

## BeefTalk 797: How Big is the Bull?

*Tools such as expected progeny differences help producers buy the right bulls.*

If one is building a house and the door does not fit, does the carpenter throw away the hammer? No.

If one is building a cow herd and the cows are the wrong size, does the producer throw away the bull expected progeny differences (EPDs)? No.

Cow size discussions at any time can be pretty involved and good. Are the cows too big? Are the cows too small? What is the right size? The discussion tends to feed into groups who tend to gather and discuss the other group.

Discussion is good. The cow size goal should meet the needs, resources and environment the cow will live in and match the desires of the producer in performance and acceptable type.

Producers have many cows from which to pick. Sorting cows is an art and a science; it should be fact-based with some modification for experience.

Let's change the cow size discussion to a bull size discussion. Generally, the cow herd genetics are changed through the purchase of bulls. On average, genes from an individual calf are as follows: Half come from the sire, one-fourth come from the maternal grandsire and one-fourth come from the maternal granddam.

For the average calf, the sire and the maternal grandsire are projected to have contributed three-fourths of the calves' genes. Mathematically, on the average, if one goes back an additional generation, 87.5 percent of the genes within the calf crop are by the last three sets of bulls a producer bought. Thus, the genetics of the cow herd are a product of the purchased bulls, and thus, the size of the cows depends on the bulls.

In other words, a producer buys three new bulls every three years; let's say three bulls in 2014, three bulls in 2011 and three bulls in 2008. The heifers that are being bred in 2016 are daughters of the three bulls purchased and used in 2014. Of the genes within those heifers, 50 percent would be from the three bulls that were purchased in 2014.

Additionally, on the average, 25 percent of the heifers' genes could be traced back to the three bulls that were purchased in 2011 because those bulls would more than likely be the sires to the maturing cow herd. And going back an additional set of bulls, 12.5 percent could be traced back to the three bulls purchased in 2008.

Keep in mind, these are assumptions for the sake of developing the example because within the mature cow herd, the older cows most likely would trace back to even older bulls. But the point is made: The last three sets of bulls heavily influence the genetic makeup of the herd. Thus, in a 100-cow herd with a bull battery of three bulls, the genes from the last three groups of bulls purchased, nine bulls, on the average should account for 87.5 percent of the genes within the 2015 calf crop.

Know the sires and you know the calves. Today, cattle producers have tremendous information at their fingertips regarding the genetic makeup of the bulls they are using. Breed associations have compiled

factual input through calf data, cow data, backgrounding data, feedlot data, carcass data, bull tests, pedigree data and other sources that define bulls. The data is collected chute-side manually or even automatically in some of the larger cattle-processing systems.

Ultrasound data is utilized to visualize body components the naked eye cannot see, and automation within harvesting facilities can provide carcass data very efficiently. As the future rolls forward, blood samples, hair samples or other tissue can reveal extensive data in regard to genomic data.

We have all this data, and we still debate the size of the bull. Who will sire the best calves? Who will sire the grouchiest calves? Who will sire the growth calves? Who will sire the most feed-efficient calves? Who will sire the best replacement heifers?

We already know the answer to many of these questions. As producers, we need to utilize this data to make better decisions. Avoid the temptation, particularly when looking for change, to skip the homework on bull-buying decisions. That decision will impact the cow herd for years to come. EPDs can better steer the direction of the ship.

Remember, the hammer does not determine the size of the house, the carpenter does. EPDs do not determine the size of the cow, the producer does. If the carpenter uses the right hammer, house building is good. Likewise, if the cow producer selects bulls with the desired EPDs, the calf will be what was desired.

The tool kit for the progressive bull buyer is full of tools to help make the bull purchase. And just as carpenters have gone to using more modern hammers to improve efficiency, new tools help bull buying.

May you find all your ear tags.

Your comments are always welcome at <http://www.BeefTalk.com>.

For more information, contact the NDBCIA Office, 1041 State Ave., Dickinson, ND 58601, or go to <http://www.CHAPS2000.com> on the Internet.

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**If one selects bulls with the desired EPDs, one will end up with the desired calf.**