USGS
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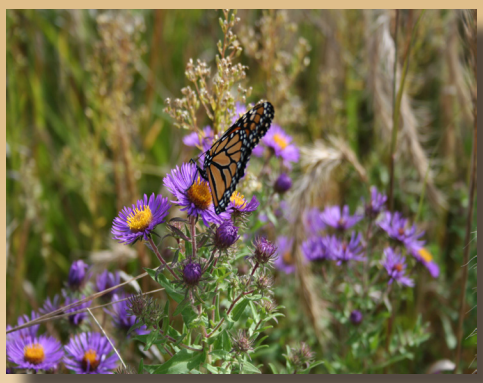
FORT COLLINS SCIENCE CENTER
Integrating Agriculture and Conservation



Agricultural lands, such as farms, ranches, and private forests, make up two-thirds of the Nation's land. Because these lands provide habitat for a multitude of wildlife species, environmental and conservation goals have become key factors in formulating national agricultural policy. For more than 15 years, the U.S. Geological Survey (USGS) Fort Collins Science Center (FORT) has provided science and technical assistance to help the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) improve management of lands enrolled in USDA-administered conservation programs.

The USDA needs information quantifying the effects of individual conservation practices and the administrative effectiveness of its conservation programs. Of these, the Conservation Reserve Program (CRP) is the largest, with a current (2009) enrollment of more than 33 million acres of potentially erosive or otherwise environmentally sensitive private lands in all 50 States. Benefits of the CRP to wildlife are well documented and account in large part for widespread acceptance and several renewals of the program. Still, FSA managers who oversee the program require more information on the biological effects of CRP policies to ensure that these policies are based on the best science, reflect important regional and ecological differences, and work "on the ground" for landowners enrolled in the program.

The USGS produces the needed science-based information to guide management actions and policy decisions that support wildlife habitat and other environmental services compatible with USDA conservation goals and farm operations. The research has involved conducting a national landowner survey, evaluating short-term vegetation responses to CRP land management practices (primarily grazing, haying, and burning), and initiating a long-term vegetation monitoring study for wetland buffers in the Conservation Reserve Enhancement Program (CREP). Studies help to refine USDA agricultural conservation policies so that they are more beneficial to agricultural operations and wildlife species.

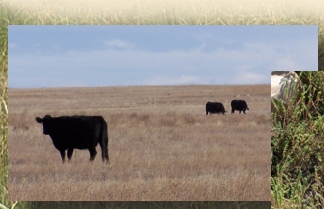
U.S. Department of the Interior
U.S. Geological Survey

Fact Sheet 2009–3099
December 2009

Selected Projects

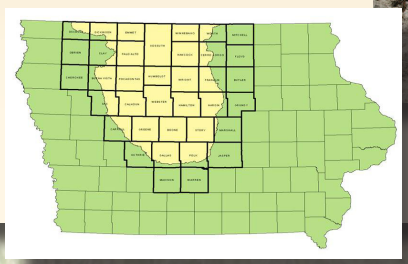
Evaluating the Effects of Grazing on Succession and Stability of CRP Grasslands in the Shortgrass Steppe

In cooperation with the FSA, the USDA Natural Resources Conservation Service, Colorado State University, and a private landowner, the USGS FORT is investigating whether limited grazing of CRP fields in eastern Colorado will favor a greater presence of native shortgrasses, speed the orderly change of plant communities, and increase belowground root biomass, thereby increasing soil organic matter and the sequestration of carbon by the system. The introduction of mixed and tall grasses in shortgrass ecosystems has heightened concerns about the management of appropriate habitats for shortgrass-associated wildlife. Species special concern or potentially endangered, such as the swift fox, may benefit from reestablishment of native vegetation more appropriate for providing long-term wildlife and environmental benefits across the shortgrass steppe.



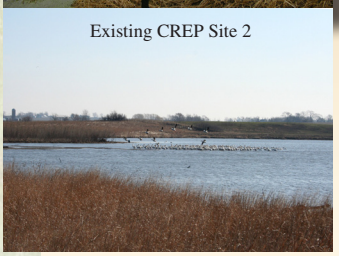
Assessing Buffer Establishment for Wildlife Habitat in Iowa CREP Wetlands

In collaboration with the FSA, Iowa Department of Agriculture and Land Stewardship (IDALS), and private landowners, FORT is monitoring vegetation succession of CREP wetland buffers to better manage the land to help accelerate native plant succession for erosion control and wildlife habitat. This research is part of a larger collaborative project between the Iowa Cooperative Fish and Wildlife Research Unit, U.S. Fish and Wildlife Service, and Iowa State University.



Assessing Amphibian Presence in Selected Iowa CREP Wetlands

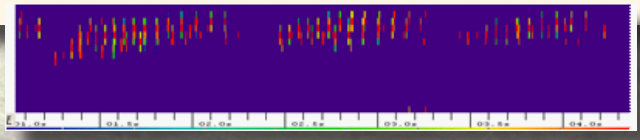

Existing CREP Site 1


Existing CREP Site 2

In collaboration with the FSA and IDALS, this pilot project was undertaken to provide the USDA with information about the presence and potential role of amphibians in CREP wetlands in Iowa. The research will document amphibian presence in existing and soon-to-be constructed CREP wetlands to establish a potential baseline for long-term research. Iowa is home to 16 anuran amphibians (frogs and toads) and 5 salamanders. The presence of breeding amphibians could represent an added ecosystem value from the CREP wetlands and be an indicator of landscape health.


Planned CREP Site 1


Planned CREP Site 2

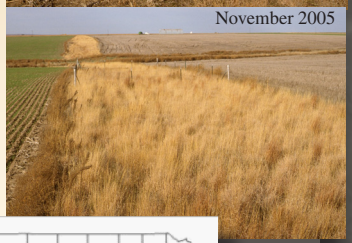


Measuring Vegetation Response to Incidental Winter Grazing in Continuous Signup CRP Buffers

Collaborating with the Kansas Department of Wildlife and Parks, a 2-year investigation determining the effects of incidental cattle grazing on linear conservation practices (crosswind trap strips and contour grass strips) associated with winter grazing of crop stubble fields was recently completed. Results of this investigation could be considered by the USDA in refining guidelines pertaining to managed grazing of similar buffers in Kansas and comparable ecoregions where conservation practices are established.


November 2004


March 2005


November 2005

Field Manual for Management of Grassland Conservation Practices in Agricultural Ecosystems

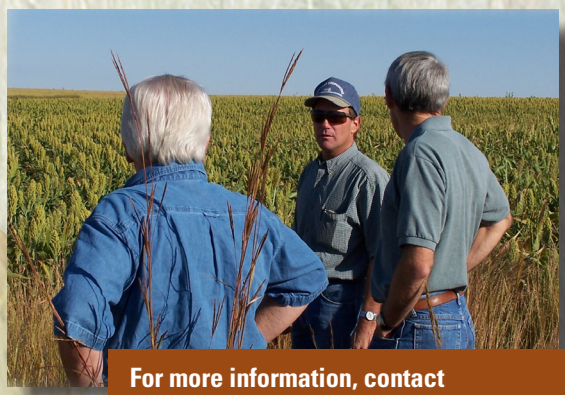
In response to a request from the FSA, FORT is preparing a manual that describes options for management of grasslands and associated wildlife in agricultural ecosystems. The manual addresses regional differences for management of grasslands established under the CRP and other USDA conservation programs. It also describes the effects of grazing, haying, burning, and disking grasslands; the implications of emergency use of CRP grasslands; conversion of introduced grasses to native species; and landscape-level planning and assessment of program effectiveness.

Recent Accomplishments and Products

1. Hosted a national conference and produced the proceedings, The Conservation Reserve Program: Planting for the Future. Available at http://www.fort.usgs.gov/Products/Publications/21490/21490.pdf
2. A National Survey of Conservation Reserve Program Participants on Environmental Effects, Wildlife Issues, and Vegetation Management on Program Lands: An Overview. Available at http://www.fort.usgs.gov/products/publications/pub_abstract.asp?PubID=21075
3. Stakeholder Opinions Regarding Management of Conservation Reserve Program Lands to Address Environmental and Wildlife Issues. Available at http://www.fort.usgs.gov/Products/Publications/pub_abstract.asp?PubID=21622

Key Partners

Colorado State University
Iowa Cooperative Fish and Wildlife Research Unit
Iowa Department of Agriculture and Land Stewardship
Iowa State University
Kansas Department of Wildlife and Parks
Private landowners
U.S. Department of Agriculture, Farm Service Agency
U.S. Department of Agriculture, Natural Resources Conservation Service
U.S. Fish and Wildlife Service



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