



## Hereford's Role in a Changing Industry

The U.S. beef industry has without question dramatically narrowed its genetic base during the past 15 years, not just among breeds but also within breeds. Not since the 1960s have we seen less genetic diversity within the commercial sector and among breeds of cattle. The advantage in the '60s was the major breeds of the time were collectively much larger in population and much more diverse within.

Today, 45-50% of the Angus registry is from artificial insemination (AI) mating and nearly every continental European breed has migrated to Angus influence.

When evaluated from a global perspective, breeds and breed associations have historically served a higher purpose aside from social activities, driving competition and shaping genetic trends. Describing and maintaining the advantages of genetic differences among breeds has been a breed association's active purpose, and yet, over time, we have argued amongst ourselves whether or not genetic diversity was a sin or savior depending on the economics of the time or the demands from the food sector.

Until recently our industry has been striving to eliminate genetic diversity. Market signals have driven each of the breed populations to conform to a specific product type, heavily influenced by beef quality attributes and producer convenience traits, while pushing the genetic envelope in the area of growth.

Overall, this trend has served the industry well. Our genetics have excelled in performance trends the past 20 years, and yet we have learned to balance our extremes with what

Mother Nature will allow. However, the elimination of genetic diversity and the press for product uniformity has created damning discrimination on much of the industry's diverse genetic populations that may be reaching a point of diminishing returns. We're losing heterosis in our cow herd. During stressful economic times like the one we're currently in, heterosis and breed complementarity could mean the difference in surviving or not.

So where does the Hereford breed fit in the spectrum of conforming to product demand and providing genetic diversity? The Hereford breed is currently in a position to provide both. We all understand the science behind heterosis, the boost that animals get in performance, survivability, fertility, vigor, etc. It's one of nature's most basic gifts.

Research by the U.S. Department of Agriculture (USDA) has determined that among the *Bos taurus* breeds, Hereford is the most different from the other breeds of cattle and can deliver the greatest amount of hybrid vigor when crossed with other *Bos taurus* breeds. This is certainly an advantage worth mentioning.

Being different has other advantages as well. Genetic diversity counteracts deleterious genes that pop up in every population of cattle when diversity is diminished. We've seen a number of genetic defects hit the purebred livestock sector in recent years. A sure way to protect from these problems in a commercial cow herd is to crossbreed.

Finally, the boost in animal health relative to crossbreeding cannot be underscored enough. Frankly,

the Hereford breed may be the only remaining breed in America, aside from the entire pool of the *Bos indicus* population, that has the population size that can complement the Angus breed from a genetic diversity standpoint and yet still maintain the product quality that our industry demands.

During the last 10 years, the American Hereford Association (AHA) has positioned itself well to fill the need. The breed has worked hard to correct traditional stereotypic defects and the frame race that carried the breed's birth weight outside of acceptable range. Developing the Whole Herd Total Performance Program (TPR™) in 1999 was probably the single most important commitment the breed made that influenced the necessary genetic change within the breed in the last 50 years.

Maintaining a commitment to total herd reporting has been a challenge for breeders and the Association. However, in the long run, it has positioned the breed to conform to commercial demands of calving ease, adequate growth and acceptable carcass traits, while sustaining the inherent genetic qualities of feed efficiency — a trait breeders have not been able to influence positively or negatively.

Today the AHA is preparing its organization and its members for the challenges that are coming. Continued investment in research that will define or create more efficiency, reduce defect rate, add convenience, and fit within the food sectors demand equation are the areas where the organization is focused. In addition, partnering with allied industry groups, other breed associations and beef companies in order to leverage

value down the chain is another area of direction the AHA is pursuing.

The Hereford breed's role will remain a global one. The prospects of an international genetic evaluation beginning with a Pan-American run in 2009 will likely double the population of Hereford seedstock with comparative expected progeny differences (EPDs) on an international scale. We look forward to working with breeders from Uruguay, Argentina, Australia and New Zealand along with our friends from Canada as we look for genetics that will keep our industry viable.

There is a great deal of uncertainty within our beef industry today. The walls of competition among breeds have lowered in recent years and are sure to be hurdled in the coming years as consolidation continues.

The AHA and its members are taking an open-minded approach to what may develop in the future as we search for ways to remain profitable and competitive. We anticipate a great deal more collaboration among other breed organizations here in the states as we tackle the explosive knowledge base developing in the genomic field.

We are fortunate that the Hereford breed is unique and different from other breeds. It's those differences along with sound direction and a shot of enthusiasm that will attract new breeders to Hereford and sustain a viable business for our existing breeders. **HW**