



# National Animal Welfare Advisory Committee

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## Submission on: National Breeding Objective Review

1. The National Animal Welfare Advisory Committee (NAWAC) welcomes the opportunity to provide feedback on the National Breeding Objective Review.
2. NAWAC is an independent statutory committee established under the Animal Welfare Act 1999 to advise the Minister for Primary Industries on animal welfare matters. Its functions include recommending codes of welfare for issue and making recommendations on legislative proposals including regulations.

## General comments

3. In 2017, NAWAC published an opinion paper on the animal welfare issues associated with selective breeding. This paper is available here <https://www.agriculture.govt.nz/dmsdocument/17053-nawac-opinion-on-animal-welfare-issues-associated-with-selective-breeding>
4. As outlined in the opinion paper, NAWAC considers it unethical to
  - knowingly use animal breeding programmes that produce animals whose physical, health and behavioural needs are compromised by their genetic status,
  - fail to prevent indiscriminate breeding of animals for which there is no reasonable hope of responsible ownership.
5. NAWAC also has concerns that sustainable intensification to reduce the impact of livestock production on the environment could result in more emphasis on high-producing, biologically efficient livestock rather than welfare. There is potential for selection to leave behind hard to measure traits with lower heritability, like disease resistance, when compared to easier to measure production traits. NAWAC has found that livestock industries are already selecting for welfare traits, and it is important that this continues.
6. Overall, NAWAC recommends that animal welfare issues, including physical health, species-specific behaviour and mental health, are taken into account when animals are selectively bred for specific traits and that these are articulated in breeding programmes.

7. NAWAC is encouraged by the dairy industry's recent focus on animal welfare and its proactive approach regarding dairy cattle genetics.

### **Specific comments to questions raised in the consultation document**

8. *How can we better predict key future trends that will affect the breeding direction taken? Should we attempt to predict future prices given the inherent uncertainty in making future predictions?*

While these may be difficult to quantify, future breeding trends should be based not only on price signals for milk and milk components, but also signals that influence the future acceptability of dairying by reducing environmental impact and protecting the naturalness of New Zealand's dairying systems.

9. *Should we be increasing the weighting on fertility in BW? Should we take it one step further and create a high fertility index*

NAWAC agrees with increasing the weighting on fertility within BW and is encouraged by recent work to develop better indicators for high fertility cattle. NAWAC believes it is important to minimise wastage of young dairy animals (e.g. young animals only have one or two seasons in production and then fail due to infertility). Animals that fail within the system in this way carry higher costs for farming and, importantly, for animal welfare, as they do not live a complete productive life. While it may be useful to create a high fertility index which could assist individual farmers endeavouring to resolve problems, the impact of fertility failure on overall farm productivity should justify its inclusion in the overall index.

10. *How much would farmers be willing to give up in profitability in order to make advances in environmental traits? Is the answer contingent on expectations that there will be direct financial incentives to individual farmers, or is this a reasonable price to pay collectively in order to improve the national and international image of dairy farming*

NAWAC considers that the development of reliable environmental traits to enable the breeding of cows with more efficient nitrogen and greenhouse gas metabolism, expressed as emissions/production unit, will ultimately affect profitability in light of customer views of New Zealand dairying systems. These traits should be viewed as having collective benefit and incorporated into breeding indices as appropriate (i.e. as a response to pricing signals which also consider consumer views about environmental responsibility)

However, in the shorter term, the impacts of changing weather patterns on animal welfare need to be managed. NAWAC would like NZAEL to consider whether heat tolerance traits might also be included. Heat stress in dairy cattle is a commonly reported welfare issue, and information to support selection of animals with mechanisms that reduce heat stress should be collected and evaluated to determine the suitability of such traits to be included into BW assessments.

11. *Should NZAEL develop a specific index for high output systems? Should we consider TOP traits for inclusion in a high output index? Alternatively, should NZAEL consider using an overseas, high input system index for high output cows?*

Genetic selection processes should be relevant and match the specific systems in which cows are managed. Hence, where high input systems are employed there should be a selection index that ensures that appropriate genetics for these systems are identified and available. However, this will depend on whether high input systems, with the various impacts that they place upon the cows, will continue to be acceptable to the milk consuming public of the future.

- 12.** *What is the role of NZAEL in providing a national standard set of decision support tools to help farmers make optimal selection and mating decisions?*

The role of NZAEL in providing an independent assessment of genetic merit based on performance of animals in our specific environment and the farming systems we employ has underpinned the success of the New Zealand industry in the past, and is a critical component in ensuring success in the future. The provision of relevant information derived locally, and designed to ensure that the animals we farm are well suited to our farming systems, is important to ensure that their welfare is optimised.

- 13.** *Should we continue to apply indirect selection for shorter gestation length through its association with early calving and higher CR42 breeding values? Or should we take it one step further and select directly for gestation length by including it as its own trait in BW to take into account the service sire advantage effect? Should direct selection favouring very short gestation length bulls be applied before we can be sure that this will not result in compromised calf viability and performance?*

Until the physiological basis of the mode of action of very short gestation bulls and knowledge of its impact on calf survivability are better understood, NAWAC would caution against a direct selection process and favours the more conservative approach being applied at present through the association with higher CR42 breeding values.

- 14.** *Is stakeholder opinion that it is sufficient to include udder overall indirectly in BW by including it as a predictor trait for functional survival, or do stakeholders believe udder overall should be considered as a standalone trait in BW?*

The indirect inclusion of udder overall as part of functional survival seems logical at present given that apart from influencing susceptibility to mastitis, poor udder conformation that affects actual milking processes is an important factor in culling decisions for young cows (see comments above regarding welfare impacts of high wastage rates of young cows).

- 15.** *Should there be investment made in the development of a calf survival genetic evaluation? If so, should calf survival be included in BW – as its own trait, but also indirectly as a correlated trait for cow survival?*

NAWAC is unsure whether a specific calf survival trait would be beneficial – failure of calf survival is often associated with difficult calving and the downstream impact of this is accounted for indirectly within traits such as CR42.

A calf survival trait might be better incorporated into selection methodology for better (beef) sires to produce calves that enter the beef industry. NAWAC has concerns about the future viability of the bobby calf industry and considers it an area of significant wastage of animal lives. NAWAC supports all efforts that promote the concept of cross-breeding to ensure that more calves are reared for productive purposes.

- 16.** *Should NZAEL create a specific OAD index? Should there be a separate evaluation and breeding program? Should the existing breeding values be combined together differently to obtain a custom OAD index?*

OAD milking appears to have benefits in some systems and for some parts of individual herds (i.e. young cows) by reducing several components of production pressure. NAWAC agrees that with correct implementation, OAD has welfare benefits and that development of a specific index for OAD selection has merit. However, given that reduced production pressure also has positive correlations with elements of BW, such as fertility traits, this may not be a task with high priority.

- 17.** *Should facial eczema tolerance be considered as a trait in national genetic evaluations? What strategy should we implement to include this trait in a national selection approach?*

NAWAC strongly supports the consideration of facial eczema tolerance in national genetic evaluations.

Facial eczema impacts on cow welfare, production and survival. It results in acute pain and distress through the early stages of intoxication, while chronic liver disease and skin conditions also have broader long-term effects on animal wellbeing. While it may be difficult to incorporate facial eczema tolerance into a breeding index *per se*, there should be information about individual sire tolerance to sporidesmin available to guide farmers in facial eczema-prone areas in the selection of tolerant sires, similar to what occurs with some breeds of sheep.

- 18.** *Should calving difficulty be included in BW or should it be a stand alone trait with information about the risk of a bull for use on heifers based on its calving difficulty EBV and reliability?*

The indirect impact of calving difficulty on CR42 currently provides some minimal weighting on overall BW, but it may be better managed as a stand-alone trait. Associated with this is a need for calving difficulty information to be readily available for terminal beef sires (see comments above regarding future trends to reduce bobby calf numbers).

- 19.** *Is an industry wide consultation effort required to increase engagement of dairy farmers and other stakeholders in New Zealand? Are there questions and topics of discussion around breeding and genetics that should be addressed by the wider dairy farming community? Are there clusters of farmers with specific trait preferences that could be met by more than one index considered at NZAEL level?*

NAWAC has previously expressed a view that there is some desirability in developing polled-ness within the New Zealand dairy herd. Horn removal by genetic means reduces the need for the painful manipulations of disbudding and dehorning, and also protects against the many welfare issues which occur as horns re-grow in an irregular manner which can result in chronic skin and eye lesions. This may become increasingly important as milk consumers consider naturalness as an attribute of our dairying systems.