

BY THE NUMBERS

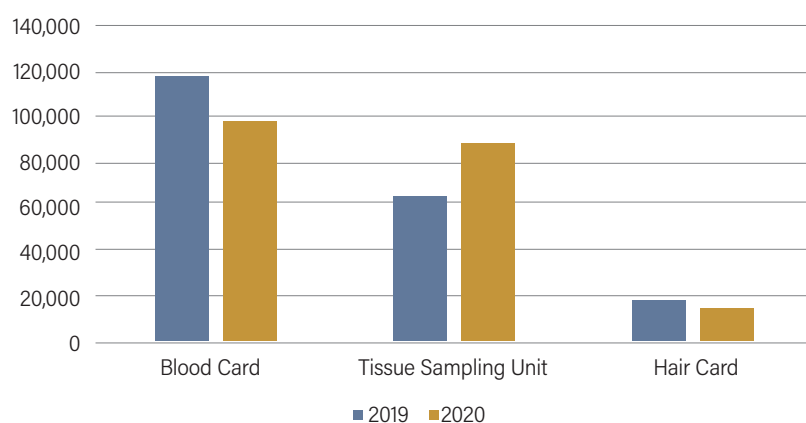
by Kelli Retallick, Angus Genetics Inc.

DNA Testing Success

Sample quality, correct test ordering and complete recording play a role in timely DNA results.

A new year has come, and while many may want to leave 2020 behind us, this past year has been a steady one for genomic testing. Nearly 166,000 genomic profiles and an additional 26,000 stand-alone parentage tests were submitted by American Angus Association members. In total approximately 1.8 million DNA samples are stored in the Association vaults in Saint Joseph, Mo.

Figure 1: Number of Submissions by Sample Type



The dedicated Angus Genetics Inc. (AGI) customer service team members work to ensure that samples are processed quickly, usually on the same day as their arrival, and quality results are returned to members.

Over the years, AGI has worked with numerous sample types to accommodate member needs. The most common sample types sent into AGI include:

1. Tissue Sampling Units (TSUs),
2. Blood card samples, and
3. Hair card samples.

TSU

Previously blood cards dominated the AGI sample-type scene. However in recent years, the team has seen a shift from blood to TSUs. Their usability chuteside during sample collection have made them a great option for many. Figure 1 shows the growing popularity of these sample collection devices over the last two years. If members are looking to order TSUs, visit the Custom Cattle Tag Store at www.customcattletags.com. It is important to note when using TSUs, members must fill out an electronic spreadsheet, which can be found in AAA Login, with tag number and TSU barcode information in addition to their order form before sending to AGI.

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Preferred method

Both TSU and blood samples are the preferred sample types to ensure sample quality and shortest turnaround times. It is important to remember when using blood samples to allow them to dry for 24 hours in an open-air environment out of the sun before shipping. If samples are not dry before they are mailed, mold can manifest in shipment, causing failures at the lab.

BVD-PI

For producers interested in testing their animals for bovine viral diarrhea persistent infection (BVD-PI), this test is available as an add-on when ordering HD 50K or AngusGSSM genomic profiles and when producers are utilizing TSU as their sample type. Using this service allows for producers to only collect one tissue sample from each animal for both their genomic and BVD-PI testing. This test can be added at a low cost of \$4.50 per animal.

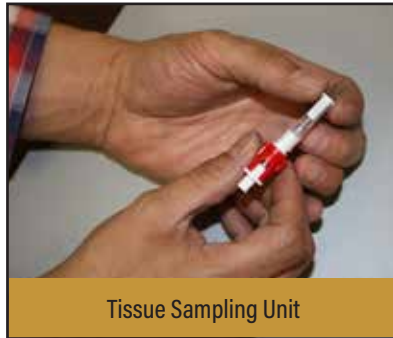
Twins

For twins either TSU or hair samples must be submitted when testing, not blood. In the uterus twins share the same blood supply, which can lead to blood samples being contaminated with the other twin's DNA.

This contamination takes some time for the body to filter out and can be seen in the adult blood sample for quite some time. Because of this blood samples will lead to failures at the lab and members will need to resample those animals.

Correct ordering

Sample quality, correct test ordering and complete recording play a vital role in the success rate



Tissue Sampling Unit



Blood Sampling




Hair Card

The three most commonly used samples types include blood samples, tissue sampling units (TSU) and hair samples. When taking blood samples, be sure to fill the entire circle with blood, at least 20-30 hair follicles should be present on a hair card sample, and when using TSUs do not forget to send in your electronic spreadsheet alongside DNA test orders.

of receiving timely test results. Once samples are collected, be sure to order DNA tests through AAA Login before sending those samples to AGI. Samples arrive at the office daily. During this time of year, nearly 1,000-1,500 samples arrive each day at the AGI corridor to be processed and sent to the lab. DNA samples with proper order forms, and electronic spreadsheets in the case of TSUs, are more efficiently shuttled through the process enabling the fastest turnaround times possible. Members can avoid extra handling fees associated with samples not sent with correct information.

Finally, always allow enough time for the testing process to take place.

Even though everyone from AGI to our partner labs, Neogen and Zoetis, strive for the fastest turnaround time possible, schedule at least three weeks for results to get back from the lab and an additional week for the genotypes to be included in the genetic evaluation. 

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Editor's note: Anytime questions arise about the sample ordering process, DNA sample capture or test results, please feel free to contact the AGI customer service team at 816-383-5100.