

Old-Style Pasture-Forage Management Practices Need to Be Culled

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Beef producers need to cull low-performing pasture-forage management practices just as producers cull low-performing cows, says a North Dakota State University range scientist.

“The natural tendency of agricultural producers is to focus on improving the product sold at market, and beef producers tend to focus on increasing the weaning weight of calves. The practice of keeping high-performance cows and culling low-performance cows has greatly improved livestock performance over the past couple decades,” notes Lee Manske, a range scientist at NDSU’s Dickinson Research Extension Center.

“However, both the land that produces pasture and hayland forage and the labor and tools that perform the work are also essential components of a managed production system. Selecting improved pasture-forage management practices is as important to a positive profit margin as is the process of animal selection and should be given the same careful attention,” he emphasizes.

Production of herbage and plant nutrients is the source of new wealth generated from agricultural use of land resources, Manske says. The amount of value captured from the land is proportional to the efficiency of the pasture-forage management practices in capturing nutrients.

Traditionally, the costs of pasture and forage and of labor and tools have been viewed as the major parts of total livestock production costs rather than as sources of potential wealth, he says. Consequently, pasture and forage management practices are not characterized as producing high income or low income. “Most beef producers do not know if a particular parcel of land and the practices used to manage that land yield an income or are an expense; they do not sort pasture-forage management practices as keepers or culls,” Manske says.

Beef producers continue to use the same basic concepts of pasture and forage management that were developed during the early stages of the Northern Plains beef industry, when the dry matter requirements for livestock were the major consideration and the cost of land area per animal added little to total production costs.

“These traditional practices sustained numerous family operations in the region during many natural and manmade calamities but are not adequately serving producers facing current conditions,” Manske says. He notes that the old-style practices ineffectively address two major changes that have occurred.

The first major change is that today’s fast-growing, high-performance cattle are genetically different from the old-style cattle. Modern cattle have higher rates of weight gain, produce greater quantities of milk, are larger, weigh more and deposit less fat on their bodies. Because of the higher rates of production and the reduced levels of body fat, modern animals perform best when provided with the required quantities of nutrients throughout the production year, Manske says. Traditional practices do not efficiently meet the higher nutrient requirements of modern animals.

The second major change is that the swine, poultry, and dairy industries have switched to efficient feed management systems that evaluate feed costs by the cost per unit of weight of the nutrients rather than by the cost per unit of dry matter. This shift has reduced production costs for these industries and increased competition for the beef industry, he says. With traditional practices, the beef industry cannot reduce production costs enough to remain competitive and return adequate profit margins.

Traditional livestock feed management systems are biologically inefficient and capture only a small portion of the value potentially available from the grasslands, haylands, and croplands in the Northern Plains. When high-performance livestock are fed forage from low-performance management practices, the result is animal performance

below potential, high forage-feed costs and low profit margins. Pasture-forage management systems for beef production need to be improved to reduce production costs per cow-calf pair and to increase profit margins.

To evaluate the effectiveness of management strategies in reducing livestock pasture-forage costs, compare forage-feed costs per day, costs per pound of crude protein captured, and costs per pound of calf weight gain, Manske recommends. “When average forage-feed costs are 62 cents or less per day, captured crude protein costs are 25 cents or less per pound, and calf weight gain costs are 42 cents or less per pound, the management practice is a keeper. When the forage-feed costs, the captured crude protein costs, and calf weight gain costs are greater than these values, the management practice should be culled.”

Modern 12-month pasture-forage management systems with improved efficiency can increase production on the land and capture greater economic value from the land resource. Sustaining high levels of production from pasture and haylands requires the use of management strategies that place priority on plant health and growth and meet the biological requirements of plants and ecosystem processes, he says.

“Increasing the value captured from the land resource requires a major paradigm shift from the practices that capture the greatest quantity of dry matter per acre to practices that capture the greatest quantity of crude protein per acre. Nutrients, not dry matter weight, are the valuable product from pastures and haylands,” Manske says.

“The inefficiency of traditional management practices in capturing economic value from the land is enormous,” he notes. Culling traditional grazing and haying practices and replacing them with efficient pasture-forage management strategies will provide Northern Plains beef producers with the ability to double the cow herd size, reduce annual pasture-forage costs per cow by 30 to 50 percent, and increase net income 3 to 10 times on their current land resources.”