

## AI Sire Selection Criteria Aids in Building a Uniform Cow Herd

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The mature cows are due March 10 and the heifers are well over half done calving. Although calving is the focus of our energy right now, we are also planning another breeding season. Our goal is to have the cows in shape and cycling within 60 days of calving so we can rebreed them within 80 days of calving.

For those herds in which the cows are bred at a synchronized time, many cows need to be cycling before the 80 days. While you pencil the nutritional program and check the condition score of the cows, the you also need to place the semen order if you plan on artificially breeding any of the cows.

For the past nine years, the North Dakota State University Dickinson Research Extension Center has artificially bred all cows and heifers primarily to Angus artificial insemination bulls. Now is the time those AI bulls need to be selected. In picking bulls, you can begin to understand why numbers, i.e., performance records, are not always easy to understand.

Our goal has been to maintain a consistent herd of medium-framed cows that produce fast-growing calves suitable for retained ownership. The cows are AI bred to Angus bulls and then naturally exposed to Hereford or Red Angus bulls. The result of nine years of AI has been a relatively uniform set of cows.

The criteria for bull selection has varied slightly, however. Throughout the years we've stressed acceptable birth weight with moderate growth along with a positive influence on marbling and rib eye area.

Seventeen bulls have had a significant impact on the brood cow herd, siring more than 33 percent of the cow herd. These bulls have produced almost 596 calves, with 127 daughters in the herd. All the bulls were originally selected for birth weight EPDs (Expected Progeny Difference) of less than 2 pounds.

Since EPDs change, two bulls have exceeded the criteria slightly, with the overall range in birth weight EPDs

being a minus 2 pounds to a positive 2.1 pounds. The average calf weight has been 83.8 pounds from the AI sire pool, while the herd average was 91 pounds in 2002.

We've had many conversations about using EPDs for aiding calving difficulty. For us, capping Angus EPD birth weight values at 2 pounds has truly aided in keeping birth weight in line with the management expectations of assisting very few heifers and no mature cows at birth.

The other criterion, post birth growth, has also been enhanced by good sire selection. The range of weaning weight EPD values for this same pool of bulls was plus 24 pounds to plus 48 pounds. The calves from these sires averaged 566 pounds at 205 days of age, while the total herd averaged 558 pounds at the same age. The resulting calf frame score was a 5, a medium-framed calf.

Often, looking at a set of numbers can be frustrating and the untrained eye has great difficulty picking out trends or patterns within the data set. Although the data may be hard to see, the Center's selection criteria for high accuracy Angus AI bulls has successfully reduced birth weight and increased weaning weight. Perhaps the real sign of a successful breeding program is that nothing stands out.

If all the calves and cows blend into the pasture as well as the data set, that may be the best sign of good selection. The Center considers the AI program a success, not only in the ability to get cows settled, but, additionally, as a valuable tool in steering the herd's genetics. Those genetics are the building blocks of any herd.

Your comments are always welcome at [www.Beeftalk.com](http://www.Beeftalk.com). For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to [www.CHAPS2000.com](http://www.CHAPS2000.com) on the Internet. In correspondence about this column, refer to BT0133.

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## Range in EPD Values and Associated Performance

Range in birth weight EPDs	-2 to +2.1
Average herd birth weight	83.8 pounds
Range in weaning weight EPDs	+24 to +48
Average herd 205 day weaning weight	566 pounds
Range in yearling height EPDs	-0.1 to +0.9
Average herd frame score	5

NDSU Research Extension Center using high accuracy AI Angus Bulls