

Appendix B

Across Breed EPD's

In 1990 the Beef Improvement Federation funded a project to allow EPD (Expected Progeny Differences) comparisons between breeds. Much of the demand for this came from Artificial Insemination companies and large herd owners who were buying bulls of many different breeds and needed a system to compare bulls from different breeds. Most producers understood that a +1 lb. Angus bull would probably have lighter birth weight calves than a +1 Charolais but they wanted to know what the differences would be.

Using the records from the USDA Roman Hruska Meat Animal Research Center in Clay Center Nebraska the Across Breed EPD values were obtained. Since 1969 this center has AI'ed large groups of Angus/Hereford cows to proven sires in more than 20 breeds. Each year some of the past years sires were used along with a current group of new sires so the bull data was linked. These same sires were also evaluated in each individual breed Sire Summary and most had high accuracy values. By taking a combination of the within breed EPD values and using the performance and weight differences at MARC the across breed EPD values were established. Each year a new AB-EPD (Across Breed EPD Table) is calculated to correspond with updated breed EPD values.

Using the table below allows for comparison of bulls of different breeds once the adjust factors are applied.

ACROSS BREED ADJUSTMENT FACTORS 2000

BREED	BIRTH WT.	WEANING WT	YEARLING WT	MILK
Hereford	4.6	3.6	2.2	-10.0
Angus	0	0	0	0
Shorthorn	8.7	31.5	49.9	14.5
South Devon	8.2	5.4	51.5	13.8
Brahman	14.5	38.8	4.5	28.0
Simmental	7.8	25.4	40.2	19.7
Limousin	7.2	29.7	34.6	3.7
Charolais	12.0	44.8	73.4	8.8
Maine Anjou	9.1	32.9	29.4	12.2
Gelbvieh	7.8	16.6	-2.7	13.6
Pinzgauer	9.0	31.2	34.8	9.9
Tarentaise	5.1	33.2	25.6	20.6
Salers	6.7	33.0	48.4	12.6
Red Angus	3.7	6.7	13.0	Not Evaluated

Now; how do you use the table in making comparison between bulls of different breeds? This table was developed using Angus as the base breed. Therefore, if using an Angus bull you make no adjustment and use the published EPD's. If I want to compare a Limousin bull to the Angus bull you need to convert the Limousin value by adding the published EPD's to the AB-EPD adjustments.

Example: Two newly purchased bulls have the following EPD's in the sale catalogs.

Published EPD's	BW	WW	YR	MILK
Angus EPD	2	25	50	15
Limousin EPD	1	20	30	10

You want a good idea on how they really compare and can use the AB-EPD table to make the comparison. We will add the conversion table values to the Limousin bull and make him an Angus for comparison.

Published EPD's	BW	WW	YR	MILK
Limousin EPD	1.0	20.0	30.0	10.0
<u>Table AB adjustment</u>	<u>7.2</u>	<u>29.7</u>	<u>34.6</u>	<u>3.7</u>
AB ADJUSTED VALUE	8.2	49.7	64.6	13.7

This allows us to compare the bulls and we realize the birth weight, weaning weight and yearling weight are much higher on the Limousin bull than the Angus.

If you went out and purchased a Hereford bull with the following published EPD's we can also compare him to our other bulls.

Published EPD's	BW	WW	YR	MILK
Hereford EPD	4.0	40.0	60.0	25
<u>AB ADJUSTMENTS</u>	<u>4.6</u>	<u>3.6</u>	<u>2.2</u>	<u>-10</u>
AB ADJUSTED VALUE	8.6	43.6	62.2	15

Keep in mind these values are our best estimates and will not give exact differences on each bull. They will however, give you a good tool to compare bulls of different breeds using the published EPD values and the AB-Adjustments. It will certainly help you realize breed differences are real and we need to make sure we consider them when making breeding decisions.

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