



Angus Advisor

► NOVEMBER herd management tips

Meet our columnists

This month we introduce columnist Randy Perry to the “Angus Advisor” lineup. Perry will provide herd management tips for the Western Region. As we introduce him, we also want to reintroduce our other columnists: John Hall, David Lalman and Twig Marston.

Western Region

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

Randy Perry is a native of California and was very active in showing beef cattle and judging livestock in 4-H and FFA as a youth. He has been involved with the Charolais



Randy Perry

breed since childhood and is currently a member of their national Board of Directors. He earned a bachelor's degree in animal science at California Polytechnic State University (Cal Poly), and a master's degree and a doctorate

in reproductive physiology from Kansas State University (K-State).

Perry is involved with cattle associations on local, state and national levels. He serves as a technical advisor for the California Beef Cattle Improvement Association (CBCIA) and is the current chairman of the Breed Improvement Committee of the American International Charolais Association.

He is currently a professor in the Department of Animal Sciences and Agricultural Education at California State University, Fresno. He teaches classes in beef and reproductive sciences, and he supervises the beef program.

In addition, he is involved with his parents in a purebred Charolais operation and with his wife, Susan, and their three children (Austin, Macy and Colby) in a purebred Angus operation.

Fall-calving herds

The main focus is to prepare for the breeding season.

Genetic management

Sire selection. Put as much effort as possible into sire selection because from a long-term standpoint it is the most important management decision that we

make each year. The difficult aspect is figuring out which sires of the ones available today are going to produce the kind of daughters that will be the most productive and sought after three to five years down the road.

Many times we use sires because we believe they will produce the kind of bulls that we can market from a phenotypic and genetic standpoint. That is fine; however, it is hard to justify the time and expense associated with artificial insemination (AI) if the daughter progeny are not the kind of females that will improve our cow herd.

Reproductive management

Semen. Get semen ordered early to avoid last-minute problems. Do not try to save money on semen; cheap semen is the most expensive item you can ever buy. If you can't afford to use the best bulls available, then just turn out bulls. They will probably do you more good in terms of herd improvement.

Synchronization protocol. Determine the synchronization protocol that is going to work best in your production situation. Use a calendar, and get all the important dates figured out far in advance. Work backwards from your desired first day of the breeding period. Avoid programs that require excessive amounts of animal handling and trips through the chute prior to breeding. Labor and product costs add up, and we stress both cows and calves each time animals are gathered for processing.

In my opinion, we have given up on some old synchronization protocols that worked very effectively and were very cost-effective. In some operations, timed-AI systems are the only practical synchronization protocol. However, in situations where heat detection is an option, we sacrifice AI pregnancy rates when we use a timed-AI system vs. AI combined with heat detection.

Heat detection. Heat detection is often the most overlooked factor influencing the success of an AI or embryo transfer (ET) program. Heat detection is not just catching

the cows in standing heat — anybody with a small amount of training can be effective in determining standing heat, or estrus. Effective heat detection is achieved by developing the skills or ability to be able to pick up all the subtle signs of heat and being able to catch the cows that never do exhibit standing estrus.

AI equipment. 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. Sanitation is one of the small details that is often overlooked. In addition, be sure to check the temperature of your thaw thermos prior to first use.

Semen and trichomoniasis (trich) tests. Semen-test 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.

Nutritional management

Mineral supplementation. Be sure that cows are receiving adequate levels of calcium (Ca), phosphorus (P) 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. Mineral boluses or injectable products can be used in addition to loose or block mineral products.

Protein supplementation. If cows are grazing dry native forage, fall is the time of year that protein supplementation is most important. Block or liquid supplements are good options if dry forage is available or if low-quality hay is being fed to replace dry forage. Good-quality alfalfa hay is an excellent source of high-quality protein; however, the cost of such hay is a problem this year.

The old-timers always said, “The cheapest hay you can buy is the most expensive hay that you can afford to purchase.” I don't know if that statement holds true at \$200 per ton. Price supplements on cost per unit of protein or energy, depending on which nutrient is most limiting in your situation.

Energy balance. 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 and, thus, it is critical that cows are in a state of positive

energy balance or gaining weight during the breeding season.

The best way to determine energy balance is to monitor body condition. The target level of body condition for beef cows at calving is a minimum body condition score (BCS) of 5 on a scale of 1 to 9. Ideally, we want to maintain or improve this condition score during the breeding season. However, many times this is difficult to do cost effectively, especially with cows that have high levels of milk production. (For information on how to condition score cows, including examples, visit www.cowbcs.com.)

Health management

Vaccinations. Make certain that cows are vaccinated at least 30 days prior to the start of the breeding period. At a minimum, cows should be vaccinated for the respiratory disease complex, the five serotypes of leptospirosis, and the clostridial diseases. I would recommend that you use vaccinations that include fetal protection against persistently infected bovine viral diarrhoea (PI BVD). Bulls should also be vaccinated for vibriosis in addition to those diseases described above.

Treatment protocol. Have a treatment protocol 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. Health records are becoming more important each year. Vaccination records can be recorded on a group basis; however, treatment records should be kept on an individual animal basis.

Spring-calving herds

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

Reproductive management

Pregnancy-check. Cows should be pregnancy-checked if not already done. Avoid holding over open cows even if they have been excellent producers, as typically the problem will re-occur. In addition, if very many open cows are held over, they steal the profits from the cows that are doing their jobs and weaning calves. If the reason for cows being open is a bull or semen problem, then that is an entirely different situation.

Nutritional management

Mineral and protein supplementation.

The comments concerning mineral and protein supplementation for fall-calving cows discussed earlier also apply to spring-calving cows at this time of year. However, it is not important that spring-calving cows maintain or improve body condition.

Body condition. 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. Therefore, if you want to let cows slip in terms of body condition, it is OK provided that body condition is recovered before the start of the next calving period.

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 develop

at adequate rates 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. In our university development program, our target levels for ADG (average daily gain) from weaning until yearling measurements are recorded is 1.5-1.75 pounds (lb.) per day for heifers and 2.5-3.0 lb. per day for bulls.

Health Management

Weaned calves. Weaned calves should be treated to control any internal or external parasites that may be a problem in your area. Heifer calves should be Bang's (brucellosis)-vaccinated if not already done, and both bulls and heifers should be PI-BVD-tested if that is

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part of your animal health management program.

The earlier comments concerning treatment protocols for fall-calving herds also apply to spring-calving herds. However, the disease of highest concern is bovine respiratory disease (BRD) in weaned calves. The first 30 days after weaning is the most critical period. If the difference in temperature from the daily maximum to the nighttime low exceeds 40°, watch out because you will have problems even in the best of conditions. If calves are exposed to dusty lots, run a sprinkler. It will more than pay for itself.

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

Midsouth Region

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

David Lalman is an associate professor in animal science at Oklahoma State University (OSU). He earned advanced degrees from Montana State University and the University of Missouri in the area of ruminant nutrition. Lalman currently maintains Extension and research programs in the areas of beef cow-calf and stocker cattle nutrition and management at OSU.



David Lalman

Spring-calving herds

1. Wean calves as soon as possible, if not already done. 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 pounds (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. As a result of this tremendous response, 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 may require up to 1.5% of body weight of supplemental feed to achieve the desired level of gain.

4. There is much interest in feeding fat to beef cattle (generally through supplements) to increase weight gain and achieve improved reproductive performance. Published experiments have failed to document consistent positive responses to fat supplementation in general. However, the research is more consistent in demonstrating that too much ruminally active fat can hinder intake, forage digestion and weight gain in general. Under most circumstances, forage-fed cattle should receive diets that contain no more than 4%-5% total fat. Many forages contain 1%-2% fat, leaving room for a maximum of 2%-4% supplemental fat.

Fall-calving herds

1. Lactating, fall-calving cows should receive approximately twice the amount of supplemental protein as the spring-calving cow herd. The goal for the

supplementation program is to minimize weight loss through the breeding season so cows are able to maintain moderate condition through this period. Moderate weight and condition loss after breeding will not compromise the pregnancy.

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. Many producers choose to begin breeding yearling heifers 20-30 days before the cows to maintain similar breeding/calving dates with the mature cow herd.

General recommendations

1. Discontinue feeding tetracycline for anaplasmosis control after the end of the vector season (30-50 days after a hard freeze).
2. Check with your Extension office for information on educational meetings about livestock and forage production practices.
3. Lightly graze native hay meadows after frost. Remove cattle from meadows in wet conditions.

4. Use prescribed fire every other year in dry leaf litter to control hardwood sprouts [less than 4 inches (in.)]. Fire will also reduce winter tick infestations.

Southeast Region

by **John Hall**, Virginia Tech, jbhall@vt.edu

John Hall is an associate professor and Extension beef cattle specialist at Virginia Polytechnic Institute & State University (Virginia Tech). He conducts educational programs and applied research on nutrition-reproduction interactions, reproductive management and cow-calf production.



John Hall

Originally a native of Pennsylvania, he earned bachelor's and master's degrees from the University of Georgia and a doctorate in reproductive physiology from the University of Kentucky.

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He has worked in Extension, research and the beef industry in a variety of places, including North Carolina, Montana, Minnesota and Virginia. John lives on a small farm with his wife, Beverly, and sons, Wyatt (16) and Matt (14).

Spring-calving herds

- ▶ Condition score cows and separate thin cows.
- ▶ Market commercial calves at value-added sales such as state-certified feeder calf programs or through AngusSource.®
- ▶ Background commercial calves for sale in December.
- ▶ Feed replacement heifers to gain 1.5-1.75 lb. per day, or use the target weight method to calculate rate of gain.
- ▶ Cull open, old and very thin cows; check feet and legs, udders, and eyes.
- ▶ Feed cull cows on stockpiled fescue until December or January to increase marketability.
- ▶ Test hay for nutrient quality.
- ▶ Move cows to stockpiled grass late this month or in early December.
- ▶ Get list of bull sales coming up early this winter.
- ▶ Remember to submit weaning data to the Angus Herd Improvement Records (AHIR®) program.

Fall-calving herds

- ▶ Finish calving.
- ▶ Check cows two to four times per day, checking heifers more often. Assist early if needed.
- ▶ Keep calving area clean, and move healthy pairs out to large pastures three days after calving.
- ▶ Tag and dehorn all calves at birth; castrate male calves in commercial herds.
- ▶ Give selenium (Se) and vitamin A and D injections to newborn calves.
- ▶ Feed cows extra energy after calving; stockpiled fescue will take care of most nutritional needs. Cows calving at a BCS of less than 5 (on a 9-point scale) should receive special nutritional attention.
- ▶ Test hay for nutrient quality.
- ▶ Look for opportunities to secure low-cost feed supplies of bulk feeds or commodity feeds.
- ▶ Keep high-quality, high-magnesium (Mg), high-selenium minerals available.
- ▶ Move cows to stockpiled grass late this month or in early December.
- ▶ Begin breeding replacement heifers late this month; try AI on heifers.

- ▶ Perform breeding soundness exams (also referred to as BSEs) on all bulls.
- ▶ This is your last chance to buy bulls at November-December bull sales.

Creative thinking needed to make it to spring

From Kentucky to Florida and from Virginia to Mississippi, the Southeast continues to be in one of the deepest droughts in recent memory. Fall rains that usually bring the opportunity for fall pastures and stockpiling have not materialized. As I write this column, the period of time for stockpiling forages is over in the northern part of our region, with only a limited amount of opportunity for the deep South portions of the region to grow fall grazing.

Feeding cows from now until spring will be extremely expensive if producers rely on hay imported from other regions. In order to maintain genetics, seedstock breeders and commercial producers need to use some creativity in designing feeding programs. Several options exist, including moving cows to other regions of the country, feeding byproducts, and using drought-stressed crops.

Several nearby regions have enjoyed an abundance (an overabundance in Texas) of rain this year. Pasture leases may be available in Arkansas, Missouri, Kansas and Texas. Some of our western neighbors found that moving cows to the feed may be cheaper than moving the feed to the cows. Many leases may already be taken. When leasing pasture, producers need to get information on local rates as well as the reputation of the person that will be managing the cattle.

For many operations, limit-feeding hay is the key to surviving until next spring and minimizing financial losses. Many different diets can be formulated using only 5-10 lb. of hay. Byproducts such as brewers' grains, corn gluten feed and soyhulls can replace much of the nutrition normally provided by hay. This year the cost of these byproducts on a pound-of-energy or pound-of-protein basis is below the cost of hay. Other byproducts are often available at reasonable prices if producers can take truckloads at a moment's notice. Tractor-trailer or train carloads of breakfast cereals, candy waste, or snack foods are available periodically. Covered storage is needed for these products. A nutritionist or Extension specialist should be consulted for

formulation of diets as well as pricing these products.

Drought-stressed crops are often a good option to feed cows during drought years, and both cattle producer and crop producer get some relief. However, producers must be very careful to test these feedstuffs for toxins. A high nitrate level in feed is the most common problem. Baled cornstalks or Bermuda hay from drought areas are most likely to contain high nitrates. Nitrate levels of 0.51% nitrate ion [1,000 ppm (parts per million) nitrate N] are cause for concern, and levels at half those (0.26% NI or 500 ppm nitrate N) may be toxic to pregnant cows. The ensiling process reduces nitrates, but levels are not changed in hay. An excellent publication on nitrates and cattle is available from North Carolina State University at www.cals.ncsu.edu/an_sci/extension/animal/nutr/nitrate%20management%20in%20beef.pdf. Prussic acid is also a concern in drought-stressed sorghums and johnsongrass. Prussic acid levels are reduced after haying or two weeks after a killing frost. Consult your Extension service for testing options for nitrates and prussic acid. Test forages before you buy.

Midwest Region

by **Twig Marston**, Kansas State University, tmarston@oznet.ksu.edu

Twig Marston grew up in central Kansas and has bachelor's and master's degrees from



Twig Marston

K-State and a doctorate from OSU. Marston has managed a family farm and ranch operation, served as senior beef nutritionist for a major Midwestern feed company, and

served as an Extension livestock specialist. He is presently the state beef Extension specialist in cow-calf management for Kansas.

His on-campus responsibilities include team-teaching the Beef Science class, organizing the Kansas Bull Test and implementing a state-wide Extension program. He has instigated an outreach educational program designed to network Kansas cattle producers with each other as well as with national and international beef producers. Marston has spoken at numerous

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cattle events across the United States and has published several scientific and popular press articles.

He and Mary have two children: Andee, a K-State graduate in animal science; and Katie, a K-State graduate in baking science and food science.

Herd management for spring-calving cows

- 1.** Pregnancy-check if not already completed.
- 2.** Finish culling. Consider feeding cull cows

to increase body weight and value, and to utilize cheap feedstuffs.

- 3.** Score cows for body condition. Provide thin cows (BCS 3 and 4) extra feed now. Take advantage of weather, stage of pregnancy, lower nutrient requirements and quality feedstuffs.
- 4.** In late fall and early winter, start feeding supplements to mature cows grazing dry grass using these guidelines:
 - (a)** 1-2 lb. per day of a 40% crude protein (CP) supplement;

(b) 3-4 lb. per day of a 20% CP supplement; or

(c) 10 lb. good nonlegume hay, no supplement needed.

- 5.** Compare supplements on the basis of cost per pound of nutrient.
- 6.** Utilize crop residues. Strip-graze or rotate fields to improve grazing efficiency. Cows with average body condition can be grazed at 1-2 acres per cow for 30 days, assuming normal weather. Available forage is directly related to grain production levels. Protein,

phosphorus (P) and vitamin A are usually the limiting nutrients.

7. Discontinue feeding tetracycline if used for anaplasmosis control.

Calf management

1. Participate in national breed association performance programs, the Cow Herd Analysis and Performance System (CHAPS), and/or other ranch record systems.
2. Finalize plans to merchandise calves or to

background through yearling or finishing programs.

3. Use Angus Information Management Software (AIMS) to record calf data.

Forage/pasture management

Plan a winter nutritional program through pasture and forage management.

General management

1. Document the cost of production by participating in Standardized

Performance Analysis (SPA) programs.

2. Review management decisions, and lower your costs per unit of production.
3. Plan your marketing program, including private-treaty, consignment, test and production sales, etc.
4. A penny saved is a penny earned. Price byproducts, grains and other feedstuffs on a nutrient basis.

