by Craig Huffhines, executive vice president
chuffhin@hereford.org

Hereford Breed Launches First Beef Cow Udder Quality EPDs

Udder quality is a top four reason for culling cows in the U.S. beef industry and has a direct effect on farm labor requirements, calf performance, lost cow longevity and has a major effect on cow-calf profitability.

The American Hereford Association (AHA) has recently addressed this concern by being the first breed association to release a two-tier expected progeny difference (EPD) for udder quality. These two new traits for udder quality are udder suspension (UDDR) and teat size (TEAT).

At the 2014 Beef Improvement Federation (BIF) meeting in Lincoln, Neb., Mark Thallman, a long-respected geneticist for the U.S. Department of Agriculture (USDA) Meat Animal Research Center in Clay Center, Neb., challenged breed associations by presenting a laundry list of shortcomings in the seedstock industry's genetic evaluation programs that limit profit opportunity for commercial cattlemen. One of those areas was predicting the genetic merit of sires for producing daughters with high-quality udders.

Mark said, "We have BIF standards for udder score, yet we can't predict the genetic outcome of sire selection for that trait."

The mammary system is one of the most important functional traits of the cow and yet until now there has not been a genetic tool or EPD for predicting udder quality in a sire's daughter.

In December, the AHA launched two udder score EPDs, one that describes the genetic merit for udder attachment and the other describes teat size.

Since 1995 Hereford breeders have collected udder scores at birth. The most recent analysis looked at over 290,000 observations representing the daughters from 24,559 sires.

The recent genetic evaluation performed by the AHA revealed the trait to be moderately heritable at about .30, which means that improvement in the trait can be made fairly rapidly if selection pressure is placed on the trait using the new breeding values.

In 2008 BIF adopted a two-tiered scoring system for evaluating udders. The AHA Board of Directors followed suit and adopted the same system for scoring both udder suspension, which is how tightly the udder suspends from the body wall, and teat size, which can be a problem for young suckling calves.

"We are extremely proud to have tackled this issue head on and be the first breed association to produce an EPD that will allow us to rapidly improve the functionality of our Hereford females," says Fred Larson, AHA breed improvement committee chairman from Spring Valley, Wis.

Research results leading up to the new udder quality EPDs' development indicated that before the two EPDs were released, the Hereford breed has already made remarkable strides in udder quality (see Figure 1 and Figure 2). The genetic trend is evidence that the AHA membership has taken an aggressive approach to making Hereford cows more defect free. With this new genetic technology, the breed is sure to make more rapid strides in improving these important traits.

On behalf of the current AHA Board of Directors and the many Board members through the years who have strongly endorsed the AHA performance program, congratulations Hereford breeders for the progress made at producing a reliable and long lasting cow for the American cow-calf producer. HW

Figure 1: Hereford breed trend for teat size EPD

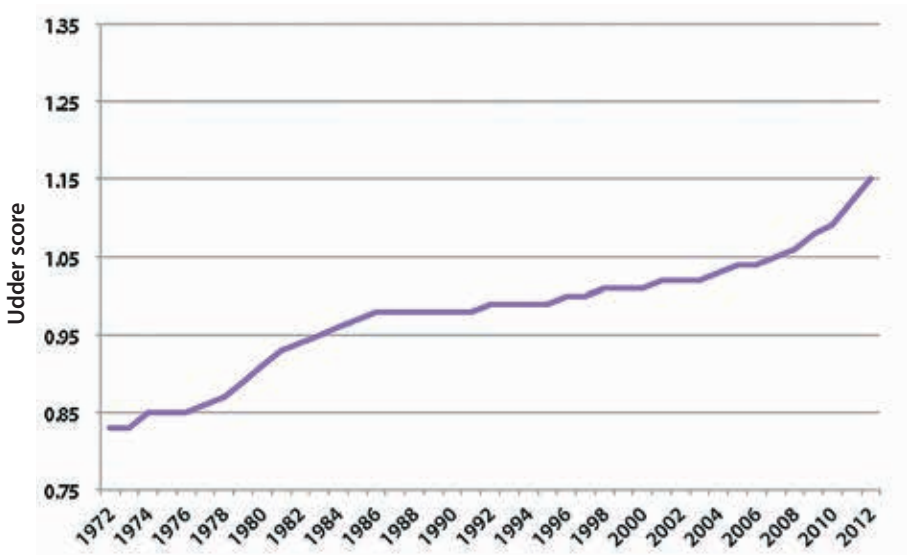

Figure 2: Hereford breed trend for udder suspension EPD

Over the last fourty years, the Hereford breed has improved the average udder score by a third of a score. With more predictable genetic predictions, udder quality and improvement will be addressed much faster.