INTRODUCTION

The latest genomic test international evaluation for udder traits took place as scheduled at the Interbull Centre. Data from 21 countries were included in this evaluation.

International genetic evaluations for udder health traits of bulls were computed from:
AUS BEL CAN CHE CZE DEU DFS ESP FRA GBR HUN IRL ISR ITA NLD NZL POL SVN USA ZAF JPN
Holstein data were included in this evaluation.

BEL, CAN, DEU, ESP, FRA, DFS, GBR, ITA, NLD, POL, HUN submitted GEBVs.

mas: , CAN, DEU, ESP, FRA, DFS, , ITA, NLD, POL,
scs: BEL, CAN, DEU, ESP, FRA, DFS, GBR, ITA, NLD, POL, HUN

CHANGES IN NATIONAL PROCEDURES

Changes in the national genetic evaluation of uder traits are as follows:

FRA (HOL)	Decrease in reliability for mas for a large number of bulls as the parameters to compute reliabilities have been reworked, causing an important downward reliability variation Changes in information due to pedigree verification
DEU (HOL)	Base change
GBR (HOL)	Change in bulls' status due to re-assiging codes to bulls as more information from daughters become more available
HUN (HOL)	For mas data from 2312r used due to the mismatch between MACE and GMACE parameter file

INTERBULL CHANGES COMPARED TO THE DECEMBER ROUTINE RUN

No changes in Interbull procedures

DATA AND METHOD OF ANALYSIS

Thirteen Holstein populations sent GEBV data for up to 38 traits, while classical EBVs for the same traits were used in the analyses. Young bull GEBVs from the GEBV providers have been converted to the scales of all countries participating in classical MACE. A bull will get a MACE EBV or a GMACE EBV but not both.
From those thirteen countries, National GEBVs of bulls less than seven years of age and with no classical MACE proofs were included for the breeding value prediction with a further requirement of either a MACE-PA or a GMACE-PA (for young genomic bulls with young genomic sires) being available.

The parameter-space approach is used for the GMACE genetic evaluations (Sullivan, 2016)

SCIENTIFIC LITERATURE

The international genetic evaluation procedure is based on international work described in the following scientific publications:

Sullivan, P.G. 2016. Defining a Parameter Space for GMACE. Interbull Bulletin 50, p 85-93.

VanRaden, P.M. and Sullivan, P.G. 2010. International genomic evaluation methods for dairy cattle. Gen. Sel. Evol. 42:7

Sullivan, P.G. and Jakobsen, J.H. 2012. Robust GMACE for young bulls methodology. Interbull Bulletin 45, Article 1.

Sullivan, P.G. 2012a. GMACE reliability approximation. Report to the GMACE working group of Interbull. GMACE_rels 2013

Sullivan, P.G. 2012b. GMACE variance estimation. Report to the GMACE working group of Interbull. GMACE_vce 2013

Sullivan, P.G. 2012c. GMACE Weighting Factors. Report to the GMACE working group of Interbull. GMACE_gedcs 2013

Jakobsen, J.H. and Sullivan, P.G. 2013. Trait specific computation of shared reference population. Reference sharing Nov 2013

NEXT ROUTINE INTERNATIONAL EVALUATION

Dates for next routine run can be found on http://www.interbull.org/ib/servicecalendar

NEXT TEST INTERNATIONAL EVALUATION

Dates for next test run can be found on http://www.interbull.org/ib/servicecalendar

PUBLICATION OF INTERBULL ROUTINE RUN

Results were distributed by the Interbull Centre to designated
representatives in each country. The international evaluation file comprised
international proofs expressed on the base and unit of each country included
in the analysis. Such records readily provide more information on bull
performance in various countries, thereby minimising the need to resort to
conversions.

At the same time, all recipients of Interbull results are expected to honour
the agreed code of practice, decided by the Interbull Steering Committee,
and only publish international evaluations on their own country scale.
Evaluations expressed on another country scale are confidential and may only
be used internally for research and review purposes.

Table 1. National evaluation dates in GMACE run December 2024

Country	Date
CAN	20241201
DEU	20241203
DFS	20241105
FRA	20241204
GBR	20241111
NLD	20241201
ITA	20241101
HUN	20241115
BEL	20201201
ESP	20241119
POL	20240930

Table 2.

Number of bulls in reference population for scs

CAN	45930.0									
DEU	12584.0	49311.0								
DFS	6837.0	40970.0	42024.0							
FRA	5770.0	37858.0	37253.0	39715.0						
GBR	38924.0	13646.0	7750.0	6235.0	41924.0					
NLD	4249.0	36918.0	36387.0	34930.0	4576.0	38786.0				
ITA	40047.0	12621.0	6677.0	5268.0	39419.0	3601.0	42071.0			
HUN	2288.0	8279.0	7803.0	7642.0	2508.0	7827.0	2273.0	9113.0		
BEL	729.0	728.0	652.0	719.0	686.0	741.0	722.0	549.0	1719.0	
ESP	7841.0	42326.0	40568.0	37945.0	8809.0	36876.0	7674.0	8097.0	705.0	43406.0
POL	5550.0	35059.0	35021.0	32989.0	6285.0	32028.0	5350.0	7640.0	994.0	35264.0 36852.0

Number of bulls in reference population for mas

CAN	27432.0					
DEU	10191.0	33786.0				
DFS	5742.0	27986.0	28837.0			
FRA	4927.0	25947.0	25545.0	27559.0		
NLD	3598.0	24366.0	24095.0	23391.0	25753.0	

ITA	22950.0	10312.0	5718.0	4609.0	3100.0	24539.0			
HUN	2175.0	4546.0	4142.0	4049.0	4091.0	2169.0	5260.0		
ESP	6729.0	29126.0	27679.0	26004.0	24360.0	6714.0	4371.0	30033.0	
POL	4616.0	22216.0	22335.0	21200.0	19573.0	4588.0	3933.0	22427.0	23828.0