

Livestock Gentec is a research centre of excellence that develops genomic tools with commercial beef producers in Canada for crossbred commercial cattle. These tools provide simple and effective ways to select superior replacement heifers and sires for superior feeders. Our aim is to help improve efficiency and profitability on your farm.

Replacement Heifer Profit Index™

The RHPI™ Score places 80% weight on hybrid vigour to **select the best replacements today**, and 20% weight on 7 traits for fertility and longevity to help **select for future daughters**.

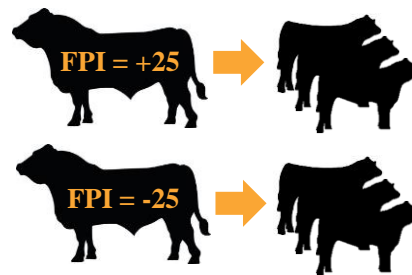
Commercial heifers with an above average RHPI™ Score were more profitable

Economic Return (per 100 heifers)	
+\$14,175	9 more calves
+\$8,550	9 fewer replacements
-\$3,000	Genotyping 100 heifers
\$19,725	6:1 Return on Investment

Feeder Profit Index™

Include the FPI™ in your sire selection process to **improve the carcass value and feed efficiency** of future feeder cattle. 7 traits for efficiency, growth and carcass merit are weighted based on net income.

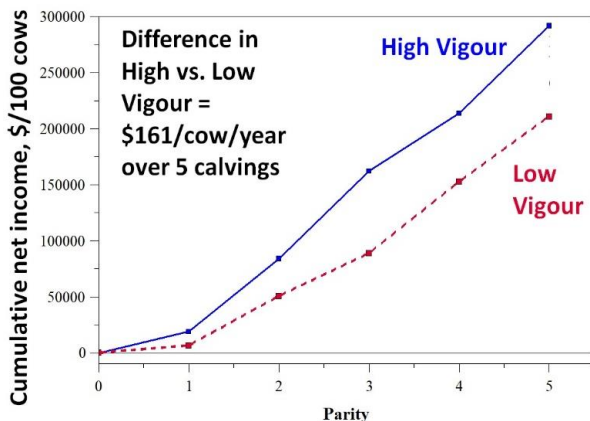
Each 1 pt change in sire FPI™ = +\$1.54 per feeder



Difference = \$77 more per feeder

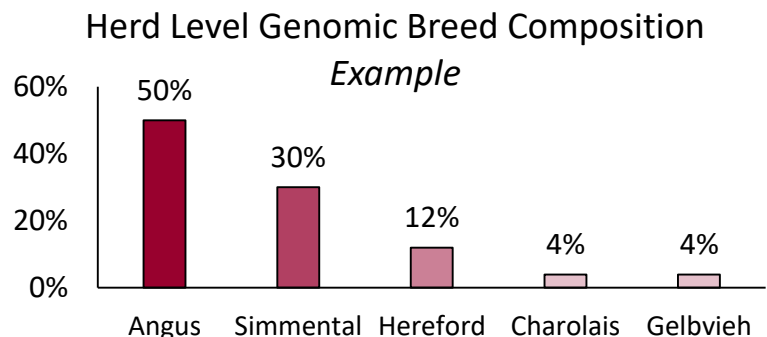
Hybrid Vigour

Increasing hybrid vigour, or degree of crossbreeding, **improves fertility, growth, efficiency and lifetime productivity**.



DNA Pooling

Pooling DNA samples for a group of cows/heifers **reduces the cost** of genomic evaluation and provides **accurate herd level hybrid vigour and genomic breed composition**.





Get Control Over Your Genetics for Less \$\$



What you do?

- Contact Livestock Gentec (780-248-1740; lsgentec@ualberta.ca) for a submission form and to arrange for Tissue Sampling Units (TSU)
- Collect TSU samples from the animals you would like to evaluate
- Send your TSUs and submission form to **Livestock Gentec, 2-31 GSB, 9007-116 Street NW, University of Alberta, Edmonton T6G 2H1**
- Pay only \$20 per animal, with project funding paying for the other \$22
 - DNA pooling costs \$5/animal + \$20 for each group evaluated (20 animals/group)

Turn genomic data into profit

Heifer Selection Criteria

1. Early, easy, single birth
2. Soundness of confirmation & structure
3. 60% of mature cow weight at breeding
4. From cows with many daughters in the herd
5. Rank by RHPI™ Score with an ideal score above 40

Sire Selection & Breeding Criteria

1. Parentage testing – index sires by # progeny, birth weight & wean weight
2. Identify sires producing desired traits & thriving calves
3. Identify which breed composition works best for your herd
4. Maintain above average (40%) hybrid vigour
5. Select terminal sires with a positive FPI™

What you get?

- Genomic breed composition and hybrid vigour score for all animals
- Genomic Expected Progeny Difference values (gEPDs) for 12 traits including growth, feed efficiency, fertility and carcass traits
- Selection Index values for the Feeder Profit Index (FPI™) and Replacement Heifer Profit Index Score (RHPI™ Score)
- Visual rank for all animals based on FPI™ and RHPI™ Score
- **For DNA pooling, only group level genomic breed composition and hybrid vigour score available**

Livestock Gentec is Here to Help!

We are committed to making our genomic tools work for your unique operation. Our research associates will work closely with you to ensure:

- You are testing the right animals for your objectives
- Results are communicated clearly
- You are able to make confident selection decisions to improve your herd
- A sampling schedule is created for future years

Livestock Gentec has received funding to improve the adoption of genomic tools in the Canadian beef industry. That means more support and less risk to get you started on your genomics journey.

