

Forage and Biomass Planting

Frost Seeding Legumes

WV Conservation Practice Job Sheet

Code 512



DEFINITION

Establishing legume species within existing stands of grasses.

PURPOSE

- To establish legume species within grassland areas in order to increase forage quality and quantity and also to provide for alternative forms of nitrogen fertilizer for cool season grasses.
- Provides a less expensive option compared to conventional and no-till methods.
- Provide a legume species within a grass dominated stand to provide habitat for wildlife and forage for pollinators.

Legumes supply nitrogen to the grass to maintain yields. This reduces the cost per ton of forage produced. Legumes improve the quality of forage by allowing cattle to eat more forage. Livestock will need less high priced protein and energy supplements. The net return is an increase in the dollars available per animal.

CONDITION WHERE PRACTICE APPLIES

This job sheet pertains to frost seeding legumes into grassland areas in order for improved forage quality. Frost seeding is suited to hayland or pastureland areas that lack legume content. Consider frost seeding legumes on soils with adequate soil pH (>6.0) and good fertility.

ESTABLISHMENT

As with any seeding test and adjust soil fertility and pH, identify and control competing vegetation, use high quality seed of a known variety and ensure good seed to soil contact. Frost seedings use livestock and frost action to control the competing vegetation, prepare the seed bed, cover the seeds, and provide seed to soil contact. If there is not sufficient frost action after applying the seed, allow livestock to walk the pastures to tread the seed into the soil surface. Only do this when the soil is firm so that cattle will not punch the soil and push the seed too deep into the soil. In most cases, good rotational grazing will control most weeds and minimize the need for any herbicides. In the fall, graze the pasture or hay field to remove excess forage growth.

Spread the seed during the winter when freezing and thawing of the ground is producing frost action with ice crystals coming out of the ground. This usually occurs between late January and late February when the snow is off the ground.

SEEDING

If over-seeding is planned every year, apply 2 lb red clover seed/acre/year. This may be doubled to 4 lb per acre on meadows. Since red clover is a biennial, meaning it lives for two years, it may be reseeded every other year. In such a cases increase the seeding rate up to 4 lb per acre on pasture and 8 lb per acre on meadows.

Consider adding 1 lb of ladino clover seed per acre when seeding pastures or hayfields. Ladino clover is a perennial and longer lived than red clover when managed under proper rotational grazing. Annual lespedeza (10-15 lb/acre) and birdsfoot trefoil (4-8 lb/acre) can also be seeded using a frost seeding.

OPERATION AND MAINTENANCE

When properly established and managed, legumes may last in a stand for several years. Maintain legumes by proper harvesting and grazing of forages and clipping excess growth of cool season grasses. Monitor soil fertility by soil sampling once every three years. For more information, contact your local NRCS Office.

Specifications

Site-specific requirements are listed on the specification sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. Information on this job sheet is considered to be part of the conservation plan.

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Client:	Farm #:
Field(s):	Tract #:
Designed By:	Date:

Purpose (check all that apply)	
<input type="checkbox"/> To increase forage quality and quantity	<input type="checkbox"/> To provide for alternative forms of nitrogen fertilizer for cool season grasses
<input type="checkbox"/> Component of a wildlife management plan developed using the (645) Upland Wildlife Habitat Management standard Species: _____	<input type="checkbox"/> Other (Specify): _____

Layout	Field _____	Field _____	Field _____
Total Area Planted (acres)			
Site Preparation Method ¹			
Frost Seed Species #1			
Seeding Rate #1			
Frost Seed Species #2			
Seeding Rate #2			
Frost Seed Species #3			
Seeding Rate #3			
Seeding Date(s)			
Lime (tons/acre)			

¹ List the site preparation method to be used: **Heavy Grazing, Mechanical, Other** or any appropriate combination.
NOTE: Refer to the "Site Preparation" section of this job sheet for instructions.

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If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Additional Notes, Specifications, O&M Requirements, etc.

Refer to the section of this document entitled Operation and Maintenance for management of the area planned for seeding.

ADDITIONAL NOTES:

For more information concerning this practice contact:

_____ at _____

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