Bird use found similar in warm- and cool-season grass filter strips

An Iowa State University (ISU) study of filter strips in southeastern Iowa confirms earlier research that shows grassland birds use both warm- and cool-season grass buffers. ISU researchers surveyed 33 filter strips in 2001 and 2002 and found "no significant differences in grassland bird response" to warm- or cool-season grass plantings.

Twenty filter strips had been planted with cool-season mixtures of bromegrass, orchardgrass, timothy, alfalfa, or clover. Thirteen filter strips were planted with switchgrass. All had been established at least 3 years.

"The vegetation of the warm-season plantings generally had more vertical density, more forbs, and more species richness," says John Henningsen, a biologist at the Wyoming Game and Fish Department. "But that did not translate to more grassland birds or nests in warm-season strip plantings. On average, species numbers and nests were similar in both types of plantings."

Henningsen and Dr. Louis Best found 634 nests of 11 bird species, averaging 3.1 nests per acre across all filter strips studied. Only 27 percent of the nests were successfully hatched. Causes of nest failure included depredation (62%), abandonment (6%), machinery damage (4%), and weather (5%).

Red-winged blackbirds were by far the most abundant species (54%) found nesting in the filter strips, followed by common yellowthroat (11%), dickcissel (9%), and song sparrow (9%).

Researchers also compared effects of nearby woody vegetation on bird nesting and use on the 13 strips with adjacent trees or shrubs. They found no differences in nest success in the filter strips adjacent to woody vegetation. They did find, however, that red-winged blackbirds and dickcissels strongly avoided the filter strips with wooded edges.

Bird response to buffer widths was not addressed in the study, but researchers suggested added width might be beneficial to sedge wrens, eastern meadowlarks, Savannah sparrows, and birds of conservation interest that have minimum habitat size requirements. Added buffer width might also be beneficial to nesting success of all bird species.

This study and others have shown bird use of buffer strips may be more dependent on structure and variety of plants than on whether cool- or warm-season grasses are present, notes Dr. Bill Hohman, a biologist with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) in Fort Worth, Texas.

Hohman facilitated the study for the NRCS. He recommends additional long-term studies be conducted between planting types to determine if differences in their attractiveness or productivity for wildlife develop as stands mature.

The study was a cooperative project of the NRCS Agricultural Wildlife Conservation Center (AWCC), formerly the Wildlife Habitat Management Institute, in cooperation with the National Fish and Wildlife Foundation.

The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.

NRCS photos by Lynn Betts

Cool-season grass filter strip (*top*); Warm-season grass filter strip (*bottom*)

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