

## History Repeats Itself

*by Laura Paine, Crops and Soils Agent*

*November 20, 2002*

“Grassland agriculture is a type of farming in which....up to 80% of the total feed used on Wisconsin farms may well come from improved pastures and high producing grass-legume mixtures harvested for hay or ensilage. The success of such a program is based on the recognition of legumes and grasses as a crop—a crop that is worthy of the same consideration with respect to fertilization, cultural and management practices as is given to cereal and cultivated crops.”

These words could have been written today, but they weren't. They're found on the back of UW Extension Circular #373 titled “Wisconsin Needs Better Pastures.” The date? 1947. Even back then, before high input production agriculture became the standard, pastures got no respect.

I'm always on the lookout for old Extension bulletins and books on agriculture. Aside from providing some fascinating insights into a bygone era, these lessons in history can provide us guidance for the future. What's that old saying?...‘Those who ignore history are condemned to repeat it.’

Besides, you'll almost always find some good information that we can dust off and adapt to our current farming systems. Although there are a many new developments—portable fencing and watering, new forage species and varieties—the basic concepts in this old bulletin are sound and some of those old, forgotten ideas deserve a new look.

The picture they painted back then is still a common scenario: grow row crops on any land that can be tilled and pasture the animals on what's left—the rocky knolls, steep slopes, riparian areas, and woods. How many times have we been told that ‘that ground is too good for pasture—you should be growing corn’ on your land. Things haven't changed so much in 50 years.

The bulletin sums it up this way: “With all these adversities, many old bluegrass pastures are weedy and unproductive. Some of them provide more fresh air, sunshine, and exercise than they do feed. At times, they are aptly described as ‘bovine gymnasiums’.”

So, here we are again, tackling the same old problems. Are we any more likely to learn from this bulletin than they were in 1947? I don't know, but in our current economic climate, their approach should make sense to many livestock farmers. The authors focus on increasing pasture productivity and utilization within a conventional system—maybe a little different definition of ‘grass farming’ than we're used to. They don't talk about converting your system. They start with some smaller steps: making those worn out bluegrass pastures more productive and providing a wider variety of grazable forage resources to get the animals ‘out of the gym’ part of the time.

The bulletin starts off by looking at renovating bluegrass pastures on erodible land. During the 1990s we did a number of studies on renovating bluegrass pastures, none spectacularly successful (see ‘Renovation: Most Pasture Improvements Can Be Simple’, *Agri-View*, February, 2000 at <http://www.uwex.edu/ces/cty/columbia/ag/grazing/articles/grazing9.pdf>).

We could have read this bulletin and learned that the only really fool-proof way to change species composition in these overgrazed pastures is to get rid of the bluegrass. It's expensive, but it's worth it to safeguard your investment in improved grass and legume seed by eliminating competition from existing plants.

Today, herbicide and a no-till drill will easily accomplish this task. Back in the 1940s, tillage was the only option. Why might we want to consider this today? One reason would be to allow incorporation of fertilizer and lime, far more effective than applying these materials on the surface. This would also be an alternative for an organic producer or anyone who is interested in reducing chemical use.

The authors suggest beginning the process in August, when drier weather reduces erosion potential and also weakens the bluegrass, making it easier to kill. You start by disking first up and down the hill, then at right angles along the contour of the slope, cutting the sod into squares. Once that's done, the ground can be worked up with a field cultivator or spring tooth harrow without plugging.

This process also allows you to kill the grass while leaving most of the residue on the surface, protecting the soil from erosion. The sod is left to decompose over winter and the ground is ready to plant in spring.

Of course, the renovation must be accompanied by increasing grazing acres or the pasture will continue to be overgrazed and will revert to bluegrass. The bulletin provides a means for gradually adding grazing acres and shifting the farm to a more grass-based system. It lays out a strategy for a diversified system in which pasture is a major component, but other crops are grown.

The authors link good pasture management with soil conservation. They recommend leaving rolling land in grass much of the time, keeping 'washing hillsides' in grass all of the time, and having steepest slopes in trees always and keeping the cattle out. They suggest using only level fields for row crop rotations and even these should be rotated into forages periodically.

For those who aren't ready to seed down their entire acreage to pasture and wish to maintain a conventional crop rotation on some acres, they suggest options for 'season long grazing' to maximize the proportion of forage the animals harvest themselves. For early spring they recommend fall seeded rye and alfalfa-grass mixtures, suggesting that grass sods can be ready to graze 2 weeks earlier with a timely application of nitrogen.

For spring and early summer, recommendations are for using yet-to-be-renovated bluegrass pastures, renovated pastures of brome, alfalfa, and ladino clover, mixtures of grasses and legumes grown in rotation with row crops, nurse crops where pasture and hay are being established, and sweet clover. Today, we'd also consider improved varieties of orchardgrass, ryegrasses, and festuloliums and we'd substitute red clover for sweet clover.

For late summer and early fall, the authors recommend renovated pastures, mixtures of grasses and legumes grown in rotation with row crops, 'native' reed canarygrass if available, and annual forages such as sudan grass, mixtures of soybeans and sudan or soybeans and corn, and dwarf essex rape.

For fall grazing, the suggestions are for permanent pasture, old pastures and hayfields going back into rowcrops, fall seeded rye, dwarf essex rape, reed canarygrass, and lightly grazing new seedings after frost has stopped their growth. I'd add grazing corn stalks and other crop residues to this list.

The variability of forage sources and quality in this system might challenge even the best nutritionists trying to balance a ration. On the other hand, this approach is a recipe for effective utilization of all the roughage a farm is likely to produce. It extends the grazing season, maximizes the proportion of forage harvested by the animals, and spreads grazing and manure distribution over as large a proportion of the acreage as possible.

Although the details have changed, the basic principles are the same: Today, as in 1947, lowering production costs is an effective way to increase profitability. And one of the most reliable ways to reduce production costs is to send the cows out there to harvest their own forage and spread their own manure, minimizing spending on seed, fertilizer, and machinery.

But there are always obstacles to making changes. Many farmers are as reluctant today as they were in 1947 to consider alternatives, or even take the small steps this bulletin suggests. I'm guessing that the particular farmer who owned this copy of "Wisconsin Needs Better Pastures" didn't get the message either. The guy who owned this bulletin had never looked inside. It was in perfect condition—unopened, unused, until now.

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Laura Paine is University of Wisconsin-Extension Crops and Soils Agent for Columbia County and has worked with grazing networks and done on-farm grazing research for 10 years with the University of Wisconsin-Madison. She can be contacted at: PO Box 567, Portage, WI 53901, 608/742-9682, [laura.paine@ces.uwex.edu](mailto:laura.paine@ces.uwex.edu). She's always interested in feedback and ideas for future articles.

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