



By the Numbers

► by *Sally Northcutt*, director of genetic research, American Angus Ass'n

Weaned calf value vs. beef value

After each new National Cattle Evaluation (NCE) release of updated expected progeny differences (EPDs) and dollar value indexes (\$Values), continued interest in the Angus beef value (\$B) is very evident. The \$B is popular but is sometimes misinterpreted as to the traits it encompasses. In the process, the weaned calf value (\$W) and its component parts are overlooked.

\$W vs. \$B: maternal vs. terminal

One thought to keep in mind when comparing the two selection indexes, \$W and \$B, is that they differ in terms of "maternal" vs. "terminal" focus. Various EPDs and economic assumptions used to arrive at the \$Values are indicators of how traits relative to the cow-calf operation will be affected by future selection choices.

\$W has maternal contributions figured into its calculation. For many commercial cow-calf producers who sell calves at weaning, the \$W has attractive features. It simultaneously combines revenue generated from the calf crop with expense adjustments for maternal milk and mature size from the genetics of the cow herd, as well as the weaned calf growth and maintenance requirements. It

also has economic assumptions relating to replacement females retained in the herd.

\$B is more of a classic terminal approach. This would be best described as postweaning performance and carcass merit being influenced by selection emphasis solely for \$B. Terminal selection emphasis implies that all calves go to market; replacement heifers are not retained. In simple terms, it is taking a weaned calf and looking only at value considerations during the feedlot and harvest phases of production.

Thus, sire selection made strictly on \$B has no consideration for calf birth weights out of the sire or how future daughters are expected to perform for maternal milk or the effect of their cow size. To have any maternal considerations, other EPDs beyond the

scope of \$B would need to be utilized in bull selection.

EPDs contributing to \$Values

Whether a herd breeding program uses either the \$W, \$B or both in the selection process, the important step is to have a plan on the production aspect being addressed, such as preweaning performance, postweaning and carcass merit, or a balance of traits. The \$Values were designed with the commercial bull buyer in mind to simplify the list of EPDs in consideration when making selection decisions. The EPDs considered for each index are outlined below.

EPDs contributing to \$W:

- Birth weight EPD
- Weaning weight EPD
- Milk EPD
- Mature cow weight and height EPDs
- Yearling weight and height EPDs (depending on the accuracy and availability of mature size EPDs)

EPDs contributing to \$B:

- Yearling weight EPD
- Marbling EPD
- Intramuscular fat EPD
- Ultrasound ribeye and fat EPDs
- Carcass ribeye and fat EPDs
- Carcass weight EPD
- Yearling weight EPD

Updated economic assumptions

Economic assumptions are used in the \$Value calculations to convert the genetic differences for various traits into units of dollars and cents. The Angus \$Value economic assumptions were updated in the Fall 2007 NCE, based on a three-year rolling average. Changes to the assumptions occurred in parameters for \$W and \$B.

The specific changes to \$B parameters are reflected in the feedlot and grid assumptions. The new economic assumptions are presented in Table 2. To learn more about feedlot (\$F) and grid value (\$G) indexes and their relationship to \$B as component pieces, go to www.angus.org or contact the Performance Programs Department at 816-383-5100.

E-MAIL: snorthcutt@angus.org

Editor's Note: "By the Numbers" is a column by Association performance programs staff to share insights with Angus members about data collection and interpretation, the NCE, genetic selection, and relevant technology and industry issues. If you have questions or would like to suggest a topic for a future column, contact Sally Northcutt, director of genetic research, or Bill Bowman, director of performance programs, at 816-383-5100.

Table 1: Weaned Calf Value (\$W)*

Base calf price	\$115 per cwt.	Updated from \$110
Cow/heifer mix	80%/20%	
Cow weight	1,300 lb.	
Feed energy cost	\$.060 per MCal NE _m	Updated from \$.055

Table 2: Beef Value (\$B)*

Feedlot assumptions:		
Time on feed	160 days	
Ration cost	\$190 per dry ton	Updated from \$150
Fed market	\$ 84 per cwt. live	Updated from \$80
Grid assumptions:		
Quality components:		
Prime premium (above Choice)	\$8.00	Updated from \$6.00
CAB premium (above Choice)	\$3.50	Updated from \$3.00
Choice-Select spread	\$11.00	Updated from \$10.00
Standard discount	\$-15.00	
Yield components:		
YG 1 premium	\$3.00	
YG 2 premium	\$1.50	
YG 3 base	\$0.00	
YG 4 & 5 discount	\$-25.00	
Avg. carcass wt., lb.	816	
Heavyweight discount	\$-20.00	

*Updated values denote 2007 NCE components updated from previous NCE run.