

## **Thoughts on Beefmaster Bull Selection**

*by Dr. Joe Paschal, Texas Cooperative Extension Beef Cattle Specialist*

This time of year, a lot of folks write articles about bull selection. In fact, I wrote one the other day from a commercial cattleman's point of view. In case you missed it, I basically said that we need to consider using younger bulls because they are often less expensive and genetically superior.

Also, we should use our bulls on more cows to reduce the annual cost per cow of using them so we can buy better bulls. I say "we" because I run some commercial cows as well as a few registered Beefmasters. I am going to assume that the bulls you are interested in are sound (can walk easily) and fertile.

So what about Beefmaster bull selection? The Beefmaster bull market has been very strong, especially in the areas in which the breed is best suited but also in other areas where you might think Beefmaster bulls are not in much demand. I get to help evaluate Beefmaster and other breed bulls at sales here in Texas several times a year and help folks pick bulls for their various types of cowherds. But I have not bought large numbers of bulls for myself.

When I am asked to talk (or write) about bull selection, I like to begin with what are you going to use him for? If you are just interested in a "cow freshener," as one of my colleagues calls them, then any fertile bull will do. He doesn't have to be anything fancy. However, I hope that no one in the Beefmaster business will settle for cow fresheners. The cattle are just too valuable to not take bull selection and purchase decisions seriously.

One of the first things that Beefmaster bull buyers have to think about is what are the traits I am interested in maintaining and which are the ones I intend to improve in my cowherd? These may be based on the performance of your own herd, especially if you have a small herd, or if you sell a few bulls and several females locally to other breeders and send the rest to the local auction barn. If you sell primarily to other Beefmaster breeders, then the levels of performance of your herd and your customer's herds for various traits are important.

Let's take some traits that are going to be important to both groups: birth weight, weaning weight, milk production and temperament. Usually in breeds formed from part *Bos indicus* genetics like Beefmaster, calving problems due to birth weight are seldom a problem. The Beefmaster cow tends to reduce the birth weight of the calf even as the sire tends to increase it.

The number one factor affecting calving ease is calf birth weight. However, it makes sense to look for bulls whose birth weight is close to your herd average even as you select for bulls that have higher weaning weights (if that is a selection goal).

Birth weight is fairly easy to select against, but it is associated with weight at other ages (like weaning and yearling). If you select to reduce birth weight, you may have a correlated effect on reducing weaning weight and yearling weight. Of course the opposite is true, too, and many breeders in other breeds have sadly realized this effect too late. An actual birth weight is a good start, but a BIRTH WEIGHT EPD is a better record since it takes into account not only the record of the bull but also those of his relatives and his progeny, if any, against all other animals in the breed.

Unfortunately, not all calves are weighed at birth and not all birth records are turned in, so I still suggest you look at the bull's actual birth weight (unless he has a BIRTH WEIGHT EPD).

The next trait of importance to you and most of your customers is weaning weight. Weaning weight is a function of the genetics of the sire and dam for growth as well as the genetics for milk production in the dam.

Selection emphasis in weaning weight should include both the genetics for growth as well as the genetics for milk production. Again, weaning weight is associated with birth and weaning weight, so selection to increase weaning weight may increase them as well causing an increase in calving problems on one end and bigger cows that may not be as adapted to your production

conditions on the other. Weaning weight can be selected for (or in certain instances against) by looking at the bull's adjusted weaning weight and, most importantly, his WEANING WEIGHT EPD.

The adjusted weaning weight takes into account the age at which he was weaned (older bulls usually weigh heavier at weaning), the age of his dam (cows younger than five or older than 10 years of age tend to produce less milk than cows between five and 10 years of age), and of course his own birth weight. I realize that some folks like the "real" or "actual" weaning weight since that is what we get paid for, but if you are comparing bulls (or females for that matter), use the adjusted weight since the effects of those other factors (calf and dam age and birth weight) are real and should be accounted for in making accurate comparisons.

The WEANING WEIGHT EPD does this, and as a result, it should be your first tool to use in selection. Selection for weaning weight does not always have to be in a positive direction. If you are comfortable with the weaning weight of your calves, perhaps your selection emphasis should be on some other trait or on the female side.

Selection for or against milk production is tricky since the only measurement of that trait is the MILK EPD in the BBU Sire Summary. The MILK EPD is actually the predicted differences due to maternal effects in pounds of weaning weight produced by the bull's daughters when their calves are weaned.

For the best estimate of the MILK EPD, a bull must have daughters that have weaned their calves (and of course had all the records turned in). I would not suggest that we try to select to increase milk production (through MILK EPD) to some upper limit since cows have to be adapted to their environment and if they are not, those additional pounds of weaning weight might be coming from a sack rather than the grass.

So far we have talked about the traits that get you live calves on the ground and something to sell. This next trait is a convenience trait – temperament, for which there is no EPD in the breed. Regardless of your experience or age, good gentle cows (not tame!) are easier to work than wild ones. They are easier to work, exhibit less stress (on themselves and you), have better immune response, lose less weight, break fewer bones (and fences), and are easier to show and sell.

The genetics of disposition are easy to select for (or against) and there is an economic reason for doing so. I am not saying you don't want a cow that is not protective of her calf; we just want one that isn't wild. Some of this is due to how cattle are handled and other environmental effects, but genetics play an important role, too!

For most Beefmaster breeders, this will cover the majority of traits they are interested in. I have not directed any comments at hide color, polledness or sheath/navel flap since I think that the first two are personal choices of individual breeders often unaffected by the marketplace (if you like red, black, paint or spotted you like 'em!) and the latter has been very well addressed by the breeders themselves. The change in sheath/navel flap has been tremendous in the past 20 or so years and has been a credit to the breed and its breeders.

There are a couple of other traits that bear mentioning that will be of importance to many breeders. One is yearling weight or weight adjusted to 365 days of age. It is a good indicator of the size and weight of the bull at maturity. He will continue to grow until he is four or five years of age, but if he is a light weight, low frame score as a yearling, chances are that is what he is going to be at maturity.

If you want to increase or decrease mature cowherd weight, this is a useful trait. If you finish your Beefmaster steers in a feedyard, this will be a useful trait to determine finishing or sale weights.

The other trait that I think is important in Beefmaster bull selection is scrotal circumference. I didn't mention it earlier since I am assuming all the bulls you are interested in purchasing (or finally purchase) have passed a breeding soundness examination (BSE) by a beef cattle veterinarian.

Having a minimum scrotal circumference for a given age is required to pass the BSE. However, for over 35 years now we have known that selection for increased scrotal circumference in young bulls reduces the age at puberty in them and their offspring (especially daughters). So selection for increased scrotal circumference does improve fertility by increasing the number of cycling females at a younger age.

However, scrotal circumference is not an indicator of sexual interest or aggressiveness. Bulls with larger circumferences at any age can and do produce and store more semen.

Recently there has also been some work that indicates the fertility of these bulls is also higher, i.e., a higher percentage of their sperm cells are normal. I do think that this can be taken to extremes though. When two mature bulls are compared, or even two two-year-old bulls are compared, I don't worry about slight differences (say 10 percent or less) in scrotal circumference. Remember, they have passed a BSE.

I know that there are many traits that I have not addressed that may be important to you ... all the feedyard performance, ultrasound live animal or carcass traits (including tenderness) for example. But most Beefmaster breeders can and do utilize the five major traits I discussed here.

One further comment I have is that wherever you purchase your bull (a Beefmaster sale, from another Beefmaster breeder, from some other consignment sale), ask for the records for the traits you are interested in selecting for. Many breeders have these and most sales post them. Visit with the breeder, and if you don't see what you are interested in, ask around. Chances are they have something at home you might be interested in or know someone who does. O

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