

Some Facts about Genetic Defects



Genetic defects are present in every beef breed. These are inherited conditions not diseases—they cannot be spread by contact or air.

Carrier animals look normal but have one normal gene and one gene that causes the condition.

In the past, breeders were only able to identify carrier animals when they bred two carrier animals that produced affected calves. Once a defect was identified in a particular bloodline breeders had no choice but to avoid all animals in that line. Today, non carrier animals from such pedigrees can be identified and used safely.

Breeding two carrier animals will result in affected calves only 1 out of 4 times. Affected calves are not seen often; in fact there have been very few reported cases in Canada. However, breeding carrier animals will pass the defect gene onto the next generation.

Today, there are DNA tests available to identify genes that cause conditions such as Arthrogryposis Multiplex (AM), Neuropathic Hydrocephalous (NH), Osteopetrosis (OS), Mannosidosis (MA) and Contractural Arachnodactyly (CA). The DNA tests cost \$22 each, and can be set up by completing the Genetic Defect Test Request Form attached.

These tests are tools to help breeders identify carrier animals and avoid breeding two carriers to each other.

Once an animal has been tested free the gene can no longer be passed on to future generations.

Test results are published on our website and on animal registration certificates as the specific defect followed by an F for Tested Free, or C for DNA tested and found to be a Carrier. For example, an animal with AMF behind its name would have been tested for the gene that causes AM and found to be free.

The most current and comprehensive information about specific genetic defects, the CAA genetic defect policy and which animals have been tested can be found on our website www.cdnangus.ca under the Breed Development tab under Genetics ([www.cdnangus.ca/breed/genetic defects.htm](http://www.cdnangus.ca/breed/genetic%20defects.htm)). Breeders and Angus genetics users are also welcome to contact Kajal at 1-888-571-3580 with any questions at all.

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Toll Free: 1-888-571-3580

Genetic Defect Test Request Form

Instructions: Please complete this form and return it to the Canadian Angus Association office. We will process your request(s) and send you test kits to send samples to the lab.

Note: Testing your sire and cows is more economical than testing all their calves; if this is possible please consider doing so.

Producer Information

CAA member ID # _____ Name: _____
Address: _____ City: _____
Prov: _____ Postal Code: _____ Email: _____
Phone: _____

Animal Information

Please circle the test requested for each animal

Arthrogryposis Multiplex = AM Neuropathic Hydrocephalous = NH Osteopetrosis = OS
Alpha Mannosidosis = MA Contractural Arachnodactyly (CA)

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

Registration number: _____ Tattoo: _____ Test: AM NH OS MA CA

All test results will be shared with the Canadian Angus Association