



Natural Resources Conservation Service

# Wildlife Habitat Planting – General Wildlife, Pollinator, and Monarch

*Illinois Implementation Requirement – 420 Wildlife Habitat Planting*

|                          |  |                 |
|--------------------------|--|-----------------|
| <b>Landowner:</b>        | <b>Farm #:</b>                           | <b>Tract #:</b> |
| <b>Field(s):</b>         | <b>Acres:</b>                            |                 |
| <b>Soil Map Unit(s):</b> | <b>County:</b>                           |                 |
| <b>Designed By:</b>      | <b>Approved By:</b><br><b>Signature:</b> |                 |
| <b>Date:</b>             | <b>Date:</b>                             |                 |

## DEFINITION

Establishing wildlife habitat by planting herbaceous vegetation and shrubs.

## PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Improve degraded wildlife habitat for the target wildlife species or guild.
- Establish wildlife habitat that resembles the historic, desired, and reference native plant community.

## LOCATION AND PLANNING

Plantings can be located nearly anywhere, as long as the plant species selected for the site are suitable for the soil, light-intensity, and geographic area. When a specific species or group of wildlife is the target, use the appropriate habitat evaluation guide. For general wildlife and pollinator plantings use Tech Note 18, IL Wildlife Habitat Evaluation Guides (WHEG). For monarch plantings use the IL Biology Tech Note 24, IL Monarch WHEG.

## SEED MIXTURES

### Criteria for general wildlife, pollinator, and monarch seed mixtures

- All seed mixtures will be developed using the Illinois NRCS Native Seed Calculator and based on a planting rate of PLS basis (seeds/ft<sup>2</sup>). **Attach Native Seed Calculator Seeding Plan to this document.**
- Pollinator seed mixtures shall contain a minimum of 3 species of native grasses and 9 species of native forbs. The forb species must be comprised of 3 forbs for each blooming period: early, middle, and late season.
- Forb species shall each have at least 0.3 PLS seeds/ft<sup>2</sup> or at least four ounces PLS per acre for large seeded species (criteria built into the seed calculator) in the seeding mix.

- Seed should be sourced from local ecotypes grown within a 300-mile radius of the planting site when available.
- Additional seeding criteria specific to monarchs is addressed below.
- For restoring native habitat use CPS 643

## SEEDING RATES

### Native grass and forb seed mix criteria for slopes greater than 5%

Seed rates shall provide a total minimum of 30 PLS seeds/ ft<sup>2</sup>. At least 20 PLS seeds/ ft<sup>2</sup> shall be comprised of grasses and a minimum of 5 PLS seeds/ ft<sup>2</sup> shall be forb species.

### Native grass and forb seed mix for slopes less than 5%

Seed mixtures consisting of native grasses and forbs/legumes shall provide at least 20 PLS seeds per ft<sup>2</sup>. The grass component shall provide at least 10 PLS seeds/ft<sup>2</sup>. A minimum of 5 PLS seeds/ft<sup>2</sup> shall be forb species.

### Pollinator seed mix criteria for slopes greater than 5%

In addition to the criteria above, the grass component shall not exceed 10 PLS seeds/ft<sup>2</sup> native grasses or grass-like species (sedges or rushes). The forb component shall have a minimum of 30 PLS seeds/ft<sup>2</sup>. The total amount of seed rate shall be a minimum of 40 PLS seeds/ft<sup>2</sup>.

### Pollinator seed mix criteria for slopes less than 5%

In addition to the criteria above, the grass component shall not exceed 5 PLS seeds/ft<sup>2</sup> of native grasses or grass-like species (sedges and or rushes). The forb component shall have a minimum of 15 PLS seeds/ft<sup>2</sup>. The total seeding rate shall be a minimum of 20 PLS seeds/ft<sup>2</sup>.

### Monarch Seed Criteria

Begin by using the above pollinator mix criteria. In addition, monarch focused seed mixes must include the following:

- Be developed using the Illinois NRCS Native Seed Calculator.
- Filter the calculator's picklists to Monarch preferred species, check the 'Monarch Preferred Species' radio button at the top of the calculator tab. The list can also be obtained from the [NRCS Important Plants of the Monarch Butterfly– Midwest Region](#)
- Include at least one site-suited milkweed species (*Asclepias* spp.) from the monarch preferred species in the Illinois NRCS Native Seed Calculator.
- Milkweed PLS must make up at least 1.5% of the pure live seed (PLS) per square foot of the entire mix (including the grass, forb, and subshrub components of the mix).
- At least 60% of the PLS forb seeds per square foot in the mix shall be preferred monarch nectar forbs.

## SEEDBED PREPARATION

Prepare fields for seeding by eradicating all existing vegetation that may compete with the species to be planted. Controlling weeds before seeding will greatly improve establishment and reduce maintenance needs. For old fields and pastures, several treatments for one or two growing seasons may be required, using a combination of herbicides, mowing, tillage, and/or prescribed burning, to eradicate aggressive, undesirable vegetation. To suppress weed competition, or when delayed

planting is necessary, a cover crop of oats (1 bu/acre) can be seeded on fields prone to erosion or weed invasion. Perform all seedbed preparation operations on the contour or across the general slope where possible.

## SEEDING/PLANTING

Dormant seeding during late fall or early winter when soil and air temperatures will remain cold enough to prevent germination is the recommended establishment method. A broadcast seeding may be done after the recommended dormant seeding date. The seed will be worked into the ground by the actions of freezing and thawing overwinter. A drill may be used for planting but be careful not to plant too deep, no more than twice the seed diameter. Native seed will usually benefit by cold wet stratification as it overwinters.

Spring seeding may be done by using grain drills and cultipacker-type seeders if the seed delivery mechanism is designed to handle the type of seed being planted. No-till seeding may be done using a seed drill designed for no-till seedings. No-till grain drills are acceptable if the seed delivery mechanism is designed to handle the type of seed being used. Place seed at a depth not to exceed two times the seed diameter.

**Table 1. Seeding dates for native grasses and forbs.**

| Time of Seeding      | Plant Suitability Zone <sup>1</sup> | Warm Season Species <sup>2</sup>                  |
|----------------------|-------------------------------------|---|
| Spring               | I                                   | March 15 <sup>th</sup> - June 15 <sup>th</sup>    |
|                      | II                                  | March 1 <sup>st</sup> - June 5 <sup>th</sup>      |
|                      | III                                 | March 1 <sup>st</sup> - June 1 <sup>st</sup>      |
| Late Summer          | I                                   | Not Recommended                                   |
|                      | II                                  | Not Recommended                                   |
|                      | III                                 | Not Recommended                                   |
| Dormant <sup>3</sup> | I                                   | November 1 <sup>st</sup> - March 15 <sup>th</sup> |
|                      | II                                  | November 15 <sup>th</sup> - March 1 <sup>st</sup> |
|                      | III                                 | November 15 <sup>th</sup> - March 1 <sup>st</sup> |

## WEED CONTROL DURING ESTABLISHMENT

Maintenance may be needed to control excessive density of annual weeds, exotics, or woody species, especially during the establishment years. Control competing vegetation by mowing when competing weeds are taller than the planted vegetation. Mow at a height above the planted vegetation, typically greater than 8 inches (no more than 3 years after planting). The use of selective herbicides and/or spot spraying of perennial weeds, exotics, and woody species can also help to promote establishment of the planted species.

## **MAINTENANCE**

After establishment (1-3 years), managing the entire habitat stand at once can severely impact wildlife as this will remove all available habitat. No matter the target species or guild, the following management activities should not occur on more than 1/3 of the established habitat in any given year.

Established habitat may be managed by one or a combination of the following methods, where allowable by individual program policy.

### **Prescribed Burning:**

After the stand becomes established, wildlife plantings may be managed through periodic burning. Prescribed fire is the preferred management activity of herbaceous communities and burns can allow germination of seed-bearing annuals, increase plant species diversity, and help control aggressive grasses and woody vegetation.

### ***Recommended Timing:***

Prescribed burns should be conducted every three to five years. For wildlife considerations, divide the area into smaller management units and burn no more than 1/3 of the habitat each year. Refer to IL Conservation Practice 647 - Prescribed Fire Fact Sheet for specific guidance on timing burns to meet specific objectives. Only burn with an approved burn plan and refer to the Conservation Practice Standard 338 IR - Prescribed Burning.

### **Mechanical Disturbance (Mowing)**

Mowing is not effective as a stand-alone practice and should be done only in combination with another management practice such as burning or spraying.

Use only rotary or flail mowers that evenly distribute grass clippings. Do not swath, as the windrows will smother the desirable plants. Clippings should be baled and removed to accommodate forb germination, if allowed by program rules. Mow no lower than 8 inches to minimize mortality and leave adequate residual cover. Avoid milkweeds when possible.

### ***Additional recommendations for all mechanical methods:***

- Reduce speed to 8 mph or less to allow wildlife time to escape.
- Use a flush bar when possible to move wildlife out of the path of machinery.
- Avoid disturbance at night when wildlife are less likely to flush.

### **Spraying**

Avoid using broad spectrum herbicides and preference should be given to spot treatments when appropriate. Judiciously use approved herbicides as necessary to control noxious weeds and undesirable plants during the establishment period. A grass selective herbicide may be needed to deter encroachment of non-native cool-season grasses. Only spray using the IL Conservation Practice - Early Successional Habitat Development IR 647B.

### **Strip Disking**

Strip disking is light disking, 2-4 inches, within established stands to control succession, primarily of grasses and woody species, and to encourage forb growth and increase stand diversity. Only strip disk using the IL Conservation Practice 647 - Early Successional Habitat Development IR 647A.

\*Use this practice judiciously in established pollinator and monarch plantings. For example, if grass species have become too dominant in a stand, this practice can be used to create open space for forbs to thrive. If a stand already has a strong forb component, then perhaps other maintenance practices should be considered.

\*Once the stand is established, supporting practices such as 647 Early Successional Habitat Management/Development and 338 Prescribed Burning, can be used to maintain the desired vegetative condition.

\*All of the above maintenance activities must take place outside of the primary nesting season in IL, April 15 - August 1

\*If the planting is specific to monarchs, use Interstate 72 to divide the state in half, the dates for no management are:

- May 1st – October 1st in the northern half of Illinois
- April 1st – October 15th in the southern half of Illinois

| <b>CERTIFICATION</b>  |
|---|
| <b>I certify that this practice, as implemented, meets NRCS standards and specifications.</b> |
| Planner Signature: _____  |
| Date: _____   |

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