

BeefTalk: Developing Sire Genetic Benchmarks

EPD Benchmarks for Selecting Red Angus Bulls
Benchmarks are key to guiding future sire purchases.

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Did you like last year's calves?

Would you like to change something? Did you have some disappointments? Could you improve some performance traits?

As the manager of the beef operation, you cannot steer change until you grab the steering wheel and take steps to move the operation forward. Change, or in this case sire selection, is achieved by gently steering.

Today's challenge is to review past sire performance and develop a plan for future sire purchases. This is not new to the beef business; a selection process has been going on for generations. The challenge is implementing new knowledge into an ancient process.

Centuries ago, the process was visual, with various notations of depth, width, length and other words of descriptive dimensions utilized to communicate breeder desires. But within the last two to three decades, the incorporation of quantitative numbers has been progressively attached to the various traits producers desire in selecting bulls. The number of traits measured also has increased, making for space competition in sale books.

To help sort the process, the North Dakota State University Extension Service offers bull workshops titled "Buying Bulls by the Numbers." The workshop objective is to provide a format to focus bull selection efforts on what traits a producer deems important.

Notice that the focus is not to tell a producer what to select for, but rather provide education into a process that helps make sense of those traits important to a producer. Thus, we discuss the concept of benchmarking, which is not new. The NDSU Extension Service, through the North Dakota Beef Cattle Improvement Association, has provided benchmarks for commercial production for years.

For producers collecting cattle data, the benchmark is a five-year rolling average of the value of the desired traits, allowing producers to compare their herd's current performance level with herds belonging to other producers who are collecting the same data. After comparing, each producer decides whether to change the trait or be satisfied with the herd's performance. Thus, the producer initiates or revises the unit's managerial plans, as well as potential changes in the herd genetics.

The bull-buying workshops work on the same principle. Producers are asked to bring three or four registration numbers from bulls that have been purchased. The registration numbers are the link to unlocking the data. Note: Producers always should transfer the bull's ownership through the breed association to their herd following purchase.

At the bull workshops, time is spent finding data from previously purchased bulls by logging on to the various breed association websites and retrieving the expected progeny difference (EPD) values. These values are key to developing the herd sire genetic benchmark values as producers decide which traits are important to them.

So, let's develop benchmarks for the six key traits on which the Dickinson Research Extension Center selects bulls: birth weight, weaning weight, yearling weight, maternal milk, marbling and rib eye. Using the registration number for each bull, searching the breed association database and printing the EPD values, the center can develop an average EPD value for each trait. This average value becomes the genetic benchmark for the herd.

Ultimately, a producer will evaluate how the average benchmark trait value ranks, compared with the rest of the bulls within the breed. This is commonly known as the percentile rankings of those values, but they're a subject for another day.

So now the center knows the average EPD values for the traits the center selected when purchasing the seven Red Angus bulls in its inventory. The average EPDs for these bulls are minus 2 for birth weight, 61 pounds for weaning weight, 94 pounds for yearling weight, 16 pounds for maternal milk, .6 for marbling score and .5 for rib-eye area.

Essentially, these are the average predicted EPD values for the genetic transmitting ability of the center's bullpen to next year's offspring, a benchmark for the center for future bull selection. These values will guide the operation and the selection of future bulls.

For a given trait, the center selects bulls based on the current EPD value for that trait in the herd. Future bull selection will be based on the need to decrease, increase or maintain the average EPD value for the trait. This is the process of tweaking EPD values to guide future bull purchases and desired calf performance.

For example, if we need more growth, then bulls with weaning weight EPD values greater than 61 pounds or yearling weight EPD values greater than 94 pounds would be selected. If we need the same growth, then we would keep the EPD values about the same. The same would be true for all the desired traits.

The benchmarks are key to guiding future sire purchases. Sire selection is made easy: Calculate the benchmarks for desired traits and purchase bulls by the numbers.

May you find all your ear tags.

For more information, contact your local NDSU Extension Service agent (<https://www.ag.ndsu.edu/extension/directory>) or Ringwall at the Dickinson Research Extension Center, 1041 State Ave., Dickinson, ND 58601; 701-456-1103; or kris.ringwall@ndsu.edu.