

# Driftless Region Beef Conference 2013

---

## 7 Habits of Highly Productive Pastures

Rhonda R. Gildersleeve, Ph.D., University of Wisconsin Cooperative Extension

For many agriculture producers in the Upper Midwest, 2012 will be recalled as a memorable year, presenting both challenges and opportunities. Due to widespread drought and high feeding costs, the beef industry is taking another hard look at increasing feeding efficiency, including figuring out how to get the best returns possible from pastures, harvested forages, and crop residues. Many pastures will need some extra TLC in the coming year to overcome the extreme drought conditions of 2012. This winter, spend some time thinking about what is really important to optimize potential of your pastures and develop a game plan for making it happen.

### Match pasture management goals with herd nutritional needs

Each farm has different goals for pastures and the management system must be designed to meet individual production, forage quality, economic and lifestyle needs. Here are a few questions to consider:

- *Who is my "customer"?* Whether the answer is your own beef cow herd, retained feeders, purchased stockers, grass finishing cattle, or a even commercial hay market, each of these "customers" will require particular goals in terms of the quantity and quality of pasture and/or harvested forage needed. Identify these goals and shape pasture management to produce the desired outcomes.
- *What are my resources?* Recognize both the opportunities and challenges for pastures on your farm and determine how best to optimize the resources available. Think about your farm's pasture and forage systems in terms of total annual production needs. Identify realistic production and quality targets in terms of animal stocking rates, length of grazing season, or potential forage yields as well as considering how production shortfalls will be addressed.
- *What can I do to improve efficiency and sustainability of my system?* How does pasture and forage production fit in with other farm enterprises? What are the opportunities to increase efficiency in relation to the resources, time, labor and capital available? What farm conservation or environmental improvements are needed? What will the pasture and forage production system look like in five years? In 10 years? In 20 years?

### Optimize soil fertility

Attention paid to soil fertility increases capacity of pastures and harvested forages to tolerate suboptimal growing conditions such as variable weather patterns, insect pests or weed competition, resulting in more consistent forage production and quality. Soil fertility needs should focus primarily on the legume component, which generally requires a higher soil mineral status, particularly of phosphorus, potassium, calcium, magnesium, sulfur, and boron for optimal production. In addition, research indicates that pasture grasses also use applied nitrogen more efficiently when soil potassium and phosphorus status is in the optimal range.

Soil test pastures and hayfields every 3 to 4 years, focusing on maintaining or improving soil pH, potassium, phosphorus, and trace minerals such as sulfur and boron as recommended. Call your local County Extension office for assistance with interpretation of soil test results for soils in your area.

### Go for the legumes

Legumes make significant contributions in both pasture- and harvested forage production systems, providing consistent forage yield, quality, and palatability. Legumes also fix nitrogen in symbiosis with rhizobial bacteria colonizing their root systems. Most legumes will need to be reseeded periodically, or allowed an extended rest period to set seed. Grazing management that encourages strong seedling growth must also be applied. Develop

## Driftless Region Beef Conference 2013

---

a consistent plan to maintain or improve productivity of legumes in your pastures and hayfields to reap the benefits of these forages across the farm.

### **Add Diversity to pasture and forage systems**

Many producers choose to use simple grass: legume mixtures on pasture and forage acres. Recent research from Iowa and elsewhere suggests that forage mixtures should be varied across the farm landscape to maximize productive capacity. In the Driftless Region, with rolling topography and variable soils, increased pasture diversity can pay dividends not only in terms of production, but also address erosion concerns, provide management flexibility during dry summers on shallow soils, and optimize returns from harvested forage acres. Improved varieties of legumes and grasses are available that enable producers to develop custom seeding mixtures that fit well across a farm's resources. For those producers interested in developing their own seeding mixtures, a calculator is available online through the University of Wisconsin Forage Research and Extension website at: <http://www.uwex.edu/ces/forage/>.

### **Manage grazing to realize adequate pasture rest and residual plant heights**

Pastures require periodic rest from defoliation and attention paid to residual heights post-grazing to maintain vigorous swards. Subdividing pastures not only builds in more rest for individual pasture areas, but increases flexibility of grazing management in terms of matching animal dry matter intake and quality requirements along with the opportunity to better manage residual dry matter left after grazing. Recent research from the US Dairy Forage Research Center has demonstrated that several cool grass species show improved seasonal forage yields and also respond the following spring with up to 10 days of earlier growth initiation when proper residual grazing heights are maintained. During periods of dry weather, forage residues also provide important cover to soils that can buffer soil temperatures and improve water infiltration when precipitation occurs.

### **Have a plan for seasonal forage gaps and unexpected weather events**

Forages adapted to the Upper Midwest have definite seasonal patterns of quality and production. As producers, we must plan for those periods of minimal forage production as well as be prepared for unexpected losses to due weather fluctuations. Currently there is much renewed interest in the use of crop residues and annual forages and cover crops to help fill in expected forage gaps as well as provide emergency forage as needed. Developing a plan for including some of these options among the total pasture and forage resource inventory is recommended for many beef production scenarios.

### **Show me the money**

Last but not least, the economic realities of high feeding costs in all sectors of the beef industry requires that producers continue to pay attention to the economics of various pasture and harvested forage alternatives. Pastures still reign as our best low cost opportunity to produce high quality and quantities of forage for beef production, but will do so only if the same amount of attention and effort are made as with other feed crops.