

Diverse plantings in wider filter strips attractive to songbirds

Songbird use of grass filter strips increases as buffers become wider, a study by Iowa State University (ISU) shows. ISU researchers looked at 39 filter strips in southwestern Minnesota ranging from 20 to 450 feet in width.

“We found that wide filter strips had more birds and greater diversity of species,” says Nicole Davros, now with the University of Illinois at Urbana-Champaign. “Consistent with other strip-cover studies, we also found high bird use, but reduced nesting success in filter strips compared to large blocks of grassland.”

Another conclusion of the study was that filter strips planted with native and nonnative mixes produced similar characteristics of plant stands such as vegetation height and coverage by grasses and broad-leaved plants. Regardless of initial planting mixture, grassland songbirds preferred sites with tall vegetation and some residual standing dead vegetation.

Researchers also discovered that filter strips with surrounding grasslands and a reduced number of habitat edges were most attractive to grassland songbirds.

The filter strips, observed in 2003 and 2004, were at least 3 years old. Cool-season grasses dominated 14 strips, 13 were dominated by switchgrass, and 12 sites had diversified mixtures of native grasses and forbs.

Common cool-season grasses were smooth brome grass, reed canarygrass, and quackgrass. Canada wild rye, Indiangrass, and big and little bluestem were common native grasses found; alfalfa, sweet cover, and Canada thistle were forbs found most often.

Songbirds accounted for 19 of the 24 bird species observed in the filter strips. Red-winged blackbirds, common yellowthroats, song sparrows,

and sedge wrens were most often sighted.

Researchers found 238 nests of 14 songbird species—11 songbird species accounted for 90 percent of the nests. Red-winged blackbirds dominated with 65 percent of the nests, followed by song sparrows, sedge wrens, and common yellowthroats. Fourteen ring-necked pheasant and eight mallard nests were found; 29 percent of the pheasant nests were successful, and 25 percent of the mallard nests were successful. Predation was the cause of all failed gamebird nests, and the primary cause of songbird nest failure.

Apparent nest success was 20 percent for red-winged blackbirds and 37 percent for other songbirds.

Biologists in the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) are encouraging landowners and conservationists interested in seeing and hearing more grassland songbirds to consider using wider buffer strips.

According to Dr. Bill Hohman, a biologist with the NRCS in Fort Worth, Texas, results in this study are consistent with other research on wildlife use of buffers showing that wider buffers with tall stands of grassland forbs are preferred by songbirds and butterflies alike.

Funding for the project was provided by the NRCS Agricultural Wildlife Conservation Center (AWCC). The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.



Photos by Nicole Davros, University of Illinois

Wider filter strips beneficial to songbirds (top); Dickcissel nest (bottom left); Sedge wren nest (bottom right)

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