INTRODUCTION

The latest genomic test international evaluation for calving traits took place as scheduled at the Interbull Centre. Data from 18 countries were included in this evaluation.

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

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

dce: CAN, DEU, , , ITA, NLD, HUN, ESP, POL
dsb: CAN, DEU, DFS, , ITA, NLD, , , POL
mce: CAN, DEU, DFS, , ITA, NLD, , ESP, POL
msb: CAN, DEU, DFS, , ITA, NLD, , , POL
ges: , , , , , , , , ,

CHANGES IN NATIONAL PROCEDURES

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

A fifth trait (ges) has been added in the calving results to align the GMACE calving format to the MACE one. As no countries has, so far, chosen to provide GEBVs for this extra trait, all fields for this extra trait are set to zero. The addition was made merely to comply with a request to have the MACE and GMACE file formats aligned.

CAN (HOL)	Base change
CAN (HOL)	Some bulls changed from official to unofficial due to change in qualification for publication
FRA (HOL)	Base change
FRA (HOL)	Some bulls changed from official to unofficial due to change in publication rules from breed societies
FRA (HOL)	Decrease in reliability due to pedigree update
POL (HOL)	Base change
POL (HOL)	New definition of UPG groups, pedigree pruning, applied new coding for status and type of proof according to new recommendation from the ITB. New data editing applied. Introduced new data filtering for calving traits and re-estimated variance components. Additionaly MACE was included as pseudophenotypes in genomic evaluation.
ITA (HOL)	Base change
ITA (HOL)	dce, msb: Decrease in reliability due to the data eidt and low heritability
ESP (HOL)	Base change
DEU (HOL)	Base change
NLD (HOL)	Base change
NLD (HOL)	Drop in information due to introduction of DGV BLUP
DFS (HOL)	MACE data used for "dce"
GBR (HOL)	MACE data used due to very old data and no more qualifying young bulls
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 April 2026

Country	Date
CAN	20260401
ITA	20260302
NLD	20260401
HUN	20260318
DEU	20260408
ESP	20260320
POL	20260310

Table 2.

Number of bulls in reference population for	dce
CAN 44130.0	
ITA 39966.0 41623.0	
NLD 4064.0 3451.0 32153.0	
HUN 2273.0 2257.0 7689.0 8879.0	
DEU 13438.0 13530.0 30946.0 8213.0 43966.0	
ESP 43170.0 40690.0 32150.0 8829.0 43659.0116038.0	

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POL  4655.0  4206.0 26724.0  7575.0 28726.0 29437.0 29449.0

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Number of bulls in reference population for        mce
-----------------------------------------------------
CAN 36722.0
DFS  6968.0 36680.0
ITA 32485.0  7002.0 33903.0
NLD  3859.0 31042.0  3305.0 32530.0
HUN  2227.0  7773.0  2215.0  7637.0  8739.0
DEU 11995.0 35939.0 12078.0 31572.0  8209.0 43106.0
ESP 36083.0 36483.0 33274.0 32527.0  8688.0 42845.0101671.0
POL  4520.0 28502.0  4122.0 26863.0  7596.0 28769.0 29519.0 29525.0

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Number of bulls in reference population for        dsb
-----------------------------------------------------
CAN 40763.0
DFS  7165.0 35733.0
ITA 36833.0  7125.0 38349.0
NLD  3886.0 29729.0  3302.0 31174.0
DEU 13012.0 34916.0 13060.0 30215.0 42879.0
POL  4505.0 27509.0  4045.0 25670.0 27734.0 28416.0

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Number of bulls in reference population for        msb
-----------------------------------------------------
CAN 36140.0
DFS  6862.0 36818.0
ITA 31824.0  6856.0 33195.0
NLD  3763.0 31113.0  3217.0 32523.0
DEU 11774.0 36050.0 11839.0 31638.0 43050.0
POL  4406.0 28445.0  3984.0 26707.0 28688.0 29407.0
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