

# American Angus Association Data Access Policies and Procedures

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Since its formation, the primary mission of the American Angus Association (AAA) included recording of information for the benefit of its membership. Initially, pedigree information was of primary interest, but over time, phenotypic measurements and genomic information became equally important. Today, the Angus database includes 22 million animals in the extended pedigree, nearly nine million weaning weights and a half-million genotypes. The investment in genotyping by members of the American Angus Association exceeds \$25 million. A primary responsibility of the organization is to maximize the return on members' investment in pedigree recording, phenotypic data collection and genomic testing.

As the size and complexity of the Angus database has grown over the years, Angus staff and elected leadership have developed policies designed to protect that investment while maximizing its benefit. In 2007, the association formed a wholly-owned subsidiary, Angus Genetics, Inc. (AGI), to provide services to the beef industry that assist in the genetic evaluation of economically important traits. Toward that mission, AGI develops and promotes technology for use by the beef industry, including DNA technology.

Genomic testing of seedstock and commercial Angus cattle is conducted by ordering tests from and submitting samples to AGI. AGI then contracts with genomics laboratories to provide genotyping services. Ownership of samples is transferred from customers to AGI upon submission, and sample identity is recoded before forwarding to labs for genotyping. Genotype result files are re-matched with original animal identities at AGI, and that information is added to the genetic evaluation weekly. The unused portion of each sample is returned to AGI for long term storage and potential research use. The sample resource at AGI is currently close to 1 million samples.

With a staff of four in-house geneticists and extensive research partnerships, AGI conducts internal research with phenotypes and genotypes to develop better selection tools for members. Both AAA and AGI share information for research purposes with outside entities under the terms of data transfer agreements. Examples of recent research efforts include implementation of Single Step genomic evaluation, validation of genetic condition tests, investigations of genetic factors involved in heat and altitude tolerance, identification of sequencing candidates, and development of the Angus GSTM genomic profile test.