## **MEMBERSHIP** TIPS

by Jerry Cassady, director of member services



## Pedigree Accuracy

The American Angus Association Member Services department recently received an interesting email from a member with concerns and questions relating to pedigree accuracy. I've discussed the issues, along with related questions, in this article.

Why does the Association need verification from the breeder of an animal when there is a parentage correction? Shouldn't the parentage results of a genomic test be good enough?

This is a good question, and one we receive often. DNA testing can confirm parentage and exclude incorrect parents with a high degree of accuracy. However, in a large database like ours, false positive matches often occur. Some animals will match dozens of possible parents, many with no logical tie. Just because an animal matches on DNA doesn't mean it is the parent.

We often have members send in DNA samples for parentage without providing any potential parents and want the Association to inform them of the qualifying results. Unfortunately, it just cannot work that way.

For the Association to assign parentage to an animal, we must have a list of potential sires and dams provided by the breeder. It's important we remain consistent with this requirement and that all possible parents be suggested only by the breeder. Then we can confirm if those potential parents match. Otherwise, we risk incorrectly assigning a parent because of a false

positive match when the actual parent may not even have parentage markers on file.

I am seeing sale books where the breeding is listed as artificial insemination (AI) and then the female is exposed to natural service sires immediately after AI. Should the Association put some rules in place that natural service sires must be genomically tested, which would include the parentage markers on file for these herd bulls?

The Association does not require registered animals to be genomically tested. Specifically referring to parentage requirements, we have two rules that address parentage at this time. Parentage markers are required to be on file with the Association for all AI sires and all donor dams. That does not mean parent-verified, it means parentage markers are required to be extracted from a DNA sample and kept on file with the Association. This allows for offspring of that donor dam or AI sire to be verified in the next generation.

Regarding natural-service sires, although we do not have a mandatory parentage requirement, we do have approximately 70% of natural-service sires on file. Additional rules associated with parent verification are understandably in our future as Angus breeders for the protection of breed purity and additional protection to buyers and sellers of Angus genetics.

With the science of genomic testing, do I still have to collect weights and measurements? Is it sufficient to use a genomic test to fill in the expected progeny differences (EPD) boxes?

The success of utilizing EPDs as a tool for genetic selection relies on breeder commitment to high-quality data collection and submission. Many industry experts would agree reporting phenotypic data may be more important now than ever before.

The science of genomic testing has brought additional accuracy to our genetic predictions, but we cannot simply rely on these technologies to make our lives easier by eliminating the need for phenotypic data collection and submission. Genomic predictions need vast amounts of data for training so they can be effective as genetic selection tools.

Most of our spring-calving programs are finishing up the current calving season. That means a lot of data to collect, record and submit.

Unfortunately, there are no shortcuts when it comes to phenotypic data collection and submission. Take the time to collect these data points correctly and accurately to provide unbiased results. It will make a difference in the accuracy of your subsequent EPDs. The better data we submit to the Association, the better information and resulting EPDs we receive in return.

The member email concluded with this statement: "One of the best things that I can provide to my customers begins with the guarantee that the pedigree is correct. All other information is irrelevant if the pedigree is incorrect!"

I couldn't have stated it any better. Those members who use parent verification as a management practice can use the results as a marketing tool and stand behind the pedigree accuracy at the point of sale. This sidebar is from our Suggested Sale Terms and Conditions, and fits perfectly within this topic of pedigree accuracy.

jcassady@angus.org

Editor's note: For more information regarding pedigree accuracy or any other issues, contact the American Angus Association Member Services department at 816-383-5100 or email me directly at jcassady@angus.org.

## Suggested Sale Terms and Conditions — Guarantees

Conformance with Registration

- 1. The seller guarantees all sold animals are registered in accordance with the rules of the American Angus Association.
- 2. The seller guarantees to the buyer all sold animals conform to the registration certificate as entered in the Herd Book of the American Angus Association.

As we advance technology and best practices, parent verification will become more and more prevalent within the Association rules and the Angus population. As a reminder, DNA testing is not a substitute for good management and accurate recordkeeping.

