

# MEMBERSHIP TIPS

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director of member services



## Parentage required!

*Perhaps the single most problematic phone call we receive in the Member Services department revolves around unavailable DNA necessary to meet a registration requirement.*

Without the DNA submission, parentage markers are not available and the registration requirement cannot be met. DNA samples need to be submitted to extract parentage markers to have on file at the American Angus Association.

This is typically associated with donor females flushed in the past where embryos were created and frozen for future use.

In the event a donor female unexpectedly dies or is culled from the herd and the breeder fails to realize DNA is required on all donor dams, the necessary parentage markers required to meet the registration rules would not be available. Unfortunately, the resulting embryo transfer (ET) calves would not meet the rule requirements and registrations would not be allowed.

This leaves the breeder extremely frustrated and unable to register the resulting ET calves.

### Parentage rules

The parentage rules associated with required DNA are simple and clear and can be found in several locations within the Breeder's Reference Guide. It is important to remember two basic rules for DNA

and subsequent parentage markers required for registrations:

1. All sires permitted for artificial insemination (AI) must be DNA-marker-typed with the Association.
2. All donor dams must be DNA-marker-typed with the Association.

From the Breeder's Reference Guide definitions section, we find in the context of parentage testing, DNA Marker Typing means the animal in question has had a blood, hair, tissue, semen or other biological sample collected; DNA has been extracted; and extracted DNA has been used to determine the genotype for bovine parentage markers as defined by the International Society for Animal Genetics (ISAG). Extraction and genotyping must be conducted by an Association-approved laboratory.

The requirement for AI sires is typically not an issue, as a previously collected straw of semen can be sent for parentage marker extraction. It is not that convenient with donor dams, and once they are gone, so goes the DNA availability.

### Inferred Parentage process

In the event a donor female is

unavailable for DNA sampling, the Association does offer a service to work backwards to get parentage verification. This process is called the "Inferred Parentage" process.

If there is sufficient DNA on enough unrelated progeny (different sires represented), parent verification can be possible. The Association makes no guarantee this effort will be successful, but we do offer the service as a last resort for those cases with unavailable DNA.

The inferred process calls for a minimum of four progeny to get the markers high enough using current DNA technology. In some cases this process requires more than four progeny, depending on the genetic relationships. In addition, we must have at least one known parent with parentage markers on file.

This procedure requires progeny and does not allow the use of collateral relatives. The inferred marker process does come with an additional fee, plus the original fee for parentage on each submitted calf.

For example, if a donor has expired without DNA collection and the breeder has requested the inferred process on the donor female, the Association would need samples on four progeny of the donor female and

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would require parentage markers to be on file on all four of the sires of these calves.

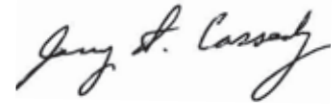
Another example would be the opposite — if the sire was expired without DNA secured and the breeder was requesting to infer the sire, we would require four progeny from the sire, and all four of the dams of these four progeny would need to have parentage markers on file with the Association.

## Remember to collect DNA samples

The Member Services department only offers the inferred process as a last resort, as a DNA sample is always preferred. The resources invested in creating these resulting ET calves can be substantial, please do not overlook this necessary step.

Remember to get DNA samples collected on each donor female in your program, and keep a second

sample at your farm or ranch as insurance. 



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*Editor's note: For more information regarding parentage requirements, contact the Member Services department at (816) 383-5100 or email me directly at [jcassady@angus.org](mailto:jcassady@angus.org).*



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