



Angus Advisor

► MAY 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
PI3	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

Southern Great Plains

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

Spring-calving herds

- Branding time is a traditional term used in the cattle industry to identify the events related to execution of several steps in a herd health protocol. This generally occurs soon after the calving season ends. Interestingly, according to a 2007 National Animal Health Monitoring System (NAHMS) study, only about 24% of U.S. cattle operations use hot-iron branding as a method of herd ID. Clearly, this common processing event is more focused on other components of the herd health program in today’s cattle industry. Typical protocols may include branding, fly tagging, castrating bulls not intended for breeding purposes, vaccinating with a seven-way clostridial bacterin and perhaps a respiratory viral vaccine complex. Your veterinarian should be consulted regarding the appropriate animal health strategies to administer at this time.
- For several years now, I have mentioned the research published by John Kirkpatrick that, in my opinion, is of great benefit to the cattle industry as we consider branding-time herd health protocols. Working with the Noble Foundation, Kirkpatrick published a series of studies showing that, in properly immunized cow herds, an MLV respiratory viral combination vaccine given at branding, followed by revaccination at weaning, is an effective vaccination strategy. In fact, it was as effective as the more traditional approach where vaccine is administered just prior to weaning (21-30 days) and followed by a booster vaccination at weaning.

Obviously, the branding/weaning timing eliminates a trip “through the chute.” Previously, it was thought that maternal antibodies reduced the effectiveness of a respiratory viral vaccine given at branding time (30-90 days of age). The reference to the manuscript is as follows: Kirkpatrick, et al., *Journal of American Veterinary Medical Association*. 2008; 233: 136-142.

- Cattle are increasingly exposed to parasites as the weather warms and they consume growing forage. Consequently, May or early June is a good time to deworm cattle

as part of a strategic deworming program because the animals have had ample time grazing spring forage to pick up a significant parasite load.

- Breeding soundness exams should be performed on bulls before they are turned out with cows. The appropriate bull-to-cow ratio will depend on many factors, including age of the bull, size of the pasture, and the number of cows or heifers serviced to AI. A conservative rule of thumb is to expose the same number of cows or heifers to a young bull as his age in months. For example, a 14-month-old bull might be exposed to 14 open females, while a 2-year-old bull might be exposed to 20-25 open cows.

Fall-calving herds

- Purebred breeders in the Southern Great Plains wean fall-born calves between April and July. Visit with your veterinarian about timing of weaning and (/or) preweaning vaccination and anthelmintic (deworming) products.
- Look for and record cows that should be culled due to calf performance, feet, leg, eye, udder and attitude problems. These records are often more practical to collect and record prior to the weaning date.
- At weaning, weigh and condition score cows while you are weighing the calves, if possible. If that additional step is not possible on weaning day, it should be completed within 45 days. Remember there is about 80 lb. of live weight associated with each one unit change in BCS (scale of 1 to 9). Consequently, BCS must be included with cow weight data so that mature weight can be adjusted to a constant BCS.
- Are you comfortable condition scoring cows? I teach my students to keep it simple. If a cow is extremely thin, she should be assigned a thin score (usually a BCS 2 to 3). If she is excessively fat, give her a fat score (7 to 9). The temptation is to gradually shrink the scale so that excessively thin and excessively fat cows are all assigned within the 4 to 6 range. We like to have condition-scoring contests on a few cows each time we collect BCS data. Everyone writes down their score for a cow, then we compare notes and have a (sometimes lengthy) discussion. I have never lost.
- While we are on the subject of weighing

cattle, remember that being consistent with weighing conditions is an important part of collecting quality data over time. Industry standard weighing conditions can be described as semi-fasted. This simply means that cattle are gathered in the early morning hours before they've had a chance to graze. Weights should then be recorded within the next few hours, if possible. If cattle are allowed to graze through the morning prior to weighing, they may weigh up to 30 lb. heavier, on average. Consider that if yearling weights are recorded for these same calves in a semi-fasted state, postweaning performance will appear to be about 30 lb. lower in this group of cattle.

Midwest Region

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

The post-AI nutrition slump

In many Midwestern beef herds, the beginning of breeding season coincides with green grass. As such, many producers have a tradition of estrus synchronization and artificial insemination followed by immediately moving heifers and cows from the winter drylot to fresh spring pasture.

Although early spring grass is high in energy and protein, it is also extremely high

in water content, particularly if a flush of spring rains has immediately preceded turnout. As such, each bite that the cows or heifers take is diluted in the amount of nutrients ingested. Although most nutritionists will agree that water content of a feed is not a limiting factor for intake, there is a limit to the number of bites a cow can take in a predetermined period of time.

Research has shown that experienced, mature grazing animals may take as many as 60 bites per minute, eight hours per day, equating to somewhere around 130 lb. of forage as-is. Young cows and heifers, however, may graze 20%-40% less in comparison. Because dry-matter content of that early-spring grass may vary from 15%-30%, the ability for a cow to maintain a positive energy balance when transitioning from a drylot to fresh pasture may be challenging.

Recent research at South Dakota State University (SDSU) has shown that heifers placed on pasture immediately following timed-AI lost nearly 1.5 lb. per day during the first week on grass, whereas heifers that had been on pasture for 44 days prior to AI gained more than a pound per day during that same week. The same study noted an improvement in AI-pregnancy rates of 15 percentage points (76% vs. 61%) for heifers

that were supplemented when compared to those that were not supplemented when turned out on grass immediately following AI.

Research at Purdue and the University of Wyoming support the SDSU data and have reported that heifers that do not maintain a positive average daily gain for the first 21 days after AI have compromised pregnancy rates to that insemination. Data from the University of Minnesota also show that heifers consuming only 80% of their dietary requirements for the first seven days post-AI had both reduced embryo quality and development at uterine flush, further supporting the need for proper nutrition immediately after AI.

While more research is being conducted in this arena, it seems clear that abrupt changes in nutritional plane around the time of AI likely prohibits producers from maximizing their investment in hormones and frozen semen. Thus, it is likely necessary to allow breeding females to adjust to spring pasture prior to the breeding season or supplement those cows on pasture until the dry matter of the forage increases if pasture turnout coincides with AI.

As always, for more information on nutritional and reproductive management

CONTINUED ON PAGE 68

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

Western Region

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

Fall-calving herds

The main focus is to prepare for weaning. Cows are on cruise control.

Pregnancy-check. Cows should be pregnancy-checked at weaning time. Avoid holding over open cows even if they have been excellent producers, as typically the problem will reoccur.

Nutritional management

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 expressed. 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. Our target levels of performance from weaning until yearling measurements taken are 3 lb. per head per day for bulls and 1.5 lb. to 2 lb. per head per day for heifers.

Weaned calves. Weaned calves 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. If calves are exposed to dusty lots, run a sprinkler or water wagon — it will more than pay for itself.

Pregnant cows. If late-term abortions have been a problem in the past, consider booster vaccinations for respiratory diseases and leptospirosis at preg-check. Some producers may be only vaccinating at preg-check time; however, we prefer to vaccinate between calving and breeding and then revaccinate at preg-check for diseases that are a problem.

Spring-calving herds

The main focus is to prepare for the breeding season.

Sire selection. Sire selection is the most important management decision that is made each year in a purebred cattle operation. Be sure that you are using the best sires available that fit your genetic goals or objectives. Many producers focus on sires that are going to produce the stoutest, most marketable bull progeny. I don't disagree with this logic, as the income from the sale of bulls to commercial herds represents the largest source of income in many purebred operations.

However, in my opinion, the value of the female progeny should be considered just as highly and from a long-term standpoint is way more important. In addition, I think that \$B is receiving far too much selection pressure in many purebred operations. This index is nothing more than a terminal sire index.

If your customers are using their Angus bulls as terminal sires and not keeping females as replacements, then the selection pressure on \$B is warranted. However, if those customers are selling their calves at weaning "off the cow" and if they are keeping

daughter progeny as herd replacements, I prefer to focus on maximizing \$W without going too far negative on \$EN.

In addition, I believe strongly in the value of phenotypic traits such as proper degree of muscling, body capacity and structural correctness. Also, the old fashioned “convenience” traits, such as eyes, udder, feet and disposition, are still as important today as they ever were. In my opinion, we are so fortunate with this breed of cattle to have so many good bulls that combine all of these traits very well.

Reproductive management

AI program. Semen should be on hand and a synchronization protocol should have been selected. In addition, all AI equipment and facilities should be ready for use. Don't overlook the importance of good heat detection and attention to details concerning semen handling. Breed yearling heifers from 2 weeks to 1 month prior to the mature cows; therefore, they have the extra time to recycle and rebreed as 2-year-old first-calf cows.

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 the period from calving until conception is the most critical in terms of influencing reproductive performance. Many excellent protocols are now available and some offer the option of timed AI with very satisfactory results. The Beef Reproductive Task Force is the best source of information in the area of estrus-synchronization protocols.

Vaccinations. Cows should have been vaccinated at least 30 days prior to the start of the breeding period. This is also an excellent time to deworm cows. We prefer to use a pour-on product at this time of the year as it also knocks down fly populations. If not already done, calves should receive their first round of vaccinations for the respiratory disease complex and the clostridial diseases.

We still recommend and use MLV vaccines for the respiratory disease complex. I have yet to see any real good evidence against the use of these products; however, there appears to be more discussion in the popular press about the concern that MLV

diseases may be having a slight negative influence on fertility rate or conception at the beginning of the breeding season. Again, I want to emphasize there is no hard evidence that I have seen that supports this concern, but it seems to be a growing concern among some professionals in the industry.

Pinkeye. To help control pinkeye, consider mowing tall pasture grasses, reducing fly populations with sprays, dust bags or fly tags, and treating problems quickly so they do not spread within groups. Access to shade will help reduce the incidence of pinkeye. We prefer to treat pinkeye with a mixture of 90% penicillin and 10% dexamethasone and an eye patch. We inject approximately 2 cc under the membranes on the upper portion of the eyeball.

Treatment protocol. Treatment protocols and products should be on hand for scours and pneumonia in suckling calves. It is well-advised to have first- and second-treatment options for both conditions, and be sure that the protocols have been communicated to the appropriate personnel.

