

What is the Beef Value (\$B) Index?

\$B is an economic selection index value expressed in dollars per head. It predicts the expected average profitability differences due to genetics in future progeny for feedlot and carcass merit compared to progeny of other sires. \$B facilitates simultaneous multi-trait genetic selection for post-weaning performance, including gain, feed efficiency and carcass value. EPDs used to derive \$B include:

- yearling weight
- carcass weight
- feed intake (DMI) and gain
- marbling
- ribeye area
- fat

To align \$B with marketplace realities and appropriately value carcass weight in Angus cattle, the following factors are incorporated into the final calculations for \$B:

- Final adjustments are made to prevent double-counting weight between feedlot and carcass segments.
- Projected carcass weight and its value are calculated, along with production cost differences.

The resulting \$B value is a terminal index not designed to be driven by one factor, such as quality, red meat yield or weight. Instead, it is a dynamic result of the application of commercial market values to Angus genetics for both feedlot and carcass merit.

Why was the \$B Index updated?

The new \$B model shares a lot of similarities to the existing model and as a result, ranks animals in a similar manner. When looking at more than 183 of the top sires (genotyped) based on number of recent registrations, the correlation between new and old \$B is 0.92.

Three features in the new \$B model having the largest impact on rankings include:

- 1. Slaughter endpoint** The new model employs an algorithm to determine what the economically optimal slaughter endpoint is given the economic assumptions. The result is an animal that is heavier and fatter than the overall industry average steer, indicating that increases in quality grade premiums offset the increases in yield discounts at those heavier weights, while preventing overweight discounts.
- 2. Dressing percent** The new \$B model directly predicts differences in dressing yield based on yearling weight and carcass weight EPDs.
- 3. Price grid** The current \$B model assumes cattle are marketed on an industry average grid. The price grid utilized in the new \$B model incorporates a proportion of the cattle being marketed on a grid that rewards more for quality and yield. The old and new price grid are compared in Table 2 and show the greater rewards for both quality (marbling) and yield with the new grid.

Grid Assumptions*	Current \$B	New \$B
Prime Premium (above choice)	13	21
CAB Premium (above choice)	4	5
Choice-Select Spread	10	12
Standard Discount	-26	-35
YG 1 Premium	4	6
YG 2.0 - 2.5 Premium	2	3
YG 2.5 - 3.0 Premium	1	3
YG 3.0 (Base)	0	0
YG 4 Discount	-11	-13
YG 5 Discount	-17	-19

Table 2.
Indicative differences in price grid assumptions between \$B models

*For illustration purposes. Price grid assumptions when implemented in June 2019 will be updated based on final 2018 parameters. The above is based on partial 2018 data to demonstrate indicative differences.

What genetic change can producers expect down the road?

Although highly correlated, there will be noticeable differences in how animals rank in the new \$B compared to the current rankings. To best understand how the two models place different emphasis on different traits, it is useful to consider the expected response to selection. Response to selection is a useful metric as it takes into account the inter-correlations between all the traits. Figure 2 illustrates the expected response in the EPD traits to ~10 years of selection. The new \$B model trade-off a slightly less positive response in growth rate (2 lbs. of YW and CW) for more marbling, yield and feed efficiency, which is predicted to be a more profitable alternative.

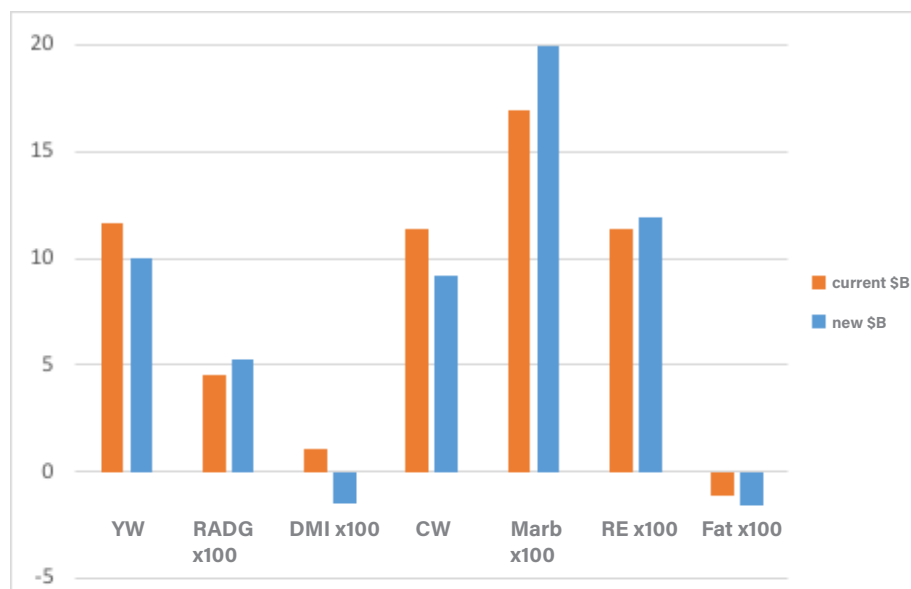


Figure 2. Expected trait response in EPD units after ~10 years (1 SD) of genetic selection.

Figure 2. Expected trait response in EPD units after ~10 years (1 standard deviation) of genetic selection. Traits are represented in units of EPD multiplied by 100 are done so for scaling purposes for presentation only. For example, producers selecting on the new beef value would expect a 0.20 increase in Marbling EPD compared to a 0.17 increase expected with the old beef value model.

When will the new \$B Index be implemented?

The new \$B Index will be implemented in June 2019.