

Managing Herefords

DNA Testing Procedures



Hereford breeders wanting to get a female donor dam permitted or a sire permitted for artificial insemination (AI) use must have the animal DNA tested. Producers can also use DNA testing to parentage verify an animal before registering when the sire of the animal is in question.

Maxxam Analytics is the American Hereford Association's (AHA) official DNA lab. All animals that are tested through the lab will also be tested for genetic abnormalities.

The cost for DNA testing for less than 50 samples submitted at one time is \$32/head for hair or \$37/head for semen, blood or tissue. If a breeder submits more than 50 samples at one time, the fee is \$19/head.

Here are the steps for each of the processes:

Permitting donor dams

- Call the AHA office, 816-842-3757, to request a DNA test kit. You will need the animal's registration number.
- AHA will send the producer a DNA Genetic Marker Test form. The form has a bar code specific to the animal. Producers cannot alter the form for another animal.
- Collect the sample and submit it to Maxxam (see "Instructions for obtaining hair samples").

Permitting AI sires

- Call the AHA office, 816-842-3757, to request a DNA test kit. You will need the animal's registration number. AHA will determine if the bull's parents have been tested and are on file. If the bull's sire and dam have not been tested, the breeder will need to collect and submit those samples as well.
- AHA will send the producer a DNA Genetic Marker Test form. The form has a bar code specific to the animal. Producers cannot alter the form for another animal.

- Collect the sample and submit it to Maxxam (see "Instructions for obtaining hair samples").

Genetic abnormality testing

- If a breeder wants to get an animal tested for a genetic abnormality, he can follow the same steps as those for permitting a donor dam. For more information about DNA testing procedures for Hereford breeders, call the AHA at 816-842-3757 and ask for Beverly Kincaid.

Instructions for obtaining hair samples

- Pull hair samples above the tail switch. Do not cut the hair. The hair root contains the material needed for DNA testing.
- Pull 20-25 hairs evenly and directly from the tail so the hair does not break. The switch must be dry and brushed clean of all debris. The lab suggests wrapping the hair around a pencil and then pulling.
- Place the hair in a straight line across the center of the form from the AHA for DNA testing. Keep the hair together with the roots to the left as noted on the form. Do not curl hair. Attach the center hair shafts to the form with tape.
- Fold the form as you would a business letter. Each sample has an individual envelope for mailing. If you have several to mail, put each sample in its individual envelope and then mail all the envelopes in one big envelope to save on postage. The address is located on the bottom of the form.

Note: It is important to only include hair from one animal in each kit. The lab cannot detect cross contamination of samples. The same form can be used for semen straw samples. Semen does not have to be frozen. Put the semen straw in a ballpoint pen casing, capped and taped on the form where it indicates to put the hair shafts. This procedure prevents the semen straw from breaking while being mailed.