



There *is* a Difference

NEOGEN®

Advanced DNA testing solutions for Charolais cattle

The Fastest Way to **Better Results**

Scan to learn more today!



Premium Genomic Testing for the Australian Charolais Industry

Neogen is proud to partner with the Charolais Society of Australia to offer comprehensive and cost-effective genomic solutions tailored specifically for Charolais 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
- ✓ Streamline the management of genetic conditions



NEOGEN

Premium genomic testing delivered in collaboration
with the Charolais Society of Australia



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

Rather than rely on generic genotyping platforms, Neogen's genomic test offering for Charolais 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, 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.



5. Long Term Partner of the Charolais Society of Australia

Neogen is proud to be the sole, long term provider of genotyping services to the Charolais Society of Australia.

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 Charolais Seedstock Cattle

Neogen's comprehensive range of genomic tests, ordered through the Charolais Society of Australia, include:

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

Genomic Testing Options

Genomic Test Bundles

Standard Bundle - Includes genomic profiling (GGP Bovine 100K), parentage verification, bovine horn/poll, Myophosphorylase deficiency (MYO), Bovine Progressive Ataxia (BPA) and genomically enhanced EBVs*

*Analysis completed by BREEDPLAN

Standalone Tests

Bovine Horn/Poll

Myophosphorylase deficiency (MYO)

Myostatin (MSTN)

Coat Colour (Black/Red)

Tenderness

Standalone Parentage Verification

(Can be ordered as standalone testing. Includes genomic profiling (SeekSire) and parentage verification only.)

Seeksire Cattle Parentage (543 SNPs)

BVDV (PI) (Must be requested in association with another test)

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



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 Charolais 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 Charolais BREEDPLAN for the following traits.

BIRTH	Calving Ease Direct, Calving Ease Daughters, Birth Weight, Gestation Length
GROWTH	200 Day Growth, 400 Day Weight, 600 Day Weight, Milk
FERTILITY	Scrotal Size, Days to Calving
MATERNAL	Mature Cow Weight
CARCASE	Carcase Weight, Eye Muscle Area, Rib Fat, Rump Fat, Retail Beef Yield, IMF

The Genomic Testing Process

Genomic testing for Charolais seedstock cattle should be ordered from the Charolais Society of Australia 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 the society or Neogen

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. Note there are additional fees for the processing of non-TSU samples.

Submit Your DNA Order

- Submit the details of the animals to be tested and what tests you would like conducted in writing to the Charolais Society of Australia, office@charolais.com.au

Submit Your Samples

- Print the acknowledgement letter (emailed from the society) and mail a hard copy of the acknowledgement letter, along with your DNA samples to Neogen Australasia, 14 Hume Drive, Bundamba, QLD 4304.

Genotyping & Analysis

- 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 the society.
- Where applicable, genomic profiles will be provided to ABRI for inclusion in the Charolais BREEDPLAN genetic evaluation.

Access results

- Results will be provided to you via email by the society.
- Parentage and genetic condition results are usually available within 3-4 weeks.
- Subject to the Charolais 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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