

North American Bison Registry: DNA Testing

Tracking and recording genetic information is a crucial management practice for a healthy herd and a great marketing tool when selling your animals, and the NBA has the tools to help you do it.

- DNA testing is exclusively available to NBA members. Not a member? [Please join the NBA today!](#)
- Testing is facilitated through our partnership with the University of California – Davis. NABR offers testing through UC-Davis Veterinary Genetics Laboratory using microsatellite technology.
- Microsatellites are tracts of repetitive DNA in which certain DNA motifs (ranging in length from 2–5 base pairs) are repeated, typically 5–50 times.
- Microsatellites occur at thousands of locations in the genome and they are notable for their high mutation rate and high diversity in populations.

NABR DNA testing service offers four types of DNA testing:

Parentage – \$37/head

Used to determine exact parental lineage lines (i.e., multiple sire herds or large herds where pairing calves and cows can be difficult.) Please note, parents need to have been DNA tested previously to match any DNA data.

Hybridization – \$38/head

Used to determine if cattle allele introgression has occurred within an animal or family of animals.

Charolais Diluter Gene Test – \$37/head

Used to determine if Charolais breed cattle allele introgression has occurred within an animal or family of animals which can result in a light colored bison calf.

Gene(tic) Diversity – \$38/head

The percent of the total genetic markers recognized as historic lineage present in one individual of a particular species population.

Historic Lineage – \$38/head

The presence of genetic markers that have been identified as present in herds recognized for post great-slaughter-era preservation of the species.

Steps for Bison DNA Test Submissions:

If you are collecting skin samples via DNA dart, please contact the NBA staff (303-292-2833) directly before collecting or shipping samples.

Step 1

Get the process started! Request a submission form by emailing info@bisoncentral.com, complete information and email back once animal data is gathered.

Step 2

Collect the samples. Collect 20+ tail hairs per sample, store in a paper envelope, and label accordingly.

- Thoroughly wash and dry your hands.
- Pull (DO NOT CUT) 20-40 tail hairs by wrapping hairs around forefinger or gripping with pliers.
- Grasp hair close to the animal's body to insure roots are included. Pull straight toward your body. Visually check that roots are attached to hair. DO NOT TOUCH ROOT BULBS.
- At least 20 good hair roots are needed to perform testing.
- Tape hair to a page as shown, fold page, place in envelope. Please include owner, bison tag id etc. and known sire information on envelope or page.
- Only use paper for storing samples. Do not save samples in plastic, as it will deteriorate the samples over time.

Owner
Name: _____
Address: _____

Parent Information
SIRE
Name: _____
Registration: _____
DAM
Name: _____
Registration: _____

Bison being tested
Name: _____
Registration: _____
Microchip: _____
Color: _____
Date of Birth: _____ Sex: _____
Breed: _____

----- First fold (Fold back. Do not cut, tape, or staple). -----

Place Roots Here Tape Here Place rest of hair here. Coil if necessary.

Step 3

Confirm the submissions. Send submission form to info@bisoncentral.com so the number of tests and services can be calculated. An invoice will be emailed to you based on the submitted information.

Step 4

Pay for your selected tests. Full payment is required prior to submission of samples.

Step 5

Mail in samples. You will be provided a mailing address by NBA staff once invoicing/payment is completed.

Step 6

Receive results. Turnaround on testing is 6 – 8 weeks depending on availability, and results are emailed directly to the owner by UC Davis Lab.

Additional Opportunities:

More information on the following options can be found at: www.bisoncentral.com/bison-registry/

Individual Bison Registry

Currently, your animals may be registered with the North American Bison Registry for FREE. The following conditions must be met:

- DNA PARENTAGE testing through NABR.
- If animals have been previously DNA PARENTAGE verified through NABR they may be included in the registry with no additional cost.

If your animals are or have been DNA PARENTAGE tested through a source other than NABR they may be registered for a discounted fee of \$15 per entry.

Conservation Herd Registry

Producers may register their foundation herds as a conservation herd, and thereby record the growth of their herds that are being raised sustainably while contributing to bison conservation. Cost to participate is a one-time \$110 fee to support administration of the program, along with a \$50 annual reporting fee.