

by Jack Ward

Hereford offers maternal heterosis advantages without sacrificing end-product merit.



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The Hereford breed has been widely accepted in commercial herds as the choice to add heterosis. The American Hereford Association (AHA) 2017-20 Strategic Plan directs the AHA Board of Directors, staff and its members to stay committed to adopting new technologies for genetic improvement and to educate the industry on the benefits of using Hereford genetics.

Over the course of the past two years, the AHA has worked to implement a single-step genomic evaluation using the Biometric Open Language Tools (BOLT) software and to produce two new traits — Sustained Cow Fertility (SCF) and Dry Matter Intake (DMI).

The introduction of BOLT has allowed the AHA to add genotypes, pedigree and performance information simultaneously into an evaluation that runs more efficiently and produces a more reliable set of expected progeny differences (EPDs) for breeders and their customers.

The AHA is focused on producing economically relevant traits (ERTs) to use in profit (\$) indexes, which can help your customers make selection decisions based on their production system.

You should work with your customers to identify their needs and to help them understand the definition of the \$Indexes. In some cases, it may be best for your customers to develop their own form of an index to identify the genetics they need or to customize the existing \$Indexes.

An example of this might be customers that like to buy one set of bulls for both heifers and bulls. If they have a British, predominately black-

hided cow herd, they would want to use a set of bulls that excel for Baldie Maternal Index (BMI\$) with a threshold on Calving Ease-Direct (CED). This approach allows them to select bulls in your offering that provide profitability in a system that retains heifers and then retains ownership in calves through harvest.

Across breed adjustments

This spring, help your customers understand the value of heterosis and the advantages of using Hereford bulls to improve end-product merit when breeding a set of Angus-based commercial cows.

The U.S. Meat Animal Research Center (USMARC; USDA Agricultural Research Service), Clay Center, Neb., has provided tools for commercial cattlemen to adjust EPDs across breeds and to look at the value of heterosis in a breeding program through the Germ Plasm Evaluation (GPE) program, which has been using semen from multiple breeds for decades. Researchers evaluate all traits of economic importance including calving ease, growth, carcass, feed efficiency, fertility and others. Included in this research is the value of heterosis.

The across breed adjustments are a tool to help compare EPDs across breeds and to allow cattlemen to identify favorable genetics for traits of economic importance. Calving ease is still ranked at the top of the list for traits of importance for cattlemen.

The USMARC across-breed-adjustments table does not include CED for a variety of reasons (you can

find more details in the January 2017 Performance Matters column), but USMARC developed a breeding study to quantify the differences in Calving Difficulty (CD) and Maternal Calving Difficulty (MCD) among breeds.

A total of 4,579 first-calf heifers were utilized from the GPE program, and within the British breeds, Hereford had the most desirable breed effect for CD and the second most desirable effect for MCD.

If you look further into the information provided from the USMARC GPE program, you will discover heterosis can positively affect end product. The Angus mean is 13.66 sq. in. ribeye area, 5.66 marbling score and 932.3 lb. for carcass weight. Using an alternate bull, Hereford, the heterosis effect on these traits is estimated at 0.26 sq. in. for ribeye area, -0.06 units for marbling score and 31.21 lb. for carcass weight using the GPE data. You must remember a 5.00 marbling score is equivalent to Sm 00 — so even with a slightly unfavorable change for marbling, you will still have a product that grades Choice or better.

These numbers are produced through the germplasm project, and your customers may have a different mean to start, but this tool should give your customers some comfort if they are concerned about the harvest value of a set of black baldie steers.

This information, along with the maternal heterosis advantage of the baldie female, continues to solidify the “Bald Face Truth About Hereford Genetics.” **HW**