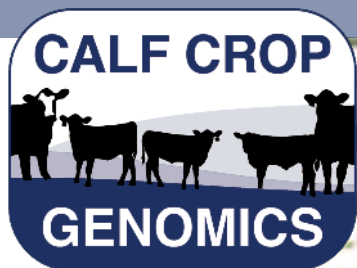


New Research Program Offers Members Half-off Genomic Tests for Their Calf Crop



By Drs. Jackie Atkins and Rachel Endecott

Background

Calf Crop Genomics, a recent program launched by the American Simmental Association in collaboration with Neogen®, offers a 50% off GGP-LD genomic test including parentage (\$25 compared to \$50 equivalent test) to participating breeders who test their entire calf crop. Genotyping entire birth groups is important to 1.) use genomically-enhanced EPDs (GE-EPDs) for selection decisions 2.) reduce selection bias in genomic predictions, and 3.) increase the volume of genotyped animals for future improvements to genetic predictions. The latter two points make any singular genomic test in the future better for all members using genomics.

How can members benefit from participating in the Calf Crop Genomics?

1.) Half-off testing and much more complete information to make selection decisions. Genomic testing is most valuable in cattle with low-accuracy EPDs and

when used to make selection decisions. By testing the entire candidate pool of males, females, or both, breeders can make more informed selection decisions earlier in an animal's life, saving valuable resources spent developing bulls and heifers.

2.) Additional money back with complete weight trait and carcass records. Complete calf-crop phenotypic records also improve EPD predictions. The Calf Crop Genomics project offers a \$5 rebate if 90% of the birth group in a breeder's possession have birth, weaning, and yearling weights. Furthermore, if carcass records are submitted on the terminal calves, breeders can qualify for a \$15 rebate.

3.) Parentage included. The current error in parentage is estimated at 7%. Large scale testing will reveal and help correct pedigree errors, resulting in more accurate EPD predictions.

Empowering members with better selection tools.

4.) Easier future parentage testing. For calves that are developed into seedstock, their parentage markers will already be on file making future parentage calls on their calves easier.

5.) Additional trait testing optional. Trait testing is considerably less expensive when coupled with genomic tests. These add-ons are available at the current GGP-LD prices.

What are the results of the Calf Crop Genomics test?

Members will receive GE-EPDs and parentage on each calf they test plus any add-on tests they requested. The Beef Improvement Federation states that genomic testing is best used in conjunction with other predictors of genetic merit (phenotypic records, pedigree, etc.). The ASA does not return molecular breeding values alone (not incorporated into EPDs). In order to receive a GE-EPD, animals must first have an EPD. Total Herd Enrollment (THE) offers options that provide EPDs on the entire calf crop (Options A, C, and D [females only]). Members who are not in THE can receive EPDs by registering the calves.

Do members have to genotype all their calves to qualify for the reduced rate?

In order to qualify for Calf Crop Genomics pricing, members must submit DNA on a complete birth group. Since heifer and bull calves are evaluated separately, you can submit all your heifers OR all your males OR both, born in the same season. There is a 10% cushion to give a little room for deceased animals, but the goal is to capture genomic information on the entire calf crop before selection decisions are made. For example: if you have 20 male calves born in the spring, then you will need to submit at least 18 male DNA samples to qualify.

Can members order other tests (like coat color and horned/polled) in addition to the genomic and parentage tests?

Yes, the same add-on DNA test options available with GGP-LD will be available with the Calf Crop Genomics project. Members need to indicate additional traits to test on the order form submitted to the ASA.

What do members need to participate in Calf Crop Genomics?

- Tissue Sampling Units (TSUs) collected for all calves
- An ASA number for each calf
- An electronically-submitted DNA order form
- A signed project agreement form

- Since the results of the test are genomically enhanced EPDs, calves will need to have EPDs in order to receive a GE-EPD. See page XX to see if EPDs are available on your calf crop.

When will I have results for my herd?

If all goes smoothly, there will be a 6 to 8 week turnaround time from the time the samples are sent to receiving GE-EPDs. If samples are mislabelled or incomplete information is sent, this will increase the turnaround time.

What types of DNA samples are accepted by the lab?

The only type of sample accepted for this research project is Tissue Sampling Units (TSUs). The TSUs are \$2 each for the sampling units and an applicator is \$40.00. The member is responsible for all shipping costs associated with sending kits.

Is parentage included?

Yes, this test includes parentage markers. As long as the parents have SNP parentage markers on file with the ASA and the progeny has parents listed on their pedigree in Herdbook, the parents can be verified.

How does the rebate work?

\$5 Weight Trait Rebate

There is a weight trait rebate where members receive a \$5 rebate after they submit 90% of the birth group weights at birth, weaning, and yearling age on animals **in their possession** at those times. This will require a current inventory is maintained with the ASA (either updating disposal codes if members are in THE or sending a list of culled cattle to the ASA if members are not in THE)

*If terminal calves are later harvested and carcass records are in Herdbook, they will count towards the 90% threshold for yearling phenotypes.

\$15 Carcass Rebate

Calves that are later harvested can qualify for a \$15 rebate once the carcass record is entered into Herdbook. The potential number of terminal calves within the birth group must be pre-approved prior to testing or the member may not be guaranteed the \$15 rebate.

**Animals will only qualify for one phenotypic rebate.*

Where can I find out more information?

www.simmental.org/ccg

Who should I contact with more questions?

Email researchdna@simmgene.com or call 406-587-4531.

