



United States Department of Agriculture

CRP Practice CP42 Pollinator Habitat

Natural Resources Conservation Service - Indiana – April 2017 (ver. 1.5)

Pollinator Habitat Program Job Sheet



Photo by Barry Fisher

PURPOSE

Pollinator Habitat is used to help enhance and restore habitat for ecologically and economically important pollinator species. Other benefits include reducing soil erosion, improving water quality, and creating or enhancing wildlife habitat.

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: To award 50 points for the National Ranking Factor N1a, existing vegetation or seeding mixes will contain a minimum of nine (9) different species of pollinator-friendly flowering plants, including wildflowers, legumes, and/or shrubs. More than nine (9) species is encouraged. At least three (3) species are required for each bloom period of April-June 15 (early), June 15-July (mid), and August-October (late). If less than three (3) species are available in a bloom period, substitute with another bloom period. Trees may not be enrolled in CP42 Pollinator Habitat. When monarch habitat is the purpose, in addition to the pollinator guidance, at least 3% of the entire seed mix must be milkweed(s) (*Asclepias spp.*), plus 60% of the forb component must

be species from each of the mid and late bloom periods that are beneficial to monarch as nectar sources.

The same criteria apply for existing vegetation or seeding mixes in **Continuous CRP**.

SEEDING RATES AND SPECIES

CP42 habitat areas must be at least one-half (1/2) acre. If not planted in whole fields, block plantings of CP42 are preferred over strips. If planted in strips, each strip must be a minimum of 20 feet wide.

Indiana requires graminoids (i.e. grasses, sedges, and rushes) for all pollinator plantings. CRP CP42 policy limits graminoids no more than 25% grasses (based on pure live seeds per square foot). Only native graminoids may be used in CRP CP42. Graminoids will be short-statured bunch grasses, non-competitive sedges and rushes, or tall grasses seeded at very low rates.

Only native forbs will be permitted in Indiana as part of the CP42 planting. Seeding mixes should be 15-30 seeds per square foot, including graminoids.

Seeding rates and species selection for CP42 will be determined using the Indiana (IN) Natural Resources Conservation Service (NRCS) *Seeding Tool*. A specific Seeding Calculator for Pollinators has been developed as part of the seeding tool- use IN Field Office Technical Guide (FOTG) Standard (327) – *Conservation Cover* (primary purpose pollinator or monarch general).

Shrubs will be planted on an 8 ft. x 8 ft. spacing (681 shrubs per acre).

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

Trees are not an eligible component of CP42 mixes.

All seeding must be completed within 12 months of the effective date of the contract to remain in compliance. If circumstances beyond the landowner's control prohibit completion within the first 12 months, the local

FSA County Committee may approve an extension to the next planting season.

FIREBREAKS

If needed, a single-species firebreak consisting of alsike clover, white/white-dutch/ladino clover, **or** red clover may be established as part of the CP42 acreage. The species in the firebreak will not count as part of the nine species of forbs required by the practice. Any pollination benefit provided the firebreak is a side-benefit of the firebreak practice.

Special consideration will be given to the timing of any Prescribed Burning to minimize impacts to pollinators. See the attached Specifications Sheet for firebreak establishment.

WOODY HABITAT

Woody habitat creation for pollinator nesting habitat is an optional component under CP42. Woody habitat created on CP42 shall not exceed 1,500 square feet for every one (1) acre of CP42, with a maximum of one (1) acre in total woody habitat.

Follow the guidance under the “Edge Feathering” section of the IN NRCS FOTG Standard (647) [Early Successional Habitat Development](#). Limbs and/or trees from an adjacent tree line or woodland edge will be cut so that the woody material falls onto the CP42 area.

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) and other species 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 the 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 typically will not be needed, but that decision 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](#), 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 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. **Apply all herbicides according to 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 in the specification sheet that will be provided for the site.

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.

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 ($\frac{1}{3}$) of the seed on the soil surface. Wind speed should be 15 miles per hour or less when broadcasting.

Seeding Depth Guidance

Groups	Seed Size (seeds/lb.)	Optimum (inches)	Max. (in.)
Brassicas, clovers, small seeded legumes & grasses, native forbs	150,000 – 500,000	$\frac{1}{4}$	$\frac{1}{2}$
Vetches, sorghums, wildryes, trefoils, native legumes, radishes	50,000 – 150,000	$\frac{1}{2}$	$\frac{3}{4}$
Cereal grains	12,000 – 50,000	$\frac{3}{4}$	1
Beans, peas, corn	1500 – 12,000	1 $\frac{1}{2}$	2

Inter-seeding:

- 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.
- 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 (e.g. soybean) and weed free crop residues, or to establish vegetation into standing crops.
- 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

Weed Control in introduced and native grass plantings: Control competing vegetation as needed until a Final Status Review is issued or three (3) years (whichever comes first). *Mowing multiple times during this establishment period is critical to the success of the native grass 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 the Purdue/Ohio State *Weed Control Guide for Ohio and Indiana* for herbicide timing and treatment.

Weed Control in Tree/Shrub Plantings: Weed control is also important to ensure survival and maximum growth of the trees after they are planted. Nine (9) ft² around each tree should remain weed-free to maximize tree growth. Mowing is not recommended for weed control for trees. CRP cost share is authorized for one weed control application within 24 months after planting.

OPERATION AND MAINTENANCE

Operation and maintenance begins with the purchase of the seed. Purchase seed from reputable dealers that is tested and verified to not contain noxious or other species that may become a problem such as Palmer Amaranth. Do not plant seed with unknown sourcing or weeds, as it could result in long-term management problems. Noxious weeds and other undesirable plants, insects, and pests shall be controlled, including such maintenance as necessary to avoid detrimental effects to the surrounding land.

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 on a spot basis and only if necessary to maintain stand health, maintain stand diversity, or control pests that will damage the CRP cover or adjacent lands. Burning must be in accordance with a prescribed burn plan. **MOWING and other maintenance activities are not authorized between April 1 to August 1** to protect ground-nesting wildlife (i.e. - the Primary Nesting and Brood-Rearing season). If maintenance activities are needed (allowed on a spot basis only) during these times, the FSA County Committee must approve the maintenance activity prior to the activity occurring. Native grasses will not be mowed lower than 12 inches. **Mowing for generic weed control or for cosmetic purposes is prohibited.**

Exclude all acres from haying and grazing year round, unless authorized. Fences may need to be constructed and maintained to exclude livestock throughout the entire year.

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

Operation and Maintenance in Tree/Shrub Plantings. Check survivability of planted tree/shrub species after three (3) years to insure that the desired stocking rate for the site is present, usually 70% survival

of the planted rate. Additional planting will be completed if it is determined that additional natural regeneration will not be sufficient to colonize the site within an acceptable time frame (usually 5 years) so that 300 acceptable woody plants per acre are established.

MID-CONTRACT MANAGEMENT

Mid-Contract Management (MCM) is required on this practice. If the CRP acres are less than 5 acres, the entire acreage can be managed in a single year; otherwise, the maximum amount that can be disturbed during any one year is ½ of the contract acreage. For maximum habitat value, disturb no more than 1/3 of the contract acreage in any given year.

Areas devoted to grass have the following options:

- Prescribed Burning
- Strip Disking
- Strip Spraying
- Inter-seeding forbs/legumes/pollinator habitat

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 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.

Managed Haying and Grazing

CP38E plantings will not be used for Managed Haying or Grazing