

MEMBERSHIP TIPS

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director of member services



Breeder's Reference Guide (Part 3)

This is the third installment of the Breeders Reference Guide (BRG) discussion. By addressing the BRG in detail, it is my hope that members can better understand the content and importance of the document.

As discussed previously, our BRG is broken up into four distinct sections for ease of use by our members and their customers. These four sections include the Charter and Bylaws (discussed in January), various Association Rules (discussed in February), Genetic Conditions and Genetic Factor Policies, and lastly the Suggested Sale Terms and Conditions (discussed in the August 2018 issue of the *Angus Journal*).

This article will focus on the Genetic Conditions section and what these policies mean to our membership. As a reminder, it is important to remember genetic conditions are found in all breeds of cattle, and are certainly not limited to only those breeds with a population large enough to discover them.

Genetic conditions and genetic factors

As you may recall in last month's article, series 300 Rules discussed the Genetic Conditions Policy of the American Angus Association. In addition, Rule 350 relates to Genetic Factors. So, what's the difference between a 'Genetic Condition' and a 'Genetic Factor'?

The rules and policies that relate to those abnormalities that are pathological conditions of genetic origin are referred to as 'genetic conditions.' These can include an

impairment of health or a condition of abnormal function due to an abnormal or mutated gene. In other words, inherited genetic defects, mostly with recessive inheritance. The term 'genetic factor' refers to the presence of a recessive gene that may or may not produce a certain type of offspring. These factors are much less serious from a genetic standpoint.

Genetic conditions

Let's look closer at the genetic conditions. The Association monitors eight recessive genetic conditions with commercial tests available within our population. Four are lethal conditions, while the other four are non-lethal.

It is important to understand the difference between the two groups, as they are treated differently in the subsequent rules. Within this BRG section is the Association's policy relating to the lethal conditions — arthrogyrosis multiplex (AM), neuropathic hydrocephalus (NH), contractural arachnodactyly (CA) and osteopetrosis (OS).

The four non-lethal conditions are also discussed — myostatin nt821 gene deletion (M1) more commonly known as double muscling, PRKG2 gene mutation for dwarfism (D2), developmental duplication (DD) as well as oculocutaneous hypopigmentation (OH).

Genetic factors

Regarding genetic factors, the Association currently monitors two — the red color factor and the wild type color factor. Both are monitored because they may, if present in the homozygous state, result in the unintended birth of red calves (see the Membership Tips article in the September *Angus Journal*).

While red calves are not eligible for registration under the rules of the Association, they are not defective genetically. Therefore, the Association permits the registration of carrier animals (those with the heterozygous state) with either of these factors, but it places the designation "RDC" or "WTC" following the animal's registration number. Additionally, such animals are listed on the Association's website. Commercial tests are available to determine whether an animal carries one or both of these genetic factors.

Getting back to genetic conditions, the policy includes dates when each lethal and non-lethal condition was recognized by the American Angus Association and when the commercial test became available to the membership. These dates affect the testing requirements and registration eligibility of those carrying these conditions.

The registration eligibility with the lethal conditions are understandably

more stringent compared to the non-lethal conditions. With the lethal conditions, all potential carrier offspring must be tested and bulls must be tested free of the monitored lethal conditions in order to be registered. Females must also be tested, and can be registered regardless of the test result. Following the test, the Association designates whether the animal is free of the defect or a carrier.

With non-lethal conditions, the registration rules are more relaxed. All animals can be registered with or without testing for non-lethal conditions, regardless of sex. All resulting progeny of currently registered carrier females or carrier bulls of the non-lethal conditions may be registered without submitting to testing, with the exception of D2, the dwarfism gene mutation.

D2 is treated like the lethal conditions, where the females

must be tested to be eligible for registration. The bulls must also be tested and free of the D2 condition to be eligible for registration.

What about steer calves? There are no testing requirements for steer calves for any of the monitored genetic conditions as they are incapable of passing on their genetics.

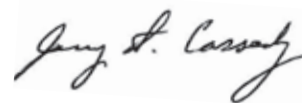
Please note, any member who becomes aware of an unusual physical abnormality, either in an animal registered with the Association or in an offspring of a registered animal, is required to notify the director of member services. Disclosure is always the best policy. This is particularly the case in which an abnormality appears on multiple occasions and the member or a consulting veterinarian is unable to identify a non-genetic cause of the identified abnormality.

Again, it is important for everyone to remember that genetic conditions

are found in all breeds of cattle, and are certainly not limited to only those breeds with a population large enough to discover them. And knowing is better than not knowing.

Remember, it is vital that members and those participating in Association programs understand and comply with all of the rules and applicable policies and guidelines.

For a current copy of the BRG, go to www.angus.org and select the Member Services tab. Scroll down to Member Center and select Breeder's Reference Guide.



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If you have any questions regarding the issues discussed, please contact the member services department at (816) 383-5100.



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