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The Boone River Watershed Review

Area Growers Take the Lead in Conservation

"The Iowa farmer understands the needs for improved conservation practices." So says John Holmes, the Iowa State University Extension Service Field/Crop Specialist. And, says the Clarion-based Holmes, farmers in the Boone River Watershed, understand "they're going to have to take the lead on developing better conservation practices. They understand that if they don't develop better conservation on their own, the government is likely to do it for them."

The key to farmers embracing change is good information, says Bruce Voigts, the Clarion-based coordinator for the MRBI Boone River partnership. "An important take-away lesson in farming and land practices is that given accurate information coupled with trust and time to consider options, farmers will try new conservation practices" Voigts says.

Enter strip-till and bio-reactor innovators such as Hamilton County Farmer Arlo Van Diest and his farming partner Jim Larson. Not only has Van Diest been an early adopter of strip-tilling and bio-reactors, he's been eager to share his knowledge with other area farmers."At first, my interest was economics," says Van Diest. 'because strip-till means fewer passes over the field. But the big surprise was less erosion. Strip-tilling means less nitrogen and phosphorus go into the creek. "

Another surprise for Van Diest and Larson was how effective strip-till has been in delivering predictable yields in continuous corn -on-corn planting. "

Keegan Kult © ISA Photo

I felt corn-on-corn was the route to go from an economic standpoint, and I think that's when you see the most benefit from strip-till," says Van Diest. This gives farmers more options, he says. Given high corn prices, a grower can continue to plant corn without having to switch to soybeans because of nutrient depletion.

Holmes and Van Diest say that GPS guidance systems, now largely perfected, also serve to make strip-till efficient not only in fuel usage but also producer's time management.

Van Diest was one of the first farmers to install a bioreactor at the end of a drain tile line as a means of reducing nitrogen entry into waterways. It's proven so successful that he recently installed a second reactor on his Webster City-area farm.

Keegan Kult, a field tech for The Iowa Soybean Association (ISA) explains that bio-reactors are being used in Iowa as an option to reduce the amount of nitrogen reaching streams from sub-surface drainage or tile lines. Tiling, he says, is necessary to farm many of the soils in North Central Iowa as well as many other areas in the Midwest. bioreactor is an underground trench filled with woodchips in which the nitrate –laden tile water is rerouted through use of control structures. Microbes then utilize the nitrate as part of the respiration process to metabolize the carbon. Previous bio-reactors in the state of Iowa have shown to reduce the overall nitrate load 35 – 60%. Kult says the *ISA is* offering producers funding to help cover the cost of installation over the amount that they are eligible to receive through the Mississippi River Basin Initiative (MRBI) program.

Boone Oxbow Restoration —A Progress Report

An oxbow forms when a meander of a river channel is cut off from the main stem of the river during the process of a river's natural lateral migration. Oxbows that still hold water can provide critical habitat for wildlife, such as fish and birds, in addition to water quality improvements and small areas of flood mitigation. However, oxbows sometimes get filled in with sediment and no longer provide any benefits. Partners in the Boone River Watershed, including the Iowa Department of Natural Resources, The Nature Conservancy, and Iowa Soybean Association have come together to work with interested landowners on restoring functionality to oxbows along the Boone River and its tributaries.

Topeka Shiner Photo © NCRS

The oxbow restoration process removes sediment deposits, which allows the oxbow to hold water, and recreates critical habitat. Oxbows in a section of the Boone River watershed have been inventoried and assessed and an oxbow adjacent White Fox Creek has been chosen as a pilot restoration project. Once the oxbow is restored in fall 2011, it will be monitored for water quality and fish habitat improvements. In particular, the slow-moving water present in oxbows is actually critically important to the life cycle of the federally endangered fish, the *Topeka shiner*. Fish surveys completed only one year after previous oxbow restorations in Greene County, IA, found that not only were populations present, they were flourishing. Monitoring from other restored oxbows has also shown significant nutrient reduction when oxbows are coupled with drainage tile outfalls. In addition to the multiple benefits that this practice provides, the placement is also ideal as the majority of oxbows are located near streams where land is often times not ideal for row crop production.

Trash from the Boone River cleanup© Eileen Bader/TNC

Boone River Cleanup Day

Some 20 volunteers spent the morning of Aug. 13 pulling scrap metal, cans, bottles, dozens of tires, and other trash out of the river along a 5-mile long stretch of the Boone River from the Tunnel Mill canoe access point to Bells Mill Park, a campground adjacent the river. Once all the canoes arrived back at Bells Mill, the trash was hauled up on shore and sorted into piles for recycling. This is the fourth annual clean-up on the Boone River hosted by Webster City, ISU Extension, and Hamilton County Conservation – last year's clean-up was cancelled due to high water and rain.

Women Landowner Meetings

A women's landowner meeting was held on February 7, 2011 in Webster City sponsored by The Nature Conservancy, Hamilton County SWCD, and the Women, Food, and Agriculture Network. The goal of this meeting, was to target a the largest but often overlooked group of Iowa landowners – *women*. The meetings are tailored to engage women who may not be comfortable with their understanding of available conservation practices or are looking for a place to network and discuss concerns with other women landowners. Topics discussed during the meeting included soil and water quality, conservation practices that keep soil and nutrients on the land, such as strip tillage and cover crops, and programs available to assist with implementing conservation practices. Another meeting is planned for October in Clarion and will include field visits. If you'd like more information or to attend this meeting, please call Eileen Bader at the Webster City NRCS office at 515-832-2916.

Landowners share their stories © TNC photo

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