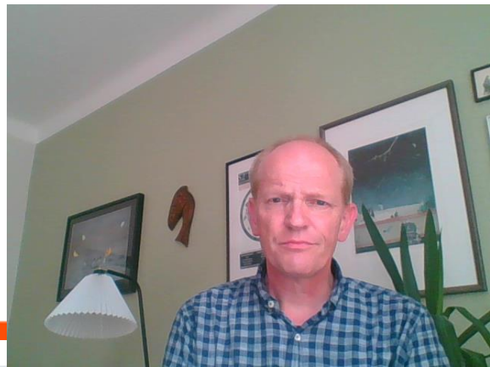
Interbull Technical Committee Report

Gert Pedersen Aamand

Chairman ITC



THE GLOBAL STANDARD FOR LIVESTOCK DATA

Interbull Technical Commitee

- ITC objective:
  - Identify and review technical issues that may be essential for providing a high-quality service to countries participating in the international genetic evaluations.
- ITC mandate:
  - Make recommendations on technical questions proposed by the Interbull Steering Committee.
  - Make spontaneous recommendations to the Interbull Steering Committee on methodological issues of such importance that they may affect the service as a whole.

Interbull Technical Commitee

Name	Organisation
Paul VanRaden	USDA, US
Zengting Liu	VIT, Germany
Raphael Mrode	SRUC, UK
Esa Mäntysaari	Luke, Finland
Pete Sullivan	Lactanet, Canada
Gerben de Jong	CRV, Netherlands
Tom Lawlor	Holstein US
Gerrit Kistemaker	Lactanet, Canada
Simone Savoia	Interbull Centre, Sweden
Gert Pedersen Aamand, chair	NAV, Denmark, Sweden, Finland

Interbull Technical Commitee

Activities since August 2020:

- ITC working groups zoom meetings
- Email discussion at the forum
- Webinar 11 Feb. 21 – Genomic-free EBV for MACE
- ITC meeting 13 April 2021 (after recording of this presentation)

Note:

Topics are also presented in R&D section (p24-29) of the Interbull Centre 2020-2021 Activity Report (https://interbull.org/ib/itbcreports)

Review of MACE Post Processing Windows

WG: Raphael Mrode (chair), Zengting Liu, Paul VanRaden, Tom Lawlor, Valentina Palucci

- Interbull do routinely post processing of the estimated genetic correlations:
  - General review of applied windows has taken place
  - Improvements (minor) in relation to applied minimum window's values and weights for countries for all breeds and traits

Implemented Jan. 21 test run

More information can be found in the Activity Report (P24)

Clinical mastitis evaluation (cma)

- The aim of a new clinical mastitis evaluation is to provide better data for SNP training for genomic evaluation of Clinical Mastitis.
- ITC has given inputs about post processing of correlations and rules for inclusion of data in the new clinical mastitis evaluation

Implemented JAN21 test run.

Genomic free EBVs

Recommendations for countries running Single Step methods on how to produce genomic-free EBV to be used in MACE:

Countries who are running a single step evaluation have two options:

A. Run traditional model to get EBV to send to Interbull (using only national information)

or

B. Run single step evaluation (foreign information could be included) and as a next step estimate EBV based on national phenotype data only, corrected for environmental effect as estimated from single step

ITC has a preference for option B as it partly corrects for the genomic pre-selection bias

Validation

WG: Esa Mäntysaari, Zenging Liu, Paul VanRaden, Raphael Mrode, Pete Sullivan, Valentina Palucci

New validation methods are needed

- WG has made a nice overview over current methods – strength and weaknesses due to genomic preselection (presented in Ohio)
- WG has continued the discussion during the year about new ideas including joint discussions with SAC – more work is needed

Genomic preselection & Future MACE

WG:Pete Sullivan, Esa Mäntysaari, Gerben de Jong, Simone Savoia

- Mendelian Sampling of AI sires are no longer normally distributed
- ***MACE should adapt to the "new NOT-normal"***

$$E(MS) > 0$$

$$V(MS) < \tfrac{1}{2}\sigma_g^2$$

- Options for future MACE are considered and different possibilities need to be tested

Thank you for your attention!