



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 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

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 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 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

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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, Johne'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

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 are 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 developing 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, “Don’t let EPDs get in your way of breeding good cattle,” is one that I believe in strongly. I am not recommending that EPDs or genomic information should be ignored, but rather 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 (docility, for example), and we will have more in the future as the Association gathers enough information to be able to compute genetic estimates.

I have a couple of other recommendations in this area. Be sure that you are using sires that are going to leave you outstanding replacement females. Even if you sacrifice a little marketability on the bull side, the female progeny will hopefully positively impact your herd over a long period of time.

This one is a little controversial, but don’t overuse calving-ease sires on mature cows. I don’t question the value of calving-ease sires on yearling heifers. However, if you have a mature cow that has the ability to have a 90- or 100-lb. calf with no problem and she lays down and gives birth to one that weighs 65 lb., that is 25 lb. to 35 lb. of weaning weight that you gave up on Day 1. Additionally, that difference will probably be 40 lb. or 50 lb. by weaning time. That is a lot of production to give up just to be extra careful on calving

ease. In addition, a very prominent Angus breeder had some pretty good data in their sale book this fall that showed calf survivability actually favored the heavier calves in their operation.

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

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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.

Mid-South Atlantic Region

by *Kevin Shaffer, West Virginia University,*
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It's the heart of bull sale season across the country, and each time a gavel drops, an impactful, long-term decision has been made. As such, it is imperative that producers do their homework well in advance of the auction and are well-prepared on sale day. As your mailbox becomes inundated with sale books, here are a few tips to help identify the correct bull for your operation.

Step 1: Self evaluation

Buying bulls begins by establishing both short- and long-term goals for your breeding program. As breeders, identifying a direction and establishing a plan to move in that direction is necessary in order to identify the type of bulls that will help in meeting our goals. Furthermore, if breeding program

goals haven't been defined, there is no measure by which to determine if progress is being made or if the selection decisions made are meaningful.

In most cases, goals will not be static. They will change over time as genetic change takes place. However, it is important to remember that at some point a lack of change should be the goal as optimum levels of traits are reached for your environment. Indefinite genetic change should never be a selection goal.

Secondly, evaluate the cow herd and identify selection priorities that are in line with both short- and long-term goals; however, realize that many traits with the greatest economic impact are lower-heritability traits (i.e., fertility and longevity) and will take a long-term approach.

Step 2: Evaluate potential seedstock providers

Selecting the correct seedstock provider is as or more important than selecting the correct bull, so it should not be taken lightly. First and foremost, seedstock providers must exhibit honesty and integrity in all aspects of their business. You cannot afford

to invest in a bull that may be misrepresented, so get to know the people behind the bulls first.

Secondly, a seedstock provider should manage cattle in a way that creates environmental challenges or bottlenecks — never at a level better than you can manage your cattle. This helps identify cattle that are adaptable to the natural environment and eliminates those that have difficulty dealing with environmental stress. A seedstock breeder who is not willing to challenge his or her cattle is not one that will get my business.

Thirdly, identify seedstock providers in a similar environment/climate as they are much more likely to have similar selection goals relative to environmental adaptability. Don't put yourself at a disadvantage by purchasing bulls from an incompatible environment.

Finally, seedstock providers should be willing to share any and all information you request on the bulls in their offering. Many provide somewhat limited information in their sale books, so don't be afraid to ask for additional information. If they can't or won't provide you with the information, find

another seedstock provider. Remember, seedstock providers should be breeders first and marketers second.

Step 3: Evaluate the offering

When receiving a bull sale book from a selected seedstock provider, begin by critically evaluating the list of reference sires. Identify sires you would want to use, and only look at sons of these sires. If you wouldn't use the bull himself, why would you want to purchase a son?

Next, study these sire groups and identify bulls that meet established selection criteria for EPDs, as well as individual and dam performance. If videos are available, use this information to evaluate phenotype, and create a list of bulls that meet or exceed all of your criteria.

After you have identified some bulls of interest, contact the seller to discuss the bulls on your list. Ask about their dam, their feet, soundness, management, etc. — nothing is off the table at this point, so gather as much additional information as you can and finalize the list of bulls in which you are interested. It can also be helpful to gauge the interest level in the bulls on your list so you

have some idea of whether they will be affordable given your budget.

Step 4: Establish a budget

Never go to a sale without a budget. Know what you are able and willing to spend before you arrive and stick with it. Nevertheless, you should never let one or two bids keep you from purchasing the right bull, so keep that in mind when the sale starts.

Step 5: Sale day

Begin by studying the bulls on your list and only the bulls on your list. Don't get distracted and begin looking at data on other bulls that catch your eye. Stay focused and critically evaluate the phenotype on the bulls you have selected on paper. At this point, your list should only get smaller, not larger.

If you only need one or two bulls, try to rank the bulls that are still on your list. The sale order may help you do this. When the sale starts, only buy from your list. If the bulls on your list are out of your price range, don't get discouraged and make an impulse purchase. There will be another sale and another day to buy the right bull.

