ABV Release AUGUST 2013

FACT SHEET

Australian Dairy Herd Improvement Scheme

KEY MESSAGES

- Adjustments have been made to the blending of data in the calculation of ABV(g)s. Young bulls especially those sired by a genomic sire will be impacted the most.
- The publishable cut-off for Fertility ABVs has been restored to 55% in the Good Bulls Guide
- The notification of tested status for genetic defects and characteristics has been updated. You will see this change reflected in the August publication of the Good Bulls Guide.
- The August release of the highly regarded Genetic Progress Report is now available and can be accessed through your herd test centre.

Blending of genomic information and conventional ABV for Holstein and Jersey ABV(g)s

Since their introduction in 2011, the reliability and use of genomic based breeding values (ABV(g)s) have seen tremendous gains.

From August 2013, a change to the way animal information is blended to calculate an ABV(g) will be implemented to further improve the accuracy of genetic merit estimations in young animals. The main group of animals impacted by this change are young bulls whose sire is a genomically tested bull with no daughters of his own.

For the majority of animals an ABV(g) is calculated by blending the animals conventional breeding value (made up mostly of pedigree information for young bulls) with their genomic information (known as a DGV or direct genomic value). This calculation takes into account the reliability of all contributing information but has previously excluded conventional breeding values with reliability below 10% (indicating limited available information).

From August 2013 the methodology for blending of information for the calculation of ABV(g)s has been adjusted slightly to include conventional breeding values with low reliability (<10%). The relative contribution of conventional breeding value information will also increase slightly for all animals. Although a conventional breeding value of less than 10% reliability adds limited information to a final proof, this information can still contribute to the final ABV(g) providing its low reliability is accounted for.

The calculation of ABV(g)s will continue to take into consideration the reliability of all contributing information.

The impact of this change will mostly affect animals with low reliability For these animals the adjustment will mean slightly more information contributing to the final ABV(g) which may cause small changes in ABV(g)s and subsequent re-ranking.

At the same time the maximum reliability that the DGV could have for yield in Holstein was increased from 64% to 75%. These thresholds differ by trait and breed. Based on the latest analysis, thresholds for other traits in Holstein were unchanged, while the Jersey ones were brought in line with the Holstein thresholds, generally leading to slightly lower DGV reliabilities.

The result is improved accuracy of ABV(g)s in young bulls and heifers.

Feeding the Genes

ADHIS research project 'Feeding The Genes', supported by Dairy Australia, is now complete and the results delivered to farmers and the wider industry.

The study drew upon data from 505 commercial Australian dairy herds, spanning all five recognised feeding systems used across Australia. The focus of the study was to investigate interactions between genetics and feeding systems on milk production and the cows' ability to last in the herd.

Key findings from the research support the use of bulls listed in the *Good Bulls Guide* for all dairy herds, regardless of breed or feeding system.

Updated codes for genetic defects and characteristics

In line with international standards, the way ADHIS publishes the tested status of animals for genetic defects and characteristics has been updated with this release.

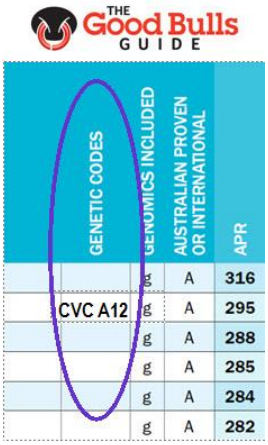
The internationally agreed three letter code system allocates the first 2 letters to trait identification (eg BL for BLAD) and the 3rd letter indicates the animals tested status.

C = Tested positive as carrier
F = Tested as free or non-carrier

Genetic defects include BLAD and CVM whilst genetic characteristics refer to potentially desirable traits including coat colour, polled and A1A2 milk.

ADHIS will record and publish codes for these traits across its full range of publications.

- Web-based publications (Displaybull, Good Bulls Guide spreadsheets, Selectabull) will display all codes.
- Print-based publications (Good Bulls Guide) will display codes for traits with a positive test result.



Genetic codes are available from ADHIS publications once the animals have been tested and the results supplied to ADHIS.

August Genetic Progress Reports now available

The Genetic Progress Report, released earlier this year, is a new tool designed by ADHIS to help simplify the bull selection process for farmers. The report offers herd testing farmers their own herd's genetic picture with little extra effort. Herd test centres can now download the August reports for their clients.

More reliable Fertility ABVs in the Good Bulls Guide

The April 2013 release of ABVs saw the new multi-trait fertility ABV increase the reliability of the Daughter Fertility ABV by 6-10% depending on the breed. This means more choice when breeding for improved fertility with thousands more bulls with publishable fertility ABV's.

In past releases, ADHIS allowed a reduced publishable threshold of 30% for Daughter Fertility in Holstein and Jersey in response to farmer concern over declining fertility, This was done to allow more bulls with fertility ABVs into the Good Bulls Guide, meaning more choice for farmers wanting to breed for improved fertility.

With the improved reliabilities delivered by the new fertility ABV this lowered threshold is no longer required. Consequently the reliability threshold for the Daughter Fertility ABV for publication in the Good Bulls Guide has been returned to 55% for Holstein and Jersey, while it remains at 30% for the other breeds.

This means that Holstein and Jersey bulls with a fertility ABV or ABV(i) reliability of less than 55% will no longer appear in the fertility table of the Good Bulls Guide. Their fertility ABV will also not appear in other tables. To access these lower reliability breeding values simply search for the bull in Displayabull at adhis.com.au

If fertility is a breeding priority, farmers are encouraged to select bulls from the Good Bulls Guide with higher fertility ABVs.

Australia's top talent

Breeders looking to discover Australia's highest ranked genomically tested heifers have new information following the August ABV release.

ADHIS now publishes lists of Australia's top tested heifers at adhis.com.au for the Holstein and Jersey breeds.

Individual breeders that test their animals will also see new data in an updated ABV(g) report format that will allow more convenient comparisons before and after the inclusion of genomic information.

More information

Go to www.adhis.com.au to find

- Feeding The Genes Project Report
- A factsheet detailing changes to the genetic codes and what they mean
- Further information on the Genetic Progress Reports

For more information, contact ADHIS by phone 03 8621 4240 or e-mail abv@adhis.com.au

ADHIS is an Australian Dairy Farmers initiative that receives the majority of its funding from Dairy Australia through the Dairy Services Levy.
Published by ADHIS Pty Ltd. This Fact Sheet is published for your information only. It is published with due care and attention to accuracy, but ADHIS accepts no liability, if, for any reason, the information is inaccurate, incomplete or out of date whether negligent or otherwise. For more information contact ADHIS at Level 2, Swann House, 22 William Street, Melbourne VIC 3000. Phone 03 8621 4240. Fax 03 8621 4280. Email dabernethy@adhis.com.au. Internet www.adhis.com.au.
Copyright ADHIS Pty Ltd 2013. All rights reserved ©