

Switch to Delta Labs & SNP DNA testing

The CBDA Board has decided that we will change the Laboratory providing our DNA services, and the type of DNA parentage test we are using for our breed. We have been using a Microsatellite parentage test and we will be moving to a SNP parentage test. This change is effective immediately (Feb 10, 2016).

There are four main reasons we made this change:

1. Delta Labs (Edmonton, AB) is part of a Biobank project that is properly cataloguing, storing and preserving our DNA samples.
2. The SNP method is \$8/test cheaper, and the Canadian Beef Breeds Council (CBBC) has received funding to transition beef breeds to SNP testing reducing the cost another \$8 to \$18 per test. The CBBC rebate is in effect until Jan 1, 2017.
3. SNP testing is more precise and accurate than the current Microsatellite method, and we should have fewer problems matching offspring to parents. There have been several members that have had this problem in the last few years, and have not been able to register animals.
4. SNP technology is used in creating Genomic profiles. Genomics is a whole other discussion, but it is basically doing a DNA test to see what the traits of an animal will be; ie: you could DNA test a 3 month old calf and know what the growth and milk production would be in advance.

What you need to know as a breeder:

1. We are currently using a Microsatellite DNA method to test for parentage. It is more expensive, less accurate and limits our Breeds ability to expand DNA testing in the future.
2. SNP parentage testing is the method the CBDA will be using moving forward.
3. All animals born after Jan 1, 2016 that require a DNA test must have a SNP parentage profile done.
4. We strongly recommend that any new DNA tests that you need for animals born prior to that date are done using the SNP method.
5. Microsatellite DNA testing will be phased out wherever possible, however Microsatellite parentage testing will still be available in cases where it is not possible to get a SNP profile from older parents.
6. This change will require the re-testing of your active Fullblood animals in order to register their offspring.
7. In many cases you will not need to send new samples, they can be pulled from the Biobanked samples at the lab provided there is enough DNA left.

8. Because not all of the stored samples will be usable, we do highly recommend that you collect a hair sample from parent animals before you sell them; especially herdsires.
9. The CBDA will pay for the SNP DNA test of all "public" AI sires that currently have Microsat DNA on file will be. AI bulls owned by current members will not be tested by the CBDA.
10. French AI bulls - France is also switching to SNP testing, and we are hoping to get most of the SNP DNA profiles for these bulls from them.
11. In the short term this will create extra costs to our membership, but in the medium term those costs will be recovered and in the long term lead to saving money.
12. If members take advantage of the program below they can have their existing animals converted to SNP testing for \$10. Parentage testing using SNP is \$8 cheaper than the old Microsat testing; ie: the first time you use SNP to parentage verify a calf you have almost covered the cost of re-testing the parent animals.

What are the costs associated with this change:

1. The Canadian Beef Breeds Council (CBBC) has funding to help with the transition, and the CBDA Board has negotiated a lower CLRC fee to help with the parent stock transition (re-tests). Here are the details:
 - \$10/test prior to July 1st, \$17/test July 1- Jan 1, \$25/test after Jan 1, 2017. To be eligible for these prices animals must already be registered and have a DNA number.
 - To be eligible for the \$10 price members must EMAIL a list in Excel Spreadsheet format to Reed Rigney (rigney@clearwave.ca) by July 1st, 2016. Hand written or scanned lists will not be accepted.
 - An Excel Spreadsheet form is available from Reed Rigney, and must include animal name, registration number and DNA number. All these things can be found on your registration papers or the CLRC website by looking up your herd inventory and selecting individual animals.
 - In some cases members may be required to send a new DNA sample if the stored sample is not useable, however those members will be notified by the CBDA and the CBDA will collect all those samples to send in as one package.
 - AI bulls without a DNA file will also be tested for the \$10 fee at a members request and expense. The member will also be responsible for supplying the DNA to do the test (semen). Again this will have a July 1, 2016 deadline and all work, and samples will be submitted to the lab by Reed Rigney on behalf of the CBDA.
 - We are hoping to have all the testing complete by the fall of 2016.
 - Those that miss the July 1, 2016 deadline will need to apply through the CLRC to have their SNP transition test done at the higher fees.

2. If you need to register animals before the SNP transition of the parents is done you can apply to the CLRC for a SNP/Microsat combination test. This test will cost \$32 if done by Jan 1, 2017, and \$50 after that date. This test uses Microsatellite DNA to parentage verify, but also creates a SNP DNA profile so that SNP testing can be used on the animal in the future.
3. Take lots of hair - 50 or more strands. The combination test that will be done until all parents have their DNA converted to SNP actually requires 2 tests done in different labs so they need more hair than normal.
4. SNP DNA will cost \$28/sample for new registrations, or \$25/sample for re-testing animals that are already registered (after Jan 1, 2017).
5. Microsatellite DNA fees have recently increased to \$36/sample to cover the cost/administration of that test.

CLRC Procedures requesting a DNA test:

1. The procedure for samples will be the same as it has always been. Please note that the lab will not accept samples without forms pre-printed by the CLRC.
2. Send in registration applications, or request a DNA test on an animal not previously tested, and DNA forms will be sent to you.
3. Request a SNP DNA re-test for animals already tested and CLRC will forward the request to the lab.
4. DNA fees will be charged at the time of application. That means you should only apply for registrations and DNA tests if you intend to use them in a timely fashion. Refunds will not be given for unused DNA tests.
5. Samples are sent to Delta Labs instead of Genserve/Quantum. The Delta address will be on the form and is:

Delta Genomics
Room 4244 TEC Centre
Enterprise Square,
10230 Jasper Ave
Edmonton, AB
T5J 4P6

Old Genserve/Quantum DNA forms

1. If your CLRC pre-printed DNA forms have "Genserve Labs" on the top left hand corner please send them back to the CLRC (email, fax or mail) so that they can re-issue new forms for Delta Labs.
2. If you have already sent DNA samples with the old forms, don't worry the testing will still be completed and results sent to CLRC.
3. Again please note that Delta Labs will not accept samples without the CLRC preprinted forms.

If you have any further questions please contact Reed Rigney (780) 348-5308 or rigney@clearwave.ca