



Recommendation on Validation of Dairy Novel Traits

Introduction

The availability of new phenotypes related to dairy novel traits has provided a lot of opportunities for Member Countries to expand their national genetic evaluations programs with their inclusion. For most of such novel traits the number of years for which the phenotypic data is available remains limited, posing a potential issue regarding the applicability of the recommended EURC genetic model validation methods. For some of such traits, in fact, there could be not enough phenotypic data to apply a four years' truncation as currently required by one of the Interbull validation methods (test method III). Given the potential benefits of EU members to receive international evaluation for novel traits, the EURC considered it helpful to provide a set of recommendations to be used as reference.

Recommendation

After reviewing all possible implications related to allowing results from unvalidated genetic models entering the international evaluations and considering past approaches applied, the following recommendation has been made:

Validation results for any novel traits will be requested **ONLY** if the country/organisation has a minimum of 10 years of phenotypic data available for that specific new trait. If this requirement is not met, then the country/organisation would still be able to join the international evaluation without the need to validate their genetic model. However, the country/organisation would be required to provide proof of the R&D steps performed at the national level (in the form of papers, reports etc.) to show that a certain level of investigation has been done to select the model in place.

The current validation requirements and frequency would be applied as soon as the minimum number of phenotypic data would be reached.

Considerations

The above recommendation finds its reasonings after considering the following points:

The amount of data included in the international evaluation from any not validated models would be too low to cause any possible harm to the international results





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A similar approach was adopted in the past with the introduction of the Body Condition Score (bcs) and Locomotion (loc) traits for the Holstein conformation evaluation confirming the negligible effect of the inclusion of the unvalidated models on the international results versus the boost effect that the availability of international results had on the phenotypic data recording.

EURC is continuing its work on revising the current validation methods for models II and III which, once the work is finalized, could be feasible also for novel traits with scarce phenotypic data. Moreover, they suggested for the Centre request proof of the R&D steps performed at the national level (in the form of papers, reports etc.) for the country/organisation to show that a certain level of investigation has been done to select the model in place.



Funded by the
European Union

The project is part of the Interbull Centre's activities as the European Union Reference Centre for Zootechnics (Bovine Breeding). The Interbull Centre receives funding from the European Union under Grant Agreement "Project: 101202338 — EURC- Zootechnics 2025-2027 — SMP-FOOD-2025-EURL-EURC-PJG-IBA"