



E512L

CONSERVATION STEWARDSHIP PROGRAM

Diversifying forage base with interseeding forbs and legumes to increase pasture quality

Conservation Practice 512 (L): Pasture and Hay Planting

APPLICABLE LAND USE: Pasture, Associated Ag Land

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 5 years

Enhancement Description

Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that increases the diversity to enhance livestock, forage supply and quality, not available in other pastures.

Criteria

- Select perennial, forbs and legume plant species and their cultivars based on compatibility with established forage species, climatic conditions, soil condition, landscape position and resistance to disease and insects.
- Recommendations for planting rates, methods, depths, and dates from land grant universities (LGU), plant materials program, extension agencies, or agency field trials will be followed.
- Utilize seed and planting materials that will meet State quality standards.
- Inter-seeding method will not restrict plant emergence or leave the site vulnerable to erosion.
- When planting legumes, use pre-inoculated seed, inoculum coated seed, or inoculate with the proper viable strain of rhizobia immediately before planting.

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- Select plants that will help meet livestock forage demand during times that normal forage production is not adequate.
- Use forage species that will meet the desired level of nutrition (quantity and quality) for the kind and class of livestock to be grazed or fed.
- Select species mixtures with similar palatability to avoid selective grazing.
- Select species with low or not toxic effects on grazing livestock. If two species for consideration provide similar forage quality, with one providing added benefit to wildlife and pollinator species, the wildlife beneficial species should be selected.
- In areas where animals congregate, consider establishing persistent species that can tolerate close grazing and trampling.
- Refer to NRCS Conservation Practice Standard (CPS) Nutrient Management (Code 590) for details for managing nutrients.
- Plant nutrients and/or soil amendments for establishment purposes will be applied according to a current soil test. Legume seed will be pre-inoculated or inoculated with the proper viable strain of Rhizobia immediately before planting.

Documentation and Implementation Requirements

Participant will:

- Prior to implementation, select a perennial forb and/or legume mixture for establishment. *If livestock are included in the system, forage species selected will meet the desired level of nutrition for the kind and class of the livestock to be fed.* (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 climatic conditions. (NRCS will provide technical assistance, as needed.)

Planting Date	
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Planting Technique	
Seeding rates	

- *Prior to implementation when livestock are included in the system, modify the grazing plan that maintains grazing periods sufficiently short to allow for forages to recover before re-grazing occurs.*
- *Prior to implementation, a current (within 3 years of the proposed planting date) soil sample analysis is required when soil amendments will be added.*
- *During implementation, exclude livestock until the overseeded species are well established and have reached the full start grazing heights or recommended cutting heights before the first grazing or cutting begins. Refer to Conservation Practice Standards (CPS) 511 Forage Harvest Management and (CPS) 528 Prescribed Grazing for more information.*
- *During implementation, keep the following documentation:*
 - *Records, seed tags and photographs of planting preparation and any materials purchased or materials on hand used for the implementation of the enhancement.*
 - *Documentation of seed rate basis (Pure Live Seed) and any fertilizer or soil amendments and rates used for the implementation of the enhancement.*
- *During implementation where livestock are included in the grazing system, documentation and photographs of turn in/turn out grazing records for each field are required.*
- *As needed, provide technical assistance to meet the criteria of the enhancement.*
- *Prior to implementation, provide and explain NRCS Conservation Practice Standard Pasture and Hay Planting (Code 512) and all supporting implementation requirements and specifications as it relates to implementing this enhancement.*
- *Prior to implementation where livestock are included in the system, modify the grazing*



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plan to keep grazing periods sufficiently short to allow for forages to recover before re-grazing occurs and maintain sufficient height to protect from soil erosion.

- As needed, prior to implementation, NRCS will provide technical assistance:
 - Planning site preparation and establishment specifications meeting NRCS Conservation Practice Standard Pasture and Hay Planting (512).
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- After implementation, verify the planned perennial forbs/ legumes or mixture was established to specifications developed for the site.

NRCS Documentation Review:

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I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

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Participant Name _____

Contract Number _____

Total Amount Applied _____

Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date



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SOUTH DAKOTA (SD) SUPPLEMENT TO CONSERVATION ENHANCEMENT ACTIVITY

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Additional Criteria for SD:

In addition to the criteria specified in the national job sheet E512L, the following additional criteria apply in SD:

- Reminder: this enhancement is only applicable to Pasture and Associated Ag Land uses.
- See the SD Range Technical Note No. 4 (found in Section 1 of the SD Technical Guide at <http://efotg.sc.egov.usda.gov>) for more information on:
 - Table 1 lists allowable varieties for use in SD.
 - Table 2 provides seeding rate information.
 - Table 3 provides information on species characteristics and adaptability.
 - Table 4, lists allowable species for each forage suitability group by Major Land Resource Area (MLRA).
- Fertilization during establishment is not recommended, and soil tests are not required.
- When interseeding of forbs, and/or legumes, the following should be considered for successful stand establishment:
 - Prior to planting, competition from existing vegetation should be reduced through intensive grazing, mowing, burning, low herbicide rates, or light tillage (the intent is to temporarily set back the existing vegetation, not kill it).
- Do not graze until the stand is fully established. This period will be a minimum of one full growing period, but may need to be longer depending on stand establishment.

Criteria related to the written grazing management plan:

- Start of grazing period will be changed by a minimum of two weeks in each pasture/paddock each year during the growing season.
- Adequate recovery periods must be provided:
 - Minimum of 30 days between grazing events on pasture



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- Longer recovery periods will be needed during slow growth period and during drought.
- Maximum utilization will not exceed 50% by weight of the total current year's growth.

Additional Documentation Requirements for SD:

In addition to the documentation requirements specified in the national job sheet E512L, the following additional documentation requirements apply in SD:

- Complete the SD Seeding Tool (SD-CPA-4).
- Complete the SD Range Tool (SD-CPA-39 Forage/Animal Inventory, Grazing Schedule using the SD-CPA-15 or similar form, and SD-CPA-16 or similar grazing records document) *if applicable*.
- Complete a drought contingency plan using the SD Drought Tool or provide the participant with a copy of the example drought contingency plan located within the SD Prescribed Grazing Technical Note 9 *if applicable*.