



Beef Talk

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We want to avoid the word 'baffling' for good reason

The science and art of livestock selection can be baffling. If one does a quick check on the Internet for the meaning of baffling, one finds it means "to frustrate or check (a person) as by confusing or perplexing."

That is a very relevant point. The art of livestock selection started centuries ago when producers realized that if they kept back a particular animal, the progeny of that animal tended to look like that animal. If both the sire and dam of the progeny were of a desirable type, then the offspring tended to be even more desirable.

To be "baffled" would imply the

progeny results based on mating plans were confusing or perplexing. That is not true. Even in the most primitive form, mating plans should have an expected outcome.

In the more advanced form, utilizing expected progeny differences (EPDs), an expected, defined outcome exists. The outcome is predictable and defined as accuracy.

Producers decide how much, or little, they want to leave the expected outcome to chance or fate. If one is spending money to buy the genes available for a given trait, an expectation of positive results exists.

The American Angus Association defines accuracy as "reliability that can be placed on the EPD. An accuracy of close to 1 indicates higher reliability. Accuracy is impacted by the number of progeny and ancestral records included in the analysis."

Other breed associations have similar definitions. Accuracy has been a number published for some time. When buying genetics, an accuracy value of 1 implies great confidence. An accuracy value of 0 would be totally baffling.

Perhaps as producers, we have read about a very similar expression called possible change. The two concepts go together. The possible change value takes the accuracy value and puts real numbers expressed in the same terms as the trait (pounds, for example). One's level of confidence can be expressed and communicated.

Putting what we know into practice

So let's look at a trait such as weaning weight (WW). We would like to buy a bull with an EPD value of 50. Two bulls in the pen fit our selection criteria. Once we evaluate the bulls' data, we notice bull No. 1 has a WW EPD of 50 (lb.) and an accuracy of 0.30. Bull No. 2, who also has a WW EPD of 50, has an accuracy of 0.85. This means our current best EPD estimate for the two bulls is 50 lb. However, bull No. 1 is a newcomer and has very few progeny or ancestors within the Angus database.

The American Angus Association

provides a table, as do other breed associations, to convert the accuracy number to a confidence level or possible change value. In the case of an accuracy of 0.30, the possible change number can be found in the table and is 8.1. In other words, the EPD is printed as 50, but the real EPD will be between 41.9 and 58.1 about two-thirds of the time.

Bull No. 2, with the higher-accuracy value of 0.85, converts to a possible change value in the table of 1.7. We can anticipate the printed EPD, listed at 50, may range from 48.3 to 51.7 about two-thirds of the time.

In other words, we have moved our confidence of getting the EPD values we want with the higher-accuracy bull.

We still are estimating the EPD value for all the bulls, but we have improved our confidence in the EPD estimates. Keep in mind, we still are estimating something we cannot see. Therefore, the estimates do change, but through time, we get the values we want.

The bottom line is that baffling is disregarding the accuracy value of published EPDs. In today's world, don't be baffled. When given the option, go with the bull with the higher accuracy value.

Your comments are always welcome at www.BeefTalk.com. For more information, contact the North Dakota Beef Cattle Improvement Association (NDBCIA) Office, 1041 State Ave., Dickinson, ND 58601, or go to www.CHAPS2000.com on the Internet.

Accuracy and Associated Possible Change Values for Angus Bulls

	Bull 1	Bull 2
Estimated weaning weight (EPD)	50 lb.	50 lb.
Accuracy value	.30	.85
Possible change value	8.1 lb.	1.7 lb.
True EPD (two-thirds of the time)	41.9 to 58.1 lb.	48.3 to 51.7 lb.

Source: American Angus Association

