



Angus Advisor

► JANUARY 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 getting cows bred.

Heat detection and AI breeding.

Accuracy with heat detection and taking the time to be precise with the small details of AI are both very important in determining the level of success of an AI program.

Semen. Semen handling is one of the small details that is often overlooked and also can be very important in terms of influencing the success of an AI program.

Natural-service bulls. Bulls are probably already turned out or will be shortly. If females are in pastures where they are easily observed, record natural-service dates.

Nutritional management

Mineral supplementation. Mineral supplementation is important in achieving optimal reproductive performance. Although females should be supplemented on a year-round basis, the breeding season is the most critical period. Mineral supplements should be formulated to meet deficiencies specific to your region or area.

Protein and energy supplementation. It is critical that both protein and energy requirements of females are being met during the breeding season. Females should be in a state of positive energy balance, or gaining weight, during the breeding season, as energy balance has a significant influence on fertility or conception rate.

Health management

Vaccinations. If not already done, calves should receive their first round of vaccinations. Producers should consult with their veterinarian in developing their vaccination protocol.

Treatment protocol.

Treatment protocols should be on hand for both scours and pneumonia in suckling calves, and both should include first and second treatment options.

Spring-calving herds

The main focus is the calving season.

Reproductive management

Calving management. Supplies should be on hand and the proper equipment should be available to assist females with problems at calving. Be sure that your personnel are properly trained in the most current procedures recommended for assisting females experiencing calving difficulties.

In order for maximal absorption of maternal antibodies, calves should nurse within the first 6 hours after birth. A supply of frozen colostrum should be on hand and should be replaced at the start of each calving season. Extra milk from a mature cow taken shortly after calving is the best source of frozen colostrum.

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. The target level of body condition at calving is a BCS of 5 (scale = 1 to 9) for mature cows and 6 for 2-year-old heifers. For more information visit www.cowbcs.com.

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. Hopefully, both bulls and heifers are performing at levels that will allow achievement of desired average yearling weights.

Health management

Treatment protocol. Have treatment protocols and products on hand for both scours and pneumonia in suckling calves.

Midwest Region

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

Winter Supplement Timing Options

With spring-calving cows entering late gestation and fall-calving cows at peak lactation, the ability of forage resources to meet these growing nutrient demands declines. As a result, producers begin considering supplementation options.

The first consideration is supplement type: protein or energy? A forage test is the first action item when developing a supplementation program in order to determine limiting nutrients.

When forages are below 7% CP supplemental



degradable protein is required to improve forage digestibility and dry-matter intake. Gestating cows need an 8% CP diet to meet protein requirements; lactating cows require 9%-11% CP depending on weight and milk-production level.

Gestating cows require 50% TDN diets, while lactating cows need 56%-59% TDN in the diet depending on weight and milk-production level. Energy is generally limiting maximal milk production during lactation, so cows will either lose condition or require supplementation to maintain or gain condition.

Protein supplements are available in many forms: byproduct meals, range cubes, tank-based liquids, and lick tubs or blocks. Self-fed liquid and lick-tub or block-based supplements offer producers a convenient supplement delivery method. Byproduct meals and range cubes require delivery to the cow herd, but the question is how often.

Protein supplement delivery interval has been tested in numerous research trials with consistent results. The cow's ability to recycle nitrogen for extended periods allows producers the option of supplementing protein as infrequently as once every 6 days. When using extended feeding intervals, supplements should be primarily natural protein sources, such as corn gluten feed, distillers' grains or cottonseed, soybean or alfalfa meal. As feeding intervals increase, the concentration of protein in the supplement will also need to increase, or the feeding level will be greater.

One percent of body weight at a feeding is a practical maximum supplementation level for cows. Feeding intervals for supplemental energy are generally limited to two or three days. Consider a 1,300-pound (lb.) cow requiring 6.3 lb. of a 90% TDN supplement daily to meet energy requirements. This 1,300-lb. cow would have a 13 lb.-per-day limit using the 1% of body weight feeding restriction, so the supplement interval would be 12.6 lb. every other day.

Alternatively, consider the same cow with better forage or greater condition requiring 2 lb. of the same 90% TDN supplement daily; this cow could be fed 6 lb. every three days. Energy supplements are best used prior to calving to improve body condition and colostrum quality, rather than after calving, when energy is primarily used by the cow for increased milk production.

When supplementing energy, feeding levels are generally greater, which brings up two concerns — supplement type and feeding method. Starch-based feeds such as corn, when fed at greater than 0.3% of the cow's body weight (3.9 lb. on a 1,300-lb.

CONTINUED ON PAGE 144

cow) can depress forage digestion and intake.

Restrict starch-based feeds using the 0.3%-of-body-weight limit to one-time offerings. In either of the previous examples, the maximum amount of corn the cow should receive is 3.9 lb. per feeding. Use of byproduct feeds such as corn-gluten feed, distillers' grains, wheat middlings or soybean hulls allows greater supplementation levels without negatively influencing forage digestion.

When extending the feeding interval to meet nutrient needs while reducing fuel and labor expenses, ensure adequate space is available for all cows to eat. Cattle fed greater amounts will require longer to consume feed, so timid cows may not receive adequate nutrition if feeding space is limited.

Finally, consider feeding later in the evening rather than at first light. Cows fed during the late evening tend to have a greater percentage of calves during the day. Calves born during daylight will dry off and warm up quicker and are less subject to predation when the cow is isolated from the herd during calving.

There is flexibility in the timing of supplement delivery. The key is testing forage

to ensure adequate nutrients are provided whenever delivery is convenient.

Mid-South Atlantic Region

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

January typically means that winter feeding has become part of the daily farm chores. Pick one of the month's milder days and think ahead to the warmer and greener days of spring. Winter soil sampling allows plans to be formulated for addressing identified nutrient needs in pastures and hay fields. Likewise, it is time to make plans for frost-seeding clover in February. The addition of clover to pastures is an economical management practice that easily pays its way.

Clover addition to tall-fescue pastures results in improved diet quality and dilution of the toxins associated with endophyte-infested fescue. Clover is also valued for its nitrogen-fixing abilities. During the past decade of high fertilizer costs, the financial benefit of this low-cost method of adding nitrogen to pastures has increased at the same pace as nitrogen. Be sure to check with your

local extension office for variety and planting tips.

Spring-calving herds (January-March) General

- ▶ Prepare for calving season by checking inventory and securing necessary supplies (ob equipment, tube feeder, colostrum supplement, ear tags, animal health products, calving book, etc.). Review calving assistance procedures.
- ▶ 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 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 paddock (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.

Nutrition and forages

- ▶ Evaluate the body condition of cows that you identified as thin and gauge if nutrition management changes are having an impact.
- ▶ As fetus size and fetal growth rate increase, cow nutrition requirements increase proportionately. If low- to average-quality hay is being fed, supplementation may be warranted.
- ▶ 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.
- ▶ Postcalving, nutrient requirements will increase; be prepared to supplement forages based on their nutrient content.
- ▶ Be mindful that harsh environmental conditions (cold, wind, ice, mud) will increase nutrient needs.

Herd health

- ▶ Ensure colostrum intake in the first few hours of life in newborn calves. Supplement if necessary. Newborn calves

CONTINUED ON PAGE 146

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 and pneumonia; have treatment supplies on hand.

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.
- ▶ Schedule ultrasound technician, and collect yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.

Fall-calving herds (September-November)

General

- ▶ Calving records should be complete and up to date.
- ▶ Monitor calves for scours.
- ▶ Continue breeding season.

Nutrition and forages

- ▶ As the breeding season continues, remember that maintaining or gaining weight has 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, hi-magnesium minerals can be discontinued.
- ▶ Use strip-grazing as a tool to increase the efficiency of utilization of cool-season pastures by cows postcalving.
- ▶ Be mindful that harsh environmental conditions (cold, wind, ice, mud) will increase nutrient needs of all cattle.

Herd health

- ▶ Monitor calves closely for health issues, particularly scours and respiratory disease.
- ▶ Consult with veterinarian concerning vaccination protocol for calf crop.
- ▶ Evaluate lice-control program and consult your veterinarian for recommendations.

Reproduction

- ▶ Remove bulls from replacement heifers after 45-day breeding season.
- ▶ Make plans to pregnancy-check heifers as

soon as possible after bull removal. This will allow options in marketing open heifers.

- ▶ 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

- ▶ 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.

Southern Great Plains

by **David Lalman**, Oklahoma State University,
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Spring-calving herds

- ▶ Years of research show that reproductive success is highly dependent on the plane of nutrition during the critical third trimester of pregnancy. Due to rapid fetal growth, energy and protein requirements are

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approximately 25% greater during late gestation compared to mid-gestation. The nutrition program should be adjusted accordingly. A 1,200-lb. Angus cow in good body condition requires a minimum of about 13 lb. of TDN and 2 lb. of protein per day during late gestation.

Consequently, hay or other forages should contain a minimum of 54% TDN and 8% protein to meet requirements for maintenance prior to calving. If the forage does not meet these standards, then a complementary supplementation program should be employed.

- ▶ Prepare calving facilities and equipment. Purchase and organize calving supplies such as tags, navel dip, tattoo equipment and ink, calf scales, etc.
- ▶ Check first-calf heifers several times daily for possible calving difficulties.
- ▶ Feed during evening hours to encourage daytime calving.

Fall-calving herds

- ▶ Removal of bulls toward the end of January or early February is necessary to maintain a controlled breeding season of around 60 to 70 days.

- ▶ If a creep-feeding program is desired, consider limit-feeding a high-protein (30%-40%) supplement, as recommended in the Oklahoma Silver program. In this program, intake of protein supplement is limited by including 10%-12% salt in the creep feed and adjusting as necessary to target consumption of around 1 lb.-2 lb. per head per day. When available, small-grain winter pasture is an excellent creep-grazing resource for fall-born calves.
- ▶ A mineral supplement with elevated concentrations of calcium and magnesium should be provided to lactating cows grazing small-grain forage.

General recommendations

- ▶ After years of decline in the U.S. cow herd, the industry seems to finally be moving toward expansion. Caution is warranted, however, and perhaps more so in the Southern Great Plains than other regions of the country. We were fortunate to have excellent precipitation and forage production throughout much of Oklahoma in 2013. This cannot be said for all of the Southern Great Plains region, however. In fact, some folks in this region are dealing with their third straight year of drought.

Climatologists continue to warn that we are in a general pattern of lower-than-normal precipitation. Keep in mind that historical long-term drought (8- to 10-year periods) have generally had one or two years of average to above-average precipitation. Just something to keep in mind as producers consider restocking their pastures with replacement cows and keeping back replacement heifers.

Forage management is increasingly important in drought. A conservative approach would be to manage and plan as if 2011 and 2012 were the norm, rather than the exception.

- ▶ Distribute hay feeding as much as possible to minimize perennial grass stand damage and to evenly distribute nutrients from manure and wasted hay.
- ▶ Test soil to determine phosphorus, potassium and lime needs for spring legumes, such as lespedeza, sweet clover, red clover and white clover.
- ▶ Plan the financial management program for the year, including cash flow, deadlines for payment of interest and quarterly tax payments.

