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 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:

CAN (HOL) Base change

DFS (HOL) Inclusion of females in reference population

FRA (HOL) Base change

ITA (HOL) Cut off one year of data and base change

NLD (HOL) Introduced the cow reference population in genomics.

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 April 2018

Country	Date
CAN	20180401
DFS	20180306
ITA	20180309
NLD	20180401
GBR	20180308
HUN	20180315
DEU	20180404
BEL	20171201

Table 2.

Number of bulls in reference population for dce

CAN	31689.0						
DFS	2615.0	27901.0					
ITA	27035.0	1591.0	27346.0				
NLD	2820.0	27175.0	1836.0	29293.0			
GBR	28885.0	2474.0	26035.0	2713.0	29966.0		
HUN	1058.0	5770.0	836.0	6139.0	1009.0	6660.0	
DEU	3244.0	27280.0	2039.0	27774.0	3048.0	6162.0	29885.0
BEL	1293.0	901.0	1109.0	994.0	920.0	490.0	1039.0	2231.0

Number of bulls in reference population for mce

CAN	25606.0						
DFS	2508.0	28667.0					
ITA	22115.0	1576.0	22366.0				
NLD	2682.0	27950.0	1789.0	29399.0			
GBR	22993.0	2387.0	21050.0	2518.0	23456.0		
HUN	1039.0	5454.0	831.0	5741.0	999.0	6239.0	
DEU	3035.0	28090.0	1964.0	28484.0	2876.0	5758.0	30482.0

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Number of bulls in reference population for        dsb
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CAN 29119.0
DFS  2530.0 26763.0
ITA 24753.0  1567.0 25061.0
NLD  2713.0 26049.0  1798.0 27524.0
DEU  3118.0 26196.0  2003.0 26591.0 28615.0

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Number of bulls in reference population for        msb
-----------------------------------------------------
CAN 23893.0
DFS  2445.0 27700.0
ITA 20558.0  1556.0 20807.0
NLD  2613.0 27001.0  1756.0 28440.0
DEU  2974.0 27178.0  1945.0 27659.0 29606.0
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