

AHA's DNA Policy for Walking Herd Sires



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Merry Christmas to you all and a hearty thank you to all of the Hereford breeders who attended the most recent American Hereford Association (AHA) Annual Meeting in Kansas City, Mo.

The Hereford breed had the largest breed show once again at the American Royal. We certainly appreciate the work you breeders put into a very impressive exhibition of cattle. The AHA had a terrific meeting, a great deal of education and entertainment, and a tremendous Hereford auction, and the reports on the state of the Hereford business were all very uplifting. The major topic of the meetings surrounded the work that AHA is undergoing to identify genetic markers that will help to improve the accuracy of expected progeny differences (EPDs) for very young, unproven animals.

Agriculture is in a constant phase of scientific discovery with continuous pressure to become more efficient and to produce more with less, while conserving our limited natural resources. The AHA Whole Herd Total Performance Records (TPR™) program and the breeding values derived from the program are an example of how science has evolved our industry.

Today we produce more pounds of beef with fewer resources. Tomorrow, we will have to do even better. Modern technology will soon allow us to look deeper into the science of animal

production. We are actually going inside the nucleus of the cell and beginning to decipher the genetic code of the animal that might deliver us another hint as to how an animal might perform in the future. DNA technology, in my mind, is still in its infancy, but its potential is great.

Basic benefit of DNA technology

A very basic benefit of DNA technology allows you as a breeder to accurately determine the parents of an animal. A year ago the AHA Board of Directors determined that pedigree errors could be significantly reduced if AHA members would genotype every herd sire that was to sire a registered calf.

Therefore, down the road if a young bull became recognized as having traits worthy of artificial insemination (AI) status, then proper parent identification would be made much easier since his sire would have already been genotyped and on file with the AHA. In fact, even if a mistake was made in a breeder's paperwork and the wrong sire has been declared on the registration, the AHA would have the true sire genotyped and a correct determination could rapidly be made.

There are still breeders who are a bit confused about the new DNA sire policy, and I am hopeful that the following questions and answers

will clear up the intent of the policy and the requirements forthcoming.

What is the purpose of the new DNA sire policy?

The seedstock industry estimates there is anywhere from a 5% to a 15% error rate in pedigrees, most of which are due to sire misidentification. There are a host of reasons for such mix-ups; frankly, it's easy to do. The new policy is designed to make quick corrections in pedigrees through DNA evidence that can quickly give us an accurate answer as to who the correct sire is on a mislabeled pedigree.

How does this policy differ from what AHA has required in the past?

From the beginning of the registered pedigree livestock business, the AHA has relied solely on the record keeping of individual breeders to determine the accuracy of pedigrees. The AHA has in the past only required AI sires to be confirmed back to parents through blood typing and, in recent years, DNA profiling.

As AI and embryo transfer (ET) use has increased during the last decade, breeders and AHA staff have found a significant error rate in pedigrees, which are for the most part corrected once we have an understanding of the sire possibilities. If the probable sires have DNA profiles on file, then the

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problem can be resolved very quickly.

Many times AHA cannot determine the correct sire which can cause a great deal of marketing problems, particularly if a bull has been used across more than one owner. Having every walking herd sire (not commercial range bulls) on file will solve nearly all of the questions regarding pedigrees once an error has been detected.

Will every bull calf that is registered be required to have a DNA profile on file?

No, not at all! This is the most misunderstood fact of the new policy. Only bulls that will become herd sires and thereby sire registered calves will be required to be DNA profiled.

What about the range bulls I'm selling to commercial cattlemen?

Range bulls will not be required to be tested if they are simply going into a commercial herd. However, if that range bull is pulled out of a commercial herd and used as a sire to produce registered progeny, then he will be required to be DNA profiled.

What is the difference between a DNA profile and parentage verification?

A DNA profile is simply one test on an individual animal that identifies the unique DNA markers that basically fingerprint the animal. A parentage test would create a DNA profile not only on an individual animal but also on the sire and dam of the individual that would confirm or

deny the accuracy of the pedigree. The new policy does not require parentage verification but only an individual DNA profile on the herd sires.

When will the new policy take effect and what age of animals will be required to be DNA profiled?

Only herd sires born after Jan. 1, 2011, will be required to have a DNA genotype on file before they can have calves registered to them. In other words, bulls born in last spring's calving season or after that, and are used as seedstock herd bulls will be required to be DNA profiled. All bulls born prior to Jan. 1, 2011, are grandfathered in and will not be required to be DNA profiled unless they become permitted AI sires.

What will a DNA profile cost a breeder?

Today, the cost for a DNA profile is \$32. This includes a status report for all three known genetic abnormalities.

What are other possible benefits of this policy?

As DNA technology advances in the coming years, DNA tests may be adopted to enhance the current national cattle evaluation. The AHA is collaborating with scientists to discover gene markers that might add accuracy to the EPDs of different economically relevant traits. As this comes to fruition, having DNA samples on file will make it easier for breeders to go back and retest herd sires for various informative DNA markers.

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2012 Committee Appointments

Executive: David Breiner, Alma, Kan., chairman; Paul Funk, Copperas Cove, Texas; Jimmy Johnson, Clinton, Okla.; and Cliff Copeland, Nara Visa, N.M.

Financial/audit: Johnson, chairman; Breiner; Funk; Dale Micheli, Ft. Bridger, Wyo.; and Dale Venhuizen, Manhattan, Mont.

Breed improvement: Marty Lueck, Mountain Grove, Mo., chairman; Copeland; Keith Fawcett, Ree Heights, S.D.; Funk; Fred Larson, Spring Valley, Wis.; and Micheli

Marketing: Steve Lambert, Oroville, Calif., chairman; Johnson; David Trowbridge, Tabor, Iowa; Venhuizen; and Eric Walker, Morrison, Tenn.

Show and sale: Copeland, chairman; Fawcett; Larson, Micheli and Venhuizen

Certified Hereford Beef LLC board: Micheli, chairman; Breiner; Funk; Trowbridge and Venhuizen

Hereford Publications Inc. board: Johnson, chairman; Lambert; Lueck and Trowbridge

Hall of Fame/Merit: Venhuizen, chairman; Larson, Lueck and Walker

Member service: Funk, chairman; Copeland; Fawcett; Lambert; Lueck and Walker

Hereford Youth Foundation of America (HYFA) board: Ray Ramsey, president; Ruth Sims, vice president