INTRODUCTION

The latest genomic routine international evaluation for calving traits took place as scheduled at the Interbull Centre. Data from 16 countries were included in this evaluation.

International genetic evaluations for calving traits of bulls from Australia, Austria-Germany, Belgium, Canada, Denmark-Finland-Sweden, France, Germany, Hungary, Ireland, Israel, Italy, Netherlands, Norway, Switzerland, the United Kingdom, and the United States of America were computed. Holstein data were included in this evaluation.

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

dce: BEL, CAN, DEU, DFS, GBR, ITA, NLD, HUN, ESP
dsb: CAN, DEU, DFS, , ITA, NLD
mce: , CAN, DEU, DFS, GBR, ITA, NLD, HUN
msb: CAN, DEU, DFS, , ITA, NLD

CHANGES IN NATIONAL PROCEDURES

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

ESP (HOL) First participation with dce

HUN (HOL) Changes affecting GREL

INTERBULL CHANGES COMPARED TO THE DECEMBER ROUTINE RUN

No changes in Interbull procedures

DATA AND METHOD OF ANALYSIS

Eleven 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 eleven 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 routine 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 2020

Country	Date
CAN	20200801
DFS	20200811
ITA	20200714
NLD	20200811
GBR	20200616
HUN	20200723
DEU	20200811
BEL	20190901
ESP	20200721

Table 2.

Number of bulls in reference population for dce

CAN	35836.0								
DFS	4041.0	30803.0							
ITA	32639.0	3291.0	33527.0						
NLD	3899.0	29512.0	3148.0	31842.0					
GBR	32915.0	4147.0	31643.0	4065.0	34914.0				
HUN	1805.0	6975.0	1716.0	7196.0	1838.0	7953.0			
DEU	6501.0	30014.0	5789.0	30066.0	6627.0	7384.0	34536.0		
BEL	1638.0	1094.0	1577.0	1201.0	1276.0	796.0	1314.0	2674.0	
ESP	4658.0	30249.0	3845.0	30254.0	4784.0	7279.0	31029.0	1267.0	31855.0

Number of bulls in reference population for mce

CAN	28370.0								
DFS	3847.0	31451.0							
ITA	26398.0	3184.0	27081.0						
NLD	3681.0	30213.0	3012.0	31800.0					
GBR	25693.0	3975.0	25285.0	3790.0	26603.0				

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HUN  1760.0  6588.0  1681.0  6809.0  1797.0  7533.0
DEU  5788.0 30734.0  5159.0 30766.0  5905.0  6987.0 34651.0

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Number of bulls in reference population for        dsb
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CAN 32678.0
DFS  3877.0 29291.0
ITA 29855.0  3185.0 30708.0
NLD  3694.0 28024.0  3012.0 29677.0
DEU  6219.0 28582.0  5574.0 28623.0 32917.0

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Number of bulls in reference population for        msb
-----------------------------------------------------
CAN 26166.0
DFS  3680.0 30095.0
ITA 24383.0  3065.0 25044.0
NLD  3516.0 28896.0  2894.0 30375.0
DEU  5507.0 29443.0  4928.0 29487.0 33165.0
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