BeefTalk 776: Understanding Grazing Systems is Not Easy

Start with the concept of "take half, leave half" when setting up a grazing system.

Grazing plans integrate the biology of plants and animals. Grass is the mainstay of a grazing plan, and the subsequent understanding and implementation of grazing can be overwhelming at times.

When the discussion widens to not only engage the grass discussion but the animal discussion, as well, the participants have been known to get a little testy. The concepts and associated processes in designing grazing systems are complicated but well-understood. Compounding the active discussion is the variation associated with whatever the species of animal that is selected to do the grazing.

Additional input soon will erupt regarding the animal type selected within the species selected. Take large or small cows, for example. Each time I address the topic, general discussions, thoughts and opinions are advanced that far outweigh the application of factual data relative to implementation of a grazing system. So let me, in a more personal way, express some of the challenges that are presented to me each time the subject is broached.

Several concepts must be placed on the table for discussion at the same time. The list generally includes desired levels of animal performance, desired level of forage utilization, and desired levels of quantity and quality of forage production. The goal: Combine these three thoughts into a bottom line that ultimately would produce the ranch a profit, outputs minus inputs, sustainably through time.

Most producers will rely on history, adjusted for current seasonal weather inputs, to help assess each year's opportunity for grazing forage. But is the system right? Is there something better? Those two questions trigger considerable discussion in the range and ranch community. But let's take each of the three desires and look at how a logical discussion could unfold.

Setting a desired level of cattle performance requires an understanding of cattle growth potential, but more importantly, it requires setting the size of cow and meeting the cow's nutritional requirements. Although range systems are based on the metabolic weight of an animal unit, for discussion as cattle producers, the 1,000-pound cow (including calf at side or dry) is the standard weight of one animal unit. The 1,000-pound cow is allotted 26 pounds of pasture forage per day to meet the nutritional needs of the cow.

Cattle performance or efficiency is not a function of setting up a grazing system. There are differences in cattle types and efficiency, but that difference does not impact the grazing system. All a producer needs to know is the average weight of the cattle going into a pasture.

In regard to forage utilization, the age-old standard is still relevant today and has not changed: Take half and leave half. Taking half of the forage and leaving half of the forage remains the goal of many grazing systems. Systems that remove more than half of the total forage production may be detrimental to plant viability and could change plant populations. Leaving half is not based on plant height but total weight, so more than half of the plant height will be harvested.

Also, even though 50 percent of the total weight of the plant is utilized, only 25 percent of the total weight actually is ingested by the cow because 25 percent of the total weight is lost to trampling, is used

for bedding, dries out or decomposes through animal waste products. All a producer needs to know is most grazing systems assume a 25 percent harvest efficiency of total forage weight.

So why so much discussion of grazing systems? Harvest efficiency will vary as cattle numbers are varied and with the intensity of the grazing system. If additional grazing pressure is applied, the "take half, leave half" rule is violated, but harvest efficiency may increase. By decreasing grazing pressure, harvest efficiency actually goes down.

Grazing System Goals

1. Set a desired level of animal performance
2. Set a desired level of forage utilization
3. Set desired levels of quantity and quality of forage production

Ultimately, combine these three thoughts into a bottom line that produces a ranch profit, outputs minus inputs, sustainably through time.

Another term, grazing efficiency, is used to represent the proportion of utilized forage; it's the "take half" that is ingested vs. wasted when grazing density is changed. As grazing density (more cows per acre) increases, grazing efficiency can increase. So there are components of grazing systems that vary depending on the system.

Again, in setting up a grazing system, start with the concept of "take half, leave half." Of course, the desired levels of quantity and quality of forage production are the most critical to understand because cattle weight is set and forage utilization is determined by the grazing system. Forage quality ultimately will be determined by the grazing system. However, producers must know how much total forage can be produced, given the soil type, topography and environment. More next week.

May you find all your ear tags.

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