

# The Time is Now

Follow this timeline to get your DNA results back in a timely fashion.

by Leoma Wells

Popular TV shows such as “CSI: Crime Scene Investigation” lead us to believe we can receive results within minutes of inserting DNA by collecting one lone hair follicle feeding it into a machine. Unfortunately, that is not how it works. As former President Abraham Lincoln advises, “You cannot escape the responsibility of tomorrow by evading it today.”

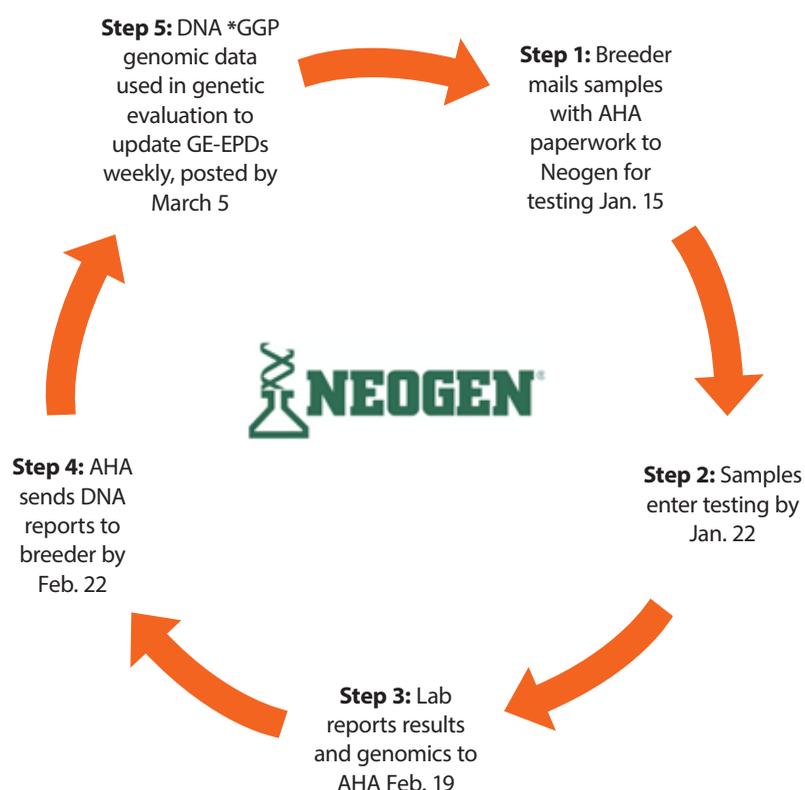
The truth is, seedstock producers can no longer afford to procrastinate until the last minute. Imagine missing out on a potential sale or breeding opportunity simply because the DNA was not completed on the animal. Adjust calendars to accommodate testing expectations and even add additional time in case there is an unexpected delay. Any opportunity to add value to an animal is beneficial, whether it is to be sold or retained.

### Standard timeline and steps

When it comes to DNA testing, the earlier you submit samples the more likely you will capture the full value of your investment. There are simple steps each breeder can follow to submit your DNA samples and receive results in a timely fashion (see Figure 1).

Say you absolutely need results posted by March 19, 2021, to finish your April sale catalog. Assuming all American Hereford Association (AHA) submission instructions are followed, you should submit samples for testing no later than Jan. 22. An even more optimal time frame is to submit samples by Jan. 15 to allow some extra time, especially in the aftermath of the holidays.

Figure 1: Steps and timeline to receive DNA results. All calendar dates and timelines have been estimated for the purpose of this example.



\*GPP stands for GeneSeek® Genomic Profiler

With DNA, it is always best to start early and give each area of Figure 1 a little extra time – potentially saving yourself and others unnecessary stress and frustration. We have taken each step and translated it to an expected business day and turnaround time, outlined in Figure 2.

**Step 1:** It is highly encouraged to ship your samples via a method that allows shipment tracking. In my opinion, peace of mind is well worth the additional \$8 to \$30 tracking fee, especially since you have already invested a significant amount of time, energy and expense into collecting the samples. Typical mailing time can vary from one to 10 days depending on the shipping method.

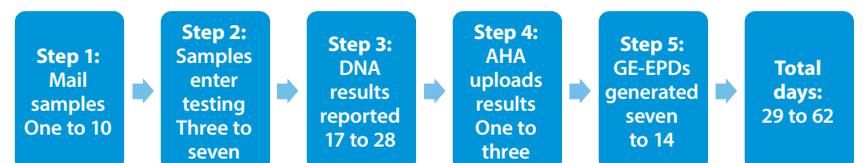
**Step 2:** As long as your samples arrive with the proper AHA paperwork, they will be tested within 3-7 business days. This timeline fluctuates depending on the sample volume being received at the lab, which varies based on the time of year. The lab tends to be extremely busy from September through March, so to be safe, plan on seven business days for this step when creating your testing plan, just to be safe.

**Step 3:** DNA is being processed on the samples and results are reported electronically to AHA via our Lab Information Management Software (LIMS) and email. The timespan from when a sample enters testing to when results are reported to the Association is 17 to 28 days, depending on the testing selected and current lab testing volume.

**Step 4:** AHA uploads the results into its database and reports them to the breeder. This process is streamlined and efficient; but, remember we are creating an ideal timeline, so we suggest allowing three business days for this step.

**Step 5:** AHA runs genetic evaluations weekly. If the animal has a genomic test conducted, the results will be incorporated into the genetic evaluation, and genomic-enhanced expected progeny differences (GE-EPDs) will be published on the animal. Depending on when the genomic test is completed and uploaded into the genetic evaluation, it could be up to 14 days before GE-EPDs are available.

Figure 2: Estimated days of turnaround for DNA tests. All estimations are in days. Individual experiences may vary.



### The big picture

Given the steps above, it could take four to eight weeks from the time a breeder mails samples to the lab to receive DNA results from the Association. Six weeks can quickly turn in to eight due to retesting or incorrect paperwork delays.

Sticking to an ideal testing calendar provides time to resample if the initial submission ends in a sample failure. From experience, approximately 2-3% of samples fail testing. For example, if you submitted 100 samples, there may be up to three samples you will need to recollect and resubmit through the entire process.

It is important to note DNA testing cannot be expedited, and results cannot magically appear with the push of a button. Our best recommendation is to follow your Association’s DNA submission instructions closely, to gather samples using proper collection techniques and to mail samples at least two months before results are needed.

Breeders are also advised to create a DNA testing calendar that works for your operation and to adhere closely to it. By submitting samples earlier than normal, you may end up testing a few more animals than ultimately needed, but the benefit of having all the information before the final deadline is well worth it. DNA testing is an important investment in the future of the genetics for your operation and that of your customers.

The moral of the story: The time to get started testing your sale animals, replacement heifers and summer show prospects is now. **HW**

**Editor’s Note:** Leoma Wells is a strategic account manager for Neogen Genomics. This article was provided by Neogen as part of the organization’s educational partnership with the AHA.