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$ Indexes — Helping Your Customers Be More Profitable

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It is easy to see that genetic progress has been made in the U.S. beef industry during the past few decades as the pounds of beef produced have increased while the cow herd inventory has shrunk. According to figures presented by the National Cattlemen's Beef Association, in 1980 there were nearly 48 million cows, and they produced about 21.5 billion lb. of carcass weight compared to figures from 2009, which show that 41 million cows produced about 26 billion lb. of carcass weight. All reports show the world's population is growing and there will be an even bigger demand for the sustainable production of high-quality, nutritious beef.

There are several reasons for this increase in production, and those can be attributed to better management practices, including health and feed. Cattlemen also have put a real emphasis on genetic selection.

Through the years there has been a transformation in all livestock production from type and pedigree to data collection, genetic evaluations and genomic tools. As new tools evolved, the seedstock industry has been asked to implement these tools to make the genetic progress needed in the commercial industry. As the industry puts into effect these changes, it must keep in mind that the industry has to stay profitable and sustainable.

Specifically, the beef cattle industry has changed its mindset from "more is always better" to considering the expense of producing one more pound of beef.

In 2005 the American Hereford Association introduced four profit indexes which allow breeders and their commercial customers to select sires that maximize profit under different production situations. The indexes are formulated on general representations of beef production systems used in the U.S. and consider a group of economically relevant traits (ERTs) that characterize those systems. Relative economic values for this group of traits are paired with expected progeny differences (EPDs) to produce a profit ($) index value. The difference in the $ value of the index predicts the difference in profit potential.

This technology was first introduced in the early 1940s. The swine and dairy industries have used values such as a sow productivity index and a type-production index to select animals that excel in several traits. Various beef breeds around the world have developed index value tools as part of their current genetic evaluations. The Hereford breed has developed three maternal indexes and one terminal index. You can find detailed information on the Hereford $ indexes at *Hereford.org*.

As you hear more about individual tools being developed to identify cattle in the commercial industry, take a closer look at the $ indexes and what they can provide your customers. These indexes are built to be comprehensive, and they look at multiple traits, which include pedigree, performance and genotypes.

These, along with the $ component, make them the tool of choice to increase profitability. As we move forward, fertility and efficiency traits will be added, making these so much more valuable than any individual tool, including a small genomic panel that accounts for a small amount of variation in an individual trait.

It's important to identify your customers. If they are using Hereford bulls in a British-based program and they want to benefit from both heifer replacements and feedlot merit, the all-purpose index of choice would be to select bulls from the Baldie Maternal Index (BMI$).

If your customers want to utilize Hereford bulls in a replacement heifer program, then the Calving Ease Index (CEZ$) should be the one you provide them for selection.

If your customers are in the Gulf Coast and want to use Hereford bulls in *Bos indicus*-based programs, then use the Brahman Influenced Index (BII$).

If your customers are more concerned with end product merit, then the Certified Hereford Beef Index (CHB$) should be the one of choice.

Economic selection indexes allow producers to select animals with the most favorable combination of EPDs to maximize profit in a given situation. As you make the chase for more output, there will always be some antagonisms. To help customers be more profitable, the tool of choice for selection should be the $ indexes. **HW**