Board Announcement

June 20 the Association published the names and registration numbers of a sire (Vermilion X Factor, Reg. 15535998) and dam (S R S Nellie 0475P, Reg. 14962497) determined to be carriers of a double-muscling mutation. A registered bull calf produced by this mating was also determined to be an affected double-muscled calf, and his registration has been canceled.

The publication of these two carriers and the removal of a single bull calf from the registry follow an investigation by the Association that was triggered by a report received from the owner of the dam and affected calf. Following protocol, the Association involved David Steffen, a veterinary pathologist at the University of Nebraska, with whom the Association has worked on defect matters for approximately 20 years.

As a part of the investigation, the affected calf was parent-verified to the bull and dam in issue. The breeders of the impacted animals have cooperated fully with the Association and, to date, there have been no further reports received on the presence of a double-muscled animal.

In his determination, Steffen reached several conclusions that are worth noting.

1) First, Steffen discussed the fact that a currently available DNA test developed for testing on other breeds provides a basis for determining whether an animal is or is not a carrier of this particular strain of double muscling.
2) Second, the dam of the affected calf was a heterozygote, and the distribution of the gene in this case is consistent with that of a simple recessive.

That test played a role in this case. As a part of his own response to the calf, the owner of the dam and calf submitted DNA on the sire, dam and affected calf to a testing lab to determine whether those animals had the nt821 deletion in the myostatin genotype. That deletion in the myostatin gene has been known to cause muscular hypertrophy (double muscling) in other breeds of cattle. In this situation, the test results on the sire, dam and calf indicated the presence of a simple recessive, giving rise to Steffen's belief that the test could be of value in the Angus breed. His belief was affirmed by communications he had with scientists at the U.S. Meat Animal Research Center (USMARC), Clay Center, Neb., who had been involved in research relating to that specific deletion.

Finally, Steffen urged that the Association monitor the breed for this mutation, which he believed could have a low frequency based on the relative absence of dystocia (difficulty in calving) found in Angus cattle. That observation may explain why, other than the affected calf in this case, the Association has not received any reports of double-muscled animals in years.

This notice will, of course, raise questions for some breeders and, in anticipation of that, the Board of Directors provides the following guidance to the membership as it works promptly toward establishing an approach to deal with this strain of double muscling:

1. The Association is moving as quickly as possible to reach agreement to begin testing and processing the results of the nt821 deletion tests in an orderly fashion.
2. Steffen's determination that the sire and dam are carriers was based on his observation of pictures of the affected calf and the fact that parentage was verified. As such, the marking of the pedigrees of current and future progeny would normally proceed under Rule 306.c.
3. However, in that regard, the Board intends to either amend Rule 306.c. as it relates to the registration status of progeny of carrier parents or to adopt a specific policy to deal with this strain of double muscling.

The Board is monitoring this matter closely and will update the website (*www.angus.org*) as soon as it has additional information. In the meantime, please feel free to contact the Association staff at 816-383-5100 if you have any questions.

— June 20, 2011, statement by Board of Directors.

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