



CONSERVATION ENHANCEMENT ACTIVITY

E512I

CONSERVATION STEWARDSHIP PROGRAM

Establish pollinator and beneficial insect or Monarch habitat

CONSERVATION PRACTICE: 512 - Pasture and Hay Planting

APPLICABLE LAND USE: Pasture; Associated Ag Land; Farmstead

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 5 years

Enhancement Description

Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species that can provide nectar for Monarch butterflies and/or pollinators and forage and other habitat values for wildlife and livestock, particularly at times when targeted nectar, forage supply and quality, cover, and shelter are not available in other pastures.

Criteria

- This enhancement is acceptable for use when converting from degraded pastureland sites that require NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512) in order to stabilize the site to address a resource concern.
- Select native, perennial, grass/forb/legume plant species and their cultivars based on climatic conditions, soil condition, landscape position and resistance to disease and insects, and will meet the nectar needs of specified, pollinating insects (and/or Monarch butterflies) at times when they will be present and foraging. These plants need to also provide forage or other habitat values for wildlife and livestock.
- Recommendations for planting rates, methods, depths, and dates from land grant/research institutions, plant materials program, extension agencies, or agency field trials will be followed.
- Seeding medium that does not restrict plant emergence will be provided, and planting will take place when soil moisture is adequate for germination and establishment.

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- Federal, state, or local noxious species will not be planted.
- Plant nutrients and/or soil amendments for establishment purposes will be applied according to a current soil test. Legume seed will be pre-inoculated or inoculated with the recommended viable strain of Rhizobia immediately before planting.
- When selecting Monarch habitat, plants will be selected that help meet nectar requirements for Monarch butterflies during times that the Monarch will be present. Plant selection will help to increase scores on the state's approved NRCS Monarch butterfly habitat evaluation.

Documentation and Implementation Requirements

Participant will:

Prior to implementation, select a perennial forage species or grassland species mixture for establishment. If livestock are included in the system, forage species selected will meet the desired level of nutrition for the kind and class of the livestock to be fed. (NRCS will provide technical assistance, as needed.)

Species	Forage category (grass, legume, forb)

- Prior to implementation, select planting technique, seeding rates and timing appropriate for the site and climatic conditions. (NRCS will provide technical assistance, as needed.)

Planting date	
Planting method	
Seeding rate	

If livestock are included in the system, prior to implementation a grazing plan must be developed to keep grazing periods sufficiently short to allow for grazed forages to recover and develop habitat before re- grazing occurs.



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- If livestock are included in the grazing system, during implementation in areas where animals congregate, establish persistent species that can tolerate close grazing and trampling.
- During implementation, keep the following documentation:
 - Records and photographs of planting preparation and any materials purchased or materials on hand used for the implementation of the enhancement.
 - Documentation of seed (Pure Live Seed) and any fertilizer or soil amendments used for the implementation of the enhancement.
 - If livestock are included in the grazing system, documentation, and photographs of turn in/turn out grazing records for each field.
- After implementation, make the forage planting and grazing records available for review by NRCS to verify implementation of the enhancement.

NRCS will:

- Prior to implementation, complete the state's approved NRCS Wildlife Habitat Evaluation Guide (WHEG).
Target Pollinator Species: _____
WHEG score before implementation: _____
WHEG score after implementation: _____
- Prior to implementation, provide and explain NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512) as it relates to implementing this enhancement.
- As needed, prior to implementation, NRCS will provide technical assistance:
 - Planning site preparation and establishment specifications meeting NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512).
 - Prepare specifications for applying this enhancement for each site using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
 - If livestock are included in the system, develop a grazing plan to keep grazing periods sufficiently short to allow for forages to recover before re-grazing occurs.
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.



- After implementation, verify the planned perennial grassland mixture was established to specifications developed for the site.

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NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____

Contract Number _____

Total Amount Applied _____

Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date

2024 CSP ENHANCEMENTS – GUIDANCE & PERFORMANCE CERTIFICATION

E512I – Establish Pollinator and/or Beneficial Insect and/or Monarch Habitat

Conservation Practice 512: Forage and Biomass Planting

BRIEF DESCRIPTION OF ENHANCEMENT: This enhancement will be used to plant mixes which will be excellent pollinator, beneficial insect and/or Monarch butterfly habitat in pastures.

Some important things to note:

- Use this enhancement to convert degraded pastureland, odd edges or corners or other suitable areas from pasture grasses to pollinator/beneficial insect habitat.
- **Minimum Required Treatment:** A minimum of one-half acre (1/2 ac) of planting must be completed for every 40 acres of open land in the CSP application with no less than ½ acre planned on any tract. (1.25% of open land acres or ½ acre, whichever is less)
- Acres in this enhancement must be fenced out during the growing season. Grazing is allowed outside of the growing season on a rotational basis. Must have grazing records.
- Select plants from the attached plant list. Three must be planted from each bloom period, with a total of 9 species to be planted. One native warm season grass (bottom of list) may be substituted for one of the mid or late blooming species.
- NO fertilizer or lime will be applied to the site at planting.
- Area should be treated with appropriate herbicides prior to establishment of pollinator habitat if johnson grass, cogon grass or other hard to eradicate species such as bahia, tall fescue or Bermuda are present.
- Maintenance shall be completed on these areas beginning the second winter after establishment. Some form of maintenance must be completed on all acres at least once every 3 years. The best regime is to implement maintenance on 1/3 of the acreage annually. Prescribed burning or winter grazing is the recommended form of maintenance, but mowing high (12 inches) is acceptable. Mowing could allow a duff layer to develop and potentially limit pollinator plant growth and survival. Therefore, if mowing is the main form of maintenance, then either fire or light disking must be used at least once every 3rd maintenance cycle to break the duff layer. Light disking means scratching the surface of the soil, but not going deeper than 3 inches at any one point.
- Spot spraying to stop invasives and woody plant encroachment is recommended during the life of the practice but ensure herbicide label directions are followed.

ATTACH COPIES OF REQUIRED DOCUMENTS AS NOTED BY THE ENHANCEMENT JOB SHEET. CHECK THE BOX OR OTHERWISE IDENTIFY THE SUPPORTING DOCUMENTATION.

- MAPS OF THE AREA or LOCATION(S) WHERE THIS PRACTICE WAS APPLIED

Alabama Supplemental Guidance for CSP Enhancement

- PROVIDE SEED INVOICE SHOWING TYPE AND AMOUNT PURCHASED FOR THIS PRACTICE.
- REPRESENTATIVE DIGITAL IMAGES/PHOTOS OF THE AREA AND INDICATE AREA ON MAP
- DATES OF COMPLETED ACTIVITY
- IF LIVESTOCK ARE ALLOWED TO GRAZE (ONLY OUTSIDE THE GROWING SEASON), PROVIDE PHOTOGRAPHS NOTING FENCING AND TURN IN/TURN OUT GRAZING RECORDS FOR EACH FIELD.

The attached documents support the full implementation of this Conservation Stewardship Enhancement.

CSP Participant Name

Date

Conservation Security Program

Pollinator Habitat Plant List

Choose a Minimum of 9 Forbs (3 Per Flowering Period)

Early Flowering Species (Choose 3)

Smooth Beardtongue (<i>Penstemon digitalis</i>)	$\frac{3}{16}$ pound pls* per acre
Butterfly Weed** (<i>Asclepias tuberosa</i>)	$\frac{1}{4}$ pound pls per acre
Lanceleaf Tickseed** (<i>Coreopsis lanceolata</i>)	$\frac{1}{2}$ pound pls per acre
Blue False Indigo (<i>Baptisia australis</i>)	1 pound pls per acre
Common Milkweed** (<i>Asclepias syriaca</i>)	$\frac{1}{4}$ pound pls per acre
Plains Coreopsis** (<i>Coreopsis tinctoria</i>)	$\frac{3}{16}$ pound pls per acre
Purple Prairie Clover (<i>Dalea purpurea</i>)	$\frac{3}{16}$ pound pls per acre
Pale Purple Coneflower (<i>Echinacea pallida</i>)	$\frac{1}{4}$ pound pls per acre
Spotted Beebalm (<i>Monarda punctata</i>)	$\frac{1}{8}$ pound pls per acre

Alabama Supplemental Guidance for CSP Enhancement

Black-Eyed Susan** (*Rudbeckia hirta*) $\frac{1}{4}$ pound pls per acre

Golden Alexander** (*Zizia aurea*) $\frac{1}{4}$ pound pls per acre

Mid-Season Flowering Species (Choose 3)

Large Flower Partridge Pea (*Chamaecrista fasciculata*) $\frac{1}{4}$ pound pls per acre

Small Flower Partridge Pea (*Chamaecrista nictitans*) $\frac{1}{4}$ pound pls per acre

Slender Mountain Mint** (*Pycnanthemum tenuifolium*) $\frac{1}{8}$ pound pls per acre

Illinois Bundleflower (*Desmanthus illinoensis*) $\frac{1}{2}$ pound pls per acre

Purple Coneflower (*Echinacea purpurea*) $\frac{1}{2}$ pound pls per acre

Blue Verbena** (*Verbena hastata*) $\frac{5}{16}$ pound pls per acre

Yellow Giant Hyssop (*Agastache nepetoides*) $\frac{1}{4}$ pound pls per acre

Golden Wave Tickseed** (*Coreopsis basalis*) $\frac{1}{8}$ pound pls per acre

Rattlesnake Master (*Eryngium yuccifolium*) $\frac{3}{8}$ pound pls per acre

White Prairie Clover (*Dalea candida*) $\frac{1}{4}$ pound pls per acre

Boneset (*Eupatorium perfoliatum*) $\frac{1}{8}$ pound pls per acre

Roundleaf Thoroughwort (*Eupatorium rotundifolium*) $\frac{1}{8}$ pound pls per acre

Alabama Supplemental Guidance for CSP Enhancement

Lance-Leaved Goldenrod (<i>Euthamia graminifolia</i>)	$\frac{1}{16}$ pound pls per acre
Rosemallow (<i>Hibiscus moscheutos</i>)	$\frac{1}{4}$ pound pls per acre
Violet Lespedeza (<i>Lespedeza violacea</i>)	$\frac{1}{4}$ pound pls per acre
Spiked Blazing Star (<i>Liatris spicata</i>)	$\frac{1}{4}$ pound pls per acre
Lupine (<i>Lupinus perennis</i>)	$\frac{5}{8}$ pound pls per acre
Bergamot** (<i>Monarda fistulosa</i>)	$\frac{1}{8}$ pound pls per acre
Mexican Hat (<i>Ratibida coumnraris</i>)	$\frac{1}{8}$ pound pls per acre
Greyheaded Coneflower** (<i>Ratibida pinnata</i>)	$\frac{1}{4}$ pound pls per acre
Clasping Coneflower (<i>Rudbeckia amplexicaulis</i>)	$\frac{1}{4}$ pound pls per acre
Passion Flower (<i>Passiflora incarnate</i>)	$\frac{1}{2}$ pound pls per acre
Wild Quinine (<i>Parthenium integrifolium</i>)	$\frac{3}{16}$ pound pls per acre

Late Flowering Species (Choose 3)

Joe-Pye Weed (<i>Eupatorium fistulosum</i>)	$\frac{1}{8}$ pound pls per acre
Sweet Joe-Pye Weed (<i>Eupatorium purpureum</i>)	$\frac{1}{8}$ pound pls per acre

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Swamp Sunflower** (<i>Helianthus angustifolius</i>)	$\frac{3}{16}$ pound pls per acre
Maximilian Sunflower** (<i>Helianthus angustifolius</i>)	$\frac{3}{16}$ pound pls per acre
Cardinal Flower (<i>Lobelia cardinalis</i>)	$\frac{1}{8}$ pound pls per acre
Butterfly pea (<i>Centrosema virginianum</i>)	$\frac{1}{8}$ pound pls per acre
Heath Aster** (<i>Aster pillosus/Symphotrichum pilosum</i>)	$\frac{1}{8}$ pound pls per acre
Wand Goldenrod** (<i>Solidago stricta</i>)	$\frac{1}{8}$ pound pls per acre
Pine Barren Goldenrod** (<i>Solidago fistulosa</i>)	$\frac{1}{8}$ pound pls per acre
Tall Goldenrod** (<i>Solidago altissima</i>)	$\frac{1}{8}$ pound pls per acre
Gray Goldenrod** (<i>Solidago nemoralis</i>)	$\frac{1}{8}$ pound pls per acre
Rough Goldenrod** (<i>Solidago rugosa</i>)	$\frac{1}{8}$ pound pls per acre
Swamp Milkweed** (<i>Asclepias incarnata</i>)	$\frac{3}{8}$ pound pls per acre
Smooth Aster** (<i>Aster laevis</i>)	$\frac{1}{8}$ pound pls per acre
Showy Tickseed (<i>Bidens aristosa</i>)	$\frac{3}{8}$ pound pls per acre
Tall Tickseed** (<i>Coreopsis tripteris</i>)	$\frac{1}{8}$ pound pls per acre
Florida Beggarweed (<i>Desmodium floridanum</i>)	$\frac{5}{16}$ pound pls per acre

Alabama Supplemental Guidance for CSP Enhancement

Dixie Tick Trefoil (<i>Desmodium tortuosum</i>)	$\frac{5}{16}$ pound pls per acre
Perplexed Tick Trefoil (<i>Desmodium perplexum</i>)	$\frac{5}{16}$ pound pls per acre
Pine Barren Tick Trefoil (<i>Desmodium strictum</i>)	$\frac{5}{16}$ pound pls per acre
Indian Blanket** (<i>Gaillardia pulchella</i>)	$\frac{3}{8}$ pound pls per acre
Sneezeweed (<i>Helenium autumnale</i>)	$\frac{1}{8}$ pound pls per acre
Evening Primrose (<i>Oenothera biennis</i>)	$\frac{1}{8}$ pound pls per acre
Yellow Wingstem (<i>Verbesina alternifolia</i>)	$\frac{5}{16}$ pound pls per acre
White Wingstem (<i>Verbesina virginica</i>)	$\frac{5}{16}$ pound pls per acre
Iron Weed (<i>Vernonia altissima</i>)	$\frac{3}{16}$ pound pls per acre
Alabama Iron Weed (<i>Vernonia noveboracensis</i>)	$\frac{3}{16}$ pound pls per acre

Native Warm Season Grasses

Big Bluestem (<i>Andropogon gerardii</i>)	$\frac{1}{2}$ pound pls per acre
Purple Top (<i>Tridens flavus</i>)	$\frac{1}{2}$ pound pls per acre
Yellow Indiangrass (<i>Sorghastrum nutans</i>)	$\frac{1}{2}$ pound pls per acre

Alabama Supplemental Guidance for CSP Enhancement

Switchgrass (*Panicum virgatum*)

½ pound pls per acre

*PLS = Pure Live Seed ($\% \text{ purity} \times \% \text{ germination} = \% \text{ pure live seed}$)

Example: Where Purity is 90% (meaning 90% of the weight being purchased is actual seed) and where Germination is 70%, (meaning 70% of the actual seed are guaranteed to be viable). In this Example **PLS** = $.90 \times .70 = 63 \text{ percent}$

So, in this example, every 100 pounds of bulk seed you get actually contains 63 pounds in pure, viable seed.

As you can see, PLS is NOT the same as bulk seed. Buyer should ensure pricing is based on pls pounds!

** Denotes plants that make good habitat for beneficial insects. Favor planting those species if targeting beneficial insects.

Note: If targeting Monarch butterflies, plant at least one of the milkweed species (*Asclepias*)