



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 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 now is the breeding season.

Reproductive management

Synchronization protocol. If estrus synchronization is going to be used, a protocol should have been selected and products should be on hand. Take extra time in administering synchronization products, being sure to prevent injection-site leakage.

A number of synchronization protocols are available that offer the option of timed AI (TAI). Historically, timed AI systems resulted in significantly lower conception and pregnancy rates. However, that is not the case today. Protocols are available that offer satisfactory results with TAI. The biggest advantage of TAI is reduction in the labor requirement and the elimination of a need for heat detection. These protocols are recommended by the Beef Reproduction Task Force and are printed in almost every major AI beef sire directory.

Heat detection. Heat detection is critically important and many times the most important factor influencing the success of an AI program. This is not the case if a timed-AI protocol is used.

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 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.

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. Although they are more expensive, I personally recommend chelated mineral products, especially during the

breeding season. Injectable mineral products are also a very viable option today.

Protein and energy supplementation. It is critical that both protein and energy requirements of females 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. At a minimum, cows should be vaccinated for the clostridial diseases and should also receive a combination vaccine that includes the respiratory diseases and five serotypes of leptospirosis. Other diseases such as vibriosis and additional serotypes of leptospirosis are included in some of the combination products.

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 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. The target level of body

condition at calving is a minimum BCS of 5 for mature cows and 6 for 2-year-old heifers on a scale of 1 to 9.

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.

Southern Great Plains

by **David Lalman**, Oklahoma State University,
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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.).

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► 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%-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 should still be in good body condition after calving in good condition in September and October. 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 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 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 20%-30% of actual grazing time. In our limit-grazing work here at OSU, it looks like grazing wheat pasture 12 hours per week (three days, four hours each time) is highly effective. This strategy makes efficient use of the expensive wheat pasture resource.
- 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

- After a productive summer, native hay meadows (that were harvested in early to mid-July) 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. If you have the ability to burn the hay meadow in the spring, leave enough standing forage for that purpose and remove the cattle from the meadow if wet conditions develop. Burning hay meadows helps to improve hay quality and suppresses brush encroachment around the edges of the field.
- 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.

Midwest Region

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

New Year's resolutions

As we conclude 2016, many of us will reflect on the last 12 months and think about the good, the bad and the ugly. Unfortunately, the beef industry has experienced its fair share of ugly this year. However, I am often one who submits to the philosophy that you can't change the past, so don't dwell on it. This month I hope to encourage you to take a step back to outline a plan for improved herd management and profitability that can help get 2017 on the road to prosperity. Thus, here is a short list of New Year's resolutions that I challenge every producer to consider.

1. Keep better financial records.

Revenue is usually the easy piece to measure. However, true input costs are not defined well in many operations. Opportunity cost of land devoted to the cow herd, true cost of harvested feed production, and machinery costs all need to be accounted for. Not tracking total production costs, and in particular fixed costs, may give enterprise operators a false sense of profitability, and prevent identification of areas that can be improved upon. With tighter margins in 2016, this may be the most important bullet point on the list.

2. Maintain existing and consider adding another value-added practice.

Among other practices, preconditioning, feeding cull cows, and targeting feeder cattle for niche-fed markets can substantially increase gross revenue. Remember that cull

cattle represent 15%-20% of sales receipts most years. Consider management and marketing alternatives that can increase the value of this population. Evaluate your marketing plan, and implement genetics that optimize it. Fitting the proper genetics to your marketing goals will no doubt optimize returns. Unfortunately, many producers do not always have a clearly defined marketing plan. They often fall into the habit of using genetics that someone else believes they should be using, but which may not facilitate their marketing goals. Seedstock, retained ownership, and feeder-cattle marketers will all likely have different emphases for their respective breeding programs. Source the genetics that maximize your returns.

3. Don't skimp on health and mineral.

At a time of tighter margins, producers are quick to cut back on health inputs and mineral programs. Unfortunately, the upfront money saved on inputs often results in a significantly larger value lost in production.

4. Implement a new technology. There is no shortage of new technology out there for every enterprise from agriculture to Wall Street. Technology improves and gets cheaper over time, enhancing efficiency of production. Step outside your comfort zone and try at least one proven technology that you haven't previously experienced. You will likely be glad you did.

5. Critically assess your forage management plan. Harvested feedstuffs represent the largest single cost to most production systems in the Midwest. Furthermore, feed costs have the largest impact on profitability of Midwestern operations. Develop opportunities to reduce harvested forage use. Consider extending the grazing season through use of stockpiled forages, corn residue and cover crops.

6. Expand the operation. This may sound crazy, but now is likely the best time to expand, as the basic principle of economics is to buy low and sell high. Perhaps unfortunately, many operations followed the flock and rushed toward expansion in 2014-2015 only to see the bottom drop out of the market. The price cycle is one of the few guarantees in the cattle business, so if you are in it for the long haul, consider adding a few cows in 2016.

As always, consult with the team of experts you have assembled, including your nutritionist, beef extension specialist and herd health veterinarian.

Happy holidays!

Mid-South Atlantic Region

by **Kevin Shaffer**, *West Virginia University*,
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From a genetic standpoint, I often wonder about the direction we are headed as an industry. Are we on a sustainable path? Are seedstock producers creating genetics that will keep commercial cattlemen profitable for generations to come? Are we making sustainable breeding decisions?

From an environmental perspective, sustainability has many components in a genetic context; however, I believe sustainable genetics must ultimately provide users with the ability to reduce their cost of production through reduced input cost. Regardless of market conditions, lower input costs will improve profit potential. To do so, breeders must emphasize fertility, feed efficiency, soundness, longevity and appropriate mature size while avoiding selection for excessive growth or carcass yield in maternal breeds.

Because feed costs account for 70% of the total cost of production in beef production systems, and about 70% of those costs are directly attributable to maintenance feed costs of the cow herd, around 50% of the total cost of production is directly related to maintenance feed costs. Simply put, next to fertility, feed efficiency is the most economically important trait in cow-calf production systems; however, feed efficiency is also one of the most underutilized traits in selection programs. If we are going to be a sustainable industry, feed efficiency must be emphasized now and in the future.

Secondly, and perhaps more importantly, the purpose of Angus bulls is to make cows. Bulls are simply a byproduct of the system. Angus breeders need to quit making matings to create bulls and start focusing on matings to make the next generation of females more efficient cows than their mothers. The Angus cow shouldn't have to be everything to everybody in every aspect of the production chain. She can't ignore it, but she first and foremost needs to be an efficient cow.

Yet, finding a source of bulls for this purpose can be difficult as genetic services companies seem intent on selecting and promoting extremes. If we look at the top 25 sires in the breed for registrations from 2013-2015, you will find that they consistently rank in the top percentages of the breed for growth and carcass traits; however, as these values go up so does the number of their daughters that fail to make cows. In an analysis I ran last February, many of these sires had less than 27.5% of their daughters with yearling weight data wean a single calf. These sires also possessed

significantly greater weaning weight and yearling weight EPDs. How can we utilize sires when only 25% of their daughters will actually produce a calf?

The recent drop in the value of cattle has been significant, to say the least, and the length of the decline is not yet apparent. Although this is disheartening, as cow-calf producers the market forces that impact our bottom line are beyond our control, so we should view this as an opportunity to reevaluate, retool and recommit to making cows our priority.

