

# No Need For Beef Producers To Panic About Curly Calf Syndrome

LEXINGTON, KY.

**T**he recent discovery of Curly Calf Syndrome in the Angus cattle breed has some producers feeling uncertain about the future of the breed, but University of Kentucky Extension Beef Specialist Darrah Bullock says there's no reason for Kentucky's beef producers to panic. He believes the best course of action is to stay informed.

Curly Calf Syndrome is a genetic defect, which researchers believe is caused by a simple recessive gene. It can cause calves to be still-born with twisted spines. Early research information traces the syndrome back to a popular Angus bull.

"This is a serious situation that Angus breeders and the American Angus Association are diligently working to resolve," Bullock said. "There is no need to panic and drastic measures should be avoided until more information is known."

Bullock encourages beef producers to continue checking the current status of ongoing research at the American Angus Association's Web site at <http://www.angus.org/>.

"First, it is not known, but thought that Curly Calf Syndrome is a simply inherited recessive lethal genetic defect. A simply inherited trait means that the condition (or trait) is controlled by a single pair of genes at one location (locus) within the cattle genome," Bullock explained. "If the Curly Calf Syndrome is associated with the recessive allele (gene) then it requires both recessive alleles to be present at this locus for the condition to be expressed (misshaped and dead at birth). Unfortunately, a very popular bull in the Angus breed, GAR Precision 1680, appears to be a carrier."

It is not currently known whether this mutation started with Precision or if it started somewhere in his pedigree. If he is the source of the mutation then he would have to be in an animal's pedigree for them to be a carrier. If the

source is one of his ancestors then there could be other sources, but they are not likely to be as widespread.

"Some important information to know about a lethal recessive like Curly Calf Syndrome is that if a carrier bull is mated to a carrier cow there is a 25 percent chance the calf will have Curly Calf Syndrome and be born dead; however, there is a 50 percent chance that this mating will produce another carrier and a 25 percent chance that it will have two normal genes."

Bullock said if a carrier is mated to a non-carrier, the syndrome will not be expressed, but half of those matings will result in a carrier. Commercial producers that are using Angus bulls in their crossbreeding program have a low likelihood of having any calves with Curly Calf Syndrome, even if Precision is in their bull's pedigree. However, they would want to make certain that Precision is not in the pedigree of future bull purchases if they are retaining heifers.

For beef producers using Angus in their breeding program, Bullock warns that this is a serious situation requiring some precautions. However, he said it is a very manageable situation that can be resolved over time and producers should not handle it in a rash manner.

The American Angus Association currently is working to develop DNA markers that will allow producers to test their animals to identify carriers of the gene. Once this test is available, it will be much easier to eliminate the carrier animals, and ultimately the gene, from the population.

For more information on basic genetic principles or DNA markers, refer to the National Beef Cattle Evaluation Consortium Beef Sire Selection Manual that is located in the educational section of the NBCEC Web site at <http://www.nbcec.org>. Δ