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A PRAIRIE STRIP INTEGRATED INTO AN AGRICULTURAL FIELD CAN PROVIDE MANY BENFITS. PHOTO BY ANNA MACDONALD

Prairie Strips – a Practical Conservation Approach for Iowa and Beyond

By Julie Dale, Iowa State University

Farmers are always looking for practical ways to keep their soil and nutrients on their land. Many producers would also like to see more wildlife, including beneficial insects, pollinators and birds. What if these goals could be achieved without devoting large tracts of land to conservation practices? As it turns out, they can.

Ongoing research at Iowa State University is exploring how producers can use native vegetation to achieve measurable conservation results in a space-efficient way. The Science-based Trials of Row-crops Integrated with Prairie Strips (STRIPS) research team has been experimenting with prairie strips in agricultural fields since 2007. Phase I of the experiment is ongoing at the Neal Smith National Wildlife Refuge in Prairie City. The STRIPS team planted prairie strips of several different configurations in small watersheds and measured how the native vegetation affected the movement of water across the field, as well as how wildlife responded to the additional habitat. The results were encouraging: lands with as little as 10 percent of their total area converted to native vegetation experienced 95 percent less soil export, 89 percent less phosphorous loss, and 84 percent less nitrogen loss than comparable fields without prairie strips. The benefits don't stop there: investigators have found that the prairie strips can potentially provide valuable habitat for insect predators, pollinators and birds.

The next step for the STRIPS team is to see how these benefits translate from small watersheds on a national wildlife refuge to working farms across the state. Many landowners have signed up to have prairie strips planted on their lands, and the research team will measure how farm fields with prairie strips compare to those without. Farmers who are participating in this research are finding that installing prairie strips can be a simple and cost-effective strategy. The best place for the strips often happens to be in some of the least productive areas of a field, and the small amount of land converted to prairie makes it easy to continue normal farm operations. As an added incentive, the cost for these measures has proven to be quite low, and can be reduced by more than 80 percent with help from the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Conservation Reserve Program.

The STRIPS team is seeing more and more farmers express interest in trying out prairie strips. Detailed information about the research conducted by the STRIPS team and the disproportionate benefits offered by prairie strips can be found at prairiestrips.org. Farmers and farmland owners can contact Tim Youngquist (timyoung@iastate.edu), a STRIPS farmer liaison, for more information on how prairie strips might be an effective option for their farm.

It's Our Legacy

By Karen Wilke, The Nature Conservancy in Iowa

An overwhelming 95 percent of Iowans believe we have a moral responsibility to ensure that future generations can enjoy our water, land, wildlife and natural beauty the same way we have. However, roughly half of Iowa's rivers, lakes and streams fail to meet state water quality standards; more than 90 percent (5 million acres) of Iowa wetlands that help prevent flooding and provide important wildlife habitat have been lost, and Iowa loses an average of five tons per acre of soil each year to erosion.

In an effort to improve Iowa's natural resources, many organizations, agencies and individuals are working together to support the Natural Resources and Outdoor Recreation Trust Fund. On January 26, hundreds of people visited the state capitol to talk with legislators about the importance of funding the Trust. In 2014 polls, 81 percent of Iowa voters supported the Trust, an increase of 18 percent from 2010.

The Trust would provide reliable and consistent funding for conservation and recreation throughout the state of Iowa. Hunting, fishing and outdoor recreation are a huge part of our cultural heritage, and the Trust would pump an additional $150 million annually into Iowa's economy for conservation and outdoor recreation that would circulate throughout the state's economy. About $30 million annually would be used from the Trust to meet the demand for voluntary soil and water conservation practices on family farms.

Iowa's Natural Resources and Outdoor Recreation Trust Fund builds voluntary, non-regulatory conservation partnerships, and is accountable to taxpayers through public oversight, mandatory annual audits and regular reports submitted to the Iowa Legislature. **For more information please visit iowaswaterandlandlegacy.org**

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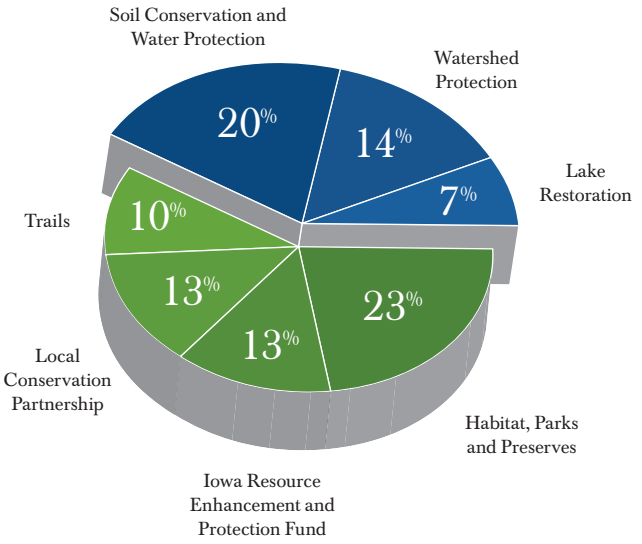

FIGURE 1: Once funded, the Trust guarantees that money in the Trust will be allocated as shown in the graph above. Graphic and article content derived from iowaswaterandlandlegacy.org.

Conservation Talks Back

By Michelle Jones, Iowa Soybean Association

Many times when profits are high, marginal land is put into production; however, these acres are typically the most environmentally sensitive and least productive areas of a field. The Iowa Soybean Association (ISA), working in conjunction with AgSolver Agronomic Services, a precision ag data and simulation company, is helping farmers take a fresh look at agronomic and environmental performance by using profit to drive decisions. Through profitability mapping, producers can better understand the performance of their operation by pinpointing the strengths and weaknesses of each field down to the 10-foot subfield scale. Using yield data, input costs and management information, acres are broken into three zones: high performing, reasonably performing and nonperforming. Combined, these acres generate the overall picture of the farm and help farmers identify ways to optimize profit, including adopting conservation practices. "When crop prices are low and profits are trending downward, it's important to understand what areas are making profit and which are dragging profits," says Adam Kiel, state water resources manager for ISA Environmental Programs and Services. "Once that's understood, investigating alternatives for those loss areas may be an easy solution to increase profits."

Many producers think in terms of yield to maximize profit, but a profitability map offers a different perspective. Nonperforming areas comprise 3–15 percent of nearly every field, according to Dave Muth, AgSolver senior vice president of analytics. Historically, these acres result in a net loss and the return on investment (ROI) shows it is cost prohibitive to invest in these acres. Instead, implementing alternative practices or changing land uses can reduce input costs and provide more capitol to invest in high-performing areas of the field. "The first thing is demonstrating environmental and economic performance are not competing," Muth says. "Here is a precision business plan that makes you, the farmer, more profitable and implements environmental practices. Once producers understand how their business improves, they are more willing to put acres in environmental practices." It starts a conversation about which conservation practices can boost profitability, such as reduced tillage; nutrient application rates, form and timing; cover crops; Conservation Reserve Program (CRP) alternatives; habitat plantings and much more.

Oxbow Update

By Karen Wilke, The Nature Conservancy in Iowa

This fall, seven more oxbows were restored for a new grand total of 12 restorations throughout the Boone River Watershed. The seven new oxbows were funded by the Coca-Cola Foundation, the National Fish and Wildlife Foundation and the Environmental Protection Agency Section 319 Lyon's Creek Project. These restored oxbows will provide valuable wildlife habitat and floodwater storage, as well as remove excess nutrients from tile water. The Boone River Watershed Project has additional funding from a Wells Fargo Environmental Solutions for Communities grant for 4–6 oxbow restorations in 2015. **Contact Karen Wilke (515-832-2916 x112 or kwilke@tnc.org) for more information.**

Join us for the Boone River Cleanup on Saturday, August 1, starting at 7:00 a.m. at Briggs Woods. **For more information, visit the Boone River Cleanup Facebook page.**

RECENTLY RESTORED OXBOW ALONG LYON'S CREEK IN THE BOONE RIVER WATERSHED. PHOTO BY BRUCE VOIGTS

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