Wetland and grassland birds benefit from the Farmable Wetlands Program

In 2001, the Farmable Wetlands Program (FWP), an option under the continuous sign-up U.S. Department of Agriculture (USDA) Conservation Reserve Program, was created to restore small, mostly temporary wetlands on land under cultivation.

The FWP, a voluntary program, is aimed at assisting landowners who want to restore small, shallow wetlands that have been drained for agricultural use.

The program has been used across the United States, but particularly in the tallgrass prairie region of Iowa and Minnesota, where less than one percent of native prairies and pothole wetlands remain.

In support of the USDA Natural Resources Conservation Service (NRCS) in Iowa and its conservation partners, the NRCS Wildlife Habitat Management Institute, now the Agricultural Wildlife Conservation Center (AWCC), asked Iowa State University (ISU) researchers in the Department of Natural Resource Ecology and Management to assess the Agency's success in reestablishing wetland functions to FWP restorations.

Researchers assessed plant and animal responses to varying hydrologic and vegetative treatments, project sizes, and surrounding land uses.

Researchers monitored aquatic invertebrates because they are good barometers of restored wetland functions. They chose to study grassland birds as wildlife indicators of restoration success because bird declines associated with land use changes in the upper Midwest are well documented.

The study was conducted on 48 FWP sites and 12 unrestored wetlands in north-central Iowa.

High bird use of FWP wetlands

Bird abundance, species richness, and conservation value were higher at FWP sites than in unrestored basins. During the study, of 51 bird species observed, red-winged blackbirds were by far the most abundant recorded, but species of conservation concern including grasshopper sparrow, dickcissel, sedge wren, Savannah sparrow, and bobolink, were also commonly observed.

Bird abundance and species richness were positively related to size of site and flooding duration.

The invertebrate community was characteristically simple—relatively few were captured; species typically found in temporary wetlands were conspicuously absent.

Management recommendations

"Resource managers should encourage landowners to maximize the size of FWP restorations within program limitations, research past drainage histories and seek to restore original hydrology to the greatest extent feasible," says Ryan Harr, wildlife biologist at ISU. "They should also consider seedings that will provide diverse structure and cover types for wetland and grassland birds." Harr also says sites located in landscapes with existing wetlands and perennial herbaceous cover are likely to be most beneficial to wetland and grassland wildlife populations.

The results and recommendations are useful to the NRCS as the Agency strives to restore wetland functions, according to Dr. William Hohman, a biologist with the NRCS in Fort Worth, Texas, who facilitated the study.

Primary funding for the project was provided by the AWCC.

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

Photo by Ryan Harr, ISU

Small restored wetland

Summary of:

Agricultural Wildlife Conservation Center
Project # 68–7482–2–50

For more information on wildlife conservation technology, contact:

Ed Hackett
NRCS AWCC
Phone: (601) 607-3131
E-mail: ed.hackett@ms.usda.gov
Web site: http://www.whmi.nrcs.usda.gov

For more information on this summary, contact:

Ryan Harr
ISU NREM
Phone: (515) 294-1662
E-mail: rnharr@iastate.edu

Dr. William Hohman
USDA NRCS
Phone: (817) 509-3332
E-mail: william.hohman@ftw.usda.gov