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 synctial 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

Western Region

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

Fall-calving herds

The main focus now is the breeding season.

Reproductive management

Synchronization protocol. 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 leakage. Try to avoid programs that require females to be handled more than twice prior to breeding.

Heat detection. Heat detection is critically important and the most important factor influencing the success of an AI program.

AI breeding. Take the time and be precise with all of the details concerning semen handling and placement. If you are breeding AI for more than one cycle, inject GnRH at the time of repeat inseminations.

Natural-service bulls. 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

Mineral supplementation. Minerals should be supplemented on a year-round basis. The breeding season is the most critical time in terms of meeting mineral requirements.

Protein and energy supplementation. 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

Vaccinations. Cows should have been vaccinated at least 30 days prior to the start of the breeding period.

Treatment protocol. 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.

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

Reproductive management

Vaccinations. 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.

Calving supplies and equipment. Be sure that equipment is in working order and supplies are on hand to assist females once calving starts.

Nutritional management

Mineral supplementation. Be sure that cows are receiving adequate levels of calcium, phosphorus and trace minerals that are deficient in your area.

Body condition. 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.

Protein and energy supplementation. 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.

Heifer and bull development. 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

Heifers and bulls. 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.

Midwest Region

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

Winter cow nutrition and an investment opportunity

Now is a good time to begin planning winter feeding programs. Spring-calving cows are at their lowest nutrient requirements of the year following weaning, so now is the best time to get those cows in shape for the upcoming calving season. Poor nutrition during late gestation has been shown to negatively influence calf performance from birth through the feedyard. With feed cost decreasing by the day and strong cattle prices, there are few reasons to neglect the winter feeding program.

To develop a winter feeding program, start by scoring cows for body condition at weaning. Weaning BCSs offer managers the opportunity to sort cows into nutrient management groups to optimize the forage and feed resources.

Each BCS represents about 100 lb. of body weight gain in addition to gain from pregnancy. Consider a young cow that needs to calve at a BCS 6 and was a BCS 4 at weaning. She needs approximately 200 lb. of gain in addition to fetal growth prior to calving. If the calf was weaned Nov. 1 and the cow is due to calve March 1, then you have 120 days to gain 1.7 lb. per day. Now consider a mature cow that needs to gain only one BCS from weaning to calving; she needs to gain 0.8 lb. per day.

In the examples above, length of time is similar from weaning to calving, illustrating the importance of making the decision to wean calves based on forage availability, BCS and market prices. In the case of younger and/or thinner cows, managers may need to consider weaning earlier if the thin cows and adequately conditioned cows are going to be managed together.

An alternative to earlier weaning managers should consider is sorting cows into groups based on condition at weaning. In this example, the thin cows need 15% more dietary energy. Feeding the entire group together would result in thin cows not getting enough nutrition or mature cows wasting the excess nutrients needed by thin cows. Sorting offers the best opportunity to optimize nutrient resources without unnecessarily increasing cost.

Once cows are sorted into groups, consider offering young and thin cows the opportunity to graze fall regrowth first while providing the mature cows lower-quality forage. One way to accomplish this is to allow young and thin cows to graze a pasture first, then move them to a new pasture while the mature cows consume the remaining forage.

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Splitting cattle into groups will optimize the supplemental feed dollar. Young and thin cows can be fed relative to their increased energy requirements without feeding the mature cows unnecessarily. Young, thin, late-gestation cows are trying to not only add condition, but also gain weight to reach mature size. These cows may need 4 lb.-5 lb. of supplemental feed per day depending on forage quality to gain body weight and condition.

Forage quality can only be determined by forage testing. With hay in abundant supply and plenty of cheap feed, producers are tempted to feed cattle without testing forage. Without a forage test, producers, nutritionists and feed consultants alike are just guessing to determine if the feed and forage combination are meeting requirements.

As the end of the year approaches, many producers are deciding how to invest profits. Having recently weaned and worked calves, the parts of the working facility needing repaired or upgraded should be top of mind.

Nearly every aspect of improved management involves the working facility. Health, genetics, reproduction, nutrition and marketing all begin with either sorting or holding cattle in a working facility. Facility improvement may make working cattle safer and more enjoyable, an investment difficult to put a value on.

Mid-South Atlantic Region

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

Short days, cooler temperatures, and the end of the year characterize December. With the end of the year just around the corner, December is an opportune time to reflect on the year experienced with your cattle enterprise. As you review receipts and expenses, it is important to keep the big picture in mind as you assess the details. The key to making significant changes is identifying weaknesses in important areas that have a major impact on your bottom line, along with addressing those that will have the largest impact.

Production and economic records are the necessary tools to begin the identification of the variables where the smallest changes will have the greatest impact on your profitability. Likewise, it is important to understand which key investments will have the potential for the biggest return on investment (items such as facilities, fencing, genetics, etc.).

As you take advantage of the short days and work on your enterprise records, what pieces are you missing? The 2015 record year is less than a month away.

Spring-calving herds (January-March)

General

- Begin preparation for calving season by checking inventory and securing necessary supplies (OB equipment, tube feeder, colostrum supplement, ear tags, animal health products, calving book, etc.)
- Evaluate marketing options for calves not yet sold.
- Evaluate cull-cow marketing strategy; take advantage of seasonality in cull-cow price.
- Conduct forage tests to determine nutritional content of hays.

Nutrition and forages

- Evaluate BCS of cows you identified as thin and gauge whether your management is making adequate progress.
- Continue strip-grazing accumulated fescue growth as needed.
- Continue to manage first-calf heifers separately; give them the best forage. Thin, mature cows could be added to this group.
- Feed lower-quality hay to dry cows, saving the best hay for calving season.
- Continue to feed high-selenium trace-mineral salt. A forage/hay analysis can reveal what other minerals should be supplemented.

- Harvest impacts on feed costs have taken effect. Work to contract or lock in winter feed needs at the most economical price.

Herd health

- In consultation with your veterinarian, finalize vaccination and preconditioning protocol for calf crop.

Reproduction

- Cull open, old and thin cows and cows with udder, eye and soundness issues.

Genetics

- Make plans for winter and spring bull-buying season. Evaluate potential sources for bull purchase. Using herd genetic goals, establish benchmarks and selection criteria for bulls to be purchased. Secure new natural-service sires in ample time to acclimate to your management and environment prior to breeding season.
- Identify replacement heifers using objective measures including genetic background, dam performance and individual performance, along with phenotype. Keep only heifers born in defined calving season.

Fall-calving herds (September-November)

General

- Calving season is completed for most. Continue to observe late-calving cows frequently.
- Calving records should be complete and up to date.
- Monitor calves for scours.
- Conduct forage tests to determine nutritional content of hays.
- Initiate breeding season.

Nutrition and forages

- As the breeding season begins, remember that maintaining or gaining weight have a major impact on pregnancy rate. As available forage becomes scarcer and of lower quality, be prepared to supplement as needed.
- Offer high-magnesium mineral. Generally, fall-calving cows are not as predisposed to grass tetany. As cows transition from grazing to hay or silage, high-magnesium minerals can be discontinued.
- Use strip-grazing as a tool to increase the efficiency of utilization of cool-season pastures by cows postcalving.

Herd health

- Consult with your veterinarian concerning a prebreeding vaccination schedule for cow herd, yearling heifers and bulls. Plan early to allow a 30-day vaccination window prior to breeding season.
- Begin planning vaccination and preconditioning protocol to be used for calf crop at weaning.
- Castrate commercial calves if not done at birth; consider castrating bottom end of male calves in seedstock herds.
- Monitor calf crop for health, have treatment options on hand.

Reproduction

- Reproductive tract score and measure pelvic area on yearling replacement heifers.
- Implement plans and protocols for breeding season following preplanned calendar and synchronization program. Confirm schedule with AI technician, have supplies and semen on hand. Take time to be precise with protocols for synchronization, detection of estrus and semen handling.
- Breed heifers two to four weeks ahead of mature cows to allow longer postpartum interval prior to second breeding season.
- Use 48-hour calf removal for thin cows and first-calf heifers at beginning of breeding season.
- Schedule and conduct breeding soundness exams (sometimes referred to as a BSE) on herd sires, including annual vaccinations prior to turnout.

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- Manage bulls properly during the breeding season. Observe frequently to confirm breeding activity and soundness, and monitor cows for repeat estrus. Avoid commingling mature and young bulls, as older bulls will be dominant. As a rule of thumb, yearling bulls should be exposed to number of cows equal to their age in months (i.e., 18-month-old bull with ~18 cows).

Genetics

- Finish collecting yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.

Southern Great Plains

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

Spring-calving herds

- With adequate protein supplementation, spring-calving cows can maintain weight and body condition consuming stockpiled forage or lower-quality hay. A gradual decline in stockpiled forage quality is to be expected and that decline is accelerated with continual freezing, thawing, ice, snow and rain. To maintain cows' body condition, monitor the weather with this in mind, as well as the cows' BCS.

  Be prepared to adjust the nutritional program as necessary to keep cows from losing weight and body condition ahead of late-winter/spring calving. Adjustments can include moving cows to ungrazed stockpiled pasture, increasing protein and/or energy supplementation, initiating hay feeding or providing limited access to high-quality forage such as cool-season annual forage (wheat, rye, ryegrass, etc.).
- During December or early January, virgin heifers should be checked for weight gain and compared to your established goal. The rule of thumb for commercial operations is to develop heifers to 55% to 65% of expected mature weight by the beginning of the first breeding season. Most seedstock operations will target around 65% of expected mature weight. A lower target would represent a "nutritional challenge" to aid in identifying heifers that thrive in a lower-input environment.

Fall-calving herds

- Fall-calving cows were in excellent body condition this fall with scores ranging from 6 to 8 in our operation at Oklahoma State. Because December is the heart of the breeding season for most fall-calving herds in the Southern Great Plains, the goal of the nutritional program should be to minimize weight and condition loss of cows that are nursing 30- to 100-day-old calves. However, an "acceptable" rate of weight loss can be tailored to the initial body condition of the cows so that they do not drop below a condition score threshold of around 4.5 or so by the end of the breeding season.

  To achieve this, 3 lb.-6 lb. of a concentrate supplement, along with 5 lb.-10 lb. of high-quality legume hay or silage may be necessary. The higher the initial BCS cows have at the start of the breeding season (BCS 7 or higher), the less supplement or harvested forage should be required. Remember that when cows are in a negative energy balance, the first priority for nutrients is maintenance, followed by milk production, then finally (if there is any left over … and usually there is not) maternal energy stores.

  In other words, when you supplement a lot of protein and energy to fall-calving cows, most of the nutrients are used to prop up milk production and very little, if any, is left over to boost cow body condition. Again, assuming cows are grazing stockpiled forage or moderate to low-quality hay, about all you can do is hope to slow down the weight loss to some degree.
- 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

- This fall, native hay meadows have as much forage or even more than when it was baled in June or July. These meadows should be grazed after a hard frost. Leave a minimum of about 6 in. of standing forage and remove the cattle from the meadow if wet conditions develop. Plan to burn the remaining dead material in the spring. This will greatly improve next year's hay quality and allow you to benefit some from the late-summer and fall regrowth.
- 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*.