



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.
- Continue to monitor calves for the possible development of BRD.

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, control of weeds and invasive plants with herbicide or prescribed fire and fertilizer use in introduced forages.

Mid-South Atlantic Region

by **Scott Greiner**, *sgreiner@vt.edu*; and
Mark McCann, *mark.mccann@vt.edu*, both of
Virginia Tech

The outlook for the cattle business is exciting. The combination of lower feed prices and potentially record cattle prices are enough to excite anyone's imagination. Is it the time to expand the cow herd or cash in on high prices?

There has never been a better time to take advantage of enterprise budgets as a tool. Enterprise budgets can provide a summary of annual production costs, and make it easier to identify the factors that impact your bottom line in both the cost and revenue columns. Specific items such as the cost to

develop replacement heifers can be evaluated.

By combining budgets with key assumptions, it is possible to consider the adoption of certain management practices in terms of their costs and potential returns. Good examples would be the addition of a timed AI program or perhaps revisiting the economics of creep feeding in the light of grain costs and calf prices.

History has taught us that grazed forages are our best value for the cow. The addition of clovers to pastures, strategic weed control and stockpiling are management options worthy of consideration in the upcoming year to reduce reliance on harvested forages and feedstuffs and decrease annual feed costs.

Spring-calving herds (January-March)

General

- ▶ Prepare for calving season by checking inventory and securing necessary supplies (obstetric equipment, tube feeder, colostrum supplement, ear tags, animal health products, calving book, etc.).
- ▶ Move pregnant heifers and early-calving cows to calving area about two weeks before due date.
- ▶ Check cows frequently during calving season. Optimal interval to check calving females is every 4 hours.
- ▶ Utilize calving area that is clean and well-drained. Reduce exposure to scours by moving 2- to 3-day-old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves).
- ▶ Identify calves promptly at birth to comply with age- and source-verification requirements. Record birth weight, calving ease score, teat/udder score and mothering ability of cow.

Nutrition and forages

- ▶ Evaluate growth of yearling heifers with goal of reaching 60%-65% of mature weight by breeding. Depending on forage quality, supplementation may be needed to meet weight gain target.
- ▶ Feed better-quality hay during late gestation and early lactation. If quality is unknown, submit sample for nutrient analysis (local extension office can assist). Target quality is 11%-12% crude protein

and 58%-60% TDN. Supplement protein and/or energy as needed.

- ▶ Frost-seed clovers mid- to late month. Four lb. red clover and 2 lb. of ladino is recommended. Best success will be achieved by choosing areas with little or no plant residue.

Herd health

- ▶ Ensure colostrum intake in the first few hours of life in newborn calves. Supplement if necessary. Newborn calves need 10% of body weight in colostrum in the first 24 hours of life.
- ▶ Provide selenium and vitamin A and D injections to newborn calves.
- ▶ Castrate commercial calves at birth.
- ▶ Monitor calves closely for scours; have treatment supplies on hand.
- ▶ Evaluate lice-control program and consult your veterinarian for recommendations.

Genetics

- ▶ Make plans for spring bull-buying season. Evaluate current herd bulls for progeny performance and soundness. Establish herd genetic goals, and selection criteria for AI sires and new herd bulls. Order semen.
- ▶ Collect yearling performance data (weight, height, scrotal circumference, ultrasound) in seedstock herds.

Fall-calving herds (September-November)

General

- ▶ Monitor cows closely during breeding season for signs of return to estrus. Contact veterinarian to evaluate fertility of bull if many cows repeat cycle. Remove bulls to maintain controlled calving season (60-90 days).
- ▶ Begin planning marketing strategy for calf crop.
- ▶ Plan to pregnancy-check heifers as soon as possible postbreeding.

Nutrition and forages

- ▶ Begin creep-feeding or creep-grazing calves if desired.
- ▶ Once breeding concludes, supplementation should be adjusted to mid-lactation nutritional requirements.
- ▶ Frost-seed clovers mid- to late month. Four lb. red clover and 2 lb. of ladino is recommended. Best success will be

achieved by choosing areas with little or no plant residue.

Herd health

- ▶ Monitor calves closely for health issues, particularly respiratory disease.
- ▶ Administer seven-way clostridial vaccine and respiratory vaccinations (especially if killed products are used; booster dose given at preweaning) to calves.
- ▶ Evaluate lice-control program and consult your veterinarian for recommendations.

Genetics

- ▶ Make plans for spring bull-buying season. Evaluate current herd bulls for progeny performance and soundness.

Midwest Region

by **Justin Sexten**, *University of Missouri*, sextenj@missouri.edu

As the single largest new genetic source, your bull's nutrition and management should not be overlooked. Fall-calving cow herds are preparing to, or have already removed bulls from cows. Historical recommendations suggest separating bulls from cows after a 45- to 60-day controlled breeding season. However, marketing short-bred cull cows may offer increased value.

There are two key points to consider if bulls are left with cows to capture this additional value. First, cows not calving in the 45- to 60-day defined calving season are still culled. Effective nutrition, reproduction and health management are easier when controlled calving seasons are maintained. The second and perhaps more important point is bulls are given adequate nutrition and time to recover to a body condition score (BCS) of 6 before the next breeding season. For herds calving one time a year, this is not as challenging as those with spring and fall herds.

Bull management should develop bulls so turn-in condition is adequate but not excessive. Bulls with a BCS of 6, ribs fully covered, topline smooth but not spongy, have adequate fat reserves to lose weight during the breeding season without negatively influencing reproductive efficiency. Excessively conditioned bulls are commonly associated with poor reproductive performance due to time required to adjust to pasture breeding conditions and reduced

CONTINUED ON PAGE 162

nutrient diets. Bulls should be athletic, with sound feet, legs and eyes and adapted to pasture conditions.

Ideal bull diets are forage- or fiber-based with adequate energy to promote gain. For mature bulls, forage supplementation will provide adequate nutrition. Yearling bulls will require greater dietary energy to promote adequate gain and growth. Avoid significant nutritional changes to bull diets around breeding. Transition bulls prior to the breeding season to similar diets consumed by cows so plane of nutrition does not change at turnout.

The number of bulls required to cover cows will vary with pasture size, bull age, AI success and breeding-season length. A rule of thumb on bulls less than 2 years of age: one cow for every month of bull age. Mature bulls should cover 25-35 cows.

Bulls are a significant financial investment. The average bull sires 42-45 calves when those lost to breeding injury, low libido and failure to pass breeding soundness exams are factored in. As the bull sale season begins, consider having an extra bull on hand or located at the start of the breeding season. When a bull gets injured or sick during the breeding season, this is not the time to start looking for your next herd sire.

In many herds, bulls are also the sole source of new disease exposure, so having time to isolate bulls in the event one goes bad or is injured can be a critical aspect of health management, in addition to the risk of increased open cows and the gap in the calving season. Bull vaccination programs should match those of the cow herd. Do not neglect annual booster vaccinations and deworming. Consider vaccinations when bulls are evaluated for breeding soundness so bulls are up to date prior to the breeding season.

Bulls should pass a breeding soundness exam (sometimes referred to as a BSE) 30 to 60 days prior to the breeding season. Early BSE allows producers time to procure an alternative bull or additional time for bull development if necessary. Remember, a BSE does not evaluate mating ability, libido or disease presence; they are a relative measure of fertility, and whether the bull will be a satisfactory or unsatisfactory potential breeder.

Yearling bulls more commonly have a BSE conducted prior to sale. Bull fertility can and will change over time; have mature bulls evaluated each year before the breeding season. Many state regulations mandate trichomoniasis testing of non-virgin bulls if

they change ownership or possession, so have a BSE conducted at the same time.

If multiple-bull breeding pastures are used, make sure bulls are familiar with each other. Putting a newly purchased bull with an established herd sire at the start of the breeding season may result in bull injury or reduced cow coverage by both bulls due to competition and fighting. Research evaluation of multiple-bull breeding pastures has demonstrated wide ranges in the number of cows serviced by dominant bulls. One example demonstrated the dominant bull serviced 92% of cows while the other two bulls covered 3% each. If the dominant bull was not a satisfactory breeder, he may have prevented the other bulls from servicing cows.

Herd sires represent a small management group within the beef operation. However, they represent 50% of the cow herd's future genetics. Focused herd-sire management will improve reproductive success and, ultimately, genetic progress.

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.

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. However, at the time of the writing of this column, we are experiencing one of our driest years on record.

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 lines or ditches 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.

CONTINUED ON PAGE 164

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.

