Grazing Myths that Reduce Profitability

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Many cattle farms have moved to rotational grazing in the past decade, and there are significant benefits associated with this grazing technique. However, one thing that I have noticed is that costs are not always accounted for when it comes to recommended rotational grazing practices. If you ignore costs, partially or fully, you will invariably do too much of whatever you are considering. In this light, I will highlight four grazing recommendations (myths) that many folks are often taking to extremes related to rotational grazing, and one additional myth (generic to grazing style) that is reducing the overall profitability of farms and ranches.

Myth #1 – Cattle Need to be Moved Every Day

Rotating cattle frequently has definite advantages: increased pasture growth, increased forage utilization, and potentially balanced forage intake that does not swing from one extreme to another. Roy Blaser, one of the pioneers in grazing research from Virginia Tech in the 1960’s, found the largest improvement in carrying capacity and forage productivity came from going from continuous grazing to a basic three paddock rotational grazing system. Further improvements in carrying capacity were found as subdivisions increased (and period of stay decreased), but these improvements were progressively smaller. Three to four paddocks with weekly moves produced 75% or more of the overall efficiency gains compared to continuous grazing.

There are additional costs as rotation frequency increases, the main one being increased labor, but also potentially additional grazing infrastructure required to handle the more frequent moves such as watering points. The increased labor costs alone will limit the cost-effectiveness of rotation frequency. This is because labor costs increase at a near linear rate (moving every day will have almost twice the labor cost as moving every two days), while the benefits of increased rotation frequency slow down dramatically after the first 3-4 subdivisions.

The challenge is determining when the additional costs exceed the additional benefits for a particular operation as you keep increasing move frequency. The article “How Often Should You Move Your Cattle” in the May 2017 edition of Progressive Forages (http://www.progressiveforage.com/forage-production/management/how-often-should-you-move-your-cattle) provides details on how to estimate this balancing point. The main conclusion was that a one-size fits all approach or recommendation for grazing frequency does not work. One-day moves may in fact be the most profitable for one operation, while one-week moves may be the most profitable for another. In general, the more cattle that you have the more often you can afford to move them.

Myth #2 – Cattle Need to Clean Up the Pasture

There is a natural tendency to think forage left in the pasture after a grazing cycle is wasted. Possibly this is a remnant of the cultural history of this country: “waste not, want not”, and other Protestant idioms ingrained into our psyche. Regardless of its origins, insisting on lawnmower-like pastures will have negative effects on profitability.
I have heard too many presentations related to rotational grazing stressing increased utilization, with no mention whatsoever related to animal performance. However, reduced animal performance due to excess forage utilization has been well documented as far back as the 1940’s, by another pioneer of grazing dynamics, D.B. Johnson-Wallace at Cornell University. In one of his studies, cattle intake was monitored over a 9-day period. Dry matter intake for cows started out at 32 lbs/day for the first three days, then dropped to 20 lbs/day for the next three days, and finally went to 10 lbs/day for the last three days as cattle cleaned up the pasture. While this particular study looked at a nine day period of stay, the same type of results could have been obtained by using a one or two day move but allocating a corresponding decrease in acreage. The main conclusion of his study was that if you push animals too hard on a pasture to increase utilization, performance will suffer.

While you may increase utilization in the short-run by forcing animals to clean up each paddock, two other dynamics are working against you. First, taking the pasture sward down beyond a point during the growing season will require more carbohydrate reserves to initiate regrowth and reduce overall pasture growth. Second, much of what you might think was “wasted” by the cattle at lower utilization rates would be available in the next grazing cycle. The combined affect is that what may appear to be an increase in pasture utilization in the short-term, will be counteracted to some degree in the long-term, while still having the negative consequences of reduced animal performance. Out of all the myths discussed here, this may in fact be the most costly to the bottom line, and easiest to correct if only we could recalibrate out notion of “waste”.

Myth #3 – Never Back-Graze

One of the biggest advantages of going from continuous to rotational grazing is controlling when plants are defoliated and how long they are rested before the next grazing cycle. Not allowing cattle to constantly graze their preferred plants as soon as they are tall enough to wrap their tongue around them, and forcing them to eat plants that they might otherwise avoid in the short-term both make for a more productive pasture.

Once we start rotational grazing, there are two new questions related to back-grazing that are relevant: 1) What is the maximum stay that we can get away with to avoid back-grazing? 2) Can we have some limited amount of back-grazing that does not significantly cut into pasture production? For some die-hard rotational graziers, even asking these questions may amount to heresy, so I will carefully explain my reasoning.

If you give cattle a new pasture allocation with access to the last allocation, you will see virtually no back-grazing on that first day assuming you gave them enough new pasture. The cattle will only start back-grazing as the fresh grass plays out (if you didn’t give them enough new pasture). At first, they will start grazing areas that were completely missed in the first round (if available) but will start re-grazing clipped plants as pasture availability diminishes. This second possibility is not ideal, but in my opinion, it is far better than the alternative where cattle intake and performance goes down, potentially drastically if you underestimated how much new pasture they would need.

To be clear, I am not talking about 3-4 paddock systems with 1-2 week moves. I am talking about fairly intense rotations where we are moving at least twice a week. Moving twice a week and providing access to just one previous allocation means the opportunity for regrowth and subsequent re-grazing is at most one week. The more intense your rotations are, the less room for error you have in pasture
allocation if you do not allow back-grazing. You will invariably allocate on the low side on occasion. Would you rather your cattle go hungry and performance suffer, or allow your cattle to back-graze when you mess up?

**Myth #4 – Need Water in Every Paddock**

In the perfect grazing world, we would all have four-ball permanent water systems in every paddock subdivision. In the real world, we typically have considerably less than this ideal. Water infrastructure can be expensive if you insist on having permanent water in every paddock. Another option is moving a small portable tank to each paddock. This latter option may sound inexpensive, but if you account for the additional labor, as well as the occasional major water leaks that will inevitably occur with this type of system, the true cost in most cases will be surprisingly high.

Having the ability to back-graze the previous 1-2 pasture allocations gives you a tremendous amount of flexibility related to water supply. Having a few permanent water points that will not freeze for winter grazing combined with a few more semi-permanent water points set up during the growing season can provide most of the benefits of a Cadillac system as long as you are flexible in allowing limited back-grazing to get to these water points.

**Myth #5 – You Should be Grazing 365 Days a Year**

There are many cattle farms and ranches that could be more profitable by feeding less hay. However, there are also farmers and ranchers out there who in recent years have likely swung too far to the other side of the pendulum. The amount of hay that is most profitable will depend on a number of factors, the two most important being the base profitability of the enterprise and the net hay cost. The higher the base profitability the more hay feeding days that are desirable, and the higher the net hay cost the less hay feeding days that are desirable. The specifics with example scenarios and results are detailed in the article “Picking Apples Off the Grazing Tree: The Stocking Rate – Hay Feeding Trade-Off” in the November 2017 edition of Progressive Forages (https://www.progressiveforage.com/forage-production/management/picking-apples-off-the-grazing-tree-part-iii-the-stocking-rate-hay-feeding-trade-off).

There are very plausible examples where zero hay feeding days would in fact be most profitable, but there are also very plausible examples where 150 or more hay feeding days per year would be most profitable. In the current market environment for an average cow-calf operation, 60-90 days of hay feeding is likely a good target. However, you need to know the specifics of the particular operation (hay cost and base profitability) before you can determine this with certainty. Base your hay-feeding days and other grazing practices on analysis, not faith.

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