

LIVESTOCK

EPDs benefit terminal production systems

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Surprisingly, I still find that many producers do not use expected progeny differences (EPDs) as a primary selection tool for their bull. Many

select their next herd bull based only on physical appearance or a perceived ability to perform, or low birth weight. In other words, does he have a well-balanced body with plenty of muscling, yet look like he will be easy on calving? Several purebred breeders have said that the only question most of their customers have is "Is the bull calving ease?" These buyers typically complain that EPDs are confusing to use or that they don't work. With some basic knowledge, however, utilizing EPDs can be easy and beneficial to all cattle operations.

Typically, when a producer reports that EPDs don't work, it is usually because they selected a bull with the wrong expectations for a particular EPD. The first thing one must determine is in which direction, higher or lower, a particular trait is desired.

The following is a brief list of some EPD traits and the typical target direction for terminal production systems. Each breed association has numerous other EPDs they measure. The



inclusion or exclusion of traits does not necessarily imply significance of a particular trait. However, the following list is common among most breeds and is important to consider in a terminal production system. A terminal production system does not retain and develop replacement heifers, and typically sells off the ranch to the next segment of the industry or retains ownership through the feeding phase.

Performance EPD Traits

Calving Ease, Calving Ease Direct (CE, CED): A high CE score will in-

dicade less potential for dystocia or calving problems. This trait takes into account both calf birth weight and calving score data, which ranges from one to four. The higher the value, the better. Use this EPD instead of just the birth weight EPD since it takes into account other factors such as frame size of the calf and relative difficulty of the calving process.

Birth Weight (BW): Lower numbers are more desirable. Birth weight EPD is an indicator trait in pounds of calving ease in heifers. The differences between two bull BW EPDs is the ►

average expectation of difference in pounds of calf weight. The genetic relationship between birth weight and calving ease is high (0.76); however, it is not perfect. This is the reason CE is a better indicator for calving ease than birth weight.

Weaning Weight (WW): Typically for most terminal production systems, a higher value is more desirable. A production system developing and retaining its own replacements would typically want to moderate this trait. This indicator is measured in pounds and is an indication of the sire's ability to pass on weaning growth to his offspring.

Yearling Weight (YW): Typically for most terminal production systems, a higher value is more desirable. However, a production system developing and retaining its own replacements

would typically want to moderate this trait. This indicator is measured in pounds and is an indication of the sire's ability to pass on growth between weaning and a year of age to his offspring.

Carcass EPD Traits

Marbling (Marb): This is the difference between marbling scores of progeny for one sire compared to another. Typically, a higher Marb EPD value is more desirable in a terminal production system.

Fat Thickness (Fat, BF): This is the measure, in inches, of the 12th rib external fat difference from one sire compared to another. Typically, a moderate value is better, depending on the breed of choice.

Ribeye Area (RE): This trait is measured in square inches and is the

difference in ribeye area of a sire's offspring relative to another sire of the same breed. Smaller-framed breeds would benefit from larger values, while larger continental breeds will want to moderate this trait but remain above breed average.

EPD values are not directly comparable across breeds. However, across-breed EPD adjustments can be made to compare a particular bull in one breed to another bull in a different breed.

Remember, single trait selection is dangerous and can have unintended consequences. Furthermore, recognize that selection for extremes in a specific direction for any trait can change mature cow size or production efficiency over time. Select multiple traits that have economic significance for your operation, and develop a plan to use them to meet market goals of the ranch. ■