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 submitted GEBVs.

dce: BEL, CAN, DEU, DFS, GBR, ITA, NLD, HUN
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:

NLD (HOL) Included a deregression post-processing step to keep the animals with information in the system

BEL (HOL) Corrected a small bug in their routines preparing final GEBV to be submitted
Increase in the size of the reference population (mainly females)

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 2018

Country	Date
CAN	20180801
DFS	20180807
ITA	20180706
NLD	20180801
GBR	20180708
HUN	20180711
DEU	20180807
BEL	20180701

Table 2.

Number of bulls in reference population for dce

CAN	32192.0						
DFS	2705.0	28394.0					
ITA	29421.0	2178.0	29996.0				
NLD	2892.0	27436.0	2348.0	29588.0			
GBR	29531.0	2660.0	28396.0	2866.0	30715.0		
HUN	1102.0	5919.0	1012.0	6160.0	1075.0	6746.0	
DEU	3371.0	27554.0	2834.0	27778.0	3239.0	6200.0	30097.0
BEL	1311.0	848.0	1224.0	969.0	933.0	494.0	1048.0	2254.0

Number of bulls in reference population for mce

CAN	26057.0

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DFS  2591.0 29118.0
ITA 24194.0  2137.0 24619.0
NLD  2747.0 28156.0  2266.0 29628.0
GBR 23575.0  2566.0 23109.0  2668.0 24110.0
HUN  1088.0  5559.0  1002.0  5800.0  1069.0  6368.0
DEU  3170.0 28352.0  2685.0 28530.0  3069.0  5838.0 30769.0

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Number of bulls in reference population for        dsb
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CAN 29572.0
DFS  2607.0 27111.0
ITA 27047.0  2134.0 27613.0
NLD  2766.0 26159.0  2284.0 27676.0
DEU  3236.0 26350.0  2757.0 26563.0 28811.0

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Number of bulls in reference population for        msb
-----------------------------------------------------
CAN 24291.0
DFS  2516.0 28147.0
ITA 22576.0  2101.0 22993.0
NLD  2662.0 27199.0  2222.0 28573.0
DEU  3085.0 27438.0  2642.0 27616.0 29793.0
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