

What's ahead in this ABV release

August 2020 ABV Release Update

HIGHLIGHTS

- August ABV results can be accessed via DataVat.com.au
- 4000 new bulls and 74,000 new cows evaluated since April.
- Join our ABV release highlights webinar on Thursday 20 August
- Programming is underway for changes to BPI and HWI to be implemented in the December ABV release.

Look it up on DataVat

You can now use DataVat to look up the latest ABV release. The August release details will be available from 9am Monday 17 August. Here are some quick links:

[Bull lists: Good Bulls Guide excel files](#)
[Cow lists \(top genotyped females\)](#)
[Animal search - bulls \(replaces Display-a-bull\)](#)
[Animal search - cows](#)

See the last page of this update for more information about DataVat.

Big run makes for big data

Since April, DataGene has evaluated more than 4000 new bulls and 74,000 new cows. Records were broken for both male and female genomic testing in 2019/20 and 20/21 has started strongly. Virtually all Holstein and Jersey bulls sold in the marketplace include genomic information. Thirty-two percent of the new cows have genomic ABVs. Participation in testing of heifers is on the rise.

Big data has big impact

A total of 440,560,185 ABVs and indices were calculated in this run. While this is quite rightly labelled 'big data', it's only useful if it makes a difference to Australian farmers. Here are some real-world examples,

- The Genetic Futures Report shows a farmer that high BPI cows in the herd produced 76kg more milk solids and lasted 4 months longer than the herd compared to the low BPI cows. Breeding high BPI cows makes sense.
- The Genomic Value Tool shows a farmer that using genomics to select the best 100 heifers for the herd from the 200 calves in the sheds, returns a net benefit of at least \$9969 in addition to saving heifer rearing costs.

- The genomic screening of a group of 195 young bulls helps a breeding program manager line up which 5-10 bulls will likely enter the marketplace in the coming months. Selecting the best of the best for the next generation of Australian cows.
- Genetic trends help industry analysts predict future improvements in important performance areas like fertility and mastitis.

Staff changes at DataGene

Thuy Nguyen has joined the DataGene team as Stakeholder Relations Manager. She takes on this role as Michelle Axford transitions onto a major project to accelerate the rate of genomic testing in Australia and study towards a PhD.

Thuy joins us from Agriculture Victoria Research and will be known to many in the dairy industry, as the scientist behind the world first Heat Tolerance ABV.

Contact Thuy: 0438 345 935

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Michelle's contact details remain the same.

DataGene board positions

DataGene is seeking nominations for three non-executive board members, including applications with experience in milk production, the genetics supply chain and R&D implementation. Applications close Friday 28 August. [More information](#) or contact Nigel Crawley, Rimfire Resources 1300 380 701.

Fertility trends

The genetic improvement for daughter fertility is accelerating in Holstein bulls, particularly since the introduction of genomics and improvements to evaluation methods. The rate of gain in cows has been slower because of the time lag between breeding better bulls and breeding better cows. On farm, the 6-week in-calf rate at herd level has improved – but marginally.

Epidemiologist Dr John Morton recently analysed the time lag between genetic choices and on-farm gains using a dataset of Holstein cows with high quality reproductive data (n=903,543 lactations). He concluded that based on recent genetic trends, we should only expect to see small improvements from 2019. It is unrealistic to see whole herd changes earlier than this.



Daughter Fertility trends (Morton, 2020): Blue line: mean of all cows' sires' daughter fertility breeding values by cow's year of birth; maroon line: mean of all cows' daughter fertility breeding values by cow's year of birth; green line: mean of cows' daughter fertility breeding values for all calvings in year.

So what does this mean for bull selection this season? To improve daughter fertility, select bulls from the Good Bulls Guide/App that are at least 105 in Holsteins and 100 in Jerseys. If you want to improve faster, apply an even tighter criteria.

Don't assume that all bulls are good for daughter fertility. Holstein bulls that were actively sold earlier this year range from 95 to 123. In Jerseys the range is 91 to 110 – so it pays to check the Guide/App if you want to make faster progress in this trait.

Don't give up after a couple of years. Genetic improvement requires managers to make good choices with every joining season.

Watch our webinars

Tune in to DataGene's webinar at 12:30 on Thursday 20 August for a discussion about the highlights of the August ABV release.

[Webinar registration](#)

If you missed our earlier webinars, click on the links below to watch the recordings.

[Watch DataVat Demo](#) password: Q?^Y54s^
[Watch Rump ABV](#) password 4+G0J&e%
[Watch Feet & Legs ABV](#) password ^\$5Y8pE3
[Watch Dairy Strength](#) password H9!wcyXc

Last run with current BPI, HWI, TWI

August will be the last public ABV release with the current indices (BPI, HWI, TWI). The December ABV run will see implementation of changes arising from the review of the National Breeding Objective.

National Breeding Objective changes

The review of the National Breeding Objective (NBO) is largely complete and the changes will be implemented for the December 2020 ABV release.

The key changes are:

- Balanced Performance Index (BPI)**
 - Updated with current economic values for fat, protein, feed and labour.
 - Greater emphasis on health and fertility and less emphasis on production traits, compared with 2019 BPI.
 - Jersey BPI will exclude Feed Saved, reflecting significant differences between breed objectives and differences in the evaluation of the Feed Saved ABV.
- Health Weighted Index (HWI)**
 - Updated with current values for fat, protein, feed and labour.
 - Double weighting on Daughter Fertility.
- Type Weighted Index (TWI)**
 - Replaced by Good Bulls Guide tables that rank bulls by Overall Type and Mammary System.
- The base (used to compare animals)**
 - Remain consistent but add a breed purity filter so it is a truer reflection of the breed.

[More info on December updates to BPI, HWI](#)

[More info on NBO review](#)

New resources

[Tech Note: Female ABVs](#)

[DataVat farmer case study Bacon family, NVic](#)

[DataVat farmer case study: Telford/Aikenhead, SA](#)

[DataVat farmer case study: Eugene Rae, WVic](#)

Recent research papers

Jennie E. Pryce & Mekonnen Haile-Mariam

[Symposium review: Genomic selection for reducing environmental impact and adapting to climate change](#). Journal of Dairy Science,

Volume 103, issue 6, P5366-5375, June 2020

Acknowledgement

DataGene is an initiative of Dairy Australia and the herd improvement industry. DairyBio provides the research pipeline to develop and maintain Australian Breeding Values.

More information

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DataVat features

Here is an overview of some popular features of DataVat.

Animal Search on DataVat

DataVat's Animal Search function is publicly accessible and allows the user to look up genetic details of individual bulls or cows, including ABVs, indices, genetic codes, pedigree, progeny and indices graphs. Powerful filters allow the user to create short lists of animals that meet their breeding priorities.

[Quick link to animal search](#)

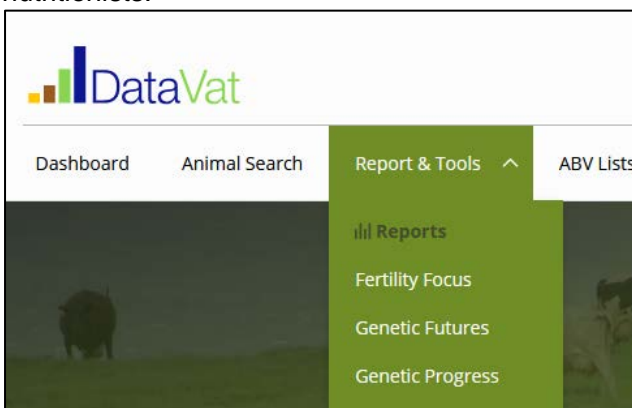
Easy to find 'what's changed'

Did you know that you can compare last ABV to this ABV using the 'Compare' tool on DataVat? When looking at an individual animal click 'Compare' to see what's changed.

Using this tool highlights reasons why bulls move. For example, the new #1 BPI bull (daughter proven), Perseus, has jumped from BPI 371 in April to 451 in August on the back of improved production, feed saved and somatic cell count. He now has more than 400 daughters in Italy, UK, USA and Ireland. He has 25 daughters in Australia but this isn't sufficient to contribute to his proof yet. Amazing what you can find with a single 'click'.

Herd reports on DataVat

Herd owners can look up genetic of animals including genomic results and herd reports such as the Genetic Futures Report. This feature requires the herd owner to register and log in. Herd owners can also authorise view-only access to trusted third parties such as breeding advisors, vets or nutritionists.



DataGene helpdesk ph 1800 841 848

DataVat

Online: [user instructions](#) are available 24/7.
[DataVat FAQs](#)

Email: datavathelp@datagene.com.au

NASIS

Online: [user instructions](#)

Email: NASIShelp@datagene.com.au

Top tip Don't forget there are two websites:
<http://www.datagene.com.au>:

- General info e.g. fact sheets, tech notes
- ABV lists (cows and bulls) including Good Bulls Guide (pdf and excel spreadsheets)
- Data Services for semen companies
<http://www.datavat.com.au>:
- ABV lists (cows and bulls) including Good Bulls Guide (pdf and excel spreadsheets)
- Animal search (replaces Display-a-bull)
- Herd specific records and reports (requires registration and authority from herd owners)

NASIS

The National AI Sire Identification System (NASIS) is now accessed through DataVat. Access to NASIS is restricted to DataGene customers who are issued with a DataVat login and password to access this feature. It provides a user-friendly interface for bull owners to register their animals in the genetic evaluation system. It is fully integrated with the centralised data repository and has a number of new search/view/edit/report features related to both animal identity and genetic evaluation results.

