



Angus Advisor

► NOVEMBER 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

Western Region

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

Fall-calving herds

The main focus is to prepare for the breeding season.

Genetic management

Devote adequate time to sire selection because, from a long-term standpoint, it is the most important management decision that is made each year in a purebred cattle operation.

Reproductive management

Order semen early to avoid any last-minute problems.

Evaluate available synchronization protocols and determine the best choice in your production situation.

Heat detection is often the most overlooked factor influencing the success of AI or ET programs.

Have extra AI supplies on hand, and thoroughly clean and disinfect all breeding equipment (including the thaw thermos) prior to the start of the breeding period.

Semen- and trich-test bulls far enough in advance of the breeding season that if problems arise, replacement bulls can be located prior to the time they are needed for natural service.

Nutritional management

Ensure cattle are receiving adequate levels of calcium, phosphorus and trace minerals deficient in your area.

If cows are grazing dry native forage, fall is the time of year when protein supplementation is most important. Price supplements on a cost per unit of protein.

Energy balance is the relationship between the amount of energy that is consumed vs. the amount that is used for various physiological functions such as maintenance, lactation and reproduction. It has a major effect on fertility. It is critical that cows be in a state of positive energy balance, or gaining weight, during the breeding season.

Health management

Make certain females are vaccinated at least 30 days prior to the start of the breeding period.

Have treatment protocols on hand for

scours and pneumonia in suckling calves. Have first and second treatment options for both conditions.

Spring-calving herds

The main focus is to keep weaned calves healthy. Cows are on cruise control.

Reproductive management

Preg-check cows if not already done. Avoid holding over open cows even if they have been excellent producers, as typically the problem will recur.

Nutritional management

The comments concerning mineral and protein supplementation for fall-calving cows also apply to spring-calving cows at this time of the year.

Monitor body condition of cows; however, the period from weaning until 50 days prior to the next calving is the least important from a nutritional standpoint. It is fine for cows to slip in body condition provided condition is redeposited before the start of the next calving period.

The developmental period from weaning until yearling time and beyond to the start of the breeding period is critical in terms of influencing the future productivity of both bulls and heifers.

Health management

Weaned calves should be treated to control any internal or external parasites. Heifer calves should be Bang's-vaccinated if you have not already done so, and both bulls and heifers should be PI-BVD-tested if that is part of your animal health management program.

If late-term abortions have been a problem in the past, consider booster vaccinations for the respiratory diseases and lepto at preg-check.

Midwest Region

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Nutritional Economics

There are two ways to think about herd nutrition: expense or investment. If you consider feed and forage simply as an expense, the tendency is to focus efforts on reducing expenses without considering the cost of reduced productivity.

Reproduction and health are two areas where the risk of excessive cost reduction can be worse than spending too much for feed. Using first-calf heifer management as an example, let's consider failure to provide adequate nutrients prior to calving to ensure she calves at a sufficient body condition score.

This failure can result in a nonpregnant cow after weaning her first calf. Now the cow has two year's expenses and one calf to pay the bills. Carrying her another year will increase her costs and your risk because she is not guaranteed to become pregnant the next breeding season, but is certain to incur more expense. Consider how much supplemental feed may have been purchased for the entire cow herd using the "revenue" generated from not selling a young open cow who is four to five years from breaking even.

Health is another area where the risk of

providing inadequate nutrition can be greater than the feed costs incurred to prevent disease. Providing energy- and protein-dense feeds at weaning with minimal filler ingredients is critical to ensuring good immune response and promoting gain after weaning. Calves unable to develop an immune response due to inadequate nutrition may require increased treatments or experience greater death loss. In this case reducing feed costs also reduces profit opportunities due to increased treatment and morbidity expenses.

These two examples should not suggest there is no limit to acceptable feed cost, but serve as indicators that there are situations where the lowest-cost option fails to meet the needs of the cattle and results in greater overall expense.

There are nutritional investments beyond feed worth considering. The forage

test is the first and most important investment producers can make. There are several reasons why forage testing is not used in more operations. The first reason is inability to collect a sample correctly. Collecting forage samples in stored forages requires a forage probe. A listing of available probes can be found at www.foragetesting.org/index.php?page=hay_probes. These probes follow National Forage Testing Association guidelines and are a worthwhile investment if you are collecting very many forage samples or if you simply do not like trying to track down a probe when you need it.

Alternatively, ask your feed representative to assist with forage sampling. A partnership with your feed supplier where supplement programs are suited to your operation will benefit both parties. Sampling your forage is

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necessary to develop a feeding program designed with your forage quality, management system and performance goals in mind.

Forage testing will cost about \$20 per sample. If forage sampling allows you to reduce supplement feeding by 1 lb. per head each day using supplemental feed costs at 10¢ per lb., then the forage test is paid for in 200 animal days. If greater supplement levels are needed based on forage test results, testing payback occurs as discussed in the first example by preventing inadequate nutrition from increasing the open cow percentage.

Another nutritional investment worth considering is hay storage; there are several opportunities for return on investment. The initial return is hay loss savings, because covered forages experience reduced dry-matter losses associated with weathering, so less hay is needed. Dry-matter losses are also observed due to greater waste at feeding as cattle refuse to eat a greater percentage of outside stored hay. Additionally, covered hay is higher in quality, resulting in reduced investment in supplemental feeds. Hay storage also offers the opportunity to carry hay inventory from one year to the next, reducing forage costs in drought years. Consider the value of a barn full of hay last year with the opportunity to fill it past this spring and summer. As the end of the year approaches, some producers may consider hay storage investments as a tax-management option.

Mid-South Atlantic Region

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

By November, most areas have received their first frost and forage growth has slowed. Most spring-born calves have been weaned and marketed. Depending on accumulated forage inventory, hay feeding season is on the horizon. Economic analyses of cow-calf operations indicate that minimizing days of hay feeding is an important ingredient in profitability. Grazing crop residue and efficient utilization of stockpiled forages can delay hay feeding in many situations until after New Year's Day.

Most farms in the region found 2013 to be a challenge in regard to making quality hay. Forage testing is a valuable tool to assess the impact of harvest issues we faced this year. The most common problems were the amount of overly mature hay harvested, rain-damaged hay and hay baled too wet. Visual estimation of hay nutrient content is always a guess, but these additional issues make visual ranking of hay quality even more problematic. "Don't guess; forage test."

Spring-calving herds (January-March)

General

- ▶ Implement marketing plan for calf crop, synchronize postweaning grazing and feeding program, as well as vaccination program with marketing plan. Calculate breakevens on various winter and spring marketing options and consider risk-management strategies.

- ▶ Schedule and conduct pregnancy diagnosis with veterinarian. Plan a marketing strategy for open cows that takes advantage of seasonality in cull-cow prices.
- ▶ Finalize winter feed and forage supplies and options. Conduct forage tests to determine nutritional content of hays.

Nutrition and forages

- ▶ Body condition score cows at weaning and separate thin cows.
- ▶ Use palatable feeds and high-quality hay to background calves.
- ▶ Continue stockpiling tall fescue and begin strip-grazing accumulated growth if needed.
- ▶ Continue to manage first-calf heifers separately; give them the best forage. Thin, mature cows could be added to this group.
- ▶ Continue to feed high-selenium trace mineral salt. A forage analysis can reveal what other minerals should be supplemented.
- ▶ As warm-season grasses go dormant, manage grazing to utilize dormant residue before too much weathering occurs.
- ▶ Begin to shop and compare winter supplement options.

Herd health

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

Reproduction

- ▶ Conduct pregnancy check of cow herd with veterinarian.
- ▶ Cull open, old and thin cows and cows with problem udders, eyes and soundness.

Genetics

- ▶ Collect weaning weights on calf crop at appropriate time (AHIR® age range specifies 120-280 days of age), along with cow weights, hip heights and BCS (cow mature size data taken within 45 days of calf weaning measure).
- ▶ Identify replacement heifers using objective measures, including genetic background, dam performance, individual performance, along with phenotype. Keep only heifers born in defined calving season.

Fall-calving herds (September-November)

General

- ▶ Calving season is winding down for most. Continue to observe cows frequently. Address calving difficulties early.
- ▶ Tag, tattoo, record birth weight, calving-ease score, teat/udder score and mothering ability of dam. Keep accurate records at birth.

- ▶ Monitor young calves for scours. Prevent scours by keeping calving area clean and well-drained. Moving 2- to 3-day-old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves) will help reduce exposure to scours.
- ▶ Finalize winter feed and forage supplies and options. Conduct forage tests to determine nutritional content of hays.
- ▶ Finalize plans and schedule for breeding season.

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.
- ▶ Offer high-magnesium mineral. Generally, fall-calving cows are not as predisposed to grass tetany.
- ▶ Reserve high-quality hay and stockpiled pasture areas for cows postcalving. Use strip-grazing as a tool to increase the efficiency of utilization of cool-season pastures by cows postcalving.
- ▶ If available, utilize crop aftermath.
- ▶ Use grazing management to utilize the residue of dormant warm-season pastures.

Herd health

- ▶ Ensure colostrum intake in 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 & D injections to newborn calves.
- ▶ Castrate commercial calves at birth.
- ▶ Monitor calves closely for scours and pneumonia, have treatment supplies on hand.
- ▶ Finalize and conduct prebreeding vaccination schedule for cow herd and yearling heifers. Plan early to allow 30-day vaccination window prior to breeding season.

Reproduction

- ▶ Reproductive tract score and measure pelvic area on yearling replacement heifers.
- ▶ Finalize plans and protocols for breeding season. Establish calendar to map timing of synchronization program to be used during breeding season. Confirm schedule with AI technician, have supplies and semen on hand.
- ▶ Breed heifers two to four weeks ahead of mature cows to allow longer postpartum interval prior to second breeding season.
- ▶ Conduct breeding soundness exams on

herd sires, including annual vaccinations. Do so prior to fall/early winter bull sales to allow time to secure replacements as necessary.

- ▶ Manage newly acquired herd sires properly to prepare them for the breeding season. Yearling bulls often lose 100+ lb. during their first breeding season. Adjust them to the feed and environment of their new home, and commingle bulls of same age/weight for a period of time prior to turnout. Ample exercise, in combination with a proper nutritional program, is essential to make them physically fit for the breeding season.

Genetics

Collect yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.

Make plans for 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.

Southern Great Plains

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Spring-calving herds

1. Wean calves as soon as possible. Cow milk production is at its lowest point in the lactation curve, and forage quality rapidly declines through the fall months. As a result, adjusted weaning weights generally decline for calves that are weaned late in the season. Furthermore, under most circumstances, cows will continue to lose condition until the energy demand for milk production is removed.
2. For cows grazing forage that contains less than 7% protein, begin supplementing the equivalent of about 0.4 lb. of protein per day. This is approximately equivalent to feeding 1 lb. of a 38% protein product or 2 lb. of a 20% protein product. This strategy will increase forage intake and digestibility, allowing the cattle to harvest 25%-50% more energy from the forage resource. Cows should gain one-half to one full BCS before the end of the year, assuming they have access to abundant forage.
3. Depending on forage quality, retained heifer calves will likely require supplementation in order to achieve gains of 1-1.5 lb. per day. The most appropriate and efficient

supplementation program can only be designed with the nutritional characteristics of the forage resource in mind. For example, high-quality forage, such as wheat pasture, will not require protein or energy supplementation. In contrast, high-quality prairie hay will require protein and energy supplementation to achieve weight gain beyond 0.75 lb. per day.

Fall-calving herds

1. Lactating, fall-calving cows should receive approximately twice the amount of supplemental protein as the spring-calving cow herd. On native, warm-season pasture, use an escalating supplementation program, beginning with 1 lb. of 37%-40% CP supplement in October and increasing to 3-4 lb. by Jan. 1.
2. If not done in October, brand calves and vaccinate for clostridial diseases. Vaccinate cows for reproductive diseases according to your herd health plan.
3. Prepare for the breeding season by purchasing semen, checking, repairing and cleaning breeding equipment and facilities. An excellent resource for up-to-date information on various heat-synchronization schemes is available in the following fact sheet: ANSI-3166 "Synchronizing Heats in Beef Cows and Heifers." It can be accessed at <http://pods.dasnr.okstate.edu/docushare/dsweb/HomePage>.

General recommendations

1. Producers evaluating winter feeding and supplementation programs should spend some time with a simple ration-evaluation program. These decision tools can help you make informed decisions, cut out waste, and ensure optimal animal performance. Most extension service groups offer some sort of ration evaluation program. The Oklahoma State University (OSU) Cowculator is one such tool that is made available for free at www.beefextension.com.
2. Discontinue feeding tetracycline for anaplasmosis control after the end of the vector season (after a hard freeze).
3. Check with your Extension office for information on educational meetings about livestock and forage production practices.
4. Lightly graze native hay meadows after frost. Remove cattle from meadows in wet conditions. Only about 25% to 40% of the existing regrowth should be grazed.