

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 calf's genes. Mathematically, on the average, if one goes back an additional generation, 87.5% of the genes within the calf crop are from 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% would be from the three bulls that were purchased in 2014.

Additionally, on the average, 25% 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% 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% 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. Which will sire the best calves? Which will sire the grouchiest calves? Which will sire the growth calves? Which will sire the most feed-efficient calves? Which 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. Those decisions 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. **HW**

Who Gets the Weight?

The opportunity to use nontraditional beef production methods is very real.

Traditional management sells Dickinson Research Extension Center (DREC) steer calves at 609 lb., and nontraditional management sells the center's long yearling steers at 1,264 lb.

Have you ever added water to a dried sponge and watched the sponge expand? The cow-calf industry resembles the sponge.

For decades cow-calf producers have used genetics, health, nutrition, reproduction, marketing, environment and product development to improve production. This expansion of potential productivity is like the sponge soaking up water.

The center's decades of experience with traditional, experimental and just different management practices have focused on production costs as related to improving efficiency. The efficiency could be reproductive or growth, cow or calf, range or feedlot, retained ownership or selling at weaning or many different alternative management practices that provide options for cow-calf producers.

The results have culminated in recommendations for cattle producers that encourage production systems that perform well and are quite efficient. The results generally reflect

traditional cow-calf production practices, traditional being historical: how Grandma and Grandpa survived, how Mom and Dad survived and, ultimately, how the next generation will survive. The mantra for these strong generational ties has been "if it works, let's not change." Hold that thought!

Consider this question: "What happens to the sponge when you add water but you place the sponge back into the original container?" The sponge cannot expand, or it can expand minimally at best.

The same is true with the cow-calf business. What happens if the producer never changes the original managerial foundation of the cow-calf operation? In other words, will the herd be able to expand and utilize new traditional or nontraditional thoughts and managerial principles? Maybe those are the questions for the day.

Today, the ever-increasing pressure of costs points to the need to limit costs and to bring more cash back to the cow-calf operation. There is also continued pressure from consumers to justify all products derived from many aspects of agriculture, including meat.

The opportunity to present nontraditional ideas of production is

very real. Pictures are nice. However, cattle producers riding off into the sunset, shaking the dust off a line of designer clothes after a beautiful day of working cattle are not an assurance that the operation is going to stay in business.

Cattle circles — should I say "the discussion blogs" — actively search for nontraditional solutions to current challenges. And so, the center is challenged to look at nontraditional cow-calf production.

The struggle is the challenge to actually study the difference between traditional and nontraditional cattle systems. Such studies seldom are done because time, space and cattle required to conduct such trials are prohibitive. There are some very well-done large cattle studies, but positioning the data back to the local cow-calf production unit is difficult, and if the unit is nontraditional in its approach to cattle production, more unknowns than knowns soon are identified.

But that does not mean the center does not try. Back to the expanding. Why not keep watering the sponge to see how far the sponge will grow? In traditional center cattle management, bulls are turned out June 1, calves are due March 12, weaning will be in early

to mid-November and cows start their last trimester of pregnancy Dec. 12. Nontraditional center management has a later calving system in which bulls are turned out Aug. 1, calves are due May 12, weaning is in early to mid-January and cows start the last trimester of pregnancy Feb. 12.

Traditional management sells center steer calves at 609 lb. in November. Nontraditional management sells calves as yearlings at 1,264 lb. by mid-August, according to Doug Landblom, DREC animal scientist. Granted, costs and markets significantly impact producer decisions, but costs can be managed and markets can be predicted.

In the end a producer struggles with a sluggish production response to rapid changes in costs and markets. But remaining traditional caps expansion of the operation. Furthermore, all those production practices that have been shown to improve producer opportunity to enhance cow-calf production are held back. Traditional management sells center steer calves at 609 lb.; nontraditional management sells center long yearling steers at 1,264 lb. **HW**