



# Angus Advisor

► FEBRUARY 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 <sub>3</sub>	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

### Spring-calving cows

- Maintain cows on fresh, clean pasture or in a dry, clean calving facility if they are confined.
- Consult your veterinarian in the event that calf scour problems develop.
- Check first-calf heifers several times daily for possible calving difficulties.
- Visit with your veterinarian to develop a *written* protocol before the calving season starts. This protocol should include what to do, when to do it, who to call (if someone besides your veterinarian is to be called), phone numbers, how to know when the veterinarian should be called, etc.
- The process of parturition (calving) is generally divided into three stages:
  - Stage 1 is the dilation of the cervix and occurs 4 hours to 24 hours before the actual birth.
  - Stage 2 is the delivery process and begins when the fetus enters the birth canal. The beginning of Stage 2 is usually identifiable when membranes or a water bag appears at the vulva.

Published research indicates that Stage 2 averages about 30 minutes in mature cows and about one hour in first-calf heifers. Intervention should be considered (refer to your protocol) if there has been no progress in the birthing process after 30 minutes in mature cows or one hour in first-calf heifers.

- Stage 3 includes expulsion of the placenta and involution of the uterus.
- Feed during evening hours to encourage daytime calving.
- During early lactation, energy and protein requirements increase dramatically. Assuming above-average genetic potential for milk production, these cows would require about 19 lb. of TDN and 3.4 lb. of protein. This is roughly equivalent to a diet containing about 59% TDN and 11% protein.

### Fall-calving herds

- Fall-calving purebred cows with above-average genetic potential for milk

production should receive about 7 lb. of a supplement containing 20%-24% protein daily when the following conditions exist: Abundant dormant native range (3%-5% protein) is available and cows are at a BCS 5 or less and/or winter weather conditions are severe. A second alternative that works well under these conditions is to feed around 4 lb. of a protein supplement containing 20%-24% protein with 5 lb. of good-quality alfalfa hay.

- With moderate- to high-quality grass hay (minimum of 9% protein and 54% TDN) as the forage base, 5 lb. of a 12%-14% concentrate supplement will supply adequate protein and energy for 1,200-lb. purebred cows with above-average genetic potential for milk production.
- Cool-season annual (small-grains) forage has been a tremendous resource thus far this winter. A high-calcium, high-magnesium mineral supplement should be provided to lactating cows grazing small-grains forage.
- Fall-born calf health is easy to overlook during winter months. Keep an eye out for possible bovine respiratory disease, lameness and eye irritation (especially a problem with hay feeding).

### General recommendations

- Consult a forage specialist in your area as you consider the fertility and management program for both native and “improved” cool- and warm-season grass pastures and rangeland. Develop a plan for stocking density, grazing management and control of invasive plants with herbicide or prescribed fire and fertilizer use in introduced forages.

## Midwest Region

by **Patrick Gunn**, Iowa State University, pgunn@iastate.edu; and **Chris Clark**, Iowa State University Extension beef specialist

### Getting serious about colostrum

It is well-understood that timely and adequate consumption of colostrum is critically important for newborn calves. Bovine antibodies are not readily transferred across the placenta, but rather are concentrated in the udder as colostrum during late gestation. Therefore, calves are

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born almost completely unprotected from infectious disease and must ingest colostrum in order to receive passive immunity from the dam. To ensure adequate absorption, calves must receive colostrum within the first 24 hours of life. As calves age, the intestines lose the ability to absorb large molecules like the IgG antibody proteins.

Because there is significant variability in calf birth weight, colostrum concentration, volume of colostrum produced, etc., it is difficult to make definitive recommendations regarding the exact dose and timing of colostrum to ensure calf health. Common rules of thumb suggest that beef calves should receive approximately 6%-10% of body weight in colostrum within the first 24 hours of life, with approximately 2-3 quarts ingested during the first 12 hours of life. Ideally, calves would ingest approximately 2 quarts of high-quality colostrum within the first 4-6 hours of life and an additional 1-2 quarts by approximately 12 hours of age.

Ideally, newborn calves would receive some TLC (tender loving care) from the dam, stand within the first hour or so after birth, and immediately find a teat to suckle a nice healthy dose of rich colostrum. We all know, however, that calving season can be full of challenges and surprises: dystocia, weak calves, chilled calves, poor mothers, lack of colostrum production, and a host of other challenges that can disrupt the ideal. So what do we do to provide colostrum when these challenges occur?

Mother's milk is almost always best. If possible, help the calf nurse or milk out the dam to tube/bottle-feed the newborn. Heifers may not offer the quantity or quality necessary, and calves born to heifers may require colostrum supplementation or several small feedings offered as more colostrum is let down and made available by the young dam.

If the problem is insufficient colostrum production by the dam, or if it is not possible to milk the dam for any reason, the second-best option may be to use fresh or frozen colostrum from another cow. Mature, healthy, well-vaccinated cows within the same herd would be the best choices for colostrum donors. When compared to

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heifers, mature cows produce colostrum that is more abundant and more concentrated. Healthy, well-vaccinated cows will be less likely to transmit disease and more likely to offer protective antibodies through colostrum. Finally, to minimize biosecurity risk, it is always advisable to use colostrum from cows within your herd.

Colostrum can be frozen and stored for use at a later time. It is usually recommended to freeze in 1- or 2-quart zip-top freezer bags or freezer-safe containers. Care must be taken to thaw appropriately as excessive heat, uneven heating, freeze/thaw cycles, etc., can damage antibodies in colostrum. The best method for thawing is to place the frozen bag or container in a warm-water bath (110° F) and stir every 5 minutes, continuing until the colostrum reaches 104° F. This thawing process takes approximately 40 minutes.

### Alternate sources

Beef producers are sometimes interested in obtaining frozen colostrum from dairy operations that regularly freeze and store colostrum. When considering this option, it is important to remember two potential issues. First, colostrum of dairy cows is much less concentrated than that of beef cows, so it will require a greater volume to impart the same immunity if using dairy-derived colostrum. Additionally, several infectious diseases are more prevalent in dairies than in beef operations, and when using dairy-derived colostrum, biosecurity has to be a concern. At a minimum, you should be

confident that all stored/frozen colostrum is free of blood, mastitis organisms, John's disease and fecal contamination.

Numerous commercial products are available to replace or supplement maternal colostrum. Most colostrum products are manufactured using bovine colostrum or bovine serum as sources of IgG. Commercial colostrum products are generally labeled as either colostrum supplements or colostrum replacements.

Colostrum supplements generally have less than 100 g of IgG per dose and are meant to be used as a supplement to maternal colostrum. Given alone, colostrum supplements lack the IgG concentration necessary to prevent failure of passive transfer, and they lack the necessary nutritional components to ensure calf survival and health. Colostrum supplements can be very useful to offer additional colostrum when the calf receives some maternal colostrum but concentration or volume offered by the dam is insufficient.

Colostrum replacements generally have greater than 100 g of IgG per dose and are meant to be used as a replacement when maternal colostrum is completely unavailable. Colostrum replacements are also formulated to supply the necessary nutrients required by the calf. Colostrum replacements are more expensive because they are more concentrated with antibodies and nutrients but may be worth the investment if you have to completely replace maternal colostrum.

It is recommended that you read and

follow label directions to ensure proper use. As always, consult with the team of experts you have assembled, including your beef extension specialist, herd health veterinarian, nutritionist and genetics provider.

## Western Region

by **Randy Perry**, *California State University, Fresno*, [randyp@csufresno.edu](mailto:randyp@csufresno.edu)

### Fall-calving herds

Cows and calves are on cruise control.

### Reproductive management

**Natural-service bulls.** Bulls should be turned out and hopefully are doing their job.

Watch for return heats from natural-service dates. If a high percentage of females are coming back into heat, switch sires if that is an option.

### Nutritional management

**Mineral supplementation.** It is important that minerals are supplemented on a year-round basis. Supplements should be formulated to meet deficiencies specific to your region or area. Although they should be provided year-round, the breeding season is probably the most important time period. Consider injectable mineral products in addition to loose, block and tub mineral products.

### Protein and energy supplementation.

Most fall cows in the West graze native foothill pastures during the winter months. As is the case in any environment, timing and amount of rainfall are two of the critical factors that determine the pattern and amount of forage production. In most years in California, mid-February marks the start of the good forage-production period in the foothills. Therefore, cattle typically don't need any supplemental energy or protein during this time of the year.

### Health management

**Treatments.** This is the time period of the year when fall-calving cows and calves should have very few problems with animal health.

### General management

Early spring is an excellent time of the year to work on general repairs such as repairing and building fences and other facilities. Also, if irrigated pastures comprise part of the pasture resources during the summer months, this is the time to make repairs to irrigation systems before they are needed later in the spring.

In addition, I would encourage producers to spend some time in the office working on setting long-term and short-term goals for their operations. Most producers spend the majority of their time providing the physical labor associated with the operation. However, time spent with a blank piece of paper developing some strategies for how to improve an operation can be very beneficial. Development of a strategic marketing plan is an excellent example of one of these activities.

### **Spring-calving herds**

The calving season is the main focus.

### **Genetic management**

**Sire selection.** Although the start of the breeding season is still months away, now is the time to start finalizing a list of potential sires. There are more good Angus bulls available today than ever before. I would highly encourage breeders to use all the information that is available and never select potential sires on EPDs only.

The statement that I like is, “Don’t let EPDs get in your way of breeding good cattle.” I am not saying that EPDs should be ignored, but I believe strongly that phenotypic traits and old-fashioned convenience traits like longevity, udder

structure, disposition, mothering ability, feet and leg soundness, etc., are just as important as EPDs. We already have EPDs available for some of these convenience traits (like disposition), and we will have more in the future as the Association gathers enough information to be able to compute genetic estimates.

### **Reproductive management**

**Calving management.** Females should have already started calving or should be shortly. Supplies should be on hand and personnel should be properly trained or advised as to how to assist females with calving problems. In addition, any females that experience retained placentas should be treated promptly.

### **Nutritional management**

**Mineral supplementation.** It is important that females receive adequate levels of calcium, phosphorus and trace minerals that are deficient in your area. Many of the nutritional companies now have mineral supplements that are tailored to different times of the year and forage conditions.

**Body condition.** The target level of body condition at calving is a BCS of 5.0 (scale = 1 to 9) for mature cows and 6.0 for 2-year-old heifers. Although difficult to achieve, this

level of body condition should be maintained during the breeding season.

### **Protein and energy supplementation.**

The period from calving through the end of the breeding season is by far the most important period in terms of meeting protein and energy requirements of beef cows. If cows are going to maintain a yearly calving interval (which is the goal of most beef producers), then they must conceive by 80 days postpartum. This goal is extremely difficult to achieve if nutritional requirements are not being met.

The most practical way to monitor energy status (the relationship between energy consumed vs. energy requirements) is to evaluate body condition score. The most practical way to monitor level of protein intake is to evaluate an animal’s fecal output. If the stool is loose and the cow pies flatten out on the ground, the animal is receiving adequate levels of protein. If the fecal output is extremely firm and the cow pies do not flatten out on the ground, then the animal is most likely protein-deficient.

### **Health Management**

**Treatment protocol.** Treatment protocols and products should be on hand for both scours and pneumonia in suckling calves.

