



National Breeding Objective Review 2019/20

Your herd. Your asset. Your future.

National Breeding Objective

The National Breeding Objective (NBO) describes the collective breeding priorities for Australian dairy herds. Its purpose is to enable farmers to breed herds that meet the future needs of the Australian dairy industry.

While Australian Breeding Values (ABVs) express a bull or cow's genetic potential for a single trait such as fertility or protein kilograms most farmers want to improve more than one trait in their herd.

The NBO supports genetic selection pressure for an *agreed group of desirable traits*, providing direction for both bull and cow breeding across the country.

The current National Breeding Objective for the Australian dairy industry is aimed at increasing net farm profit. It is expressed through the three breeding indices – Balanced Performance Index (BPI), Health Weighted Index (HWI) and Type Weighted Index (TWI).

Since the introduction of the BPI, HWI and TWI, there has been a positive and sustained increase in the utilization of Australian indices, especially the BPI. The past 15 years has seen a doubling of the rate of genetic gain in the sires used to produce Australian cows (see graph). This has been due to the combination of an increased awareness and use of the BPI by bull companies and farmers, the use of genomics to select young bulls based on BPI and implementation of the Good Bulls extension strategy. This means that this

review is seen as an update rather than a root and branch review that concludes with wholesale change.

Why review?

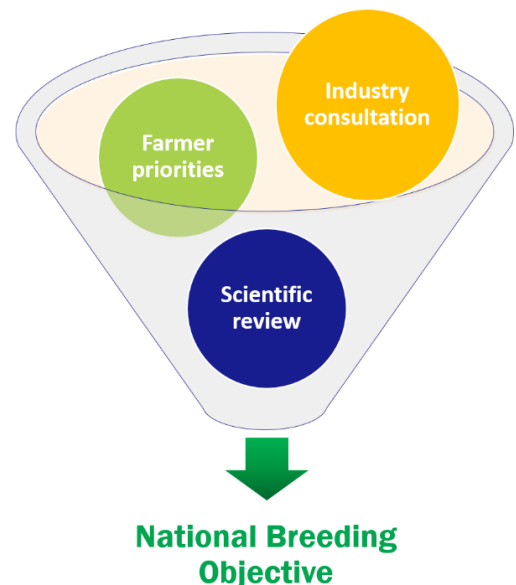
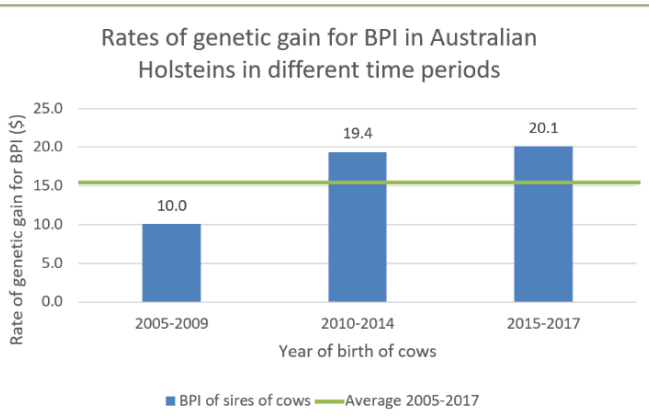
The National Breeding Objective must evolve over time in response to the changing needs of dairy businesses, new knowledge and breeding technologies. As the NBO evolves, so do the indices. DataGene has a policy to review every five years the NBO and the index formulated to meet this objective.

The last review, undertaken in 2014, resulted in the release of the three indices in April 2015. The BPI aligns directly to the top priorities established through Australia's Longest Farmwalk and Farmer Survey in 2014.

2020 review

The purpose of the 2019/20 NBO review is:

- to ensure the NBO which is aimed at driving on-farm profit, still remains relevant, and
- to maintain an index (or indexes) based on strong scientific principles which are in line with farmer preferences and meet the agreed NBO.



Review process

Australian indices make a difference on the next generation of Australian dairy herds so it is important to have a collaborative process involving farmers, scientists, processors, herd improvement organisations and farm advisors.

The NBO review is guided by DataGene's Genetic Evaluation Standing Committee that includes farmers, scientists, breed association, semen reseller and bull company representatives who have been nominated by Australian Dairy Farmers, National Herd Improvement Association, Dairy Australia or the DataGene Board.

DataGene leads the review process which also involves a team of scientists from Agriculture Victoria and AbacusBio, an agribusiness consulting company with expertise in genetics and bioeconomic modelling.

Key themes

The Genetic Evaluation Standing Committee has identified the following areas of focus during the current NBO Review: Fat:Protein ratio, Longevity, fertility, feed efficiency, new traits, multiple indices and updating the base. The [NBO discussion paper](#) provides more details on these.

NBO survey

The NBO survey is a key mechanism for farmers and everyone involved in the Australian herd improvement industry to provide feedback about breeding trait preferences.

The survey, being administered by AbacusBio, will be open in December and January.

Stakeholder involvement

Different stakeholder groups will be involved in different stages of the process. The process has been designed to enable input from farmers, industry and scientists. The Genetic Evaluation Standing Committee will provide final advice to DataGene, based on the review findings.

Timelines

The process and timelines for the National Breeding Objective Review are outlined below. It is expected that the review will be complete by Autumn 2020 with an implementation date of December 2020. The timing of the implementation is planned around the main breeding seasons with a December release the most practical option for farmers and commercial organisations.

More information

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