United States Department of Agriculture

NRCS Natural Resources Conservation Service

CRP Practice CP2

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Native Grass Plantings Program Job Sheet

PURPOSE

Native grass plantings are used to reduce soil erosion, improve water quality, and create or enhance wildlife habitat.

Native grass communities are often associated with prairies, barrens, and savannas. Common native grasses that grow well in Indiana include warm-season grasses (WSG) such as Big Bluestem, Little Bluestem, and Indiangrass, as well as native cool season grasses such as Canada Wild Rye and Virginia Wild Rye. Native grass communities also included common wildflowers (forbs) such as Black-Eyed Susan, Purple Coneflower, Prairie Blazing Star, and others.

Native grass plantings of warm-season species provide excellent nesting and winter cover for wildlife. These tall, stiff, upright grasses stand up well to snow and ice. Native grasses grow mostly in the heat of the summer, unlike the cool-season grasses (found in most lawns) which grow best in the spring and fall.

Native grasses persist long after establishment. However, like most long-lived plant species, they generally establish slowly. Therefore, it is very important to establish these grasses properly and to have patience when evaluating the results.

WHERE PRACTICE APPLIES

Apply this practice on fields that meet eligibility requirements for the Conservation Reserve Program (CRP) as determined by the Farm Service Agency (FSA).

CRP POLICY

General Signup 43: To award 50 points for the National Ranking Factor N1a, existing vegetation or seeding mixes will contain at least three (3) native grass species, plus at least two (2) forbs or legumes. To award 20 points for the National Ranking Factor, existing vegetation must contain at least one (1) native grass, with or without legumes; or seeding mixes will contain at least two (2) native grasses, plus at least one (1) forb or legume.

Conservation Reserve Enhancement Program (CREP): See 50-point criteria above. CREP Permanent Native Grass plantings are only eligible as buffers on cropland that is adjacent and parallel to streams, sinkholes and karst areas, wetlands, and permanent bodies of water such as lakes/ponds.

The minimum width of CREP Permanent Native Grass Plantings will be a minimum of 50 feet, and a maximum of 120 feet, from the edge of the eligible body of water. NOTE: An average maximum width of 300 feet is allowed when area to be enrolled involves a predominance of alluvial soils. If the site already contains existing vegetation, these acres will be included in the calculation of maximum width and included in the CREP Plan, but will not be eligible for payments.

Highly Erodible Land Initiative (HELI) or Source Water Protection Program: See 20-point criteria above.

SEEDING RATES AND SPECIES

The IN Natural Resources Conservation Service (NRCS) Seeding Tool and/or tables found in the Field Office Technical Guide (FOTG) Standard 327 *Conservation Cover* (primary purpose wildlife) will be used when developing seeding mixes and to determine tree and shrub species for this practice. Commonly used, suitable species can also be found in the IN Biology Technical Note - Upland Wildlife Habitat.

Any prepackaged mixes must be approved before seeding. Site-specific requirements are listed on the attached Specifications Sheet.

Two good generic seeding mixes are listed below for landowners interested in quail and pheasant.

Quail Seeding Mix

Species	Rate (per acre)
Little Bluestem	2.0 (lbs.)
Big Bluestem	0.25 (lbs.)
Sideoats Grama	1.25 (lbs.)
Canada Wildrye	0.50 (lbs.)
Partridge Pea	4.0 (ozs.)
Annual Lespedeza[1], **or** ½ to 1 lb. forb mix (min. 5 species)	2.0 (lbs.)

[1] Best suited for sites south of Interstate 70

Pheasant Seeding Mix

Species	Rate (per acre)
Little Bluestem	2.0 (lbs.)
Big Bluestem	1.00 (lbs.)
Indiangrass	0.50 (lbs.)
Switchgrass	0.25 (lbs.)
Partridge Pea	4.0 (ozs.)
Forb mix (min. 5 species)	½ to 1 (lb.)

COMPANION/NURSE CROPS

A companion/nurse crop will be used when erosion control and weed suppression are needed. Companion/nurse crops include Winter Wheat (after the Hessian Fly-free dates in Table 2), Oats, Barley, Cereal Rye or Annual Ryegrass; native Wildryes (i.e. – *Elymus sp.* such as Canada, Riverbank, and Virginia Wildrye) are also effective.

Companion crops will be clipped after jointing, but before seed head pollination unless otherwise directed (control of Wildrye species is not necessary so that they persist as part of native seedings). A second and subsequent clipping is necessary if re-growth provides competition. Clipping height should be above developing seedlings. Where excessive growth has accumulated, the vegetation will be chopped rather than swathed.

LIME AND FERTILIZER

Lime and fertilizer should be based on a current soil test (less than four years old). In areas with existing vegetation that shows signs of nutrient deficiencies, or if the soil test shows phosphorus (P) and potassium (K) are in the low to very low range, apply enough fertilizer (organic or inorganic) to raise N, P and K to a level needed for a 1 ton/ac yield goal. Do not apply any nitrogen (N) for warm season grasses. Use Purdue University recommendations from the *Crop Fertilizer Recommendation Calculator* http://www.agry.purdue.edu/mmp/webcalc/fertRec.asp, or the Indiana NRCS Seeding Tool – *Indiana Fertilizer Calculator*.

If the pH is 6.0 or less, apply enough lime per acre to bring pH to meet the tolerance range of the planned plant species. Soil amendments will be incorporated during seedbed preparation, or applied before planting if a no-till drill is used. Apply lime according to *Tri-State Fertilizer Recommendations* - PU AY-9-32, Extension Bulletin E-2567, or the Indiana NRCS Seeding Tool – *Indiana Fertilizer Calculator*.

SITE PREPARATION

It is very important to plant the vegetation into a weed-free seedbed. Use herbicides and/or tillage to eliminate competing vegetation. Weed control efforts should begin as early as 12 months prior to planting, and may require multiple applications or operations in both the fall and spring prior to planting.

Pay particular attention to sites where noxious and potentially invasive species are likely. Many of these species are perennials that spread through seed and roots, and many have rhizomatous root systems that will persist and negatively impact the planting.

Cool season weeds (i.e. Canada thistle, quack grass) are best controlled in the fall (mid-September to early November) with a translocation herbicide. Plants should be actively growing at the time of application. Avoid herbicide application after 3:00 pm if overnight temperatures are expected to drop below 50 degrees (F).

Warm season weeds (i.e. Johnsongrass) are best controlled prior to flower with a follow-up application prior to first frost. Plants should be actively growing at the time of application. Contact your local Purdue University Cooperative Extension Service for specific herbicides to use. **Apply all herbicides according to the label**.

Use a nurse/companion crop to control potential weed issues and/or a temporary cover for erosion control.

If prescribed burning is used for site preparation, it must be conducted according to IN NRCS FOTG Standard 338 - *Prescribed Burning*

SEEDING DATES

Selected species will be planted within the dates specified in table below.

Planting Dates

Species/Mix	IN Seeding Dates	Dormant Seeding Dates*
Cool Season Grasses/Forbs	3/1-5/15 8/1-9/15	12/1-3/1
Legumes	3/1-5/15 8/1-9/15	12/1-3/1
Warm Season Grasses/Forbs	4/1-6/15	12/1-3/1

***** Increase seeding rates by 25% if dormant seeding.

SEED PREPARATION

Inoculate legume seed before seeding with the proper rhizobia bacteria specific for the species. Re-inoculate seed if it was pre-inoculated more than 60 days prior to seeding or beyond dates specified on the seed / inoculant tag. Inoculant left in the sun, even for a short period of time can significantly reduce the viability and effectiveness. Pre-inoculated seed will have a coating that changes the pure live seed per pound and thus the bulk seeding rate per acre.

Be aware that blending seed of varying size, shape and weight can make calibration of equipment and seeding uniformity difficult.

Some seeding mixtures contain seed that is extremely small and thus have very low seeding rates. This may make it difficult to set seeding equipment to uniformly seed these low rates. To add enough volume to the mix for proper metering, a **carrier** or coated seed may be desirable. The carrier should be no larger than the largest seed species and have similar shape, density and texture to the majority of seeds in the mix. The carrier can be an inert material (i.e. cracked corn) that does not have abrasive properties that may cause damage to the equipment or the seed. Inexpensive seed (unimproved varieties) that will have no significant negative impact on the purpose of the seeding may also be used.

PLANTING METHODS

No-Till seeding: Use a no-till drill with seven (7) inch or less row spacing. Ensure the drill is designed to handle the type of seed being planted (especially important for native grasses). Set the no-till drill to provide good seed-to-soil contact and a planting depth preferred for the desired species (see table below). Soils that are too wet or too dry can also cause improper seed placement.

Conventional Seeding: Prepare a fine firm seedbed to a depth of three (3) to four (4) inches. Incorporate lime and fertilizer during seedbed preparation. Use a drill with seven (7) inch or less row spacing or a culti-packer seeder designed for the seed to be planted. Seed should be drilled uniformly at a proper seeding depth for the desired species.

Seeding depth guidance

Groups	Seed Size (seeds/lb.)	Optimum (inches)	Max. (in.)
Brassicas, clovers, small seeded legumes, small seeded grasses, native forbs	150,000 – 500,000	¼	½
Vetches, sorghums, wildryes, trefoils, native legumes, radishes	50,000 –150,000	½	¾
Cereal grains	12,000 –50,000	¾	1
Beans, peas, corn	1500 –12,000	1 ½	2

Broadcast Seeding: Seed may be broadcast if completed in a uniform manner. Pre-mix the seed with 200 pounds per acre of pelletized lime if using an airflow applicator. Seedbeds should be worked to a minimum depth of three (3) inches and firmed before seeding. The seedbed should be culti-packed before and after seeding. It is acceptable to see up to one-third (⅓) of the seed on the soil surface. Wind speed should be 15 miles per hour or less when broadcasting.

Inter-seeding:

1. **Legumes/Forbs (frost seeding):** No-till drill or broadcast as above into existing vegetation or residues. Broadcasting relies on freeze/thaw cycles, rain and/or snow to incorporate the seed. This method does not include a seedbed preparation. This is most commonly used during the dormant seeding period.
2. **Cover Crops:** No-till drill or broadcast as above into existing vegetation or residues. Broadcasting relies on freeze/thaw cycles, rain and/or snow to incorporate the seed. Inter-seeding does not include a seedbed preparation. This method can be used to establish cover crop species or combination mixes into relatively light (such as soybean) and weed free crop residues or to establish vegetation into standing crops.
3. **Grasses:** No-till drill into existing covers only if prior-treated with herbicides or tillage, or if existing cover is diminishing (i.e. – older alfalfa plantings).

WEED CONTROL DURING ESTABLISHMENT

Control competing vegetation as needed until Final Status Review. Mow, burn, or apply herbicides as needed to control unwanted vegetation for up to 3 years after planting. Mow when competing weeds are taller than the planted vegetation, and at a height above the planted vegetation. Use selective herbicides and/or spot spraying to protect the desired species. Refer to Purdue Extension – *Weed Control Guide WS-16* for herbicide timing and treatment.

OPERATION AND MAINTENANCE

After the Final Status Review or three (3) years (whichever comes first), maintain the planting according to your CRP conservation plan. Maintenance activities are allowed only if necessary to maintain stand health, or to control pests, noxious weeds or any plant species whose presence or overpopulation may jeopardize the CRP cover, or have detrimental effects to the surrounding land.

The presence of annual weeds (such as foxtail, common ragweed, and perennial forbs) is not a concern, as these plants are important sources of food for wildlife, especially bobwhite quail. Maintenance may be needed to control excessive density of these annuals, especially during the establishment years, but is not intended to eliminate this group of plants.

Maintenance activities will not occur from **April 1 through August 1** to protect ground-nesting wildlife. If maintenance activities are needed during the April 1 – August 1 time frame, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring, and it may **only be on a spot basis**.

Mowing for generic weed control or for cosmetic purposes is prohibited.

Native grasses will not be mowed lower than eight (8) to 12 inches.

Inspect the vegetation annually and after storm events, and repair any gullies that have formed; remove unevenly deposited sediment and/or crop residues that will disrupt the function or kill desired vegetation; and reseed high mortality and disturbed areas.

The contract area cannot be used for field roads or other uses that will damage or destroy the cover.

Apply supplemental nutrients as needed to maintain the desired species composition and stand density.

MID-CONTRACT MANAGEMENT

Mid-Contract Management (MCM) is required on this practice. The table below shows the maximum amount of area that can be disturbed by MCM activities in a given number of years. However, to maximize wildlife benefits, participants may opt to perform MCM on one-third (⅓) of the area for each of three (3) years if they so choose.

MCM Disturbance Area

	MAXIMUM AREA TO BE DISTURBED
5 acres or more	⅓ of the area each of 3 years
Less than 5 acres	½ of the area each of 2 years, or total area in 1 year

MCM activities will be avoided on environmentally sensitive areas including:

a) Concentrated flow areas,
b) Critical areas,
c) Within the first 20 feet of a practice that borders a water resource to avoid water quality resource concerns, and
d) Other areas where gully erosion is likely.

Environmentally sensitive areas will be marked on the plan map to ensure Mid-Contract Management activities are avoided on these areas.

Grassland areas must be established for a minimum of three (3) years before initiating MCM activities.

MCM activities operations will not be performed from April 1 through August 1 for contracts starting in 2008, to protect the primary nesting period for grassland bird species. It is also recommended, but is not required, to delay MCM activities until after August 15 to reduce the chance of harming fledgling birds and other young wildlife.

MCM activities operations will be performed along field contours, or across the slope, when practical.

Strips will parallel brushy or woody escape cover when feasible.

See the link below for MCM job sheets: http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html.

Prescribed Burning: Where prescribed burning may be the Mid-contract Management option, the following apply:

1. IN FOTG Standard *Prescribed Burning (338)*, and *Firebreak (*394), will be followed.
2. See CRP Mid-Contract Management Job Sheet: *Prescribed Burning* for additional guidance.

MANAGED HAYING AND GRAZING

These plantings may be used for managed haying or grazing. The managed haying and grazing period for CRP is August 2 through September 15. All hay and animals must be removed from CRP acreage no later than 10 days after the end of the managed haying and grazing period.

Managed haying and grazing activities must be performed according to NRCS Standards and Specifications as found in the FOTG and CRP policy. The same acreage may not be hayed or grazed more than once every three (3) years. Annual CRP rental payments will be reduced based on FSA policy. All managed haying and grazing activities must be approved by FSA and included in the conservation plan prior to harvesting the forage.