

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**UPLAND WILDLIFE HABITAT MANAGEMENT
(ACRE)
Code 645**

DEFINITION

Creating, maintaining, or enhancing areas, including wetland, for food and cover for upland wildlife.

PURPOSE

To create, maintain, or enhance habitat suitable for sustaining desired kinds of upland wildlife.

CONDITIONS WHERE PRACTICE APPLIES

On all lands that are suitable for the kinds of wildlife food or cover plants that are needed or, all lands in the Conservation Reserve Program.

PLANNING CONSIDERATIONS

This standard and specification describes minimum habitat requirements and management recommendations for several forms of wildlife. Consult the NRCS biologist or local DNR person for recommendations to maximize wildlife populations.

Single species management described in this specification can have beneficial or adverse effects on other species of wildlife in the community, depending upon the nature of the prescribed management and the habitat requirements of all wildlife affected. Landowners should be apprised of this information.

Consideration should be given to the possible presence of threatened or endangered species. Refer to Biology Technical Note No. 14.

Water Quantity

1. Volume and rate of runoff and evaporation will decrease with increased canopy cover. These parameters could increase briefly during plant establishment if the soil surface is disturbed. Increased canopy cover will increase infiltration, deep percolation, and groundwater recharge.
2. Increased canopy cover will reduce downstream flow and recharge of downstream aquifers which may cause undesirable environmental, social, or economic effects.
3. Plant growth should improve due to the increase in volume of soil water.

Water Quality

1. Increased canopy cover will reduce erosion and subsequent movement of sediment and soluble and sediment attached substances that would be carried by runoff.
2. The movement of dissolved substances below the root zone and to groundwater may increase due to reduced runoff.
3. Reduced runoff will improve hydric soil conditions and water-related wildlife habitats.
4. Due to reduced runoff, use of pesticides and nutrients will allow their retention and increase in both surface and groundwater.

SPECIFICATIONS GUIDE

Minimum Requirements. An area designated as wildlife for the primary land use must have vegetative cover of grass, forbs, shrubs, trees, or any combination thereof and must be protected from over grazing by using a planned grazing system. An area designated as wildlife for the secondary land use (Section 7) must have vegetation similar to that identified for primary wildlife land use and left ungrazed for any appropriate periods designated in Section 7.

- 1. Ring-Necked Pheasant and Hungarian Partridge.

A. Nesting Cover.

- (1) Retain grassy or herbaceous cover in fence lines, odd areas, or field edges.
- (2) Establish grass or grass legume mixtures adapted to the site. Refer to Table 1 below, Biology Technical Note No. 8, Establishment and Management of Native Warm Season Grasses for Wildlife; and Pasture and Hayland Planting (512). Mow after July 15 if necessary to control weeds and woody cover.

Table 1. Seeding Mixtures & Rates

	<u>Lbs/ac*</u>
1. Switchgrass	5
2. Big bluestem	8
3. Indian grass	8
4. Switchgrass	1
Big bluestem	6
Little bluestem	2
5. Alfalfa	5
Smooth Bromegrass	8
6. Alfalfa	1
Switchgrass	5
7. Alfalfa	2
Smooth Bromegrass	4
Timothy or Orchardgrass	2
8. Birdsfoot Trefoil	6
Timothy	3

*Pure live seed per acre

B. Winter Cover and Travel Lanes.

One, 8-row windbreak (100-150 ft. long) per section is required to support a good pheasant population when other woody vegetation is not present away from farmsteads.

Retain existing woody vegetation. Establish tree or shrub plantings in rows or clumps for winter cover. Use a minimum of 25 conifers, 25 deciduous trees or 50 shrubs per clump. Avoid narrow plantings that can easily fill with snow. Establish these plantings along ditch banks, field borders, odd areas, or other areas that need winter cover. Try to establish winter cover areas on south or east slopes which tend to stay free of snow because of exposure to the sun. Do not locate so snow is spread on roads.

Establish a minimum of one row of trees or shrubs for travel lanes between existing areas of woody cover and croplands. Refer to Table 2 and Hedgerow Planting, Standard 422.

C. Food.

Retain two or more rows of corn or soybeans, or a 6-ft. strip of any grain or seed crop close to woody cover.

Establish food plot, if needed, of at least 0.25 acre in size close to winter cover, preferably on the east or south borders of the winter cover. Refer to Section 6. G., H. and use appropriate cultural practices for seedbed preparation and seeding. Protect from grazing.

2. Bobwhite Quail and Rabbits.

A. Nesting Cover.

Herbaceous cover close to early successional woody cover is a preferred nesting site. Retain brushy fencerows, road ditches, and odd areas.

B. Woody Cover.

Retain or enhance existing shrub cover, vines, hedgerows, or

lespedezas. Develop borders along woodland edges. See Standard for Field Borders – 386. Place cut woody material into loose piles 10-15 feet in diameter.

Establish one or more rows of shrubs or clump plantings of shrubs close to crop fields, in odd areas, or along ditch banks. Refer to Hedgerow Planting Standard 422, or Field Borders Standard 386. Protect from grazing.

C. Food.

Leave unharvested two or more rows of corn or soybeans or a 6-ft. strip of other grain or seed crops close to good shrub cover.

Establish food plots of at least .25 ac. in size close to good shrub cover, preferably on the east or south borders of the shrub cover. Refer to 6. G. Protect from grazing.

Table 2. Partial List of Trees and Shrubs for Wildlife Planting*

	SPACING	
	<u>WITHIN ROWS</u> <u>FT.</u>	<u>WITHIN CLUMPS</u> <u>FT.</u>
Evergreen Coniferous Trees		
Red Cedar	4-10	4-10
Northern White-Cedar	6-10	6-10
Blue Spruce	8-14	10-14
Norway Spruce	8-14	10-14
Austrian Pine	8-14	10-14
Jack Pine	8-14	10-14
Red Pine	8-14	10-14
Douglas-Fir	8-14	10-14
Eastern White Pine	8-14	10-14
Deciduous Trees		
Common Hackberry	10-15	10-15
Green Ash	10-15	10-15
Black Willow	10-15	10-15
Weeping Willow	10-15	10-15
Washington Hawthorn	6-12	6-12
Cranapple	6-12	6-12
Red Oak	10-15	10-15
White Oak	10-15	10-15
Pin Oak	10-15	10-15
Shrubs		
Amur Honeysuckle	3-4	4-6
Amur Maple	4-6	6-8
American Cranberry Bush	4-6	5-6
Autumn Olive	4-6	6-8
Common Lilac	3-4	4-6
Common Ninebark	3-4	4-6
Gray Dogwood	3-4	4-6
Silky Dogwood	3-4	4-6
Tatarian Honeysuckle	3-4	4-6
Hazelnut	3-4	4-6

* See Windbreak Interpretations, Section II, FOTG, for additional tree and shrub adaptations for wildlife plantings.

3. Squirrels.

A. Food.

Manage woodlands to favor oak, hickory, maple, and other mast or fruit producing trees and shrubs. Hickory nuts and white oak acorns are favored. Trees in the woodland border or in woodland openings are generally better food producers because they receive more sunlight.

Leave one or more rows of corn unharvested close to woodland or fencerows. Squirrels readily eat corn and it could provide survival in years of mast failure.

B. Den Sites.

Two or three den trees per acre are recommended with an entrance to dens of not over four inches in diameter. When den trees are not available, construct den boxes and attach to trees at least 20 ft. above the ground.

4. White-Tailed Deer.

A. Food and Cover.

Establish openings in mature woodlands of 0.5-5.0 ac. to promote new, dense, woody cover. Manage woodlands to favor oaks and other mast bearing trees or shrubs. Encourage shrubs and vines in woodland edges.

Leave one or more rows of corn unharvested, or plant corn, soybeans, or sorghum in food plots of at least .25 ac. in size. Refer to Table 6. G. Protect from grazing.

B. Water.

Construct ponds or develop seeps or springs if permanent water is not available within ½ mile of developed area. Refer to Pond Standard 378.

5. Wild Turkeys.

A. Food and Cover.

Manage for mature, hardwood timber. Oaks and other mast producing trees are favored. Openings or cultivated fields and pastures are beneficial and can compose up to 25 percent of the area.

Leave wheat, millet, sorghums, or soybeans unharvested close to woody cover, or plant food plots of at least .25 ac. in size. Refer to 6. G., H. Protect from grazing.

6. General Game or Non-game Wildlife.

This section applies when the decision has been made to improve the habitat for any wildlife in the area or to get more diverse species.

A. Create habitat diversity by planting trees or shrubs in parts of areas that are completely grass or herbs or remove trees and plant grass or herbs on parts of areas that are completely woodland.

B. Encourage shrub growth along woodland borders.

C. During woodland harvesting, leave branches and other residue in piles.

D. Add birdhouses and/or feeding stations to windbreaks or other wooded areas.

E. Add fruiting or nutbearing trees or shrubs to the leeward sides of windbreaks.

F. Protect from livestock.

Refer to National Manual for Assisting ASCS Cost-Share Program (NMCSP), IA539.11(d) for CRP land.

G. Food Plots.

Table 3. Annual Grain and Seed Crops for Wildlife Food Plots

Plant	Amounts lbs/ac.	Planting Dates
Corn ¹	12	4-20 to 6-1
Sorghums ¹	12	4-20 to 6-1
Oats	48	3-1 to 4-20
Barley	48	3-1 to 4-20
Wheat	75	3-1 to 4-20
Sunflowers	12	4-1 to 6-1
Buckwheat	37	4-1 to 6-1
Millet	20	4-20 to 6-1
Partridge Pea ¹	45	4-1 to 6-1
Soybeans	50	4-20 to 6-1

¹May be left two years without reseeding on CRP food plots.

Erosion Control:

1. Food plots should be placed on the least erosive areas of each field. Reduced tillage or no-till planting of food plots should be encouraged. Fall seedbed preparation is not allowed.
2. Plots may be on slopes of 5% or less, provided all tillage and planting operations are performed on the contour and the areas are planted every other year.
3. Plots located on 5% or less slopes may be planted each year providing they are in strips no wider than one

chain nor closer than one chain to another plot.

4. Plots may be located on areas steeper than 5% providing soil losses on the area do not exceed tolerable limits.
5. Food plots may be located on the same area in subsequent years as long as tolerable soil loss limits are not exceeded during any year.

Maintenance:

Do not control weeds in a food plot unless noxious weeds persist then spot treat.

Cultivation is allowed to control noxious weeds but is discouraged. Herbicides that would endanger adjacent seedings are not allowed. If CRP food plots are discontinued or rotated, they will be reseeded to permanent vegetation. Reseeding will be completed based on criteria outlined in the Conservation Cover.

7. Wildlife as a Secondary Land Use.*

A. Cropland – Wildlife Land.

Existing herbaceous field borders and grassed waterways will be unmowed until after July 15, existing woody cover in fence rows is maintained, and at least one of the following measures is applied.

- (1) Grain crop residues, except soybeans, are left standing (untilled and ungrazed) over winter.
- (2) A minimum of 2 rows of corn or 5 foot wide strips of all other grain crops are left unharvested on at least two sides of the fields each year.

B. Woodland – Wildlife Land.

Meets minimum standards and specifications for livestock exclusion plus at least one of the following:

- (1) A minimum of 3 oak, hickory, or other mast producing trees or den trees per acre are maintained during harvest cuts or woodland improvement operations.
- (2) All trees, shrubs, and vines (except mature merchantable trees) are left undisturbed within the 50-foot borer of the woodland. When mature trees are harvested, tops and limbs are formed into loose brush piles.

C. Hayland – Wildlife Land.

Meets minimum standards and specifications for hayland management plus strips 33 feet or more in width are left unmowed on at least 2 sides of the field each year.

*Upland Wildlife Habitat Management 645 will be applied when wildlife is a secondary land use and the required specifications and management measures listed in Section 7 are in effect.

D. Pastureland – Wildlife Land.

Meets minimum standards and specifications for Pasture Management except that minimum grazing height is increased by 3 inches or the area is not mowed until after July 15th.

E. Farmstead Windbreaks, Field Windbreaks.

Meets minimum standards and specifications for Farmstead and

Feedlot Windbreak and Field Windbreak and is left unmowed.

REFERENCES

Wild Trailing Soybeans, Biology Technical Note No. 3.

Establishment and Management of Native Warm Season Grasses for Wildlife, Biology Technology Note No. 8.

Odd Area Development and Management for Wildlife, Biology Job Sheet No. 1.

Developing Farm Pond Areas for Wildlife, Biology Job Sheet No. 2.

The Ring-Necked Pheasant in Iowa, 1977, Iowa Conservation Commission Book.

Deer in Iowa – 1989, Iowa Conservation Commission Wildlife Research Bulletin No. 42.

“More Wildlife for Recreation” Lincoln Technical Service Center, NRCS, 1972.