



Angus Advisor

► DECEMBER 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

Southeastern Region

by **Lawton Stewart**, University of Georgia, lawtons@uga.edu

Evaluating your herd nutritional program

Part II: Looking at available nutrients

Last month, we started evaluating our herd nutritional program by looking first at our herd and understanding the nutrients required to maintain a 365-day calving interval. The next step is looking at what nutrients we have available and how to economically put these together.

Understand your forage program.

Under proper management, forages are the cheapest source of nutrients available for cattle producers. Therefore, maximizing the nutrients harvested from forages can tremendously reduce the need of

supplements. In many parts of the southeast, fresh forage can be produced throughout most of the year.

However, on average, hay is fed for 120 days during the winter. With testing of our pastures and hay, forages can form the backbone of a nutrition program. In some cases the majority, or all, of the nutrients needed can be provided by forages.

Handling and knowing the nutrients available from hay may be an obstacle. Typically, a hay producer will get three to four cuttings of hay per year, and inevitably, there will be quality differences between cuttings. If a producer will go through steps to (1) inventory hay by cutting, (2) store it

properly to minimize storage losses, and (3) test it by cutting, he or she will understand the stock, and potential range, of nutrients available. This will allow the producer to match nutrients available in hay to the changing nutrients needed by the herd.

Develop an economical supplement.

In an ideal situation, supplementation of crude protein and energy will be minimal or not needed. However, there will be times when supplementation is needed. With the increase in costs of traditional supplements such as corn and soybean meal, producers are trying alternative feeds. The key is to identify feeds that supply the nutrients needed and evaluate these feeds on a price-per-nutrient basis (i.e., correcting for moisture content and nutrient content) using the following equation:

$$\$/\text{lb. of nutrient} = \left(\frac{\$/\text{ton}}{\% \text{ dry matter} \times \% \text{ nutrient (CP or TDN)}} \right) \div 2,000$$

Example:

$$\$/\text{lb. of CP from SBM} = \left(\frac{\$525}{0.90 \times 0.54} \right) \div 2,000$$

$$\$/\text{lb. of CP from SBM} = \mathbf{\$0.540}$$

This allows comparisons across feeds of the actual nutrient in need. The University of Georgia (UGA) Feed Cost Analyzer is available online to help perform these comparisons (www.ugabeef.com/Tools.html). This tool will allow producers to evaluate feedstuffs based on their local prices.

A supplement that commonly provides an economical source of energy and protein is a 50:50 mix of corn gluten feed and soybean hulls.

Table 1: Supplement needed (corn gluten feed:soyhulls, 50:50) to meet the daily requirements of a 1,200-lb. cow using three different qualities of forage as a base

Stage of production	% CP, TDN requirement	Poor forage, 7% CP, 45% TDN	Avg. forage, 10% CP, 50% TDN	Good forage, 13% CP, 56% TDN
----- lb. of supplement per head per day -----				
Dry cow	6 CP, 45 TDN	0	0	0
Late gestation	9 CP, 56 TDN	9	5.5	0
Early lactation	11 CP, 60 TDN	13.5	10.5	5
Late lactation	8.5 CP, 55 TDN	8.5	5	0

Develop a new program

Once a plan to address nutritional needs is developed, it is important to look at the three concepts together. In Table 1, a herd is broken down into four stages of production. Three sources of hay/pasture have been tested and inventoried, and an economical supplement of corn gluten feed and soy hulls has been identified. This step can often be overwhelming because it requires the balancing of multiple rations. The use of a ration-balancing program will make this step much easier. The UGA Basic Balancer was developed to perform this task and can be found on the UGA Beef Team website (www.ugabeef.com/Tools.html). By utilizing this program, we can tailor a nutrition program that matches nutrients from forage to the needed class of production.

With input prices continuing to rise, it is imperative that beef cattle producers evaluate their systems to decrease input costs without compromising animal performance. The result can tremendously cut cost on a feed bill without cutting corners on nutrition.

Southern Great Plains

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

Spring-calving herds

- ▶ Create a contemporary group (sort and manage separately) of 2-year-old cows and, if necessary, 3-year-olds and older cows that you intend to retain. This contemporary group can then be provided access to higher-quality stockpiled pasture, fed better-quality hay, fed more supplement or provided access to small-grains forage as a supplement. The nutritional goal for this contemporary group should be to obtain a BCS at calving that is similar to that of the remaining cow herd.
- ▶ December and early January are good times to check weights by weighing a portion, if not all, of the virgin replacement heifers. Using this information and the targeted breeding weight and rate of weight gain established at weaning, producers can evaluate the nutritional strategy and make necessary adjustments.

Fall-calving herds

- ▶ December is the heart of the breeding season for many fall-calving herds in the Southern Great Plains. Consequently, the goal of the nutritional program is to minimize weight and condition loss of cows that are nursing 30- to 100-day-old calves. To achieve this, 3-6 lb. of a concentrate supplement, along with 5-10 lb. of high-quality legume hay or silage may be necessary.
- ▶ In this region, limited access to small-grains pasture is an excellent and cost-

effective supplementation program for fall-calving cows. Access to small-grains pasture should be limited to about 25%-33% of daylight hours.

- ▶ A high-calcium, high-magnesium mineral supplement should be provided to lactating cows grazing small-grains forage.
- ▶ December is a good time to implement a creep-feeding or creep-grazing program. Many producers seem to have the impression that creep-feeding somehow reduces nutritional stress on lactating cows. It does not. Study after study demonstrates that cows produce and calves consume the same amount of milk when calves are being creep-fed, compared to calves receiving no supplemental feed.
- ▶ Creep feed does, however, replace (or reduce) forage intake when more than about 3 lb. of creep feed is consumed. Creep-feeding programs are more efficient when forage is short and/or forage is low in nutritional value compared to times when forage is abundant and has high nutritional value. Remember to report creep-fed calves as a separate contemporary group.

General recommendations

- ▶ Begin grazing dormant weeping lovegrass pastures. Be aware that this cured forage resource is notoriously low in protein and digestibility, ranking somewhere between low-quality prairie hay and wheat straw.
- ▶ Native hay meadows can be lightly grazed after a hard frost. Leave a minimum of about 6 in. of forage regrowth and remove cattle if wet conditions develop.
- ▶ Before the end of the year, check your financial management plan and projected tax situation in case income or expense adjustments are necessary to minimize your tax burden. Numerous financial tools are available at www.beefextension.com.

Midwest Region

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Spring-calving cows

- ▶ Supplemental feeding can be needed in some operations. Supplementation programs are dependent on the cow's stage of production, BCS, forage quality and forage availability. An 1,100-lb. dry cow grazing a low-quality forage (such as dormant native range grass) might need:
 - Dry grass — 1-2 lb. per day of a 40% CP supplement; or
 - Dry grass — 3-4 lb. per day of a 20% CP supplement; or
 - Dry grass — 5 lb. legume hay.
- Low-quality forages are generally

deficient in rumen degradable protein, trace minerals and vitamin A. Therefore, they should be the first nutrients considered when developing supplementation programs.

- ▶ Compare and buy supplements based on cost per pound of nutrient.
- ▶ Utilize crop residues. Cornstalks and grain sorghum stalks have historically been the most economical forage system for wintering spring-calving cows.
- ▶ Use proper grazing techniques to improve system efficiency.
- ▶ Cows in average body condition can be grazed at 1-2 acres per cow for 30 days, assuming normal weather.
- ▶ Available forage is directly related to grain production levels. Approximately 50 lb. of crop residue is on the field per bushel of corn harvested.
- ▶ If fields have more than 5 bu. of downed corn per acre, restrict and adjust grazing patterns to avoid rumen acidosis and/or laminitis.
- ▶ Control lice.
- ▶ Retained-ownership calves should be fed least-cost rations to maximize profit potential. Research indicates growing calves at rates greater than 2 lb. daily can have carcass quality advantages.

General management

- ▶ Document your cost of production by participating in Standardized Performance Analysis (SPA) programs.
- ▶ Review management decisions; lower your costs per unit of production.
- ▶ Check your financial management plan and make appropriate adjustments before the end of the year.

Western Region

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Fall-calving herds

The main focus now is the breeding season.

Reproductive management

- ▶ A synchronization protocol should have been selected and products should be on hand. Implement the protocol and take extra time in administering synchronization products, being sure to prevent injection-site leak back. Try to avoid programs that require females to be handled more than twice prior to breeding.
- ▶ Heat detection is critically important and the most important factor influencing the success of an AI program.
- ▶ Take the time and be precise with all of the details concerning semen handling and placement. If you are breeding AI for

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more than one cycle, inject GnRH at the time of repeat inseminations.

- ▶ Bulls should have been semen-checked and trich-tested and should be ready for use from a physical standpoint. In addition, they should be in the proper degree of body condition and should have been vaccinated at least one month prior to turnout date.

Nutritional management

- ▶ Minerals should be supplemented on a

year-round basis. The breeding season is the most critical time in terms of meeting mineral requirements.

- ▶ It is critical that both protein and energy requirements of cows are being met during the breeding season. Cows should be in a state of positive energy balance, or gaining weight, during the entire length of the breeding season, as energy balance has a significant influence on fertility.

Health management

- ▶ Cows should have been vaccinated at least 30 days prior to the start of the breeding period.
- ▶ Treatment protocols should be on hand for both scours and pneumonia in suckling calves, and both should include options for first and second treatments.

Spring-calving herds

The main focus is to prepare for the calving season.

Although the start of the breeding period is still months away, a list of potential AI sires should be developed.

Reproductive management

- ▶ If any precalving vaccinations are going to be administered, such as a scour vaccine, they should be given far enough in advance of the calving season to avoid handling cows that are close to parturition.
- ▶ Be sure that equipment is in working order and supplies are on hand to assist females once calving starts.

Nutritional management

- ▶ Be sure that cows are receiving adequate levels of calcium, phosphorus and trace minerals that are deficient in your area.
- ▶ On a scale of 1 to 9, the target level of body condition at calving is a minimum BCS of 5 for mature cows and 6 for 2-year-old heifers.
- ▶ Both protein and energy requirements need to be met in order to achieve the desired level of body condition as described in the previous paragraph.
- ▶ The developmental period from weaning until yearling time is critical in terms of influencing the future productivity of both

bulls and heifers. Avoid overfeeding either bulls or heifers as excessive fat deposition can hinder structural soundness and reproductive performance in both sexes.

Health management

- ▶ Normally, the first month following weaning is the most challenging in terms of respiratory disease in calves. That point should have passed by now. If calves are going to be PI-BVD-tested or vaccinated for anaplasmosis using the one-shot live vaccine, this is a good time to get those samples collected and vaccinations administered.

