EPDs - Understanding the Basics

By Kris Ringwall
Extension Beef Specialist
NDSU Extension Service

BEEFTALK

The bull-buying season is here. The catalogs arriving from producers and various companies that market artificial insemination services keep the mailbox full.

Each year additional tools are added to the bull selection tool chest. Some make the process easier, while others only add more stuff to the mix without really offering much change.

Bull selection, like everything else one does, is best if kept simple, which is sometimes impossible. One of the ironies of bull selection is that the tools available today are primarily numbers. The essence of any sire selection regime is the analysis of large data sets of numbers. Trends that can help produce models are then extrapolated from the data sets.

These models become prediction equations for future data that will be added to the data set when new progeny are born. If correct, the future data is predictable and selectable.

The industry already has shown that numbers do work. In the world of biology, where many traits normally are distributed (i.e., a lot of animals around the mean value of the trait, but the farther you get away from the mean trait value, plus or minus, fewer and fewer animals can be found), the selection and corresponding accuracy certainly are valuable tools for the producer.

Estimated progeny differences (EPDs) are easy to use because the basic principles stay the same, regardless of how many traits are added. If one wants to compare two animals, pick the trait and subtract the two EPDs. It is that simple.

The Dickinson Research Extension Center maintains an EPD record on all bulls utilized so we can evaluate sires quickly. The calculations are a simple mathematical equation: Bull A has a weaning weight of plus 52 and bull B has a weaning weight of plus 36, so the calves from bull A should average 16 pounds heavier than those calves sired by bull B.

Other traits are the same. Bull A has a yearling weight EPD of plus 99 and bull B has a yearling weight EPD of plus 79. Bull Aís calves should average 20 pounds heavier than bull Bís calves.

EPDs are in the logical units of the trait being measured. The weight traits are in actual pounds. Measurement traits such as height, depth, width or scrotal circumference are in inches (English) or centimeters (metric). Traits that involve scores or values are in the same units as were evaluated in the calculation or subjective scoring system.

Those traits that involve percentages, such as calving ease or percentage of retail product, can be confusing and actually may vary. Read the directions in the sire summary and the traits are defined easily. Simple, simple, simple - that is the hidden message of EPDs. However, common sense is an important part of that equation. EPDs are numerical estimates based on actual measurements for the various traits on the animal or group of related animals. These estimates are refined to provide the best estimate possible to help guide sire selection. Problems with individual bulls are not part of the EPD process, so these bulls need to be sorted and culled. EPDs do allow buyers to sort and group those bulls that meet the EPD criteria they have set. It is from this group the sire selection should be made.

A reminder that, given all the choices in todayís beef environment, a producer must have a plan. The plan includes three items: Evaluate the cattle at the sale site, determine if the cattle are produced within an environment the cattle are expected to produce in and establish the desired end points.

That being said, start scanning and logging bulls that have the combination of traits you need, note the data. Then get the sale date on the calendar.

May you find all your USAIP ear tags.

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EPD for Bull A minus EPD for Bull B =

Expected Progeny Difference of sire progeny group averages when both bulls are randomly mated within your herd.