There *is* a Difference

NEOGEN®

Advanced DNA testing solutions for Brahman cattle

The Fastest Way to **Better Results**

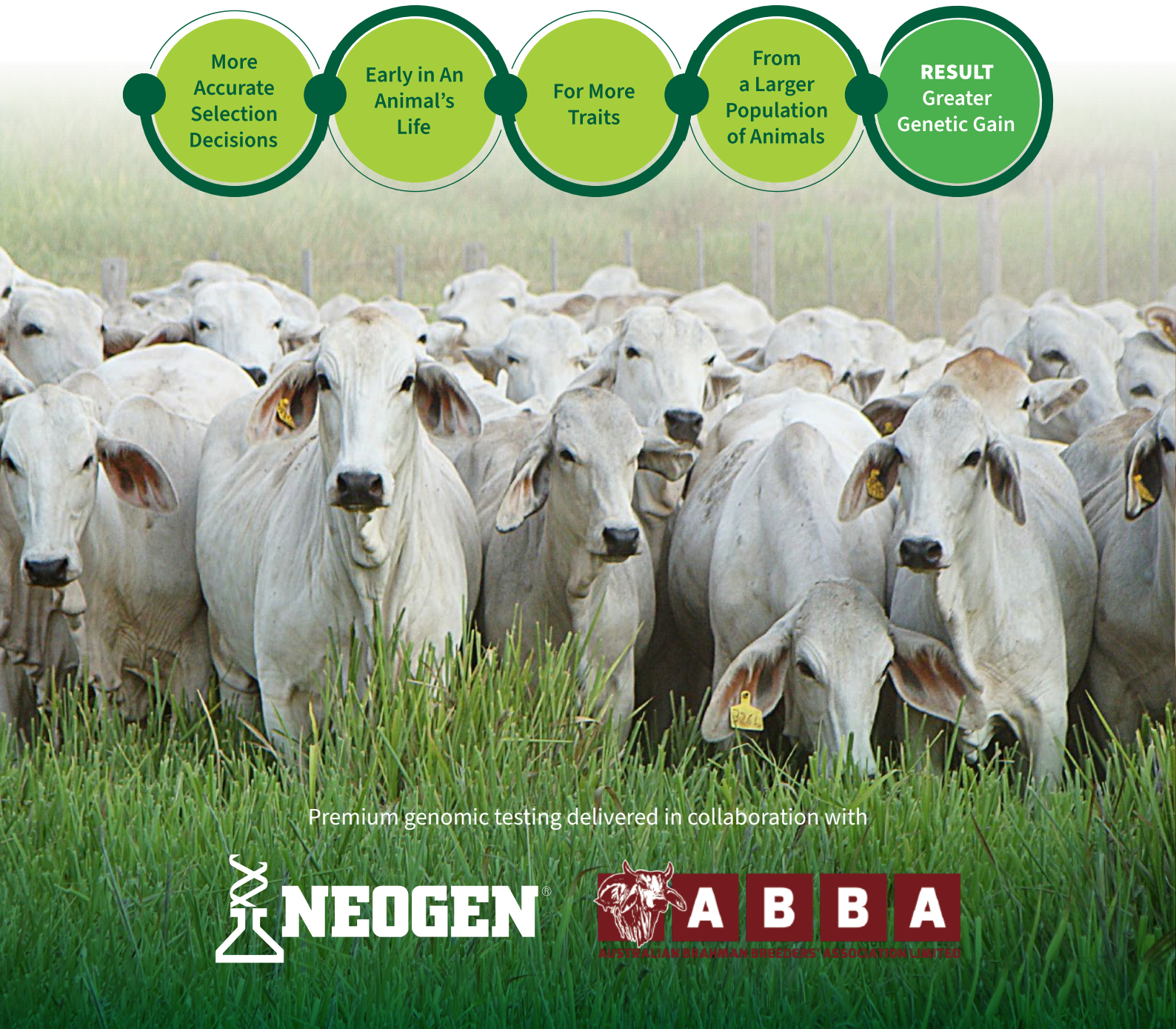
Scan to learn more today!

Premium Genomic Testing for the Australian Brahman Industry

Neogen is proud to partner with the Australian Brahman Breeders Association to offer comprehensive and cost-effective genomic solutions tailored specifically for Brahman seedstock cattle in Australia.

Our comprehensive suite of genomic tools provide valuable insights to help you:

- ☑ Assign parentage and/or reduce parentage errors
- ☑ Make faster rates of genetic gain in a breeding program
- ☑ Make more accurate selection decisions
- ☑ Make selection decisions earlier in an animal's life, and with more confidence
- ☑ Make selection decisions for traits that can't be routinely measured on-farm
- ☑ Fast track introgression of favourable qualitative traits into a herd
- ☑ Streamline the management of recessive genetic conditions
- ☑ Benchmark the genetics of a beef breeding enterprise, and track genetic progress over time



So why should you test your Brahmans with Neogen?...

Because 'There *is* a Difference'

1. Australia Based Genotyping Laboratory

Why send your samples offshore for testing when you can utilise a world-class genomic laboratory based right here in Australia?

Neogen's new, $11 million, state-of-the-art genomics laboratory is located at Ipswich, west of Brisbane in Queensland, and is the largest livestock genomics laboratory in the southern hemisphere.

2. Complete & Cost-Effective Product Range

Neogen offers a comprehensive range of premium genomic solutions, ensuring Brahman breeders can find a genomic testing option that suits their individual needs.

Rather than rely on generic genotyping platforms, Neogen's genomic test offering for Brahman cattle includes the genomic profiling of animals with Neogen's premium, proprietary genotyping array, GGP TropBeef 50K.

The GGP TropBeef 50K was built specifically for *Bos indicus* cattle, and delivers highly informative markers in tropical cattle for genomic prediction, parentage analysis, and the management of important genetic traits and conditions.

Neogen also retails sample collection equipment, such as Allflex TSUs and TSU applicators, offering customers a 'one-stop-shop' for all their genomic testing needs.

3. Unparalleled Testing Turnaround Times

Neogen understands that time is money and prides itself on offering the fastest testing turnaround times of any livestock genomics laboratory.

By leveraging the operational strength, size and efficiency of our state-of-the-art genotyping laboratory in Ipswich, Queensland, coupled with utilisation of the latest high-end genomic analysis tools and robotic processing, the vast majority of genomic testing is completed within 3-4 weeks of when samples arrive at the lab.

4. Nationwide Network of Territory Managers

Neogen's genomic solution portfolio is supported by our experienced sales, technical support and customer service teams who are on hand to offer guidance and support every step of the way.

Our national team of genomic territory managers are located geographically across Australia, and are available to provide Neogen customers with day-to-day assistance, either on- farm or remotely, in the design and execution of their genomic testing program.

5. Long Term Partner of the Australian Brahman Breeders Association

Neogen is proud to be the sole, long term provider of genotyping services to the Australian Brahman Breeders Association.

Neogen continues to be the Australian Brahman industry's genotyping laboratory of choice for research and commercial genotyping services, with many thousands of progeny in the Brahman and Northern Beef Information Nucleus (BIN) projects, and the Repronomics project being genotyped through the Neogen laboratory.

Genomic Solutions for Brahman Seedstock Cattle

Neogen's comprehensive range of genomic tests, ordered through the Australian Brahman Breeders Association, include:

- ☑ Genomic profiling
- ☑ Parentage assignment
- ☑ Screening for genetic conditions and traits of relevance to the Brahman breed
- ☑ Incorporation of genomic profiles into Brahman BREEDPLAN for the calculation of genomically enhanced breeding values.

Neogen's genomic test bundles simplify decisions about what genomic tests to order, and include all genomic tests of relevance for Brahman cattle in Australia.

Genomic Testing Options

SeekSire Cattle Parentage
Includes parentage verification

Brahman Standard Bundle
Includes genomic profiling (GGP TropBeef 50K), parentage verification, bovine horn/poll, pompes E7 and genomically enhanced breeding values*

Brahman Comprehensive Bundle
Includes genomic profiling (GGP TropBeef 50K), parentage verification, bovine horn/poll, pompes E7, congenital myasthenic syndrome, myostatin and genomically enhanced breeding values*

*Analysis completed by BREEDPLAN

Standalone Genetic Traits & Conditions
Brahman Genetic Traits Panel (Includes bovine horn-poll, pompes E7, congenital myasthenic syndrome and tenderness)
Bovine Horn-Poll
Pompes E7
Tenderness
Myostatin (Includes C313Y, E226X, F94L, NT419, NT821 variants)

BVDV (PI)
Must be requested in association with a genomic test

GGP TropBeef 50K

Designed specifically for *Bos indicus* and *Bos indicus* influenced cattle.

Contains approx. 50,000 Single Nucleotide Polymorphisms (SNPs).

Genomic Profiling With A Difference

Rather than utilising generic genotyping platforms, Neogen's genomic test offering for Brahman cattle includes the genomic profiling of animals with Neogen's premium, proprietary genotyping array, GGP TropBeef 50K.

The GeneSeek Genomic Profiler (GGP) TropBeef 50K was developed in partnership with researchers in the USA, Brazil and Australia, and is suitable for a wide range of tropical breeds including Brahman, Droughtmaster, Santa Gertrudis, Brangus and Tropical Composites.

This highly optimised 50K SNP panel is comprised of approximately 50,000 single nucleotide polymorphisms (or SNPs) that have been optimally selected for *Bos indicus* and *Bos indicus* influenced cattle

The GGP TropBeef 50K delivers highly informative markers in tropical cattle for genomic prediction, parentage analysis, and the management of important genetic traits and conditions.

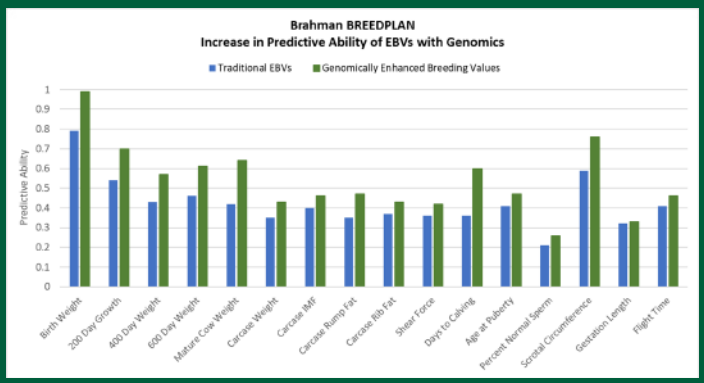
Traits Evaluated

GGP TropBeef 50K genomic profiles are incorporated into the calculation of genomically enhanced breeding values in Brahman BREEDPLAN for the following traits.

BIRTH	Birth Weight, Gestation Length
GROWTH	200 Day Growth, 400 Day Weight, 600 Day Weight, Milk
FERTILITY	Scrotal Size, Days to Calving, Percent Normal Sperm
MATERNAL	Mature Cow Weight
CARCASE	Carcase Weight, Eye Muscle Area, Rib Fat, Rump Fat, Retail Beef Yield, IMF, Shear Force
TEMPERAMENT	Flight Time

Genomically Enhanced Breeding Values Are More Accurate

Research conducted by the Animal Genetics & Breeding Unit (AGBU) has shown that the inclusion of genomic information in Brahman BREEDPLAN improves the predictive ability of EBVs by 11%, on average, clearly demonstrating the benefit of undertaking a genomic testing program in a Brahman seedstock breeding enterprise.



The Genomic Testing Process

Genomic testing for Brahman seedstock cattle should be ordered from the Australian Brahman Breeders Association (ABBA) using the process below:

Get Organised

- Contact the relevant Neogen Australasia Territory Manager to identify the genomic testing that best fits the needs of your breeding program.
- Purchase your TSU applicator and TSUs from Neogen Australasia
- Ensure your calves are recorded with ABBA. All animals must be calf recorded with ABBA prior to genomic testing.

Collect DNA Samples

- Collect DNA samples from your animals.
- TSUs are the most common form of DNA sample, however tail hairs or semen straws can also be submitted for testing.

Submit Your DNA Order

- Complete the Excel based 'DNA Application Form'. Forms are available for download from the ABBA website. On your application form, make sure you complete the TSU barcode, animal ident, sex and the test required, and if parentage verification is required, the idents of the possible sire/s and dam/s. If sires and dams are not nominated, parentage verification will not be conducted.
- Email an electronic copy of the application form to admin@brahman.com.au
- Print and mail a hard copy of the application form, along with your DNA samples to ABBA, PO Box 796, Rockhampton QLD 4700.

Genotyping & Analysis

- Upon receipt of your application form, staff at ABBA will process your order, and forward your samples to the Neogen lab for genotyping.
- Genotyping of your samples will be undertaken, any subsequent analysis of the genomic profiles conducted (e.g. parentage verification), and results (e.g. genomic profiles, parentage and genetic condition results) will be returned to ABBA.
- Where applicable, genomic profiles will be provided to ABRI for inclusion in the Brahman BREEDPLAN genetic evaluation.

Access results

- Results will be provided to you via email by ABBA.
- Parentage and genetic condition results are usually available within 3-4 weeks.
- Subject to the Brahman BREEDPLAN genetic evaluation schedule, genomically enhanced EBVs are usually available within 6-8 weeks.

To find out how we can help your business grow, contact your local Neogen territory manager today.

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NEOGEN®