



LSP *Myth Buster* #40

An ongoing Land Stewardship Project series on ag myths and ways of deflating them.

Updated: March 2014

→ *Myth*: Cattle & Water Should Never Mix

→ *Fact*:

Kent Solberg, a livestock farmer from northwestern Minnesota who also serves as the livestock and grazing specialist for the Sustainable Farming Association of Minnesota, knows all too well the reaction most environmentalists have when “cattle” and “creeks” are used in the same sentence. He has worked as a staffer and consultant for four state natural resource agencies as well as the U.S. Fish and Wildlife Service and has a master’s degree in wildlife biology.

“I’ve had the experience of sitting in a freshman class on wildlife management and a slide pops up showing cattle on an eroded stream bank with a red circle around it and a slash through it,” says Solberg.

For good reason: allowing bovines unfettered access to rivers, streams and lakes can be a disaster for water quality. Cattle can contaminate water directly through urination and defecation and indirectly by removing vegetation on adjacent lands to the point where nothing is left to keep silt and other contaminants out of the aquatic system.

However, an increasing number of water quality experts are pointing to examples where cattle not only do not destroy water quality, but in some cases make it better. The key is to not allow cattle uncontrolled access to water systems, which is often the case in continuous grazing, a system where cattle are turned out onto the same pasture for the entire growing season, and sometimes longer.

But when stream banks, for example, are exposed to short (a day or two at most) bursts of livestock activity, it tends to stabilize the riparian area, getting rid of the invasive species that can crowd out deep-rooted grasses. And it turns out such “flash grazing” activity works well with managed rotational grazing, a system livestock producers are increasingly using to produce meat and milk. Instead of turning cattle out into one big pasture for months at a time, graziers rotate the animals through a series of smaller paddocks, providing the land plenty of rest time between grazings. Such frequent rotations reduce overgrazing and allow grasses to recover and develop deep root systems. It also spreads manure and urine more evenly across the landscape, reducing contaminant runoff, and can lengthen the grazing season for farmers significantly.

Making a stream bank one stop on a rotational grazing schedule is not a new idea. In the 1990s, the Land Stewardship Project-led Monitoring Team, a partnership of farmers, scientists and natural resource professionals, showed that managed grazing of riparian areas could significantly improve water quality.

A study published in the journal *Hydrobiologia* in 2011 found

that in southeast Minnesota, southwest Wisconsin and northeast Iowa rotationally grazed sites were “associated with more stable stream banks, higher quality aquatic habitat, lower soil compaction, and larger particles in the streambed” when compared to conventionally grazed riparian areas.

The U.S. Environmental Protection Agency and the USDA’s Natural Resources Conservation Service have come to recognize the role rotational grazing can play in reducing nonpoint water pollution, a major problem in the Midwest.

A recent *Land Stewardship Letter* described a 3,000-foot stretch of Trout Run Creek in southeast Minnesota, where farmers Earl and Judy Prigge are using flash grazing to preserve the effects of a \$133,000 restoration effort led by Trout Unlimited a few years ago.

“It’s a great relationship—livestock and streams,” says Jeff Hastings, a project manager for Trout Unlimited. “If we had our way, we would have grazing on every project we work on.”

But grazing requires livestock out on the land, something that’s disappearing as monocrops of corn and soybeans come to dominate many parts of the Midwest. The 2011 *Hydrobiologia* study came with an important caveat: while rotational grazing can improve water quality on a very local scale, land use in the wider watershed may be limiting the potential of this sustainable production system. A landscape dominated by a few annual crops can wipe out the benefits of a perennial plant-based farming system practiced on a handful of farms in a watershed.

In other words, the fate of water quality and the future of livestock production are even more intertwined than imagined—and not in the way we might have assumed.

→ More Information

- The *Land Stewardship Letter* article on Trout Run Creek is in the No. 3, 2013, edition at www.landstewardshipproject.org.
- The *Hydrobiologia* paper can be found by Googling the title “Relationships among rotational and conventional grazing systems, stream channels, and macroinvertebrates.”
- *Managed Grazing in Stream Corridors* is a how-to manual for farmers. It’s at www.mda.state.mn.us/news/publications/animals/livestockproduction/grazing.pdf or available by calling 800-967-2474.

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