



CONSERVATION ENHANCEMENT ACTIVITY

E512132Z1- Colorado

**CONSERVATION
STEWARDSHIP
PROGRAM**

Forage and biomass planting that produces feedstock for biofuels or energy production

Conservation Practice 512: Forage and Biomass Planting

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

RESOURCE CONCERN ADDRESSED: Degraded Plant Condition

ENHANCEMENT 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

- 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.
 - Intended use, level of management, realistic yield estimates, maturity stage, and compatibility with other species. Verify plant adaptation to the area prior to planting.



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- 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.
- Ground cover and root mass need to be sufficient to protect the soil from wind and water erosion.

Additional criteria when livestock are included in the system:

- Grazing plan must be developed 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 and Implementation Requirements

Participant will:

- Prior to implementation, select a perennial grassland mixture for establishment. If livestock are included in the system, no more than 20% of the mixture may be alfalfa. (NRCS will provide technical assistance, as needed.)

Species	Species type (grass, legume, broadleaf)

- Prior to implementation, select planting technique, seeding rates, and timing appropriate for the site and soil conditions. (NRCS will provide technical assistance, as needed.)

Planting Date	
Planting Technique	
Seeding rates	

- If livestock are included in the system, prior to implementation a grazing plan must be developed to keep grazing periods sufficiently short to allow for plants to recover before re-grazing occurs.

- During implementation, keep the following documentation:

- Records and photographs of planting preparation and any materials purchased or materials on hand used for the implementation of the enhancement.
- Documentation of seed (Pure Live Seed) and any fertilizer or soil amendments used for the implementation of the enhancement.

- If livestock are included in the system, documentation and photographs of turn in/turn out grazing records for each field. If livestock are included in the system,



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during implementation in areas where animals congregate, establish persistent species than can tolerate close grazing and trampling.

- After implementation, make documentation and records available for review by NRCS to verify implementation of the enhancement.

NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, provide and explain NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512) as it relates to implementing this enhancement.
- Prior to implementation, verify the enhancement is planned for cropland.
- Prior to implementation, verify the selected perennial grassland mixture includes a minimum of 50% grass species. If livestock are included in the system, no more than 20% of the mixture may be alfalfa.
- If livestock are included in the system, prior to implementation verify a grazing plan is developed to keep grazing periods sufficiently short to allow for plants to recover before re-grazing occurs.
- As needed, prior to implementation, NRCS will provide technical assistance:
 - Planning site preparation and establishment specifications meeting NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512).
 - Preparing specifications for applying this enhancement for each site using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
 - If livestock are included in the system, develop a grazing plan to keep grazing periods sufficiently short to allow for plants to recover before re-grazing occurs.
- Prior to implementation, verify the enhancement is planned for cropland.
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.



- After implementation, verify the planned perennial grassland mixture was established to specifications developed for the site.

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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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