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Fencing cattle away from creeks

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Fencing cattle away from creeks

Abstract

Pastured cattle (and other livestock) are recognized as a critical factor in stream bank degradation and erosion. Fencing cattle away from stream banks is an effective technique for improving water quality in pastured stream corridors. When cattle graze in stream corridors, their hooves exert several times greater pressure on the soil than the per square inch weight of a bulldozer. They consume or trample vegetation, eliminating the stream's natural protective blanket of vegetation and expose the soil, increasing its vulnerability to erosion.

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INTEGRATED CROP MANAGEMENT

Fencing cattle away from creeks

Pastured cattle (and other livestock) are recognized as a critical factor in stream bank degradation and erosion. Fencing cattle away from stream banks is an effective technique for improving water quality in pastured stream corridors.

When cattle graze in stream corridors, their hooves exert several times greater pressure on the soil than the per square inch weight of a bulldozer. They consume or trample vegetation, eliminating the stream's natural protective blanket of vegetation and expose the soil, increasing its vulnerability to erosion. The vegetation along the stream bank is important. It not only covers the soil but also helps dissipate the energy of high water; slows runoff from surrounding pasture, crop fields, and feedlots; and absorbs or breaks down the nutrients and chemicals in runoff.



A nose pump on the Bigalk farm with a 15 x 15-foot concrete pad.

Another benefit of increased vegetation near streams is the regeneration of fish and wildlife habitat. Shaded streams have cool and clear water, increasing the amount and diversity of aquatic life supported by the stream. Mature vegetation provides food, habitat, and cover for wildlife.

Keeping cattle away from the stream also may reduce problems with poor pasture use, exposure to water-transmitted diseases and algal toxins, foot rot, leg injuries, drowning, and incidence of cattle stuck in mud. Furthermore, fencing cattle away from streams prevents the animals from defecating or urinating in the stream, which reduces bacterial pollution.

And fencing may help spur producers to establish a more productive rotational grazing system, or to think about using best management practices throughout their farming operation.

Fencing tips

Reasons to Fence Cattle Off Streams

- stabilizes stream banks
- reduces erosion
- improves water quality
- protects herd health
- better pasture management
- improves fish and wildlife habitat

Most producers already know that fencing is site-specific work and much depends on the land, resources, and livestock. To fence cattle out of a stream (and for rotational grazing), a single or double strand of high-tensile electric fence is often the best choice. Don't use woven wire around streams and creeks because it traps debris and is damaged in floods, whereas a single strand high-tensile fence is less likely to be washed out in a flood.

- enhances landscape
- progressive approach to downstream neighbors

Other advantages of a single strand of electric fence are its flexibility and low installation cost. Mowing vegetation that grows along electric fence is needed to keep tall weeds from shorting it out and to prevent cattle from reaching for more forage.

Establish your fence line as far away from the stream as possible. The benefits of reduced erosion, improved water quality, and more wildlife habitat increase as the distance from the stream increases.

Nose pumps

Fencing cattle away from streams may mean that you lose a water source. Consider using a nose pump instead. Nose pumps are powered by livestock pushing a piston with their nose (cattle learn to use the pumps within a few hours), so no power source is needed. With a moderate cost of approximately \$450 (add in costs for mounting brackets, concrete pads, and fencing), nose pumps are a cost-effective option. Two nose pumps easily have enough capacity for 50 cows and calves.

The Bigalk Creek Project

Cattle in stream corridors were degrading water quality in Bigalk Creek in northeastern Iowa, so Manley and Linda Bigalk decided to fence cattle away from the stream in their operation (the creek bears the family name.) With assistance from the Iowa Department of Natural Resources and the Iowa Department of Agriculture and Land Stewardship, the Bigalks fenced cattle out of the creek, installed nose pumps, replaced trees, stabilized the stream bank, and constructed a cattle crossing.

The Bigalks' use of best management practices caught on and grew into the Bigalk Creek watershed project (11,300 acres along a 6-mile stream corridor). Emphasizing best management practices on cropped uplands as well as fencing cattle off streams, producers used sediment retention ponds, contour farming, no-till, integrated crop management, filter strips, riparian buffer strips,

Bigalk Creek Partners

- Private landowners
- Howard Soil and Water Conservation District
- Iowa Department of Natural Resources
- Farm Service Agency
- Iowa Department of Agriculture and Land Stewardship, Division of Soil Conservation
- Natural Resources Conservation Service
- Environmental Protection Agency
- Iowa State University Extension

sediment basins, manure settling basins, grassed waterways, tree planting, and nutrient and pesticide management.

The results far exceeded expectations: sediment delivery to Bigalk Creek was reduced by an estimated 12,285 tons for the 4-year project. If the practices that were implemented during the project for both upland and riparian areas are maintained, predicted erosion will be reduced by more than 5,000 tons per year. Not only is water quality visibly clearer but also Bigalk Creek is only the third stream in Iowa where natural reproduction of rainbow trout occurs.

Water is something we all share. Doing your part to improve water is smart farming and good-neighbor relations. The [Bigalk Creek project](#) [1] demonstrated that using a voluntary approach to land management with private landowners can be a win-win for producers and the environment.

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[1] http://members.xoom.com/_XMCM/howardswcd/bigalk/index.htm

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