

**American Black Hereford Association Estimated Progeny Differences**  
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Based upon ABHA guidance, in the current evaluation, we combined animals designated as HB and NX into the same contemporary groups. Animals kept their HB and NX designations. EPD are, as before, reported for HB and HX animals.

We understand that this will be standard procedure for all subsequent runs.

Records in contemporary groups with less than 4 individuals were excluded from analyses. Increasing the minimum size requirement to 10 calves would have resulted in a loss of 32 birth weight records and 78 weaning weight records. We suspect that more records will be affected in the fall run, and will defer recommendation to increase minimum contemporary group size until those analyses are completed. We are confident that we will recommend increasing minimum contemporary group size for birth weight (but no other traits) at the time of the fall evaluation, to take effect in 2020. Updated numbers of records included in the evaluation are presented below (Table 1). The low number of scrotal circumference records ( $n = 859$ ) did not permit estimation of EPD; this number would be much lower when minimum contemporary group size requirements are applied.

Distributions of EPD by traits are shown in Table 2.

**Table 1. Estimates ( $\pm$  SE) of heritability and proportion of phenotypic variance for random effects**

	<b>N</b>	<b>Additive genetic (<math>h^2</math>)</b>	<b>Maternal genetic</b>	<b>Additive-Maternal correlation</b>	<b>Maternal Permanent Environment</b>
Birth weight	11,256	$0.44 \pm 0.05$	$0.12 \pm 0.03$	$-0.53 \pm 0.08$	$0.04 \pm 0.02$
Weaning weight	6,239	$0.18 \pm 0.03$	$0.07 \pm 0.02$		$0.16 \pm 0.02$
Yearling weight	2,419	$0.32 \pm 0.06$			

Absence of an entry means the effect was not included in final models.

**Table 2. 2019 HB EPD distributions**

	<b>Birth weight</b>	<b>Weaning weight</b>	<b>Milk</b>	<b>Total maternal</b>	<b>Yearling weight</b>
<b>Average</b>	<b>2.7</b>	<b>44.5</b>	<b>21.9</b>	<b>44.2</b>	<b>75.9</b>
<b>Range</b>	<b>-4.4 to 9.0</b>	<b>19.4 to 74.1</b>	<b>5.9 to 40.3</b>	<b>26.7 to 62.0</b>	<b>29.8 to 127.7</b>
<b>Percentiles:</b>					
<b>99</b>	<b>-0.8</b>	<b>58.4</b>	<b>29.2</b>	<b>54.3</b>	<b>96.6</b>
98	-0.3	56.2	27.4	52.9	93.4
<b>97</b>	<b>0.0</b>	<b>55.1</b>	<b>26.6</b>	<b>51.9</b>	<b>91.6</b>
96	0.3	54.4	26.1	51.2	90.4
<b>95</b>	<b>0.5</b>	<b>53.5</b>	<b>25.8</b>	<b>50.7</b>	<b>89.1</b>
90	1.0	51.4	24.7	49.0	84.5
<b>80</b>	<b>1.6</b>	<b>49.0</b>	<b>23.7</b>	<b>47.1</b>	<b>80.7</b>
70	2.0	47.2	23.0	45.9	78.6
<b>60</b>	<b>2.4</b>	<b>45.8</b>	<b>22.4</b>	<b>45.0</b>	<b>77.0</b>
50	2.7	44.6	21.9	44.2	75.6
<b>40</b>	<b>3.0</b>	<b>43.2</b>	<b>21.4</b>	<b>43.3</b>	<b>74.3</b>
30	3.3	41.9	20.8	42.3	72.8
<b>20</b>	<b>3.7</b>	<b>40.2</b>	<b>20.1</b>	<b>41.2</b>	<b>70.5</b>
10	4.4	37.6	19.0	39.5	67.5

For birth weight, EPD corresponding to each percentile indicate that animals with that EPD are **lower** than the percent of all animals with EPD; e.g., animals that have a birth weight EPD of 0.5 lb are lower than 95% of all animals with birth weight EPD.

For the other traits, EPD corresponding to each percentile indicate that animals with that EPD are **higher** than the percent of all animals with EPD; e.g., animals that have a yearling weight EPD of 77 lb are higher than 60% of all animals with yearling weight EPD.