

Crop Field Management – Habitat Strips for Wildlife

Purpose. To provide secure food and cover for various ground nesting birds (game and non-game) during critical periods of their life cycle. This practice may be used on crop fields or hay land.

This practice involves leaving undisturbed/untreated strips of standing vegetation within fields managed to produce food (insects, seeds, and green browse) and cover (nesting, brood-rearing, and escape) for ground nesting birds. Other wildlife benefits include providing habitat for pollinating insects and winter food/cover for many different wildlife species.

Habitat strips for wildlife may include untreated brood strips in wheat stubble and modifying harvest/haying practices on hayland.

The use of appropriate habitat assessments or consultation with a wildlife biologist may be used to identify the limiting factors for target species.

General Planning Guidelines

Size. Strips should be a minimum of 20 feet in width and generally not exceed 60 feet. Minimum total size should be 1 acre per field. Up to 10 percent of a field may be developed as habitat strips. Center pivot corners are encouraged to be included in their entirety.

Location. Preferred field locations may include the outer field perimeter or field border; center-pivot corners; sites adjacent to row crops; areas within the field to encourage snow catchment, as well as areas adjacent to streams, wetlands, wooded draws, Conservation Reserve Program (CRP) grass, and corridors between these habitat types.

Developing strips adjacent to permanent cover will maximize wildlife abundance and use. Maximum widths may better decrease predation, if permanent adjacent escape cover does not exist. The location of these untreated strips may be periodically changed to decrease persistent weed and insect pest concerns.

Considerations. Today's farming and haying equipment may limit more desirable irregular shaped habitat strips making these difficult to implement and manage. Although not the most desirable, linear strips which maximize widths and are well managed will provide increased food and cover.

Occurrence and Management of Practices

Brood Strip. Brood strips occur on cropland planted to wheat or other small grain crops. They are managed to produce an insect crop, green forage, and cover for broods during the initial stages of life. Tillage, grazing, or other types of disturbance of any kind are prohibited through optimum brood rearing time.

Herbicide treatment - In early-spring on green wheat, use only non-residual herbicides (e.g., 2, 4-D and Banvel) to control cool-season weeds. Specifically, sulfonylurea herbicides are prohibited. After wheat harvest, no herbicide or insecticide application is permitted through March 31 of the following year, except in cases where cool-season weeds are prevalent, in which case herbicides may be applied after January 31.

Stubble height - To maximize the value of brood strips for wildlife, cutting wheat as high as possible, leaving a minimum of 15 inches of standing stubble after harvest is encouraged. Producers are encouraged to select varieties of wheat that will attain sufficient height to produce tall stubble after harvest.

Taller stubble enhances moisture conservation by catching more snow and reducing evaporative moisture loss. Taller stubble fosters more benign weeds, like annual sunflowers. Shorter stubble tends to increase grassy weeds and Russian thistle. Broad-leaf plants are expected to dominate taller wheat stubble thereby reducing the amount of volunteer wheat and grassy weeds due to competition and allelopathic effect. Taller stubble with broad-leaf plants diminishes wind speeds at the ground level reducing the potential spread of wind-borne insects and disease.

Additional Considerations for Brood Strips on Wheat. The spread of wheat diseases and insect pests associated with volunteer wheat and other annual grasses in brood strips on wheat may be a concern when planned in wheat stubble adjacent to or in close proximity to fields that will be newly planted to wheat. Planning considerations for this concern should include the direction of the local prevailing wind as well as the location of brood strips in relation to adjacent fields planted to wheat. Planned brood strips should be located away from adjacent fields planted to wheat so that the threat of disease and insect pests are minimized.

Brood strips on wheat will not likely be planned on continuous wheat acres as the following year's wheat crop will be foregone.

Unharvested Hayland Habitat Strip. Unharvested hayland habitat strips occur on native warm-season grass hay meadows traditionally used for annual hay production and/or cropland planted to alfalfa (or other perennial or biennial legume) and used for perennial hay production within a crop rotation. Cool-season grasses (introduced species) in hay meadows do not provide the needed brood rearing benefits that other herbaceous vegetation provides and will not be considered under this practice.

Planning - Un-mowed strips included within native grass hay fields will be left undisturbed from mowing, spraying, grazing or other disturbance throughout the year to provide cover and food. No herbicides will be applied to the strips while remaining un-mowed except to control noxious and/or invasive species (spot treatment is recommended).

Un-mowed strips included within alfalfa fields will be left undisturbed from mowing, spraying or other disturbance types until after July 15 to provide insects, cover, and green forage. After which, the area may be sprayed, mowed, and/or hay removed.

Harvest Pattern - Harvest will be required to start in the middle of the field and proceed outward or begin at one side of the field and move to the other. When possible, direct harvesting to allow for dispersion of hens and broods to adjacent fields that have adequate cover for protection from predators.

Additional Considerations for Unharvested Hayland Habitat Strips. If there are several fields to harvest, leave fields or areas within fields closest to wetlands and native grass buffers like CRP acreage for last. These areas will likely produce higher nesting densities. Be aware of historical covey areas or prairie chicken display areas that might indicate incubating hens in the vicinity and slow down machinery accordingly to reduce mortality.

To improve grassland bird and pollinator use and distribution on seeded hay fields or pasture, consider inter-seeding forbs and legumes or implementing a ground disturbing activity (e.g., light disking) during the fall or winter. These should not be used on unbroken native sod.

Special Environmental Concerns

Noxious and Invasive Weeds. State, county, and local laws must be followed to control noxious weeds. Invasive species should be controlled where necessary. Spot treatment should be considered first in any management system.

Documentation

Kansas Wildlife Habitat Assessment Guide (KWHAG) or Technical Note No. KS-33, Species-Specific Habitat Assessment Worksheets

Complete Kansas Form KS-ECS-23, Vegetative Management, for planned and applied amounts.

NRCS References

Forage Harvest Management (511)

Upland Wildlife Habitat Management (645)

Kansas Technical Note No. KS-33, Species Specific Habitat Assessment Worksheets

Other References

Kansas State University (KSU) Research and Extension, Wheat Page:
www.oznet.ksu.edu/wheatpage/pests&diseases.htm

Rodgers, R. D. Effects of wheat-stubble height and weed control on winter pheasant abundance. Wildlife Soc. Bull 30(4):1099-1112.

Rodgers, R. and A. Schlegel, 2004. New life for wheat-fallow. KSU and Kansas Wildlife and Parks. Topeka, Kansas 12 pp.

Brood Strips Example



Unharvested Hayland Habitat Strips Example

