

# Conservation Cover

## Conservation Cover for Pollinators

### Conservation Practice Job Sheet

**Code 327**



Photos: C. Shrader

### Definition

This practice involves establishing and maintaining a predominance of native wildflowers or other cover including trees to create pollinator habitat.

### Purpose

This job sheet is provided as a component of a conservation plan. This practice may be applied to land taken out of agricultural production and dedicated to pollinators or beneficial insects. This practice is typically utilized to provide cover in blocks as opposed to establishment of narrow, linear strips of habitat.

### CRITERIA

#### A. PLANTING

This practice involves planting grasses, forbs, legumes, trees and/or shrubs in a diverse mix to promote bio-diversity and provide nectar and pollen resources for native insects that provide pollination services.

Pollinator plantings should be a minimum of one-half acre in size. Larger enhancements and blocks of

cover (greater than 2 acres) provide exponentially more benefit to pollinators than smaller areas.

For **herbaceous** pollinator plantings, a minimum of ten (10) species must be established in pollinator enhancements with at least three species occurring in three consecutive bloom periods as follows:

Season	Bloom Time
Very Early	March (or earlier) to April
Early	March through May
Mid	May through July
Late	July through Sept (or later)

If you are planting **herbaceous plants** (forbs and grasses) very early and early should constitute one blooming period.

The establishment of **woody plantings** alone for pollinators will not provide sufficient food sources to sustain pollinators throughout the year. Tree/shrub plantings should only be used to supplement herbaceous plantings and provide early and very early sources of pollen. For woody species refer to the proper timing and methods and other criteria described in the conservation practice standards (612) Tree/Shrub Establishment and (490) Tree/Shrub Site Preparation.

You should always plant species for pollinators that are native or recommended as acceptable non-natives. Planting should occur in fall or early spring depending on the requirements of plant species.

Select open sunny locations that are easy to maintain. Consider shade tolerance, aspect and climate when selecting plants. Consider the types of equipment that will be necessary to establish and maintain the planting

If pollinator habitat is the primary purpose, you should refrain from the use of pesticides once your planting is established unless it is required to control noxious and invasive weeds or invasive organisms. If herbicide or pesticide application is expected to be used for establishment or maintenance refer to the WinPST document attached for any associated risks.

Fertilizer application, especially **nitrogen is not recommended**. Application of any soil amendments should be based on recommendations from a

qualified soil testing laboratory, such as the University of KY Soil Testing Laboratory. It is recommended that soil samples be collected from the area to be seeded prior to planting.

## B. COMPETITION CONTROL

For herbaceous plantings, conventional seedbed preparation, herbicide application or both may be used to control competition prior to planting.

Several steps are required to achieve competition control when using herbicide especially on stands dominated by a sod grass such as fescue. Contact the University of Kentucky Cooperative Extension Service, Kentucky Department of Fish and Wildlife Resources (KDFWR) for appropriate herbicide recommendations.

- The first step in killing fescue or other sod is to mow (or graze) the area in late summer for a fall herbicide burn down.
- If possible, after step 1 and prior to herbicide application, remove any remaining residue to provide a better seedbed and allow for better herbicide contact with vegetation.
- If needed, a second herbicide application should be planned. This application should occur after the remaining vegetation has re-grown to a 4 – 6 inch height. All herbicide applications shall be made when vegetation is actively growing.
- Light disking prior to planting may be required to loosen sod and allow better seed-to-soil contact.
- Seed by an appropriate method. The most common being the broadcast method or no-till drilling.
- Protection from grazing is essential until the stand is well established (usually by year 3).

## Operation and Maintenance

For woody plantings, planners should utilize the guidance outlined in the conservation practices (490) Tree/Shrub Site Preparation and/or (612) Tree/Shrub Establishment throughout the life of the planting.

### Herbaceous First, Second and Third Years

Monitoring and controlling weeds is very critical during the first three years. Most native plants will grow deeper root systems than tops in the first year, and mowing 6-8" high will not hurt them significantly. In the first year observation of the growth of weed competition is essential. When undesirable vegetation reaches 9-18 inches tall, mow the entire

stand to no less than 6" high to prevent weeds from going to seed.

Fertilization is generally not recommended until well after establishment. For herbaceous and woody plants supplemental water may be needed to maintain plant health and vigor.

In the second year, mow once close to the ground in very early spring prior to pollinators becoming active. Postponing mowing until early spring also may provide some previous winter cover for wildlife.

Repeat the process and continue to monitor in the third year.

Habitat plantings specifically for pollinators should remain undisturbed to the greatest extent possible throughout the growing season so that insects are able to utilize flower pollen and nectar resources (for adult stages) and vegetative parts of plants for food and cover resources (for immature/larval stages).

### After Establishment of Herbaceous Plantings

Schedule management for late fall after resident bees have become inactive. If site maintenance must occur during the growing season in order to maintain the open, species rich habitat preferred by pollinators, establish a system for managing a percentage (40% or less) of the site each year on a three to five year rotation.. This will allow for re-colonization of disturbed habitat from the surrounding area. Ideally, disturbance should not occur every year, but be sure to prioritize a management scenario that will maintain the desired habitat diversity and habitats components.

Perform rotational mowing (or disking on rank stands) by mowing different parts of stand(s) each year. Wildflowers may also be mowed for re-bloom in summer when drought or heat stress causes significant loss of color. This may be done when seeds have matured at a minimum of 3 weeks following bloom. Mowing high (four to six inches) and light fertilization may initiate re-bloom of several species in three to four weeks. Do not mow the entire stand at one time.

Remove or girdle large undesirable trees that begin to shade out the more desirable forbs and shrubs. Continue to control invasive plants to lessen any negative impacts to the habitat.

## Specifications

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

<b>Client:</b>	<b>Farm #:</b>	<b>Tract #:</b>
<b>Field(s):</b>	<b>Total Acres:</b>	<b>Date:</b>
<b>Designed By:</b>	<b>Location:</b>	

### Purpose (check all that apply)

<b>Enhance pollinator habitat by establishing:</b>	<input type="checkbox"/> Non-Native, Non-Invasive Species	<input type="checkbox"/> Native Forbs (wildflowers)
	<input type="checkbox"/> Native Grasses/Sedges	<input type="checkbox"/> Legumes <input type="checkbox"/> Trees/Shrubs

### Planting Methods & Site Preparation

Prepare the site according to the methods outlined in the competition control. **Additional Requirements:**

**Complete sections below as appropriate:**

Planting Information	Field _____	Field _____	Field _____
<b>Type of Plant Material</b> <sup>1</sup>			
<b>Area Planted</b> (acres)			
<b>Establishment Method</b> <sup>2</sup>			
<b>Site Preparation Method</b> <sup>3</sup>			
<b>Site Preparation Method</b> (if combination from above) <sup>3</sup>			
<b>Fall Site Preparation Treatment Date</b>			
<b>Spring Site Preparation Treatment Date</b>			
<b>Herbicide</b> (if used and known)			
<b>Planting Date(s)</b>			
<b>Lime</b> (tons/acre) if applicable			
<b>WinPST</b>			

- See the attached additional establishment information.
- Refer to \_\_\_\_\_ herbaceous pollinator species mix <sup>4</sup>
- Refer to the attached woody pollinator species mix <sup>4</sup>

<sup>1</sup> This should be identified as **seed, plugs, tubers, seedlings** or **other**.

<sup>2</sup> Identify how the field is to be established: **No-Till Drilled** or **Conventional**, (disked and broadcast) or tree/shrub site prep methods that include **Hand Establishment, Tractor/Auger, or Tree Planting Machine**. For woody plantings refer to criteria identified in (612) Tree/Shrub Establishment and (490) Tree/Shrub Site Preparation.

<sup>3</sup> List the site preparation method to be used: **Grazing, Herbicide, Mechanical, Annual Row Crop** or any appropriate combination. Refer to the "**Competition Control**" section of this job sheet for instructions.

<sup>4</sup> Use mixes from the CPS 327 Tables 1-5 (see the back of this JS), the KY Pollinator Handbook or other approved mixes and attach to this document.

## Specifications

Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the KY NRCS Field Office Technical Guide. **Use additional sheets if necessary.**

### <sup>1</sup> CUSTOM HERBACEOUS POLLINATOR PLANTING INFORMATION – Field # \_\_\_\_\_ (utilize the table below to develop customized mixes from CPS 327)

Custom Species	Bloom Period	Number of Seeds (per lb.)	Forb Rate (oz./acre) PLS	Grass Rate (lbs./acre) PLS	Total Lbs. (PLS)*
<b>TOTALS</b>					

### Woody Pollinator Species

**Note:** *Woody plantings alone will not provide sufficient food sources to sustain pollinators throughout the year and must only be used to supplement herbaceous plantings.*

### WOODY POLLINATOR PLANTING INFORMATION – Field # \_\_\_\_\_ Acreage \_\_\_\_\_

Species	Bloom Period	Stock Type	Height at Maturity (feet)	Shade Tolerance	Plants per Acre	Average Spacing	Total Plants

<sup>1</sup> Assume 35 seeds per square foot at 85% purity and germination rates per acre. Refer to the The Xerces Society seed mix calculator to develop customized or specialized mixes.

## Specifications

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

## Additional Notes and Operation and Maintenance:

**Operation and Maintenance** –Maintain as specified in the section of this job sheet entitled Operation and Maintenance. **Additional Requirements:**

## CERTIFICATIONS

<b>Job Sheet</b>	Prepared by:	Title:	Date:
	Approved by:	Title:	Date:
<b>Installation</b>	<b>Meets NRCS standards and specifications</b>		
	Certification by:	Title:	Date:

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Common Name	Scientific Name	oz./ac	Common Name	Scientific Name	lbs. PLS/ac
Native Wildflowers			Native Grasses		
<b>Pollinator Mix 1</b>					
blackeyed susan	<i>Rudbeckia hirta</i>	2	little bluestem	<i>Schizachyrium scoparium</i>	1
bergamot	<i>Monarda fistulosa</i>	2	side-oats grama	<i>Bouteloua curtipendula</i>	1
purple coneflower	<i>Echinacea purpurea</i>	15	Virginia wild rye	<i>Elymus virginicus</i>	1
Ohio spiderwort	<i>Tradescantia ohiensis</i>	9			
rigid goldenrod	<i>Solidago rigida</i>	5			
greyheaded coneflower	<i>Ratibida pinnata</i>	7			
New England aster	<i>Symphyotrichum novae-angliae</i>	2			
spiked blazing star	<i>Liatris spicata</i>	12			
smooth aster	<i>Aster laevis</i>	2			
<b>Pollinator Mix 2</b>					
blackeyed susan	<i>Rudbeckia hirta</i>	2	little bluestem	<i>Schizachyrium scoparium</i>	1
bergamot	<i>Monarda fistulosa</i>	2	side-oats grama	<i>Bouteloua curtipendula</i>	1
purple coneflower	<i>Echinacea purpurea</i>	17	Virginia wild rye	<i>Elymus virginicus</i>	1
white beardtounge	<i>Penstemon digitalis</i>	5			
rigid goldenrod	<i>Solidago rigida</i>	3			
greyheaded coneflower	<i>Ratibida pinnata</i>	8			
New England aster	<i>Symphyotrichum novae-angliae</i>	2			
false sunflower	<i>Heliopsis helianthoides</i>	15			
smooth aster	<i>Aster laevis</i>	2			
<b>Pollinator Mix 3</b>					
blackeyed susan	<i>Rudbeckia hirta</i>	2	little bluestem	<i>Schizachyrium scoparium</i>	1
bergamot	<i>Monarda fistulosa</i>	2	side-oats grama	<i>Bouteloua curtipendula</i>	1
purple coneflower	<i>Echinacea purpurea</i>	10	Virginia wild rye	<i>Elymus virginicus</i>	1
illinois bundleflower	<i>Desmanthus illinoensis</i>	10			
rigid goldenrod	<i>Solidago rigida</i>	3			
greyheaded coneflower	<i>Ratibida pinnata</i>	5			
new england aster	<i>Symphyotrichum novae-angliae</i>	2			
partridge pea	<i>Cassia fasciculata</i>	10			
false sunflower	<i>Heliopsis helianthoides</i>	12			
<b>Pollinator Mix 4</b>					
blackeyed susan	<i>Rudbeckia hirta</i>	2	little bluestem	<i>Schizachyrium scoparium</i>	1
white beardtounge	<i>Penstemon digitalis</i>	4	side-oats grama	<i>Bouteloua curtipendula</i>	1
purple coneflower	<i>Echinacea purpurea</i>	8	Virginia wild rye	<i>Elymus virginicus</i>	1
illinois bundleflower	<i>Desmanthus illinoensis</i>	10			
rigid goldenrod	<i>Solidago rigida</i>	3			
greyheaded coneflower	<i>Ratibida pinnata</i>	5			
new england aster	<i>Symphyotrichum novae-angliae</i>	2			
partridge pea	<i>Cassia fasciculata</i>	10			
false sunflower	<i>Heliopsis helianthoides</i>	12			