maintaining soil health benefits. Cover crops planted in late fall will not



CONSERVATION STEWARDSHIP PROGRAM

typically be well enough established, however if stands are adequate cover crops may be grazed in the spring prior to termination.

- Different cover crop species have varying tolerances to grazing; this should be taken into consideration when developing cover crop seeding specifications.
- Forage estimate and livestock inventory must be completed for fields that will be grazed. For soil health benefits, utilization by livestock will be less than 50% of available cover crop forage.
- Grazing shall not occur during wet soil conditions.
- Some pesticides have restrictions on grazing following application (up to 18 months). Refer to pesticide labels.

Documentation Requirements

- Cover Crop, 340, 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 SCI calculations.
- Soil health assessment results for Year 1 and Year 3 must be provided as documentation.