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
dsb: CAN, DEU, DFS, , ITA, NLD
mce: CAN, DEU, DFS, GBR, ITA, NLD
msb: CAN, DEU, DFS, , ITA, NLD

CHANGES IN NATIONAL PROCEDURES

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

DFS (HOL) New standardization procedure and introduction of a polygenic effect of 10% in the genomic model.

CAN (HOL) Changes in the conventional evaluation (see MACE doc)

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.

SCIENTIFIC LITERATURE

The international genetic evaluation procedure is based on international work described in the following scientific publications:

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 December 2016

Country	Date
CAN	20161201
DFS	20161101
ITA	20161108
NLD	20161201
GBR	20161024
DEU	20161206
BEL	20161201

Table 2.

Number of bulls in reference population for dce

CAN	29157.0					
DFS	1908.0	25854.0				
ITA	25469.0	1312.0	25946.0			
NLD	2328.0	25414.0	1682.0	27346.0		
GBR	26601.0	1798.0	25390.0	2186.0	26963.0	
DEU	2185.0	25235.0	1632.0	25782.0	2040.0	27276.0
BEL	1151.0	832.0	717.0	922.0	791.0	922.0 2061.0

Number of bulls in reference population for mce

CAN	23444.0					
DFS	1875.0	26745.0				
ITA	20435.0	1303.0	20740.0			
NLD	2243.0	26284.0	1637.0	27685.0		
GBR	21047.0	1774.0	20393.0	2116.0	21366.0	
DEU	2122.0	26145.0	1589.0	26671.0	1987.0	28156.0

Number of bulls in reference population for dsb

CAN	26777.0				
DFS	1900.0	25576.0			
ITA	23234.0	1306.0	23706.0		
NLD	2301.0	25140.0	1659.0	26489.0	
DEU	2165.0	24958.0	1617.0	25404.0	26854.0

Number of bulls in reference population for msb

CAN	21787.0				
DFS	1862.0	26585.0			
ITA	18878.0	1297.0	19178.0		
NLD	2216.0	26126.0	1614.0	27431.0	
DEU	2105.0	25991.0	1578.0	26507.0	27960.0