



CONSERVATION ENHANCEMENT ACTIVITY
E512106Z1

CONSERVATION
STEWARDSHIP
PROGRAM

Cropland conversion to grass-based agriculture for soil organic matter improvement

Conservation Practice 512 - Forage and Biomass Planting

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial)

RESOURCE CONCERN ADDRESSED: Soil Quality Degradation

PRACTICE LIFE SPAN: 5 years

Enhancement Description

Conversion of cropped land to grass-based agriculture. Mixtures of perennial grasses, forbs, and/or legume species are established on cropland where annually-seeded cash crops have been grown.

Criteria

- The current NRCS wind and water erosion prediction technologies must be used to document the average annual soil erosion estimates and soil conditioning index improvements.
- Establish perennial grassland mixture on cropland. Mixtures shall be selected based on:
 - Minimum of 50% grass species.
 - Climatic conditions, such as annual precipitation and its distribution, growing season length, temperature extremes and the USDA Plant Hardiness Zone.
 - Soil condition and landscape position attributes such as; pH, available water holding capacity, aspect, slope, drainage class, fertility level, salinity, depth, flooding and ponding, and levels of phytotoxic elements that may be present.
 - Resistance to disease and insects common to the site or location.



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- Intended use, level of management, realistic yield estimates, maturity stage, and compatibility with other species. Verify plant adaptation to the area prior to planting.
- Follow state specific recommendations for planting rates, methods and dates. Seeding rates will be calculated on a pure live seed (PLS) basis. Plant at a depth appropriate for the seed size or plant material, while assuring uniform contact with soil.
- Prepare the site to provide a medium that does not restrict plant emergence.
- Plant when soil moisture is adequate for germination and establishment.
- All seed and planting materials must meet state quality standards.
- Do not plant federal, state, or local noxious species.
- Apply all plant nutrients and/or soil amendments for establishment purposes according to a current soil test and developed specifications.
- When planting legumes, use pre-inoculated seed or inoculate with the proper viable strain of Rhizobia immediately before planting.
- Exclude livestock until the plants are well established.

Additional criteria when livestock are included in the system:

- Grazing plan must be developed which designates the number of paddocks required to keep grazing periods sufficiently short to allow for plants to recover before re-grazing occurs.
- No more than 20% of the mixture may be alfalfa. Other legumes (especially non-bloating species) may be used in place of or in addition to alfalfa up to a maximum legume percentage of 50%.



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Documentation Requirements

- Report from the current NRCS wind and water erosion prediction technologies must be used to document the soil erosion estimates and soil conditioning index improvements.
- Prepared plans and specifications for the establishment planting for each site or management unit according to the Criteria, Considerations, and Operations and Maintenance described in Conservation Practice Standard 512. May be recorded on a site specific job sheet or in the narrative of a conservation plan. The following elements must be addressed in the plan to meet the intended purpose:
 - Site Preparation
 - Fertilizer Application (if applicable)
 - Seedbed/Planting Bed Preparation
 - Methods of Seeding/Planting
 - Time of Seeding/Planting
 - Selection of Species
 - Type of legume inoculant used (if applicable)
 - Seed/Plant Source
 - Seed Analysis
 - Rates of Seeding/Planting
 - Supplemental Water for Plant Establishment (if applicable)
 - Protection of Plantings (if applicable)
 - Grazing plan (if applicable)
 - Harvest plan (if applicable)