

Part I. Potential Wildlife Uses

This supplement provides design and management options for land users and planners seeking to enhance field borders for wildlife. Field borders can be created along field boundaries, ditch or waterway banks, terraces, contour strips, or pipeline areas. Frequent disturbance, such as vehicle traffic, turning farm equipment, mowing, or other farm activities, may limit the value of field borders for wildlife.

Nonetheless, in the Northern Plains agricultural landscapes, field borders can provide a protective buffer between cultivated farmland and sensitive upland or aquatic habitats adjacent to farm fields. Undisturbed or infrequently disturbed field borders potentially provide habitat for feeding, nesting, fawning and resting wildlife.

Field borders also may serve as travel corridors that allow animals to move safely between habitats. Field borders can also serve to increase the size of a specific block of cover. For example, a native grass field border could be installed to create a link between two blocks of existing native grasslands.

Part II. Planning and Design Considerations

Site Considerations

- Landowner's wildlife objectives
- Proximity to available water and other required habitats
- Adjacent land uses
- Soil qualities (texture, depth, moisture content, etc.).
- Width and length of field border and ability to accommodate desired wildlife species
- Special wildlife resources (e.g., threatened or endangered species)



Design Considerations

Fish and wildlife design considerations for field borders in Northern Plains agricultural landscapes include (1) frequency, timing and nature of disturbance; (2) field border width and length; (3) wildlife habitat value of plants; (4) plant selection to create diverse vertical and horizontal structure; (5) adjacent land uses; (6) opportunities to link with other wildlife habitats; and (7) plant selection to provide continuity between cover blocks that will be linked by the field border.

If disturbance of the site is frequent and pervasive, the opportunities to manage field borders for wildlife are greatly limited. For example, untimely mowing or postharvest grazing of crop residues may eliminate fall and winter cover value of the field border. Attention must focus on those situations where disturbance will be infrequent or will be timed to be consistent with the habitat needs of the desired wildlife species.

As is true for all linear or strip habitats, wider buffers with mixtures of different plant types (grasses and forbs, for example), will supply more potential habitat and attract more species of wildlife than narrow buffers comprised of a single species. Select plant species suitable to meet the wildlife habitat objectives.

If the goal is to provide wildlife with secure travel corridors and year-round cover, it is important to use mixes of grasses and forbs with stiff stems and higher resistance to lodging. Some species, such as brome grass and alfalfa, do not stand up to adverse weather as well as switchgrass or sunflowers, so their value as winter cover is reduced.

Nonetheless, mixes of introduced grasses and forbs may provide excellent cover for nesting and fawning, if stands

are properly managed and maintained. Aggressive introduced plants may outcompete other important plants and should be used carefully in developing wildlife habitats.

Recommended widths of field borders for travel corridors is 50 feet, with a minimum of 20 feet. The recommended width for nesting and escape cover is 100 feet. Larger widths are generally recommended to help reduce predator impacts.



Maintenance Considerations

The amount of maintenance required and the method used to maintain field border vegetation depends on how the area is used by the landowner; wildlife or habitat goals; and types of vegetation established in the field border.

For example, maintenance requirements for borders planted in alfalfa hay will be different from plantings of native grasses and forbs, and cool season and warm season plant mixes will have different timing requirements for maintenance.

Management should serve to maintain the desired plant community, vegetative structure, and interspersed structure. Management should also minimize disturbance to wildlife, especially during the reproductive period. Timing of maintenance is particularly critical if ground-nesting birds are using the field border. Disturbances necessary for maintaining vegetation or field border function, such as mowing, selective herbicide treatment, or grazing, should be delayed until after August 1 to avoid the primary nesting period. Use of chemical pesticides may disrupt the food web and use of such products should be carefully planned. Mowing at night causes high mortality of wildlife and should be avoided.

Natural disturbance factors in the prairie grasslands included fires, which occurred at three to five year intervals in the tall grass prairie and at three to ten year intervals in the mixed grass prairie. Fire at similar intervals is also an appropriate management tool for field borders established

with native vegetation. Treating a portion of the field border is preferable to treating the entire area in the same year.

Timing of burns is an important consideration. Fall burns eliminate wintercover, so burning in spring before May 1, prior to peak nesting, is commonly recommended. Fall burning is recommended to maintain the forb component of buffers and enhance their value for pollinating insects and young birds. Before conducting a prescribed burn, have a qualified professional develop a prescribed burning plan for your area.

Maintenance schedules for field borders should be adjusted to account for activities occurring on adjacent areas. For example, if nearby grasslands are hayed or grazed, displaced nesting birds may attempt to renest in field borders. Delaying treatments beyond conventional dates may be necessary to accommodate these late nesting birds.

Part III. Recommended Plants

Develop seeding mixes as appropriate for the soils, the range site, ecological site, or pasture suitability group, and major land resource area, using the plant species approved for this conservation practice as listed in the *South Dakota Technical Guide*.

Part IV. Specifications Sheet

Use form SD-CPA-26, *Wildlife Habitat Management*, to document the wildlife species that the land user wishes to benefit and to document how and where the species' required habitats are to be established and/or maintained. Follow specification requirements for the practice "Field Border," as outlined in the *South Dakota Technical Guide*.



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