Top 10 Misconceptions in Grazing Management

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Often in the course of our work as consultants, we help producers with land management issues that have relatively straightforward answers. For the most part, we address their concerns based on a particular land management goal. For instance, if a producer wants to increase forage production on his/her operation, there are several ways to overcome challenges and meet that goal. Many times ecological barriers of production are the easiest to address. Other times, it is perceptual misconceptions that affect an operation the most, and resolving them may require a rather steep and abrupt learning curve to achieve success.

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HERE ARE 10 COMMON GRAZING MANAGEMENT MISCONCEPTIONS

ONE
“IN THIS COUNTY, I CAN RUN A COW FOR EVERY 10 ACRES.”

Stocking rate is the single most important decision a producer makes. Stocking rates are calculated by balancing animal demand with forage supply. Often, we hear of instances where producers are managing using a county-based stocking rate. However, rates are ranch-specific and are influenced by grazing history, forage type, climate, land capability, livestock type and class, etc. County-based stocking rates will tend to overstock some ranches and understock others. In my experience, the majority of the time they tend to overstock ranches. It is also a frequent misconception that implementing a grazing system will alleviate stocking rate problems. Over the long term, no grazing system will work if the stocking rate is not balanced with the annual forage produced.

TWO
“MY COWS GRAZE ALL OF MY RANCH.”

The actual grazable acreage of a ranch is often overlooked. It is rare that every acre of the pasture is usable by livestock. Often, even if the producer went through the process to develop a balanced stocking rate, they will be overstocked on day one if they did not compensate for the grazable acres of the management unit. There are many factors that lead to actual grazable acres being limited. Slope is a common limiter; most cattle do not want to graze on slopes steeper than 30%. Acres of heavy brush is also a common limiter since those acres, even if accessible by cattle, do not produce the same amount of forage as open areas. Many producers also overlook acres of surface water as well as land taken up by ranch roads. For instance, 1 mile of a 20-foot-wide ranch road equals 2.4 acres. If we add up the area of all the access and ranch roads, the total is sometimes surprising. An accurate stocking rate is one that has compensated for the acres on an operating unit that cannot be grazed.

THREE
“GRAZING HARD IN THE WINTER WON’T HURT MY GRASS.”

The forage base of the Southern Great Plains is primarily warm-season, meaning the majority of forage production occurs in the summer growing season. It is common to stockpile native rangeland for winter grazing. It is also a common misconception that native plants can be grazed heavily in the winter as long as they are not growing. Most of our native warm-season perennial grasses begin to develop the next year’s young shoots in the fall of the previous year. These young shoots are called phytomers, and they need protection through the winter. This is one reason for leaving an appropriate stubble height on native grasses. This stubble provides some thermal protection, but mostly ensures that young perennial shoots are not grazed. Excessive grazing pressure in the fall and/or winter on native perennial grasses can reduce the number of shoots/plants present the next spring, thereby reducing overall annual production.

FOUR
“I RESTED THIS PASTURE ALL WINTER.”

Many times our good intentions can work against us. Resting pastures, or providing a specified time without grazing, does allow plants to recover from the grazing event. Typically, we plan to allow our primary forage species time to recover fully before we return for a second grazing period. The trouble with relying on “all winter” rest is that this is not “active growing season” rest. Perennial plants need periodic rest periods during the active growing season in order to rebuild carbohydrates reserves. Rest solely during the dormant season does not achieve this function.

FIVE
“BUT I ONLY GRAZED HALF OF IT.”

Most perennial forage species have a specific percentage grazing utilization rate that they can tolerate before they are forced to draw on their carbohydrate reserves to replenish. For native warm-season grasses, that utilization rate is typically 50%; some introduced species can tolerate much higher rates. Another way to look at it is that grasses are quite efficient; they produce close to twice what they need to sustain themselves. Thus, if we graze half of that production, the plant still has the capability to fully recover and thrive. However, of that half we utilize, 25% is lost to trampling, environmental losses, other grazing, etc. In essence, on rangeland, it is best to use only the remaining 25% of the total annual production of the pasture to determine the stocking rate. Consequently, the “take half, leave half” concept is commonly misunderstood, and pastures end up overgrazed.

SIX
“IF I LEAVE IT, I’M WASTING GRASS.”

Residual stubble is often considered wasted if it is not consumed by livestock. However, grasses need residual stubble for multiple reasons. Residual stubble serves as armor for the soil. Keeping the soil covered and limiting bare ground should be a primary goal of grazing management plans. Residual cover keeps the soil temperature regulated, primarily cooler in the summer. High soil temperatures can limit soil biological function and organic matter cycling. Another benefit of residual cover is slowing down runoff, thus reducing erosion. Residual forage also aids with weed control by limiting the weeds’ competitive advantage. Normally, the less bare ground, the less weed pressure.

SEVEN
“STOCK DENSITY DOESN’T MATTER.”

Stock density is the number of animals on a specific area for a specific amount of time. This is typically expressed as pounds of live weight per acre. Stocking rate for the whole ranch is very important; however, stock density is a management tool that, if properly applied, can allow you to make vast ecological improvements on your property. The higher the stock density, the more concentrated the livestock on a smaller area. This allows for more even manure and urine distribution, more effective grazing distribution, and more efficient forage utilization. The converse is also true: very light stock density can lead to spot grazing, underutilized forage and slower recovery. Stock density very much matters.
EIGHT
“GRASS IS GRASS; WHAT’S THE DIFFERENCE?”

Not all grasses are created equal. Native or introduced, annual or perennial — no two species of grass are the same. Grasses differ physiologically in the way that they grow just as much as the amount they can grow. Production capability is a function of the plant’s intrinsic traits, but it also depends on climate, fertility and soil capabilities. Almost equally as diverse are their forage quality capabilities and limitations.

NINE
“IF I CAN RUN ONE MORE COW, THAT’S MORE PROFIT.”

One more cow does not always equal one more dollar of profit, but it does ensure more input costs. Adding a cow can be profitable if a property is underutilized, but the reality is that most properties are grazed at a moderately heavy or higher rate already. One more cow may be that tipping point at which costs exceed revenue. Again, proper stocking rate is often the determinant of economic success.

TEN
“I’LL JUST FEED MY WAY THROUGH THIS DROUGHT.”

The most successful grazing managers are flexible and adaptive. Adaptive management calls for flexible stocking rates. Many times, the decision to reduce stocking rate is the hardest change to discuss and accept. To ease that problem, a drought contingency plan with active management triggers can alleviate some of that anxiety. You will at least know what to watch for, how to mitigate its effects, and how to react in a timely manner. The decision to feed through the drought is highly dependent upon the cost of forage resources and the value of weaned beef, but you should also consider the cost incurred by the forage resource and its ability to repay the bill. Feeding your way through a drought rather than adjusting livestock numbers can have costly economic and ecological ramifications.

In conclusion, grazing management is a complex part of managing a ranch. Not only are producers trying to manage an ecological system and an animal production cycle that are constantly changing, they are trying to grow their products in fluctuating markets while making a living. Understanding misconceptions about grazing management can increase your odds for ecological and economic success.
PLANT BREEDING:
ENHANCING FORAGE TRAITS
Plant breeders are developing new forage varieties that are more resilient under challenging growing conditions. They are working to:

1. Improve tall fescue, a perennial cool-season grass.
Plant breeders are developing hybrids between Continental and Mediterranean varieties to produce more persistent, higher-yielding and drought-tolerant varieties.

2. Improve bermudagrass, a perennial warm-season grass.
Plant breeders are improving nitrogen-use efficiency and cold-tolerance of bermudagrass, which would allow it to be used in colder climates.

3. Improve small grains for forage production.
The small grains breeding program encompasses four cool-season annuals: wheat, rye, triticale and oats. Plant breeders are developing vigorous seedling growth, grazing-tolerant, high-yielding, high-quality grasses for beef cattle production. These small grains are also popular across the U.S. as cover crops. For example, Elbon rye is one of the most widely used cover crops in the corn and soybean belt.

4. Explore various annual legumes as potential cover crops.
Legumes are valuable as cover crops because, in addition to mitigating erosion, they contribute nitrogen to the soil for subsequent crops, a win-win for producer profitability and the environment. Researchers are working with other teams across the U.S. to identify the best legume(s) for each environment, and to optimize their beneficial characteristics through breeding and management to increase profitability and sustainability. Noble plant breeders are currently focused on hairy vetch, pea, clovers, cowpea and Tepary bean.

FORAGE RELEASES
- Rye (Maton II and Bates RS4), oat (Heavy Grazer II and NF402), wheat (NF101) and triticale (NF201) varieties that provide fall forage.
- Rye varieties (Maton, Oklon, and Elbon) that provide spring forage.
- Continental tall fescue variety (Texoma MaxQII) for high-rainfall areas, east of I-35.

Chisholm Tall Fescue
- Mediterranean tall fescue variety (Chisholm) for dry areas, west of I-35.

Renovation White Clover
- White clover variety (Renovation) with a greater number of stolons that increase persistence.

Impact Crabgrass
- Crabgrass variety (Impact) that is late-maturing with improved nutritive quality.
- Wheatgrass variety (Plainsmen) with greater fall forage.

Plainsmen Tall Wheatgrass