



Angus Advisor

► MARCH herd management tips

Guide to abbreviations and acronyms

To make the "Angus Advisor" more concise and consistent, we have used the following abbreviations or expressions:

\$Values	dollar value indexes
ADG	average daily gain
AI	artificial insemination
AIMS	Angus Information Management Software
BCS	body condition score
BLV	bovine leukemia virus
BMP	best management practices
BQA	beef quality assurance
BRD	bovine respiratory disease
BRSV	bovine respiratory syncytial virus
brucellosis	Bang's disease
BSE	bovine spongiform encephalopathy
BVD	bovine viral diarrhea
Ca	calcium
CHAPS	Cow Herd Analysis and Performance System
CP	crude protein
cwt.	hundredweight
DM	dry matter
EPD	expected progeny difference
ET	embryo transfer
FMD	foot-and-mouth disease
GnRH	gonadotropin-releasing hormone
IBR	infectious bovine rhinotracheitis
ID	identification
IM	intramuscular
in.	inch
lb.	pound
LCT	lower critical temperature
lepto	leptospirosis
Mg	magnesium
MiG	management-intensive grazing
MLV	modified-live virus
N	nitrogen
P	phosphorus
PI	persistent infection
PI ₃	parainfluenza-3 virus
preg-check	pregnancy-check
Se	selenium
sq. ft.	square feet
SPA	Standardized Performance Analysis
TB	bovine tuberculosis
TDN	total digestible nutrients
THI	temperature-humidity index
trich	trichomoniasis
Zn	zinc

Southern Great Plains

by **David Lalman**, Oklahoma State University, david.lalman@okstate.edu

Avoiding grass tetany

Rapid, lush cool-season and winter-annual forage growth generally contains low concentrations of magnesium and moderate to low calcium. At the same time, forage nitrogen, phosphorus and potassium concentration are often excessive, leading to poor magnesium absorption from the digestive tract. As a general rule, conditions leading to forage with less than 0.2% magnesium and calcium, more than 3% potassium, and more than 25% protein (4% nitrogen) represent high risk for grass tetany.

This dietary mineral profile can lead to grass tetany if it occurs around the time of calving because magnesium and calcium requirements are highest during early lactation. Tetany symptoms due to inadequate blood calcium supply is generally referred to as milk fever, although these symptoms can be indistinguishable with those caused by inadequate blood magnesium.

Magnesium is primarily stored in bone tissue; however, as cows age, they become more susceptible to grass tetany because their ability to sequester bone magnesium declines. In contrast, younger cattle have the ability to mobilize up to 30% of skeletal magnesium during times of inadequate dietary magnesium supply.

When high-risk conditions are anticipated, concentrate feeds or mineral mixes should provide supplemental magnesium and calcium. The fortified mineral source should be provided beginning about 30 days prior to the anticipated high-risk period and continued through lush forage growth. In spring-calving cows, this usually coincides with calving and the early lactation period. Magnesium oxide and magnesium sulfate (Epsom salts) are the primary magnesium sources used, while limestone and calcium carbonate are popular, effective and relatively inexpensive sources of calcium.

Ideally, around 8 to 12 grams (g) per day of supplemental magnesium should be supplied during this period. However, magnesium oxide is unpalatable. If provided in a free-choice mineral product, mineral intake needs to be monitored and may need

to be managed. If intake is inadequate, mineral should be blended with highly palatable ingredients, such as dried molasses or cottonseed meal.

Although not well understood, cool cloudy conditions seem to increase the risk of grass tetany. The exact mechanism is not known, although these conditions do stimulate plant uptake of potassium and production of organic acids, both of which are known to antagonize magnesium absorption.

By ensuring adequate dietary supply of magnesium and calcium prior to calving and prior to grazing lush cool-season forages, grass tetany is not difficult to avoid. Other strategies to minimize the risk of grass tetany include reduced early-season nitrogen fertilization, avoiding supplements containing high concentrations of potassium (for example, molasses-based products often range from 3% to 8% potassium), and timing grazing of cool-season forage species to avoid grazing early, lush growth during the calving season.

Midwest Region

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Extend this year's grazing days

In most beef operations, regardless of size, the single largest cost is feed. Typically, feed represents 50%-60% of total costs in the cow-calf sector, with a large portion of these costs usually attributed to harvested feeds and forages. Often, as acreage decreases per cow managed, more harvested feeds and forages are going to be required. However, proper planning and implementation of an extended grazing system this year can dramatically reduce annual cow costs without sacrificing productivity and profit.

During the last 20 years, multiple reports of beef business record analyses have noted that the most profitable beef herds are the ones that utilize some sort of extended grazing system. Whether it is through the use of stockpiled grasses, cornstalk grazing or a combination thereof, more grazing equals more profit. Logically, the more forage that the cow can harvest for herself, the less we have to deliver to her. Thus, increasing grazing days not only decreases feed cost, but also reduces fuel use, wear and tear on equipment, and labor used to deliver it. Most

producers in the Midwest who graze cows year-round need about 4 acres per cow for annual forage production.

Before you can start extending your grazing season, it's imperative to know where you are starting from to have the chance to monitor progress. Do you know how many grazing days you had this year, how much supplemental feed you delivered, and how much harvested forages were fed? Many producers do not. How many cows do you have this year? Are you maintaining the herd, expanding or reducing herd size as you move forward?

Another key component that should be considered is the array of forage species to which you have access. Tall fescue is the most commonly stockpiled forage that producers use, but a variety of cool-season grasses make acceptable stockpiled forages. The one area of contention, even among many grazing experts, is the best method for stockpiling forages in the first place, and in particular tall fescue.

Some producers graze or hay fescue in the early- to mid-summer period and then allow it to grow until the first killing frost. Other producers who have increased pasture availability may leave the stockpile pasture ungrazed the entire summer and graze it only in the fall and winter.

The first option results in higher-quality grass that is less mature at the time of winter grazing, but will obviously reduce tonnage available. With this strategy, less supplement may be needed while grazing due to the higher-quality forage. On the other hand, leaving the stockpile pasture undisturbed all summer will significantly increase the amount of forage available, but quality will be lower. This may be of concern if you plan to use fall-calving cows to graze the stockpiles, as they will likely need some sort of supplementation to meet nutritional requirements for lactation.

The other consideration that should be made to maximize stockpiles is the grazing strategy. The low-input option is to turn cows out and let them graze the entire acreage. Unfortunately, a large majority of the forage will be wasted and trampled. Because the forage is no longer growing, rotational grazing is not a viable option either. The best use of the existing forage is

to strip-graze. In other words, fence off a strip of new forage every day or every few days that gives the cows what they need to meet their nutrition requirements. With this method, some producers have found that as much as 85% of the stockpile is consumed vs. wasted by the cow. While it may increase labor, the return on investment is typically quite good.

One point of order, don't be scared of the snow! Cows can graze in snow up to 18 inches deep (although many producers don't like to push the limit that far). If snow is an issue, one of the more progressive graziers I know will push a strip of snow off of the grass with a tractor blade, similar in concept to a strip-grazing system, until the snow melts. Admittedly, this may be more problematic for producers further north where the snow does not melt once winter fully sets in.

The other forage that fits well into a winter grazing program is cornstalks. In the Midwest, most of us don't have to look too far out the window to find a cornfield, and thus availability of forage is typically not limiting. What may be limiting is legal perimeter. While a single strand of hot wire may keep cattle in, this fence likely will not protect you in the event that cows would get out and cause damage to property or a vehicle. Check your local state laws for what constitutes a legal fence.

The typical rule of thumb is that approximately 16 pounds (lb.) of leaf and husk material will be left behind at harvest for every bushel of corn per acre. For example, if

the field made 150 bushels per acre, then there should be about 2,400 lb. of leaf and husk per acre. We concentrate on the leaf and husk, because this is the most palatable and digestible portion of the plant. Once cows have sought out and consumed any grain left in the field, the leaf and husk is what they will eat next.

Keeping this in mind, it is not suggested to graze cornfields that have had significant wind damage prior to harvest. The ear drop that may have occurred could lead to acidosis, founder or even death in cattle when too much corn is consumed too quickly. It may be assumed that a cow will eat approximately 2.5% of her body weight in cornstalks per day. Thus, if she weighs 1,300 lb., she will consume about 32.5 lb. of cornstalks per day. Combine this with the leaf and husk estimate to determine how many days you can graze a given size group of cows. Be conservative and assume cows will only graze half of the leaf and husk. The other half will likely be trampled or deteriorate over time. If you are limited in your access to stalks, strip-grazing may be an effective use of this forage, as well.

If you have not made a change in your grazing plan for this year and do not have access to stockpiled forage or stalks, there are still a few things you can do yet this winter to prepare for an improved grazing season this year. First, assess the number of forage species in your pasture. If legumes are limited, consider frost-seeding red clover when the freeze-thaw cycles begin. Typically

3-5 lb. per acre of red clover should be broadcast spread every two or three years. The clover will help with nitrogen fixing for the surrounding grasses, and will also provide some extra tonnage and energy during the summer months when cool-season grasses slow their growth. Just because grass isn't growing doesn't mean you can't be working on your pasture.

As always, consult with the team of experts you have assembled, including your nutritionist, beef extension specialist, and herd health veterinarian.

Western Region

by **Randy Perry**, California State University, Fresno, randyp@csufresno.edu

Let's focus this month on the developing and marketing of bulls. In most purebred cattle operations, income from the sale of bulls represents the largest percentage of their annual income. Therefore, determining how to maximize net profit from this group of animals is extremely important in terms of influencing the financial success of the operation.

Marketing ability is extremely important and it is one area that most purebred producers struggle with for many years as they get started in the business. Most bulls are marketed to commercial cow-calf producers, and it takes an extended period of time to establish the relationships and customer base to become a successful marketer of bulls. In my opinion, the keys to developing a strong customer base for bulls include:

- ▶ First and foremost, have a good product to sell;
- ▶ Represent the bulls with honesty and integrity; and
- ▶ Stand behind them fully.

The old advice of not selling something that you would not want to buy is still as true as it has always been. In addition, "word of mouth" is still the best advertising in the world when it comes to bulls. All one has to do is not stand behind a bull that goes bad for whatever reason. Once that word gets spread around to commercial producers, you will be able to appreciate the value of "word of mouth" advertising and the value of a good reputation.

Many of those commercial producers are probably not on Facebook or other forms of social media, but I will guarantee you that "coffee shop talk" is faster than the Internet when it comes to not standing behind a bull. Many times on a short-term basis it can present a pretty significant financial loss.

However, in my opinion, on a long-term basis it will pay dividends.

Although feed costs have declined significantly during the last year, the higher feed costs that we have experienced for the last five years or so have had a dramatic influence on the cost of developing both bulls and heifers.

Some producers can develop their calves out on pasture by providing supplemental nutrition to achieve the desired level of performance. This is a tremendous advantage, especially in periods of high feed prices. This practice is more commonly used for heifers as compared to bulls; however, it can be used successfully for both sexes. Most purebred beef producers don't have these kinds of pasture situations available and therefore must confine their calves to a drylot for developmental purposes.

For many years, the costs of developing bulls ranged from \$2 to \$2.50 per head per day, depending on the location and type of feeding operation. However, since the ethanol fiasco drove corn prices through the roof, many producers have faced developmental costs of \$3 to \$4 per head per day or higher.

In my opinion, it is extremely important that producers avoid two things when developing bulls. First, we have to avoid feeding below-average bulls. However, the demand for Angus bulls has been so strong over the last 10 years that many Angus producers in our state have never castrated a bull calf. It is still important that purebred producers look at their bull calves with a critical eye and a sharp knife.

The second point is to minimize the length of the developmental period if that is an option. If we could convince commercial cow-calf producers to buy bull calves at weaning, I believe it would be a win-win situation for both purebred and commercial producers. Purebred producers would sacrifice yearling measurements. However, a \$2,000-\$2,500 weaned bull calf will probably net more dollars than a \$4,000-\$5,000 long yearling. In addition, bulls would be gone long before they cause many of the problems for which they are known, and commercial producers would be able to acclimate the bulls to their own environment and develop them to fit their own needs.

Many times bulls are developed on "hotter" or higher-energy diets or rations

than what is optimal to get the impressive yearling weights that will add value to those bulls. The extra fat that comes with this higher rate of development hurts feet and leg soundness and also hurts reproductive soundness as fat is deposited in the scrotum and around the reproductive tract of the bull. In addition, many times these "fat" bulls have a hard time acclimating to "rougher" types of range situations once they are turned out. The problem is that commercial producers will say that they do not want to buy "fat" bulls, but at the same time they will go to a sale and buy the big, stout, heavy bulls that many times are just fatter than the bulls that they passed by.

In summary, I would strongly encourage purebred producers to get a handle on all the costs that are going into the development and marketing of their bulls. Then, with those costs in front of them, sit down and develop a strategy to maximize net profit from this group of animals that represents a major source of income in many purebred cattle operations.

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