

DNA Sampling Tips and Tricks

DNA testing is a vital component of the beef industry. The American Hereford Association (AHA) requires DNA testing on any sire born after Jan. 1, 2011, out of which calves are being registered. Additionally, DNA testing is required on dams being flushed and having embryo transfer (ET) calves registered to them. The AHA allows several types of samples to be used for testing. To ensure you are using the best practices when obtaining and mailing your DNA samples, review the following tips.

Hair

Hair used for DNA samples must be collected from the tail switch of the animal. Pull the hair sample; do not cut it. You will need to collect 80 to 100 hairs. This amount may seem like a lot, but hair breaks easily, may not have a good follicle on it or could be contaminated. Make sure the hair is clean and not contaminated with manure, mud, bodily fluids, etc. It is best to wait until the animal has reached weaning age before taking the sample since young calves generally do not have a lot of follicles and are difficult to use in obtaining results.

Blood card

Blood cards can be purchased from the AHA for \$.50 each with a minimum order of 10. Blood can be drawn using any method desired. Fill the blotting paper section of the blood card with blood and saturate the paper just enough to fill the circle, but not too much as to make the card soggy. Oversaturating the card can result in a “bad sample” designation from the lab. Insert the blood card lid into the top slit so there is room for air to get in. Leave the card in a clean area to dry at room temperature. Do not use a heating source for drying. Once the card is dry, open the lid and insert the tab into the bottom slit for storage or shipping. Blood card samples can be collected at any age, so this is a better option than hair if testing a young calf.

Semen straw

Semen straws can be used as a DNA sample for bulls. Straws can be shipped at room temperature – they do not need to be shipped refrigerated. However, semen straws break easily, so put straws in something protective when shipping. An easy way to protect them

from breaking is to use an ink pen. Simply pop the end cap off of an ink pen, pull the ink tube out and then slide the semen straw into the pen. The hard plastic of the pen provides protection for the straw in the mail. It is also best to use a padded envelope to send straws in, even if you put the straw in a pen or some other protective casing.

Tissue sample unit

Tissue sample units (TSUs) are the latest form of samples to hit the market. To collect a TSU, order the proper equipment including tissue sample tubes and an applicator. These products can be ordered directly from Allflex® or through the order form posted on the AHA website. Send completed forms to eartags@hereford.org.

When collecting a TSU, wipe the ear clean. Do not use any cleaning products to clean the ear, as these could contaminate the sample. Try to collect the sample from a portion of the ear without a tattoo as the tattoo ink could contaminate the sample and fail the DNA testing. Be sure the white cap is pressed down firmly on the tube, ensuring no part of the sample or any

liquid can escape. It is important to protect TSUs properly during shipping. Send them in a padded envelope or another form of protective casing.

TSUs are great for obtaining samples on younger calves since the samples can be collected at any age. However, the sample should not be taken immediately after birth. The newborn calf may still have fluids that could contaminate the sample.

All samples should be sent with the corresponding DNA submission form for the specific animal. Obtain this form from the AHA before sending samples into the lab. DNA requests can be made online through MyHerd or by calling or emailing the AHA Customer Service Department. **HW**

Laura Loschke is the education and information service coordinator of the American Hereford Association. She can be reached at lloschke@hereford.org.