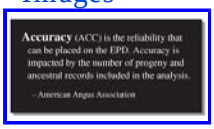
# BeefTalk: Bull Buying Basics – Accuracy

Images




Accuracy

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Recent BeefTalk articles focused on bull buying simplicity. An estimate of the expected progeny difference (EPD) of a defined trait between two bulls of the same breed involves simple subtraction of the EPDs for the desired traits.

If a producer wants to compare bulls from a different breed, the EPDs need to be adjusted to a common breed. Then the same process will work. Add or subtract the EPDs from the desired bulls and then look at the EPDs for the bulls you have selected.

Imagine Bull One, with a yearling EPD of plus 113, and Bull Two, with a yearling weight EPD of plus 111. Mathematically, in a random mating, Bull One should sire calves 2 pounds heavier as yearlings, so the calves would be very similar in yearling weight.

Add Bull Three with a yearling EPD of plus 60. We still would expect that there would be an average difference in yearling weight of the progeny of 53 pounds in favor of Bull One.

The question is why this formula doesn't always work. Bull One's calves, as yearlings, probably will not be 2 pounds heavier than Bull Two. Bull Three's calves most likely will not weigh 53 pounds lighter than the yearlings of Bull One.

The simple reason, as noted above, is random mating, which implies no bias or conscious effort to select what cows get bred to each bull. In other words, the larger cows were not bred to Bull One and the smaller cows were not bred selectively to Bull Three.

Most people do not breed their cows randomly, which may be the primary reason the actual results of mating do not match the calculated EPD. The genes for the additional growth were distributed randomly across all the calves produced, but the calculations may not be able to substantiate the end result.

Another reason the calculated EPDs were not observed is the accuracy of the actual EPD value printed for the sire. For example, Bull One's printed EPD for yearling weight is plus 113, but in reality, although unknown, is plus 105.

This is the point where many producers hang up the sheet and go look at the bulls. These numbers are estimates based on the best set of actual data available.

The end result is the printing of a number that is used to predict the EPD. Selection by numbers also may mean that a producer has taken the time to at least attempt to understand the accuracy number that is printed alongside the actual EPD listed.

The accuracy number lists the probability that the EPD number is more likely to happen. Simply put, bulls that have accuracy values closer to one are more accurate than those bulls that have accuracy values closer to

zero.

No estimated number is 100 percent accurate because the process intends to predict something that is not known. So, the more information (for example, the more number of offspring a bull has sired or the more ancestral information available) that is utilized in the process, the more accurate the end prediction is.

As end users of the numbers, we can be more comfortable in using bulls with accuracies closer to one because the number is more reliable. At this point, many will have quit reading this BeefTalk. The simple thought is that numbers are something the mind can play with for only so long.

That may or may not be true, but rest assured, even if one does not fully understand all the numbers that are printed in a sire evaluation, the basic principle is still true. Bull selection by the numbers is simple.

Understanding all of the numbers may create some head scratching. The important thing is to try to understand the numbers and don't let the overall lack of understanding get in the way of using EPDs. Good luck.

May you find all your ear tags.

Your comments are always welcome at http://www.BeefTalk.com.

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Attachments

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