

Test to soon be available for genetic abnormality

by

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At an educational seminar hosted by the American Angus Association during the North American International Livestock Exposition (NAILE) in Louisville, Ky., Jon Beever of the University of Illinois said a test would soon be available to detect carriers of arthrogyriposis multiplex (AM). Beever is associate professor of molecular genetics.

Often commonly called curly calf syndrome, the genetic defect is caused by a gene deletion that follows a simple recessive pattern of inheritance. When two carrier animals are mated and the resulting calf inherits the gene mutation from both of its parents (a 25% likelihood), the result is an AM calf that is born dead with a spine that is bent or twisted. The affected calves are small and appear thin because of limited muscle development. Their legs are often rigid and may be hyperextended.

Beever initially presented notice to the Association in early September of the likely presence of a genetic defect based on calves submitted to him for testing. The Association then presented an open letter to the membership requesting submission of information on any calves abnormal at birth. Initial investigations pointed to a common ancestor among reported calves having the defect, and Beever began work to establish a genetic test to detect carrier animals.

The test has been developed, with further research including tests on bulls submitted by many of the major artificial insemination (AI) studs. Results of those tests are available through the individual bull studs and on the Association web site, www.angus.org.

It is reported that several of the DNA labs are in negotiation to obtain a license to conduct the test. Beever said in Louisville he hoped licensing would be done by mid-December, but indications are that those agreements may not be in place that soon.

At its Nov. 15 Board meeting, the American Angus Association adopted a new policy related to its handling of genetic defects and adopted new rules. The Board adopted a specific policy relating to the registration status of potential and known carriers of AM.

The Board emphasized its intent to safeguard the commercial cattle industry from the effects of the genetic abnormality as reasoning behind the new rules and policies, which are posted to the web site.

The new policies and rules emphasize the Association's ability to convey timely

and accurate information through its web site. Check the web site for the names and registration numbers of known carriers of the defect, as well as of animals tested free of the abnormality.

Beever noted that the technology available today has allowed for rapid

identification of the problem as well as rapid development of a test to identify carrier animals. For more information, including a link to listen to Beever's presentation at the NAILE, visit the Association web site.



For more information, visit

www.angus.org.

