

Plants Enhancement Activity – *PLT08 – Habitat Development for Beneficial Insects for Pest Management*



Enhancement Description

Establishment of habitat to attract and support populations of beneficial insects that provide natural suppress of undesirable insects or other pests. Beneficial insects used for pest management include insect arthropod, predators and parasitoids. Habitat requirements include shelter and food that attract and support beneficial insects. These can include trap crops and insectary strips (both permanent and annual.)

Land Use Applicability

This enhancement is applicable on cropland including orchards and vineyards.

Benefits

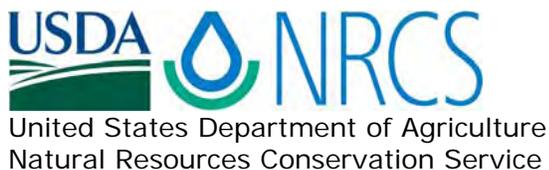
Environmental benefits will be operation specific. Benefits may include but are not limited to improved water quality through a reduction in the amount and type of pesticides used, reduced risk of chemical residue on farm products and less exposure of farm worker to pesticides. Increase in habitat for beneficial organisms will also provide food and shelter for pollinators and other wildlife species creating a more biologically diverse farm.

Criteria for *Establishing Beneficial Organism Habitat*

Planning Criteria

(Should be based on information available through the state land grant university or other known reputable sources such as “Appropriate Technology Transfer for Rural Areas (ATTRA)

- Identify pest species and associated beneficial insects targeted for control
- Inventory existing conditions on the farm to determine habitat needs of selected beneficial, include:
 - Permanent Insectary sites
 - Augmentation of existing hedgerows, field borders or other odd areas adjacent to fields
 - Trap crop areas
- Plant selection matched to attract identified beneficial insect
- Amount of habitat required based on the beneficial insect dispersal ability and can be either annual or perennial cover.
- Lists of plants suitable for beneficial insect habitat will be developed by NRCS at the state level. The lists must emphasize as many native species as practical.



Planting Criteria

- Site selection should consider existing weed pressures and available methods of control, delay planting if weed pressure requires excessive treatment.
- Site preparation and plant establishment shall be accomplished according to the appropriate NRCS conservation practice and specifications.
- Successful establishment is determined by comparing field conditions with published plant density recommendations for the species for the region.

Operation and Maintenance

- Management and/or maintenance activities such as mowing, haying, burning, or grazing must be conducted outside of the growing season or bloom period. Maintenance should be done on less than 1/3 of the acreage during any given year.
- Insecticides and herbicides should not be used in the habitat planting area. Even non-synthetic herbicides and botanical insecticides can harm beneficial insects. If adjacent crop areas are treated use one or more of the following actions to limit insecticides in the pollinator habitat area:
 - Create insecticide free buffers in the first 25 feet of crop area,
 - Use application methods that minimize drift to the adjacent habitat,
 - The planted habitat areas must be regularly inspected for invasive and/or noxious plants or other plants that may compromise the purpose of this enhancement. Undesirable species should be controlled using the method least damaging method.
- If habitat is part of an organic farming operation, only materials allowed according to the USDA National Organic Program's National List of Allowed and Prohibited Substances may be used.

Documentation Requirements

Written plan documenting

- Targeted pest with associated beneficial insects
- A map showing the location and dimension of the beneficial habitat areas.
- A list of beneficial insect habitat species planted.
- List of maintenance activities carried out

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State Criteria

This enhancement is applicable on cropland, including orchards and vineyards.

Identify pest species and associated beneficial insects targeted for control. Match plant selection(s) to attract identified beneficial insects (refer to ATTRA, “Appropriate Technology Transfer for Rural Areas,” or University of Nebraska information on beneficial insects).

Implementation of this enhancement requires the use of the flowering plant species noted below. Substitute species may be approved by NRCS provided they are native and adapted to site conditions. New seedings must incorporate the required nine or more flowering species at 50% of the seeding rate or more (based on seeds per square foot). Total seeding rates (grasses plus forbs) should be a minimum of 10 PLS/ft² and should not exceed 30 PLS/ft² unless required on small areas to control soil erosion resulting from concentrated flow.

Existing habitat areas must contain the required nine or more flowering species at 50% or more by canopy cover. It may be necessary to upgrade or enhance existing habitat areas by suppression of established plants using prescribed burning, tillage, or herbicide application followed by interseeding of the necessary flowering plant species. The minimum seeding rate of 10 PLS/ft² should be used for inter-seeded forbs.

Vegetation will not be disturbed between April 15 and October 15 unless approved by NRCS as part of a management plan intended to maintain and enhance plant diversity and vigor.

Native Forbs

Early

- Blanketflower
- Canada milkvetch
- Illinois bundleflower
- Leadplant
- Purple coneflower
- Purple prairieclover
- Roundhead lespedeza
- Scarlet globemallow
- Western yarrow
- White prairieclover

Middle

- Blackeyed Susan*
- Blanketflower
- Canada goldenrod
- Canada milkvetch
- Dotted gayfeather
- False sunflower
- False boneset
- Illinois bundleflower
- Leadplant
- Missouri goldenrod
- Plains coreopsis*
- Prairie sunflower
- Purple coneflower
- Purple prairieclover
- Roundhead lespedeza
- Scarlet globemallow
- Showy partridgepea
- Stiff goldenrod
- Stiff sunflower
- Upright coneflower

Late

- Canada goldenrod
- Dotted gayfeather
- False sunflower
- False boneset
- Maximilian sunflower*
- Missouri goldenrod
- Prairie sunflower
- Showy partridgepea
- Stiff goldenrod
- Stiff sunflower
- Upright coneflower
- White aster

Western yarrow
 White aster
 White prairieclover
 Wild bergamot* = only appear in one season
 (no native forbs appear in all three seasons)

Native Shrubs (all are considered early season)

American plum	Buffaloberry	Chokecherry
Elderberry	Golden currant	Gray dogwood
Red-osier dogwood	Skunkbush sumac	Woods Rose

Documentation Requirements

- Grass Seeding Job Sheet (NE-CPA-8) providing documentation of site preparation, seeding method, and composition of species planted or inter-seeded to meet requirements.
- Map with pollinator habitat area clearly identified (highlighted, outlined, etc.).
- Approved maintenance/management activities noted in table below intended to improve plant diversity and vigor. (Only up to 1/3 of area can be treated in any one year.)

Tract	Field	Acres	Proposed Activity	Approximate Timeframe
100	2b	6.0 (total)	<i>i.e., Prescribed Burning (2.0 Acre patches)</i>	<i>March of 2012, 2013, 2014</i>

I certify that the following information meets specifications and has been provided to NRCS:

- Written documentation consisting of a completed NE-CPA-8 Grass Seeding Job Sheet and associated seed tags, as required.
- Map with pollinator habitat area clearly identified (highlighted, outlined, etc.).

Certified by: _____ **Date:** _____