



INTERBULL EXECUTIVE SUMMARY

JULY-DECEMBER 2021

The most recent Executive Summary was published soon after the ICAR-Interbull 2021 Conference, and covered May and June 2021. This current executive summary reports the latest information about the Interbull Centre and important decisions taken by the Steering Committee in their meetings on 9 September, 18 October, 23 November and 9 December 2021.

Interbull Governance Review

The Interbull Steering Committee commissioned a review of governance activities for Interbull in July 2021. The purpose of this review was to identify any improvements to make governance processes more effective, improve the interaction and effectiveness of governance structures, and enhance governance-related relationships: all key points identified during the Interbull Strategic Meeting and SWOT analysis held in January 2020.

Once completed, the outcomes of the review will be shared with the wider community during the Interbull Annual Meeting 2022 in Montreal.

ISO Certification at the Interbull Centre

The Interbull Centre is ISO 9001 certified since January 2016. An ISO 9001 recertification audit was performed by Bureau Veritas on 9 November 2021. Interbull Centre's Quality management system was found complying with the standard, without any non-conformities, and was re-certified for services related to Interbull dairy and beef evaluations (MACE, GMACE, InterGenomics, Interbeef) and data exchange service (GenoEx-PSE).

Interbull Services

Fees

Supplementary invoices for the 2021 Interbull and Interbeef services that were not included in the May 2021 invoices, have been invoiced in November 2021.

In 2020, the Steering Committee introduced a new policy to review the fees for services offered by the Interbull Centre annually. During the most recent Steering Committee meeting (9 December 2021), it was decided that the fees increase for 2022, will be 3% for all Interbull Centre services.

GMACE: Software Update

The GMACE software was recently reviewed due to observed misalignments between GMACE and MACE results in Estonia. After investigation, the root cause of the problem was identified in a lack of convergence. The convergence problem affected different traits and countries to varying degrees, but the largest impacts were almost exclusively in countries with fewer than two thousand locally proven bulls for the given trait.

A series of improvements were made to the GMACE software to address the convergence issue. One change dramatically improved the paths to convergence, specifically where this was needed, and several other changes reduced the run time requirements, by essentially cutting computations in half. Thus, fewer iterations are now required, while substantially more iterations were made possible in the same amount of run time. In combination, these improvements effectively allowed us to eliminate all identified convergence problems, across all traits and countries, while still maintaining the current level of service and timeline used by Interbull for GMACE.

The updates have been recommended by the Interbull Technical Committee and approved by the Steering Committee, and have been incorporated into the Interbull GMACE systems. The new software will be officially implemented with the January 2022 GMACE test run. A detailed report is available on request from the Interbull Centre.

IDEA: New upload feedback

IDEA will soon switch to a dedicated page where you (and other members of your organization) can view all feedback relevant to any upload events made by your organization. This will be in the form of a table, where you can look back at current and past feedbacks, download the relevant files and so on.

There will also be an RSS feed available, so you can set up notifications of new feedback as it becomes available, in a way similar to previous email feedback.

With this new feedback system, information on all type of uploads will be available to each and every member of the same organization and not only available, in the form of an email, to the person making the upload.

Moving away from an email-based feedback methodology to an RSS based one, will make the feedback more stable and reliable, without risk of spam or mail server problems. Also, it will make it easier to programmatically handle feedback from the IDEA system.

IDEA emails and RSS feeds will co-exist to give time to all IDEA users to get acquainted with the RSS feed in 2022. We intend to transfer to RSS feeds only from 1 January 2023. More detailed information will be shared with the service users.

Checking programs: Upgrade from Python2 to Python3

During 2021, Interbull Centre staff has actively worked on upgrading all available checking programs from Python2 to Python3. The upgrade was deemed necessary as Python2 has reached end of life and will no longer be supported by developers.

The Interbull Centre's Python upgrade has now completed, and all users are strongly advised to upgrade to Python3 (minimum 3.6) in order to minimise potential issues.

Interbull Centre Infrastructure:

Interbull FTP-server recently upgraded

Interbull FTP-server has been recently updated: older versions of the ssh protocol has become obsolete and will no longer be used for security reasons. If you experience troubles connecting to the server, please consider upgrading the client software used, to be able to comply with only secure versions of the ssh protocol. Due to the ftp-server update the server has also got a new fingerprint so when connecting for the first time, it will be normal to receive a message about "a man in the middle attack". In order to finalize your login, delete the line corresponding to the FTP server in your `.ssh/known_hosts` file, just as reported by the warning message.

Publications and Communication:

Interbull Bulletin

The Proceedings of the 2021 virtual Interbull Meeting were published in Interbull Bulletin No 56 in September 2021 and are now available online on the Interbull Bulletin. We take once more the opportunity to thank both authors and co-authors for choosing the Interbull meeting to present the state of the art of their research (<https://journal.interbull.org/index.php/ib>).

Email issues

The Interbull Centre's emails (xxx@slu.se) are provided through the email server of the Swedish University of Agricultural Sciences. SLU has encountered some seemingly 'random' issues with emails not being delivered or being treated as spam. We kindly request that you contact Interbull Centre staff if some expected Interbull communications were not received. Please accept our apologies for any inconvenience this may have caused.

Research & Development:

SNPMace: Consultation with Interbull Service Users

Sixty-four participants joined the **Interbull SNPMace Consultation Webinar** held on 24 November 2021. The webinar focused on describing the principles of the Business Model envisaged for a potential SNPMACE Service and informed the participants on the Interbull SNPMace Consultation Survey, which has been issued on 26 November 2021. The **SNPMace Consultation Survey**, was distributed to 33 NGECS on 26 November 2021, with a deadline for providing feedback set to 15 December 2021.

ReDiverse

The Interbull Centre has been involved in the European Union-funded "ReDiverse" project "*Biodiversity Within and Between European Red Dairy Breeds - Conservation through Utilization*". The main purpose of this project, which has now finished, was to develop and to set in place collaborative and integrated novel breeding and management concepts to achieve a resilient and competitive use of these resources and to strengthen best practices for small farm holders for improving product quality and to supply ecosystem services according to their specific circumstances. An investigation in the population structure and genetic connectedness as well as phenotype recording schemes for the European Red Dairy Breeds was carried on as part of the project and mostly based on Interbull's Genetic Evaluations Forms. The results of this investigation are available on https://interbull.org/ib/rediverse_phenotypic_report.

GenTORE

The European Union-funded "GenTORE" project "*Genomic management tools to optimise resilience and efficiency*" is due to be completed in May 2022. The Interbull Centre is involved in the development of new evaluations for traits related to efficiency and resilience. The results of the international evaluation on trait "Age at Slaughter" performed by Interbull Centre, using data from Interbeef partners, were presented during the latest GenTORE 2021 Annual meeting in the context of "*Genomic indices for multi-breed selection in different environments*". More information is available on www.GenTORE.eu and www.interbull.org/ib/gentore.

Interbull-ICAR meeting 2022 in Montreal, Canada

The 2022 ICAR-Interbull Meeting will be held in the vibrant and friendly city of Montréal, in the province of Québec, Canada, from 30 May until 3 June 2022.



ICAR Conference: The call for abstracts for the ICAR technical sessions is open until 14 February 2022. We are looking for the submission of abstracts to eight technical sessions - eight exciting opportunities to present your recent technical advances in the domains of animal welfare, feed and gas, sustainability, and artificial intelligence to name a few. Please visit www.icar2022.ca/abstracts for further details.

Preliminary Interbull Programme:

- **Interbull Open Meetings:** Monday 30 and Tuesday 31 May 2022
- **Interbull Business Meeting:** "Share. Connect. Transform": Tuesday 31 May 2022
- **Joint ICAR-Interbull Session:** Wednesday 1 June 2022. Topic: 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". 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**

Further details are available on: https://interbull.org/ib/2022_icar_interbull_meeting.

Season's Greetings....

The Interbull Centre will be closed from 20 December 2021 until 7 January 2022. The closure will not affect the reception and checking process of the data submitted for the January 2022 MACE Test Run (2201t).

