



Angus Advisor

▶ SEPTEMBER 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

Mid-South Atlantic Region

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

September signals the official change of season from summer to fall, and as such offers an opportunity to assess management items that will affect herd nutrition and performance later into fall and winter. The following are some key areas of consideration for early this fall that can have very positive effects as we move into winter:

1. It is not too late to test your hay supply. Nutrition programs are based on forage quality. Without a forage analysis, winter supplement strategies are based on guesses. Both underfeeding and overfeeding have costly impacts on your cow herd’s performance and profitability. Don’t guess — test!
2. Stockpiled fescue will hold most of its nutrient content until next January-February. Strip-grazing stockpiled forages has been demonstrated to increase efficiency of forage utilization. Restricting access to stockpiled forage will reduce selective grazing while still meeting cow nutrient needs. Allowing cows access to larger areas will allow them to consume better quality forage than they need and trample residual forage.
3. Assess the nutritional status of your herd. The best snapshot barometer of nutritional status is to score your cow herd for body condition. Fall-calving cows should be at a BCS 5-6 at calving. Spring-calving cows will be thinner as calves are weaned this fall. Postweaning is the most efficient time to add weight and condition to thin cows. First- and second-calf cows are typically the ones requiring the most attention. Utilizing a limited amount of stockpiled forage or 2-3 lb. per head per day of corn gluten feed are both effective and economical ways of increasing body condition.

Spring-calving herds (January-March) General

- ▶ Finalize plans for marketing the calf crop. Coordinate and time weaning, vaccination program and weaning-time

management in concert with marketing plans. Calculate breakevens on various marketing options and consider risk-management strategies.

- ▶ Schedule and conduct pregnancy diagnosis with veterinarian 45-60 days following breeding season. Plan a marketing strategy for open cows.
- ▶ Plan for winter by evaluating feed and forage supplies and options, including conducting forage tests to determine nutritional content of hay on hand.

Nutrition and forages

- ▶ Score cows for body condition at weaning and separate thin cows.
- ▶ Use palatable feeds and high-quality hay to background calves.
- ▶ Continue stockpiling.
- ▶ 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.
- ▶ Continue to manage growth of warm-season grass pastures by rotational grazing. As warm-season pastures approach dormancy, continue to use rotational grazing to manage residue.
- ▶ Store your high-quality hay in the dry.
- ▶ Collect and submit forage samples for nutrient analysis.

Herd health

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

Reproduction

- ▶ Make plans to preg-check heifers as soon as possible after bull removal. This will allow options in marketing open heifers.
- ▶ Remove bulls after 60 days for controlled calving season.
- ▶ Schedule preg-check of cow herd with veterinarian.

Genetics

- ▶ Collect 205-day weights on calf crop at appropriate time (AHIR® age range 120-280 days), along with cow weights, hip heights and condition scores (cow mature size data should be taken within 45 days of weaning calves).
- ▶ Identify replacement heifers. Utilize available tools, including genetics, dam performance, individual performance and phenotype. Restrict replacement heifer pool to those born in defined calving season.

Fall-calving herds (September-November)

General

- ▶ Secure necessary supplies for calving season (obstetrics 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. The optimal interval to check calving females is every four hours. Address calving problems early.
- ▶ Utilize calving area that is clean and well-drained. Reduce exposure to scours by moving 2- and 3-day-old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves).
- ▶ Identify calves promptly at birth. Record birth weight, calving-ease score, teat/udder score, and mothering ability of cow.
- ▶ Plan for winter by evaluating feed and forage supplies and options, including conducting forage tests to determine nutritional content of hay on hand.

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.
- ▶ Continue to feed high-selenium trace-mineral salt.
- ▶ Reserve high-quality hay and pasture area for cows postcalving.
- ▶ Use grazing management to control the residue of warm-season pastures as they approach dormancy. Use strip-grazing as a tool to increase the efficiency of utilization of cool-season pastures by cows postcalving.
- ▶ Store your high-quality hay in the dry.
- ▶ Collect and submit forage samples for nutrient analysis.

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 within 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 and pneumonia, have treatment supplies on hand.

Genetics

- ▶ Collect yearling performance data (weight,

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height, scrotal, ultrasound) in seedstock herds.

- ▶ Evaluate bull battery and begin planning for the breeding season by evaluating herd goals and objectives.

Midwest Region

by **Patrick Gunn**, Iowa State University, pgunn@iastate.edu

Revisiting vitamins

As grain harvest begins, many herds in the Midwest will begin shifting their forage base away from grass and to the use of cornstalks for at least a portion of the fall and winter months. With the shift in forage comes the need for a shift in supplementation strategies. Although energy, protein and minerals are often the focus of fall and winter ration balancing, an influx of perinatal calf mortality cases at the Iowa State University veterinary diagnostic lab the past three springs suggests vitamin nutrition may be getting overlooked, even by some of the best-managed herds in the Midwest.

Most vitamins are synthesized in the rumen, with the exceptions being vitamin A and vitamin E, which can be derived from consuming green forages. Thus, in years where grazing periods are extended or high-quality hay can be sourced, vitamin deficiencies are rarely a concern. However, abnormally wet hay-making conditions in the Midwest this year have resulted in winter forage resources that may be low in quality and vitamin content. Mature first-cutting, rained-on or CRP hay; cornstalks; and even hay that has been stored for extended periods will most likely be deficient in vitamins A and E.

Insufficient vitamin supplementation when feeding or grazing these low-quality forages will result in cows rapidly depleting their liver stores of vitamins A and E. Many times, dams may not show signs of dietary imbalance as vitamin A and E deficiency often does not result in loss of body

condition score; however, the problem can easily manifest itself in the newborn calf with clinical signs of deficiency including stillbirths, blindness and white muscle disease. All of these problems have been prevalent in the Midwest during the past few years, with likely culprits including a combination of drought and increased utilization of cornstalks in many operations.

In addition to conscientious supplementation of vitamins A and E when other dietary vitamin sources may be low, determining vitamin status of cattle in mid-gestation may be of benefit if it is in question. For many spring-calving herds, that time is now. This timing is crucial because if a correction needs to be made in the diet, there is enough time to do so before the dam reaches late gestation. This is imperative because it is difficult to make a change in the diet during late gestation that ensures the cow will be in adequate vitamin status at calving.

Deciding how to sample animals for determining the herd's vitamin status is critical to being able to accurately interpret the results that are obtained. Ultimately, it is best to sample several animals from different groups in the herd. For example, the herd can be divided into heifers, cows less than 5 years of age and mature cows. These three groups all have different metabolic needs, so they need to be sampled separately instead of randomly choosing a certain number of cows from the herd.

For more information on vitamin nutrition and sampling both cattle and feed for vitamin status, consult with the team of experts you have assembled, including your beef extension specialist, herd health veterinarian and nutritionist.

Southern Great Plains

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

Spring-calving herds

1. Purchase supplies needed to complete the

herd health program and prepare for processing calves at weaning in September or October.

2. As the weaning date approaches, be sure to have facilities and equipment checked, repaired or updated as needed. This is a great time to have your scale certified or calibrated. Spend some time with the torch and welder to make those little improvements to your working facility that you have been thinking about doing for years. The cattle will appreciate your efforts as will your help, and you will be asking yourself, "Why didn't I do that years ago?"
3. A well-planned and -executed weaning management and nutrition program are major components in a successful weaning period. Fenceline weaning in a pasture is preferable to sudden, complete removal and pen confinement. If pasture weaning is not an option, consider keeping the calves in the pen next to the cows in the pasture. Once calves have stopped bawling, immediately move them out to a pasture where they cannot access the cows through a fence.
4. Weaned calves can gain 1.5 lb.-2 lb. per day grazing good-quality pasture during late summer and early fall if a complementary supplement package is provided. In situations where good-quality pasture is not available, calves can be fed a growing ration in a drylot, generally resulting in very efficient feed conversion. Consult a nutrition expert for assistance with ration balancing and supplement packages.
5. Weaning is also an important time in the herd health program as it relates to the mature cows and replacement heifers. Potential management steps to be considered at this time include annual vaccinations, brucellosis vaccinations for replacements, pregnancy diagnosis, deworming and treatment for other parasites, retagging, culling decisions, and possibly freeze-branding replacements.

Fall-calving herds

1. Calves should be individually identified and weighed within 24 hours of birth.
2. Identify herd sires to be used in the AI program and purchase semen.
3. Plan the herd health program to be administered at "branding" time. Recent research published by Oklahoma State University (OSU) veterinary scientists indicates that, in properly immunized cow herds, an MLV combination vaccine given at branding, followed by revaccination at weaning is as effective a vaccination strategy as vaccine given preweaning (21 to

Meet our new columnist

Patrick Gunn grew up on a diversified row-crop, purebred beef cattle and custom swine-finishing operation in Greenfield, Ind. Gunn was a 10-year 4-H member and provided leadership to several state-level beef cattle associations during his junior career. He received his bachelor's, master's and doctoral degrees from Purdue University, studying a combination of beef cattle nutrition and reproductive physiology. He started as the beef cow-calf specialist for Iowa State University in 2013. His primary responsibility is cow-calf extension, but he also conducts applied research and co-instructs the senior-level beef systems management course. He and wife Kara (Claeys) have two sons, Maddox and Wyatt, and reside in Story City, Iowa.



Patrick Gunn

30 days), followed by revaccination at weaning.

4. Lactating fall-calving cows will likely lose some body condition during the calving and early lactation period. Ideally, your cattle genetics, forage management and supplementation program would result in limited weight and body condition loss during this critical period. In other words, when these components of your program

are not “in sync,” the cows will lose weight too rapidly, resulting in few cows cycling at the beginning of the breeding season and low conception rates. Either that or you will have to spend a lot of money to keep this from happening.

General recommendations

1. For the second year in a row, the Southern Great Plains region lost the early spring

period from a forage production standpoint. Once again, most of the region has been blessed with excellent summer precipitation. In fact, summer rains have delayed much of the hay harvest throughout the region. We will be fortunate to have abundant standing forage and harvested hay available this coming winter.

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Western Region

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

Fall-calving herds

The main focus is the calving season.

Genetic management

Sire selection. Although the breeding season is still months away, now is the time to start developing a list of potential AI sires.

Reproductive management

Calving management. Supplies should be on hand and proper equipment should be available to assist females with problems at calving. Be sure that personnel are properly trained in the most current procedures recommended for assisting females that are experiencing calving difficulties. As calves are tagged and weighed at birth, their navel stumps should be dipped or sprayed with a mild iodine or betadine product. In addition, if you are in a selenium-deficient area, they should receive a selenium injection at birth.

For maximal absorption of maternal antibodies, calves should nurse within the first six hours after birth. A supply of frozen colostrum should be on hand and should be replaced at the start of each calving season. The best source is a mature, heavy-milking cow that calves early in the calving season. She should be milked out shortly after her own calf nurses. Do not freeze all of the product in one bag; rather, divide it into the proper amount that would be fed to a newborn calf (about one-half of a calf bottle) prior to freezing.

In addition, be certain that females are being monitored for the incidence of retained placenta. If problems arise, treat them promptly.

Nutritional management

Mineral supplementation. Be sure that cows are receiving adequate levels of calcium, phosphorus and trace minerals that are deficient in your area. Minerals should be supplemented on a year-round basis and can be varied depending on the time of the year and available forage resources. The mineral products that include chelated minerals are more expensive but offer much better rates of absorption. Mineral boluses or injectable products can be used in addition to loose or block mineral products.

Body condition. The target level of body condition at calving is a BCS of 5 (scale = 1 to 9) for mature cows and BCS 6 for 2-year-old heifers. Ideally, this level of body condition should be maintained during the breeding season. However, this is sometimes difficult to achieve, especially with cows that have extremely high levels of milk production. Avoid getting cows overconditioned during the breeding season as reproductive performance starts to decline if cows are above a BCS of 6.5 to 7.0.

Protein and energy supplementation. Both protein and energy requirements need to be met to achieve the desired level of body condition. Supplements should be compared on a price per unit of either protein or energy, depending on which nutrient is the most limiting in your situation. In general, if forage is available and is poor in terms of quality, then protein will be the most limiting nutrient. If the availability of forage is the problem, then energy will be the most limiting nutrient.

Health management

Treatment protocol. Have treatment protocols and products on hand for both scours and pneumonia in suckling calves. If cows are calving on irrigated pastures, be prepared to have a higher incidence of scours in young calves. It is well-advised to have first- and second-treatment options for both conditions, and be sure the protocols have been communicated to the appropriate personnel.

Spring-calving herds

The main focus is to prepare for weaning.

Reproductive management

Pregnancy-check. Cows should be preg-checked at weaning time. Avoid holding over open cows, even if they have been excellent producers, as typically the problem will recur. As a general rule, each open cow that is maintained without raising a calf steals the profits from four cows that are raising calves.

Nutritional management

Supplementation. In terms of protein and energy supplementation, usually spring-calving cows can perform adequately without supplementation at this time of year as long as forage is available.

Heifer and bull development. 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. Both sexes need to be developed at adequate rates of gain so that differences in terms of genetic potential for growth can be exhibited. However, neither sex should be developed at extremely high rates as excessive fat deposition can hinder future reproductive performance and detrimentally affect foot and leg soundness.

Health management

Weaned calves. Calves should be administered preweaning vaccinations for the respiratory disease complex at least two to three weeks prior to weaning. After weaning, they should be treated to control internal and external parasites, and heifer calves should be Bang's-vaccinated. Both bulls and heifers should be PI-BVD tested if that is part of your animal health management program.

The first 30 days after weaning is the most critical period concerning problems with BRD in cattle. Consider pasture weaning if you have the facilities to accommodate this management technique. Minimal electric fencing can be used quite successfully, and pasture weaning usually results in significant reductions in the incidence and severity of respiratory disease associated with weaning.

General management

Marketing program. Marketing ability is one of the key factors that determine economic performance in a purebred cattle operation. A sound and creative marketing program is of paramount importance. Many firms are available that can assist breeders with the development of a marketing program that reaches potential customers at the most opportune time and in a most cost-effective manner.

As usual, a good amount of harvested hay will be low in quality due to late harvest or rain damage. Also as usual, if you will be in the market to purchase hay, be sure to take the time to either request or require a forage test. Forage testing and monitoring cow condition are the best tools to use in determining an appropriate nutrition program for fall and winter. A list of certified commercial laboratories is available at www.foragetesting.org.

2. Concentration of critical minerals in forage

declines as forage matures and as leaf-to-stem ratio declines from grazing pressure. Minerals that are of particular concern in the predominant forage species found in the Southern Great Plains include phosphorus, copper, zinc and selenium. Vitamin A is also critical when animals consume drought-stressed forage over a long period of time. A balanced supply of vitamins, macrominerals and microminerals is an important component of the overall herd health program, which

influences health of weaned calves, as well as reproductive success.

3. Late-summer applications of about 50 lb. per acre of nitrogen can produce high-quality Bermuda grass or fescue pasture from October through December. Pastures should be grazed, hayed or otherwise mowed before the fertilizer application is made. Forage production will be highly dependent on late-summer precipitation.

