

GeneMark® Genomics

the future of DNA testing



There's always room for improvement



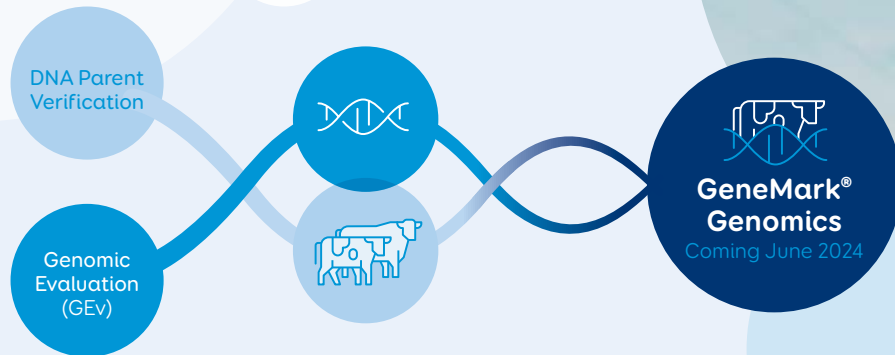


One simple, convenient solution delivering more value

From June 2024, our DNA parentage testing and genomic evaluation services will be combined into one simple and convenient solution - GeneMark Genomics.

Every eligible female sample will receive parent verification and genomic evaluation (GEv), giving you another tool in your toolbox to help identify your highest genetic merit animals and improve your herd.

GeneMark Genomics improves the reliability of an animal's breeding value by including its DNA information within the genomic evaluation model. This allows the animal's genetic merit to be reflected within its breeding value.



It's the way forward

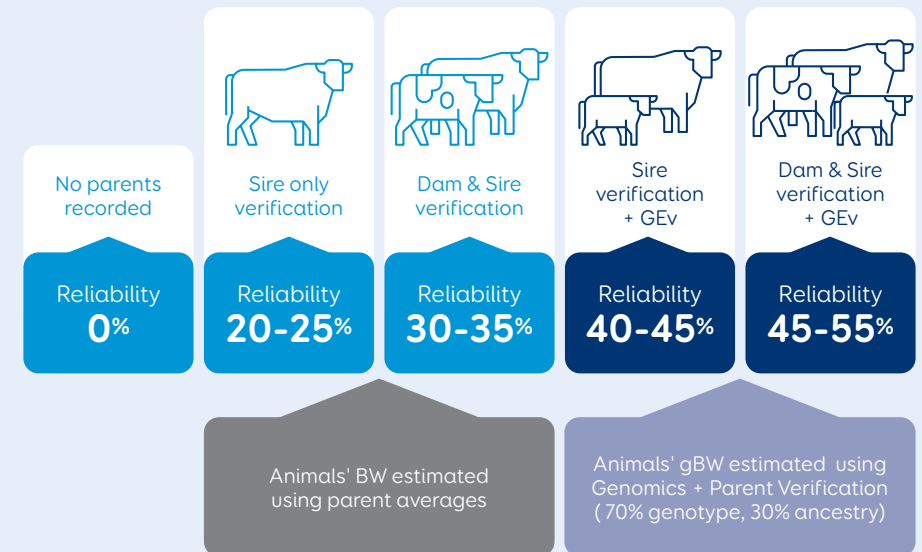
DNA parentage testing has laid a strong foundation for accurately identifying best replacement animals using parent average. With today's advances in DNA technology and genomic science you can now more reliably identify superior genetics at a younger age to help fast track your herds' genetic gain and breed better cows faster.

Our latest technology generates reliable and cost-effective genomic evaluations for all eligible female samples to deliver key benefits on farm.





Improved reliability, more gains



By offering parent verification and genomic evaluation in one convenient service, GeneMark Genomics helps you take the guesswork out of matching calves to their parents for added precision in your breeding programme, while also confidently selecting the highest genetic merit animals to join your milking herd.

- Simple, single solution - every eligible female animal sample you send us will receive genomic evaluation and parent verification.*
- Improved reliability of your animals' breeding value through a complete assessment of their genomic profile, rather than relying on parent average alone.
- More informed breeding decisions by identifying the best replacement animals in your herd at a younger age.
- Reduced risk of inbreeding.

* All animals' parents must have a GeneMark DNA profile for successful parent verification.

The difference is in the data

All eligible female animals will receive parent verification* and a genomic evaluation (GEv).

- Breeding values based on parent average obtain a reliability of approx. 30-35%
- Breeding values based on ancestry and genomic information obtain an increased reliability to approx. 45-55%

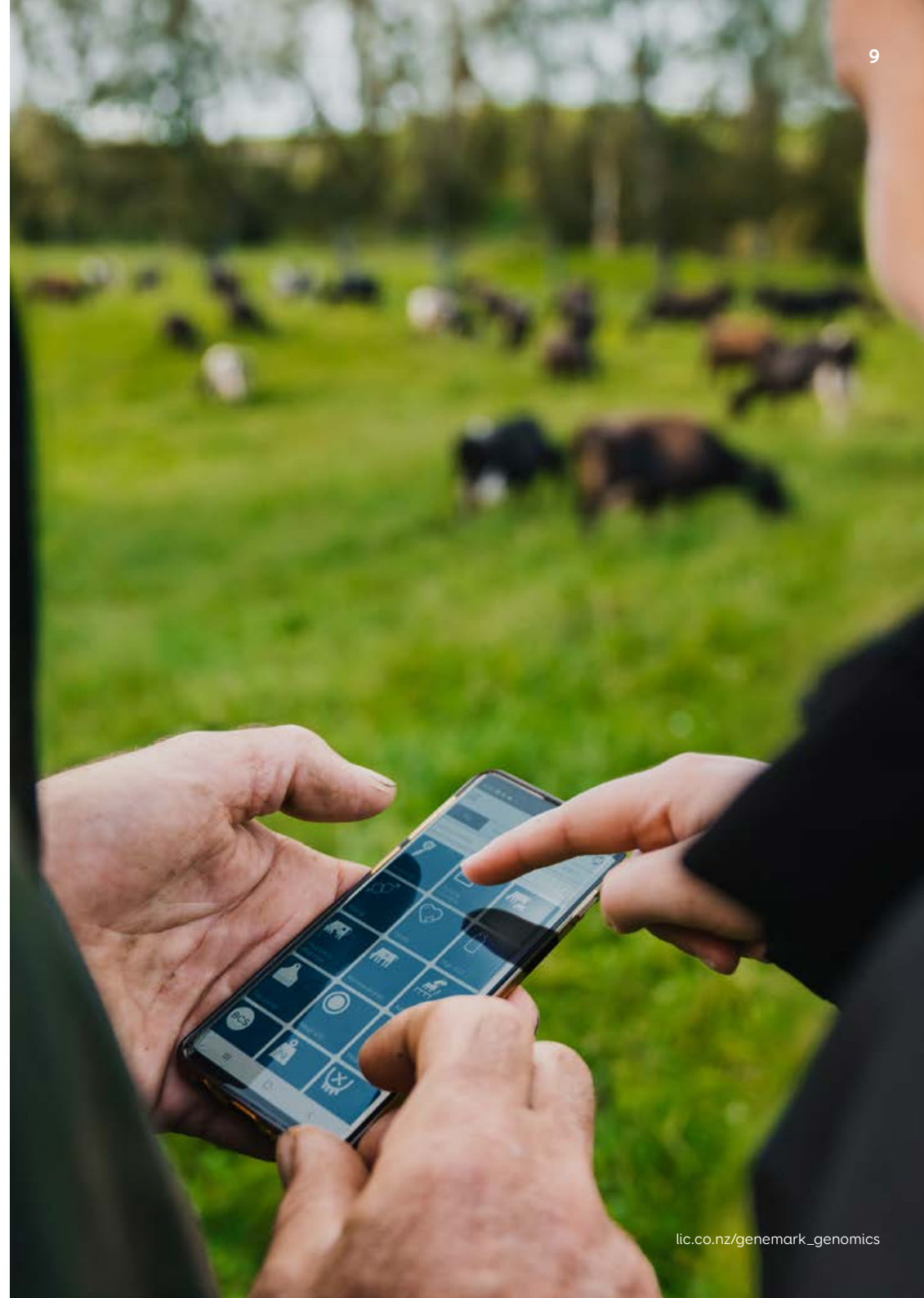
The below table shows how an animal's breeding values deviate from its parent average once its own DNA information is added to the evaluation. This animal's DNA information indicates that overall she is better than parent average – particularly for fat, liveweight and somatic cell count.

Although some breeding values can go up or down, the outcome is a more reliable and accurate prediction of an animal's genetic merit.

Example of Parent Average vs Genomic Evaluation

Trait	Parent Average (½ Sire + ½ Dam)	Following Genomic Evaluation service (½ Sire + ½ Dam + animal's DNA information)
gBW	318/30	405/45
Fat gBV	29.5/32	46.0/48
Protein gBV	14.6/32	17.8/48
Volume gBV	-204/33	-86/49
Liveweight gBV	2.6/26	-3.3/43
Somatic Cell gBV	-0.10/31	-0.18/46
Fertility gBV	2.0/28	-1.9/37
Body Condition Score gBV	0.19/23	0.16/38
Functional Survival gBV	4.3/17	4.2/28
Udder Overall gBV	0.44/23	0.97/36

* Animals whose parents have a GeneMark DNA profile will receive parentage i.e. if we receive a natural mate calf and have no profile of the dam or sire, this animal will not receive parentage.



New solution. More value for farmers

Starting from as little as \$20.65 (excl GST) GeneMark Genomics offers you access to affordable genomics (GEv) and a more valuable product.

All eligible female animals that have been processed through GeneMark since February 2023 will receive a genomic evaluation. From June 2024, this will be shown with a GEv symbol (as shown to right) added to the animals' profile in MINDA®.



Additional tests for BVD, A2/A2 can be added on to GeneMark Genomic testing for increased efficiency and decision making.

GeneMark Genomics Testing options		
Product	Test type	Price per sample excl.
Off peak - youngstock (received between Jan-Aug)	DNA Parentage & GEv	\$31.00
On peak - youngstock (received between Sept-Dec)	DNA Parentage & GEv	\$34.00
Off peak - Dams/sires (received between Jan-Aug)	DNA Parentage & GEv	\$20.65

Additional GeneMark Services		
Product	Test information	Price per sample excl.
BVD Ag ELISA test	Animals over 35 days old	\$14.40
BVD PCR	Animals of any age	\$14.40
A2/A2 Tissue test	Use a tissue sample to test for the A2/A2 gene	\$26.90
A2/A2 Retro test	Existing G3 or GEv profile required	\$14.00
A2/A2 Milk test	Use your herd test samples to test for the A2/A2 protein	\$25.85

*Youngstock = animals younger than 2 years. Dams = animals over 2 years.

**Prices are effective as of the 1 June 2025



Getting your results

Results for GeneMark Genomics will be delivered in phases.

Parentage for all samples will be delivered within four weeks.

We are aiming for a total estimated turnaround time for parentage and GEv results at 6 weeks for youngstock and 9 weeks for dams.

There may be an extension to these turnaround times initially as we introduce this new product into our systems.

This season, GeneMark has delivered 95% of all parentage reports within four weeks and we commit to continually improving this turnaround time for you. For more information on expected turnaround times for GeneMark Genomics, visit our website.

For more information about
GeneMark® Genomics and the
value it can add to your herd,
visit our website or contact our
GeneMark team on **0800 436 362**

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