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“Beef Production Strategies” article

Yearling Bull Management

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Many seedstock producers choose to market bulls as long yearlings instead of holding them to two years of age and incurring additional development costs and risks. Because of the additional development costs associated with holding younger bulls until two years of age, there may be opportunities to purchase yearling bulls with desirable genetics for less cost than purchasing more mature bulls with similar genetics. However, special management considerations come into play when yearling bulls are used as herd sires.

Proper post-weaning development of beef bulls is important for future effectiveness as herd sires. Bulls should be separated and managed according to age groups (weanling bull calves, yearling bulls, highly-fitted or gain-tested bulls, 2-year old bulls, mature bulls). Separating younger and older bulls can be particularly important in preventing injuries. Dividing bulls into management groups also allows the different nutritional needs of the different groups to be better met. Yearling bulls still have lots of growth and development ahead of them and should be managed differently than older bulls.

As bulls mature, their nutritional requirements change. Younger bulls require less quantity but higher quality diets. For example, daily nutrient requirements for a 700 lbs. bull gaining two lbs. per day are approximately 16 lbs. of dry matter intake with 11.4% crude protein and 65% total digestible nutrients (TDN) on a dry matter basis, while a 1,500 lbs. bull gaining two lbs. per day needs approximately 34.5 lbs. of dry matter intake with 6.1% crude protein and 63% TDN on a dry matter basis. While daily dry matter intake generally increases with increasing body weight, a bull's crude protein requirement declines as a percentage of dry matter intake with advancing age and body size. Younger bulls require higher protein percentages for the rapid lean muscle growth that is occurring during early development.

Increased physical activity of bulls during the breeding season can result in body condition loss. Adequate bull body condition is important for effective breeding performance. Since it can often be difficult to supplement bulls separately from the remainder of the breeding herd, bulls should be fed to go into the breeding season in at least good body condition without being excessively fat. A body condition score of 6, where 1=extremely thin and 9=obese, is a good goal for bulls at the start of breeding.

Yearling bulls can lose significant amounts of weight during their first breeding season. They must gain this weight back and continue to grow before the next breeding season to remain effective herd sires. It is important to observe growing bulls closely for changes in body condition. Adjustments to bull feeding programs can then be made in a timely manner. A good target is for a 2-year old bull to weigh approximately 75% of his

expected mature weight. For example, if a bull's expected mature weight is 2,000 lbs., then he should weigh approximately 1,500 lbs. ($2000 \times .75 = 1,500$) at two years of age.

Bull power is another particularly important consideration when using yearling bulls. The number of females a bull can effectively service depends upon bull maturity, body condition, paddock size, fertility, libido, length of the breeding season, and structural soundness. The number of females a young bull can successfully cover during a breeding season is typically much less than that of a mature bull. Cow-calf producers should limit the exposure of young bulls to about 15 to 18 head of females in a controlled breeding season.

From a genetic improvement standpoint, using bulls first as yearlings rather than as older sires has the advantage of lowering the generation interval and can speed genetic improvement progress for economically relevant traits. Keep in mind that young bulls with low expected progeny difference (EPD) accuracy values are considered "unproven." Accuracy values indicate the reliability of EPDs or the amount of confidence that can be placed in EPDs. Accuracy values increase as additional performance information on a bull, his calves, and his relatives becomes available for calculating EPDs.

With many well-developed yearling bulls with desirable genetics available, it is important to consider the level of management needed for successful use of these young bulls in herd breeding programs. Mississippi cow-calf producers can then look at the advantages of using young bulls in breeding programs and decide whether or not yearling bulls are a good fit for their programs. No matter what the age of the bull, well-planned and implemented bull development and management practices are worthwhile.

Beef Cattle Short Course

Go ahead and mark your calendars for May 21, 2004 for a Beef Cattle Short Course presented by the American Breeds Coalition. Baseball pitching legend and cattleman, Nolan Ryan, will be the featured speaker at the short course, which will be held on the Hinds Community College campus in Raymond, MS. The theme for this short course is "Production Targets for Success in the Beef Industry." Speakers from Nolan Ryan Tender Aged Beef, Texas A&M University, Cactus Feeders, and Mississippi State University will address where *Bos indicus* cattle fit in the industry, the Nolan Ryan Tender Aged Beef program, Texas A&M Ranch to Rail program results, marketing alliances for small producers, electronic identification, and herd health and management practices to improve feeder calf value. For more information on yearling bull management or the upcoming Beef Cattle Short Course, contact your local Extension office.