

RANGE PLANTING

USDA NATURAL RESOURCES CONSERVATION SERVICE
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Adding Forbs and Legumes to an Existing Stand of Native Grasses in CRP

WHAT IS RANGE PLANTING?

Range planting is revegetating areas such as old fields to a permanent cover.

HOW IT HELPS THE LAND

Many range plantings have been planted without including native forbs and legumes. Planting these species requires specialized techniques. Adding forbs and legumes enhances the value of an existing native grass planting in several ways. These plants have root systems that are compatible with native grasses and can help in nutrient cycling. Additionally, a broader spectrum of wildlife and livestock habitat is provided. For wildlife, these forbs and legumes offer food, protective cover, winter food supply, loafing areas and escape cover. For livestock, forbs and legumes greatly increase the forage quality of the grazing unit. Many forbs and legumes commonly exceed 15 to 20 percent peak crude protein levels, while grasses peak at about 10 to 12 percent.

WHERE THE PRACTICE APPLIES

This practice applies to existing stands of native mixtures where native forbs and legumes are desired for enhancement.

WHERE TO GET HELP

For help in applying this practice, contact the local Natural Resources Conservation Service office.

REQUIREMENTS FOR ADDING FORBS AND LEGUMES

It is a challenge to establish forbs and legumes into an existing stand of native grass. Once a native grass stand has become established it will occupy all available growing space, especially in higher rainfall areas of the state.

Therefore, there may be very little open ground to establish forbs and legumes. However, in nature, the native forbs and legumes coexist very well with native grasses as long as the natural ecological tools are used. The following alternatives exist to enhance a native grass stand with native forbs and legumes:

1. Prescribe burn the native stand in winter and drill in a mixture of native forbs and legumes. Optimum dates are during January and February. Do not seed past March 31.
2. In some cases, the bare ground component of the range site is at a point which can potentially allow successful forb/legume seed-to-soil contact by simply pulling a no-till drill across the site. In this case, if at least 30% bare ground

consistently exists within the rangeland field, and the height of the existing grasses will not create a severe shading effect, the burning requirement can be waived.

3. If a prescribed burn is not a feasible option and bare ground cover is less than 30%, stand enhancement can be achieved by light disking and planting between the dates of December 1 and March 31 as long as there is good seed-to-soil contact.

APPLYING THE PRACTICE

It is essential that anyone planting forbs and legumes be able to identify them in early stages of growth. This is needed to make determinations for weed control. If undesirable weeds exist at 3 per square foot or are anticipated to exceed a 50 percent canopy, then mowing is recommended to remove top growing points of the offending weed. Mowing may be needed at the six to twelve inch level to allow light to reach the new seedlings. Chemical control is discouraged as it will also kill the establishing forbs and legumes.

FERTILIZER MANAGEMENT

A soil test to help determine the available soil nutrients and pH is needed. For legumes, soil deficiencies of phosphorous, potassium and

pH need to be corrected prior to planting. Research suggests that prescribed burning helps to raise pH during the first year after burning.

MAINTAINING THE PRACTICE

Generally native plantings with forbs and legumes benefit from prescribed burns on three to five year intervals. Burning helps

remove excessive litter buildup that can interfere with germination of the forbs and legumes. Burning is an important factor in legume germination. Local NRCS offices can assist with prescribed burn intervals.

Prescribed burning for maintenance on CRP land should be should be timed to avoid destruction of wildlife nesting cover. The critical

nesting periods for wildlife bird species occur between May 1 and July 1. Birds nest primarily in previous year's growth of bunchgrasses, especially little bluestem. Burn according to a written fire plan developed from guidelines in the Prescribed Burning standard found in the NRCS Field Office Technical Guide.

ESTIMATED SEEDING COSTS

ITEM	PRICE	QUANTITY	UNIT	COST
Burn	1.00	1	acre	1.00
Seed (est.)	8.00	1	*	8.00
Drill	5.25	1	acre	5.25
Fertilizer (18-46-0)	0.20	40	lb.	8.00
Interest	10%	22.25	*	2.24
Total Variable Cost				24.49
w/ disking if needed	9.02	1	ac	33.49

SITE SPECIFIC PLANTING RECOMMENDATIONS

Field #	Seedbed Preparation and dates	Species	PLS/ac	Method of planting and timing

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