



There *is* a Difference

NEOGEN®



Advanced DNA testing solutions for registered Wagyu cattle

The Fastest Way to **Better Results**

Scan to learn more today!



Premium Genomic Testing for the Australian Wagyu Industry

Neogen is proud to partner with the Australian Wagyu Association to offer comprehensive and cost-effective genomic solutions tailored specifically for registered Wagyu 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



Premium genomic testing
delivered in collaboration with



So why should you test 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. Comprehensive & Cost-Effective Product Range

Neogen offers a comprehensive range of premium genomic solutions, ensuring Wagyu 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 Wagyu cattle includes the genomic profiling of animals with Neogen's premium, proprietary genotyping array, GGP Bovine 100K.

The GGP Bovine 100K contains approximately 100,000 markers, known as single nucleotide polymorphisms (or SNPs), and is ideal for the calculation of genomically enhanced breeding values, particularly for seedstock animals, along with use for parentage assignment, and the management of 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 Genomic 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 Wagyu Association

Neogen is proud to be a long term partner of the Australian Wagyu Association in the delivery of genomic services to the Wagyu industry in Australia.

Neogen continues to be the Australian Wagyu Association's genotyping laboratory of choice for research and commercial genotyping services, with many thousands of Wagyu animals in the Wagyu Progeny Test Program being genotyped through the Neogen laboratory.

To find out more about the 'Neogen Difference', and how we can help your business grow, contact your local Neogen territory manager today, or visit neogenaustralasia.com.au.

Genomic Solutions for Registered Wagyu Cattle

Neogen offers a comprehensive range of genomic tests for animals recorded in the Australian Wagyu Association's Herdbook, Content and Slaughter registers, including:

- ✓ Genomic profiling
- ✓ Parentage assignment
- ✓ Confirmation of Wagyu breed claims
- ✓ Screening for genetic conditions and traits of relevance to the Wagyu breed
- ✓ Incorporation of genomic profiles into Wagyu 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 Wagyu cattle in Australia.

Genomic Testing Options

SNP Testing

Parentage SNP - Includes genomic profiling (543 SNPs) and parentage verification[^] only

Genomic SNP - Includes genomic profiling (GGP Bovine 100K), parentage verification[^], and genomically enhanced EBVs^{*}

Genomic Test Bundles

Standard Bundle - Includes genomic profiling (GGP Bovine 100K), parentage verification[^], genomically enhanced EBVs^{*}, and screening for the 4 most common genetic conditions in the Wagyu breed (F11, CHS, B3 & IARS)

Elite bundle - Includes genomic profiling (GGP Bovine 100K), parentage verification[^], genomically enhanced EBVs^{*}, bovine horn/poll, tenderness, coat colour & dilution, and screening for all genetic conditions of relevance in the Wagyu breed (Band 3/Spherocystosis (B3), Chediak-Higashi Syndrome (CHS), Factor 11 (F11), Isoleucyl-tRNA Synthetase (IARS), Stearoyl CoA Desaturase (SCD), Claudin 16 Deficiency (CL16))

Add-On Genetic Traits & Conditions

(Can be ordered in association with the Genomic SNP)

Bovine Horn/Poll

IARS

Claudin 16 (CL16)

Coat Colour + Dilution Factor

SCD

ANXN10[^]

Add-On Breed Content

(Can be ordered in association with the Genomic SNP)

Crossbred Wagyu Test [#]

Add-On BVDV Testing

(Can be ordered in association with the Genomic SNP)

Bovine Viral Diarrhoea Virus (BVDV) - Includes screening for animals persistently infected (PI) with BVDV. TSU samples only.

Standalone Genetic Traits & Conditions

(Can be ordered as standalone testing i.e. not in association with the Parentage SNP or Genomic SNP)

Trait Panel - Includes screening for the 4 most common genetic conditions in the Wagyu breed (F11, CHS, B3 & IARS)

Bovine Horn/Poll

IARS

CL16

Coat Colour + Dilution Factor

SCD

ANXN10[^]

[^]Parentage analysis completed by AWA ^{*}Analysis completed by BREEDPLAN [#] Analysis completed by AGBU

[^] Annexin 10 testing is only available via Australian Wagyu Association (AWA)



GGP Bovine 100K

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

Contains approx. 100,000 Single Nucleotide Polymorphisms (SNPs).

Genomic Profiling With A Difference

Rather than utilising generic genotyping platforms, Neogen's genomic test offering for Wagyu cattle includes the genomic profiling of animals with Neogen's premium, proprietary genotyping array, GGP Bovine 100K.

The GeneSeek Genomic Profiler (GGP) Bovine 100K genotyping array contains approximately 100,000 markers, known as single nucleotide polymorphisms (or SNPs), and is designed specifically for *Bos taurus* and *Bos taurus* influenced cattle.

The GGP Bovine 100K lassos the knowledge of industry leading scientists, combined with Neogen's leading SNP selection processes, to precisely choose the most informative 100,000 SNPs for *Bos taurus* cattle.

The GGP Bovine 100K delivers more accurate evaluation of genetic merit, genome wide selection, comparative genetic studies, and higher density imputation.

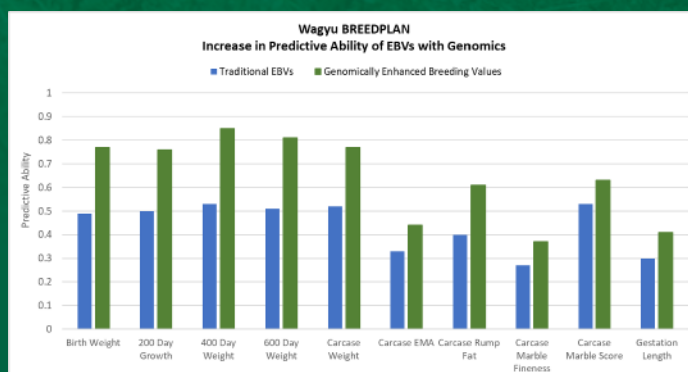
Traits Evaluated

GGP Bovine 100K genomic profiles are incorporated into the calculation of genomically enhanced breeding values in Wagyu BREEDPLAN for the following traits.

BIRTH	Birth Weight, Gestation Length
GROWTH	200 Day Growth, 400 Day Weight, 600 Day Weight, Milk
FERTILITY	Scrotal Size
MATERNAL	Mature Cow Weight
CARCASE	Carcase Weight, Eye Muscle Area, Rump Fat, Retail Beef Yield, Marble Score, Marble Fineness

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 Wagyu BREEDPLAN improves the predictive ability of EBVs by 20%, on average, clearly demonstrating the benefit of undertaking a genomic testing program in a Wagyu seedstock breeding enterprise.



The Genomic Testing Process

Genomic testing for registered Wagyu cattle should be ordered from the Australian Wagyu Association using the process below:



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

+61 (7) 3736 2134
naa-lab@neogen.com
14 Hume Drive, Bundamba QLD 4304

