



1182 County Road Y • Ashland, Kansas 67831 • 620.635.2932 • Fax: 620.635.2930
www.GardinerAngus.com • email: gar@ucom.net
Henry: 620.635.2932 • Mark: 620.635.2760 • Greg: 620.635.2752 • Garth: 620.635.2361

Dear Customers & Friends:

We have been asked many questions and attempted to respond to the concerns of our fellow beef producers who may be affected by the recent information released by the American Angus Association regarding Curly Calf Syndrome (CCS). In an effort to continue an open line of communication with our customers, we are providing responses to the questions most commonly asked by those contacting us.

Q: Have you had calves born at GAR with this defect?

A: Approximately 2,000 calves are born each year at Gardiner Angus Ranch and our ET Cooperator herds. Since 1991 we have produced about 27,000 calves. During this time period we have had 11 stillborn, anatomically-defective cases in our records. This would represent only .04% of the calves born in that period. Descriptions and/or samples from these calves were submitted to Dr. Horst Leipold (Kansas State University, AAA advisor on genetic abnormalities) in the 1990s and more recently to Dr. Dave Steffen (University of Nebraska, Dr. Leipold's student who subsequently became AAA's advisor). Six of these calves had "no Precision" in their pedigree. Dr. Leipold advised us that the anatomically-defective calves born on our ranch were the result of a variety of possible causes including: environmental factors (e.g., plants, insects, soil toxicity, etc), disease (viruses) or that some "might" have a genetic component. He advised us to continue recording and reporting abnormal calves and we have done so. This calving season we had one such calf and submitted the calf and samples to Dr. Steffen.

Q: When you did first hear about Curly Calf Syndrome?

A: Dr. Leipold referred to CCS as "Arthrogyposis." We first heard this term from him when we submitted our first case in the fall of 1991. More recently, we became aware when a small number of calves born dead with bent and twisted spines were reported to the Angus Association in March 2007. However, it was not until August 12th, 2008 when Dr. Jonathon Beever visited GAR that we were informed he suspected an autosomal recessive gene was the cause of CCS. During his visit Dr. Beever asked for and received semen samples from some of our bulls in order to expedite his research. We were only informed Curly Calf Syndrome appeared to be caused by a simple recessive gene, traced from GAR Precision, a few days before the Angus Association released its report on September 17th.

Q: Has there been other diseases caused by a mutant autosomal recessive gene in cattle?

A: In fact a similar autosomal recessive disease was reported in Holstein cattle in 1992. Bovine leukocyte adhesion deficiency (BLAD) in Holstein cattle is an autosomal recessive disease characterized by recurrent bacterial infections, delayed wound healing and stunted growth. Affected cattle die at an early age due to the persistent infections. The carrier frequency of the BLAD gene among U.S. Holstein cattle reached approximately 15% among active artificial insemination bulls and 8% among cows in the early 1990's. The dairy industry quickly developed a diagnostic test to identify BLAD carriers. Because the DNA test was highly accurate and relatively inexpensive to perform, the A.I. organizations were able to test and eliminate many sons of BLAD carrier bulls, thus minimizing any potential negative impact BLAD carriers might have had on the breed. The control of BLAD in the general population of Holstein cattle was done by publishing the genotypes and avoiding the mating between BLAD carriers. That strategy dramatically reduced the frequency of BLAD carriers. Similar strategies used in Poland, a country where the frequency of the BLAD mutant carriers was 15% among young bulls, has reduced the incidence of BLAD carriers to 0.8% in 12 years. Obviously, the breeding strategies used to reduce the frequency of BLAD in Holstein cattle would make a good model for efficient control of another genetic disorder mediated by a single recessive mode of inheritance.

Q: What will be Gardiner Angus Ranch's Plan of Action?

A: For the past 30 years, every animal sold by GAR has been fully guaranteed. THIS WILL NOT CHANGE. Every bull in our fall sale and every bull and female in our Spring 2009 sale will be covered by the same guarantee—period! If you buy a bull or cow from us and are not satisfied, we will replace it.

As for our plans at GAR, we are cooperating fully with the American Angus Association and as soon as a DNA test is available, we will test every animal on the ranch and the results will be made available to all our customers. Our goal will be to eliminate the recessive gene for CCS from our herd by selective mating and testing of offspring.

Gardiner Angus Ranch has always used science, technology and data to breed better cattle. We will continue to do so. We will aggressively move forward to produce cattle that are superior for the economically important traits and free of this recessive gene. It will be important for all of us to remember to not throw the "baby out with the bathwater". Science, data and technology will allow us all to be successful in breeding better cattle.

FINAL NOTE: We encourage the reporting of all calves possibly affected by CCS. For further information contact Don Laughlin, Director of Member Services, AAA by e-mail (dlaughlin@angus.org) or 816/383-5140. Note: if possible, please retain the calf and Don Laughlin will make arrangements to have it shipped to Dr. David Steffen in Lincoln, Nebraska at the Association's expense.



Don't just buy a breed.
BUY A BRAND.