

Spring 2008 NCE Summary

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It's that time of year again, not only did last minute Christmas shopping keep a few folks up late at night, but the release of the new RAAA EPDs kept a few diehard Red Angus members up as well. Although we would like you to be able to view the EPDs as soon as we receive them from Colorado State University (CSU), the EPDs must undergo a series of statistical and common sense evaluations to determine if they are correct before releasing the new genetic predictions. This evaluation is performed by the Red Angus Technical Committee, personnel at the Center for Genetic Evaluation of Livestock at CSU, and the Red Angus staff. After evaluating the current EPDs, all parties involved must collectively agree that the EPDs are correct before they are released. In an effort to keep you informed on this process, the remainder of this article will focus on evaluating the genetic evaluations.

Table 1. Rank Correlations	
Trait	Correlation
CED	0.9949
BW	0.9994
WW	0.9994
YW	0.9997
MILK	0.9965
ME	0.9825
HPG	0.9768
CEM	0.9903
STAY	0.9948
MARB	0.9966
REA	0.9972
FAT	0.9913

The first statistical evaluation calculated for the new EPDs are rank correlations. These correlations evaluate whether sires rank the same between the new EPD run and the most recent EPD run (Fall 2007) for animals with an accuracy greater than .70. If the two ranks are identical then the rank correlation would be 1.0. As you can see from Table 1, all rank correlations are very high; therefore, very few sires changed in ranking between the two EPD runs. These rank correlations were viewed favorably by the evaluation team; therefore, the new EPDs had passed the first step in being released.

The first common sense evaluation placed on the current EPDs was comparing the new EPDs and the most recent EPDs (Fall 2007) of the "Top 20 Most Used Sires of All Time" and the "Most Used Sires in 2007". Upon comparison of these EPDs, three large EPD changes were identified in the "Most Used Sires in 2007" list; these were lower accuracy sires. Data was pulled, analyzed, and summarized to see if the change was valid. Upon further evalua-

Figure 1. Growth Trends

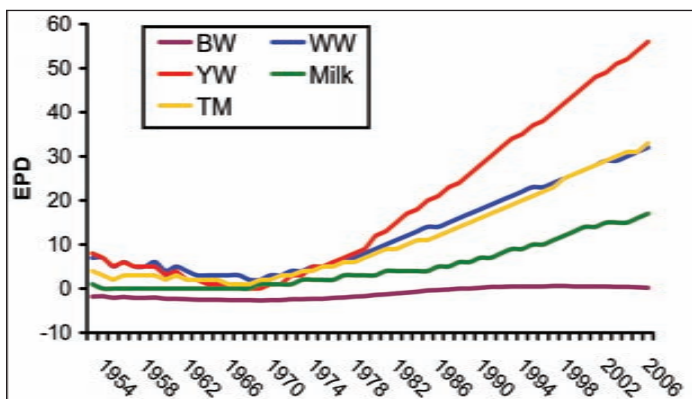


Figure 2. ME Trends

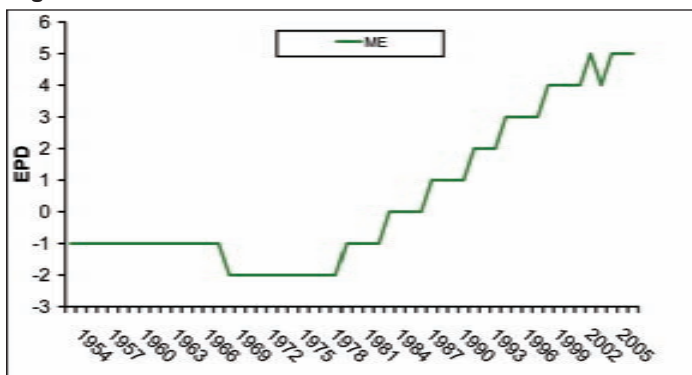
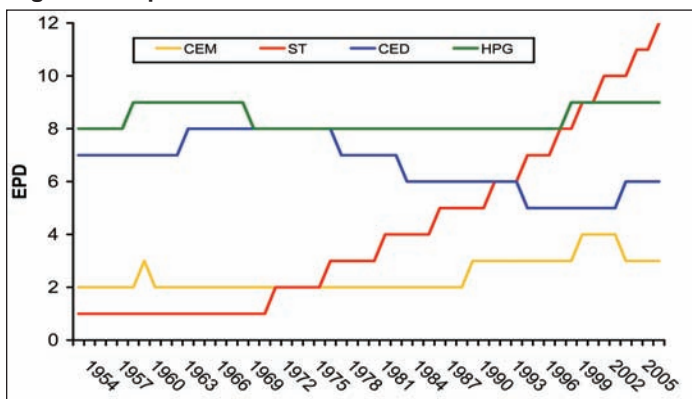


Figure 3. Reproductive Trends



tion, it was found that data had been collected which accounted for the change in the EPDs of the three sires in question. This common sense evaluation could be the most important tool in validating the correctness of the new EPDs.

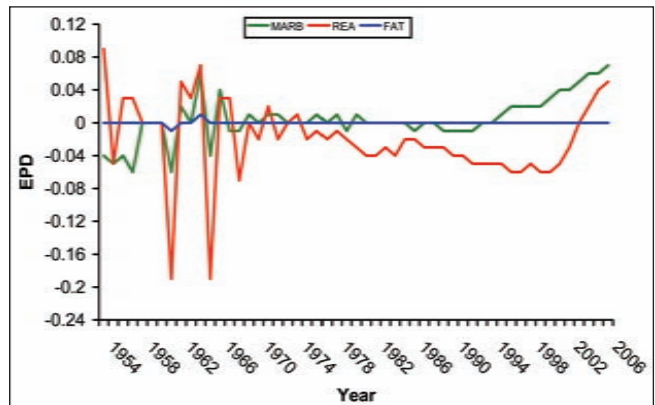
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Genetic trends were calculated and evaluated for each trait. Growth trait trends (Fig. 1) continue to slightly increase, with the exception of birth weight, which continues to remain flat. According to Figure 2, Maintenance Energy has leveled off. Reproductive traits (Fig. 3) have remained steady for the last five years with Stayability being the exception. Stayability continues to increase. Carcass genetic trends (Fig. 4) reveal positive changes. Backfat continues to remain near 0, while Ribeye Area and Marbling have increased. The genetic trends are recalculated every year. Comparing the newly calculated genetic trends to the previously calculated genetic trends, reveal that the trends for the previous years are very similar. This is another indication that the new EPDs are correct.

Lastly, EPD Average, Minimum, and Maximum for sires published in the Sire Summary, active dams, and non-parent animals (Table 2) were evaluated for each trait. Comparing these statistics to the previous evaluation illustrated that averages have changed only minimally. Additionally, averages that have changed mirror the change in genetic trend.

After reviewing the above statistical evaluation summary, it was no surprise that the evaluation team collectively agreed that the EPDs were valid and ready to be released. The 2008 Red Angus Sire Summary will be available soon. If you haven't contacted the National Office to request your copy of the 2008 Sire Summary, now is the time to

Figure 4. Carcass Trends



do so. This move will ensure that you have the information needed to make your summer breeding decisions. The Sire Summary is also available to commercial bull buyers at no charge. Requested performance pedigrees and EPD printouts are also available at a nominal fee.

A modified electronic version of the sire summary can be accessed at <http://redangus.org>. This website also contains an Animal Search link that will allow you to search the EPD database for a particular sire's EPDs. Another powerful tool at the above mentioned website is the EPD Search link that allows you to set minimum and maximum EPDs that best fits your breeding plan. After entering the EPDs, the program will return the sires that match your EPD criteria. Other useful information including links to averages, percentiles, and genetic trends can be found at the website. ■

Table 2. Averages and Ranges

EPD Averages and Ranges for Proven and Opportunity Sires in the 2008 Sire Summary													
	CED	BW	WW	YW	MILK	TM	ME	HPG	CEM	ST	MARB	REA	FAT
Min.	-14	-9.2	-18	-32	-6	-6	-19	-5	-12	-2	-0.4	-0.73	-0.06
Average	6	0.3	32	58	17	33	5	9	4	12	0.06	0.03	0
Max.	29	8.7	62	108	38	56	23	22	25	24	0.68	0.9	0.05

EPD Averages and Ranges for Active Dams on Inventory in 2007													
	CED	BW	WW	YW	MILK	TM	ME	HPG	CEM	ST	MARB	REA	FAT
Min.	-10	-8.8	-14	-21	-8	-8	-23	-5	-14	-2	-0.4	-0.77	-0.05
Average	5	0.5	29	51	15	30	4	9	3	11	0.05	-0.02	0
Max.	23	11.3	66	115	38	66	42	21	16	21	0.82	0.73	0.07

EPD Averages and Ranges for Non Parents Under Two Years of Age													
	CED	BW	WW	YW	MILK	TM	ME	HPG	CEM	ST	MARB	REA	FAT
Min.	-9	-11.5	-11	-21	-1	-4	-17	1	-8	-1	-0.23	-0.4	-0.02
Average	6	0.2	32	56	17	33	5	9	3	12	0.07	0.06	0
Max.	22	11.2	61	101	33	58	25	18	17	20	0.45	0.63	0.02