INTRODUCTION

The latest genomic test international evaluation for dairy production traits took place as scheduled at the Interbull Centre. Data from 29 countries were included in this evaluation.

International genetic evaluations for milk, fat and protein yields of bulls were computed from:
AUS BEL CAN CHE CZE DEU DFS ESP EST FRA GBR HUN IRL ISR ITA JPN KOR LTU LVA NLD NZL POL PRT SVK SVN URY USA ZAF HRV

Holstein breed data were included in this evaluation.

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

fat: CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN, CZE
mil: CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN, CZE
pro: CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN, CZE

CHANGES IN NATIONAL PROCEDURES

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

AUS (HOL)	Change in status of some bulls for not being qualified to have the results published
	Decrease in reliability due to pedigree updates
	Some bulls with missing pedigree due to pedigree update or not having sire or dam
FRA (HOL)	Bulls with unexpected type of proof linked to heifer fertility traits
	Some bulls with missing pedigree due to pedigree update
	Some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
ITA (HOL)	Some bulls missing pedigree due to the authority issue
NLD (HOL)	Some bulls with type of proof 13, with unexpected type of proof, because of not being eligible for daughter testing breeding values.
ESP (HOL)	Base change
GBR (HOL)	Some bulls with missing pedigree because they either younger than 10 months or they don’t have sireID or they have international IDs
	Change in status of some bulls, due to the decease in number of daughters
	Some extreme deviation from the year mean for Friesian bulls in the UK and Ireland due to comparing Friesian and Holstein bulls
CZE (HOL)	Some bulls with large standard proof change due to the change in conventional TDM (bug in pedigree construction)
DEU (HOL)	Introduction of single step evaluation
POL (HOL)	Change in status of some bulls due to the increase in number of daughters
BEL (HOL)	Participating with MACE data due to very old data and no more qualifying young bulls

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 August 2025

Country	Date
CAN	20250801
DEU	20250812
DFS	20250204
FRA	20250813
ITA	20250707
NLD	20250813
GBR	20250714
AUS	20241203
ESP	20250710
CZE	20250728
HUN	20250725
POL	20250617

Table 2.

Number of bulls in reference population for	mil
CAN 47147.0	
DEU 13376.0 50257.0	
DFS 7334.0 41677.0 42731.0	
FRA 5794.0 37943.0 37398.0 39818.0	
ITA 41215.0 13427.0 7250.0 5290.0 43023.0	
NLD 4264.0 36923.0 36399.0 34930.0 3600.0 38785.0	
GBR 40069.0 14483.0 8324.0 6272.0 40656.0 4600.0 43207.0	

AUS 1501.0   959.0   815.0   807.0 1325.0   812.0 1297.0 4596.0
ESP 46848.0 50169.0 42696.0 39813.0 42734.0 38780.0 42903.0 4594.0161339.0
CZE 2256.0 2748.0 2045.0 1959.0 2218.0 1735.0 2218.0   415.0 4179.0 4193.0
HUN 2292.0 8294.0 7846.0 7644.0 2273.0 7827.0 2513.0   769.0 9064.0 1431.0 9114.0
POL 5033.0 34303.0 34137.0 32685.0 4538.0 32028.0 5528.0   695.0 35923.0 2565.0 7639.0 35931.0

Number of bulls in reference population for   fat

CAN 47146.0
DEU 13376.0 50255.0
DFS 7334.0 41677.0 42730.0
FRA 5794.0 37943.0 37398.0 39818.0
ITA 41214.0 13425.0 7250.0 5290.0 43012.0
NLD 4264.0 36923.0 36399.0 34930.0 3600.0 38785.0
GBR 40068.0 14483.0 8324.0 6272.0 40655.0 4600.0 43206.0
AUS 1501.0   959.0   815.0   807.0 1325.0   812.0 1297.0 4596.0
ESP 46847.0 50167.0 42695.0 39813.0 42723.0 38780.0 42902.0 4594.0161320.0
CZE 2256.0 2748.0 2045.0 1959.0 2218.0 1735.0 2218.0   415.0 4179.0 4193.0
HUN 2292.0 8294.0 7845.0 7644.0 2273.0 7827.0 2513.0   769.0 9063.0 1431.0 9113.0
POL 5033.0 34303.0 34137.0 32685.0 4538.0 32028.0 5528.0   695.0 35923.0 2565.0 7639.0 35931.0

Number of bulls in reference population for   pro

CAN 47146.0
DEU 13376.0 50255.0
DFS 7334.0 41677.0 42730.0
FRA 5794.0 37943.0 37398.0 39818.0
ITA 41214.0 13425.0 7250.0 5290.0 43012.0
NLD 4264.0 36923.0 36399.0 34930.0 3600.0 38785.0
GBR 40068.0 14483.0 8324.0 6272.0 40655.0 4600.0 43206.0
AUS 1501.0   959.0   815.0   807.0 1325.0   812.0 1297.0 4596.0
ESP 46847.0 50167.0 42695.0 39813.0 42723.0 38780.0 42902.0 4594.0161242.0
CZE 2256.0 2748.0 2045.0 1959.0 2218.0 1735.0 2218.0   415.0 4179.0 4193.0
HUN 2292.0 8294.0 7845.0 7644.0 2273.0 7827.0 2513.0   769.0 9063.0 1431.0 9113.0
POL 5033.0 34303.0 34137.0 32685.0 4538.0 32028.0 5528.0   695.0 35923.0 2565.0 7639.0 35931.0