

Collaboration Fuels Innovation: Unveiling the North American Charolais Joint Evaluation

- American and Canadian Charolais Associations Collaborate to Enhance Genetic Merit and Drive International Trade.

In July, the American International Charolais Association (AICA) and Canadian Charolais Association (CCA) joined forces to reintroduce the North American Charolais joint evaluation. This effort is the result of years of dedication and persistence as our two organizations collaborated to revolutionize the Charolais cattle industry.

This long-awaited development brings forth the implementation of a joint set of genomic-enhanced Expected Progeny Differences (EPDs), enabling direct comparisons of Charolais cattle within the AICA and CCA databases. The merger of these genetic evaluations has been a constant topic of discussion among the visionary leaders of both associations, and after nearly two years of research, the highly anticipated joint evaluation is finally set to be unveiled.

Enriching the database

The joint evaluation has made significant improvements to the AICA evaluation. It adds over 600K birth weights, 435K weaning weights, and nearly 228K postweaning gain records, enriching the existing database. Furthermore, it expands the number of genotypes eligible for genetic evaluation by almost 50%, providing a considerable upgrade for single-step genomic analysis. These advancements hold significant value for both organizations.

As a result, the joint evaluation enables producers to select and sell seedstock internationally with enhanced confidence and ease, thanks to directly comparable EPDs and accuracies. However, it's important to note that while EPDs are directly comparable, EPD Percentile Ranks and EPD averages remain specific to each individual country. Additionally, only traits that are produced and published in both countries will be included in the joint format. Please refer to Table 1 for the list of traits predicted through joint evaluation. Note that Teat Score (TEAT) and Udder Suspension (UDDER) EPDs will not be part of the joint evaluation.

Table 1. Joint EPDs predicted through joint evaluation.

Trait	Abbrev	Units
Calving Ease	CE	% Unassisted Calving (heifers)
Birth Weight	BW	Pounds

Weaning Weight	WW	Pounds
Yearling Weight	YW	Pounds
Maternal Calving Ease	MCE	% Unassisted Calving (daughters)
Milk	Milk	Pounds
Total Maternal	TM	Pounds
Scrotal Circumference	SC	Centimeters
Hot Carcass Weight	CW	Pounds
Rib-Eye Area	REA	Square Inches
Fat Thickness	Fat	Inches
Marbling Score	Marb	Marbling Score Units

Understanding the Impact

EPD correlations between previous and current evaluations are exceptionally high, with correlations above 0.97 for all traits in AICA animals. Although the correlations are high, breeders should expect to observe changes in EPDs due to the inclusion of additional data. The individuals in the AICA herd book who will experience the most significant changes are those that have progeny data and/or an individual genotype added from the CCA herd book. This additional information enhances the accuracy of assessing relative genetic merit, especially for animals represented in both countries. It is also important to note that some changes will also be due to additional data and genotypes being added from AICA members since the previous April 2023 evaluation release.

Focus on the Ranking

Slight differences in base will affect the entire population particularly for Calving Ease and Maternal Calving Ease. The breed average EPD for active sires CE and MCE has moved from 6.1 to 10.1, respectively. As a breeder, it is important to focus on the individual ranking of animals to understand their relative genetic merit to the rest of the herd. Even though, an EPD may have changed many animals will rank very similarly. Updated percentile tables are available on the AICA website. No other changes in model structure, heritability estimates or trait descriptions will be experienced by AICA breeders.

Advancing the Mission

In conclusion, the new joint evaluation offers an improved understanding of the genetic merit of Charolais cattle within the North American population. These cattle play a significant role in the genetics of both nations' cattle populations, and the joint evaluation serves as a valuable tool for Charolais breeders to further their contribution.

If you have any questions regarding this new evaluation, please don't hesitate to reach out to the AICA office.

Ensuring Accurate Evaluations

For accurate evaluations in the joint North American Evaluation, it is crucial to match individual IDs between the USA and Canada. If you notice animals with differing EPDs between countries, please notify your respective breed association promptly. This ensures accurate cross-referencing and evaluation.

