



INTERBULL EXECUTIVE SUMMARY 2022 No.1

JANUARY - MARCH 2022

This first issue of the Interbull Executive Summary of 2022 covers the period January – March. It includes the latest information from the Interbull Centre and important decisions taken by the Steering Committee (SC) and Technical Committee (ITC) in their meetings of 16 February and 8 March 2022 respectively.

Publications and Communication:

The following documents were completed in 2022 and are available on the [Interbull website](#).

- Interbull Centre Activity Report 2021
- Interbull Centre Financial Report 2021
- Interbull Centre Annual Operating Plan 2022.

Interbull Governance Review

The Interbull Governance Review (commissioned by the Interbull SC to identify improvements to make governance processes more effective, improve the interaction and effectiveness of governance structures, and enhance governance-related relationships) has been considered by the SC. A range of recommendations and proposed actions have been identified. An overview of the review was presented to the ICAR Board during their meeting of 23 February 2022. Actions implemented by the SC as a result of the review and proposed actions will be shared with the wider community in connection with the 2022 ICAR-Interbull Meeting.

Interbull Service Updates:

GMACE Update

The GMACE software was updated in January 2022, to improve rates of convergence and to reduce computations. These changes were necessary to better align GMACE with published MACE proofs. Impacts were small for the evaluation scales of large populations, but in other cases the parent averages used in GMACE were very much improved, mainly for the scales of smaller populations with no national GEBV contributing to GMACE and relatively few locally proven bulls contributing to MACE.

Service Calendars

The 2023 Interbull and Interbeef Service calendars are available online:

Interbull: <https://interbull.org/ib/servicecalendar>

Interbeef: https://wiki.interbull.org/public/Interbeef_calendar?action=print&rev=46.

New Service Users

Cooperative CRV ua (The Netherlands) is the latest organisation to join the GenoEx-PSE service, with parentage SNP data from The Netherlands and Flanders (Belgium). As a result, parentage SNP data will be available through GenoEx-PSE for populations from 14 countries: Austria, Belgium, Denmark, Finland, Germany, Ireland, Italy, Japan, Luxemburg, The Netherlands, Norway, Poland, Slovenia and Sweden.



PREP Database

In March 2022, the Interbull Centre launched the Beta version of a new platform for sharing Performance Recording, Evaluation and Publication information: the **PREP** database!

PREP is a database platform developed and hosted at the Interbull Centre within the context of the Interbull Centre's function as the European Union Reference Centre (EURC) and enables users to upload descriptive information regarding performance recording, national genetic evaluation systems and publication policies. The platform is accessible by all European and International Cattle breeding organisations, whether or not they are involved in Interbull Centre's International Bull evaluations for dairy (Interbull) and/or beef (Interbeef) breeds. The PREP database is accessible, after registration, via <https://prep.interbull.org/>. Contact the Interbull Centre if you require access.

European Union Reference Centre

The European Commission designated the Interbull Centre as the European Union Reference Centre for the "scientific and technical contribution to the harmonisation and improvement of the methods of performance testing and genetic evaluation of purebred breeding animals of the bovine species" from 1 November 2018; the same date as the European Union Animal Breeding Regulation (EU Regulation 2016/1012) come into force.



PREP will, over time, replace the way descriptions of national genetic evaluations are displayed and accessed, opening up the possibility for a wide range of cattle breeding organisations, including Interbull Service Users, to provide descriptive information for any breed and trait that is nationally recorded.

The PREP database will also play a central role in the way organisations could provide their feedback on the next economically important trait(s) to be included in international evaluations.

Webinar: PREP Database and New Traits Pipeline.

On 31 March 2022, the New Traits Pipeline Working Group and Interbull Centre organised a webinar with the aim of introducing current Interbull Service Users and National Genetic Evaluation Centres to 1) the framework that the WG has created to guide SC, ITC, Interbull Centre and Service Users in the decision process for introducing new traits and services in Interbull Centre portfolio, and 2) the role of the PREP database in collecting information on recorded traits.

Research & Development:

Interbull Genomic Reliability (GREL) WG (Chair: Zengting Liu)

The GREL WG welcomed 3 new members (Ismo Strandén, Jeremie VandenPlas, and Herwin Eding) and a new Interbull Centre representative (Katrine Haugaard). The WG is working on the implementation of the Interbull Genomic Reliability Method in Single-Step Models.

Interbull Trend Validation Tests WG (Chair: Esa Mäntysaari)

The Validation WG is progressing in its work toward the development of new validation methods to be used in the genomic era addressing the limitations observed in the current Interbull validation methods. The WG is preparing to present the results of its activity during the 2022 ICAR-Interbull Meeting in Montréal.



Interbull Genomic pre-selection and Future MACE WG (Chair: Pete Sullivan)

The Future MACE WG identified the main principles of the Future MACE model aimed at handling genomic pre-selection (GPS) bias, and will perform preliminary testing of the new model. Results are expected to be presented during the 2022 ICAR-Interbull Meeting.

Recommendations for Harmonisation of Calving Traits in MACE

Following a request from the ITC, the Interbull Centre reviewed the information provided by NGECS in the GE Forms for Calving Traits. Based on the information collected, a set of recommendations to harmonise calving traits proofs to be submitted for MACE evaluations has been prepared and shared with the ITC members. The documentation is currently under review by the ITC and will, once finalised and approved by the Interbull SC, be shared with the Interbull community.

SNPMace Update

The SNPMace Feasibility Study showed the technical feasibility of the SNPMace Methodology: More accurate SNP solutions, and hence more accurate genomic EBVs, can be achieved by 1) first analysing training population within a country and then 2) combining the SNP solutions from a range of countries – without the exchange of genotypes.

SNPMace Consultation

Considering the significant differences between the current Interbull services and the envisaged SNPMace service, Interbull organised a SNPMace Consultation Webinar (attended by 64 participants) and Survey in November 2021, with 32 out of the 34 NGECS completing the survey in early 2022. From the results of the survey, it can be concluded that:

- a) There is a good understanding amongst the Interbull Community of the outlined principles and concepts of the SNPMace Business Model.
- b) Interbull Service Users agree in principle with the presented Business Model and Service Options.
- c) Interest in a SNPMace Service is relevant across several breed x trait combinations

SNPMace Pilot Run

Based on the above study and survey, the Interbull Steering Committee has made the following decisions and recommendations:

- To continue with developing SNPMace as a potential new Service to be offered to both “Closed Groups” and “Open Groups”.
- To start the Implementation phase through Pilot Runs in collaboration with two defined groups: “EuroGenomics” (for Holstein) and “InterGenomics” (for Brown Swiss).

Both EuroGenomics and InterGenomics have recently been invited to participate on a collaborative basis in a SNPMace Pilot Run. Next steps are to be discussed, and we plan to provide an update to the Interbull Community during the 2022 ICAR-Interbull Meeting.



2022 ICAR-Interbull Meeting in Montréal, Canada

Considering the recent changes in directives and restrictions issued by provincial and Canadian governments, the Organizing Committee has announced that the 2022 ICAR-Interbull Meeting will be an **IN-PERSON** event! The Meeting will be held in Montréal, Québec, Canada, from 30 May until 3 June 2022. Registration is open until 24 May 2022, with “Early Bird discounts” until 15 April 2022. Full details are available on www.icar2022.ca.



ICAR Conference

The ICAR programme includes the General Assembly, Plenary Session and eight Technical Sessions in animal welfare, feed and gas, sustainability, and artificial intelligence during Wednesday 1- Friday 3 June 2022.

Interbull Programme

Monday 30 May 2022: **Interbull Open Meeting**

Tuesday 31 May 2022: **Interbull Open Meeting** and **Interbull Business Meeting**

Wednesday 1 June 2022: **Joint ICAR-Interbull Session:** “Recording and selection tools for feed efficiency and environmental impact”.

The overall theme for the Interbull Open Meetings is: “*Innovations in national and international genetic and genomic evaluations*”. Title and abstract submission for the Open Meeting is open until 20 April 2022. Authors are invited to submit abstracts within the overarching above theme that specifically address the following topics for dairy and beef:

- **Big data for the benefit of genetic and genomic evaluation**
- **Meta-analytical methods in animal genetic and genomic evaluation**
- **Experience with single-step evaluation**
- **Implementing new traits in genetic and genomic evaluation systems**
- **Cross-breed genetic and genomic evaluations**

*** **NOTE:** The following theme has recently been added ***

- **Sustainability, efficiency, methane emission and adaptation/resilience.**

Further details, as well as the link to submit your title and abstract, are available on: https://interbull.org/ib/2022_icar_interbull_meeting