

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: BEL, 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:

FRA (HOL) Evaluation now performed by a new genetic centre, GENEVAL

BEL (HOL) First participation with mce
Changed the pedigree rules for the genomic evaluation, the pedigree is now reduced and limited to birth year of YYYY-15

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

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 2018

Country	Date
CAN	20181201
DFS	20181106
ITA	20181116
NLD	20181201
GBR	20181105
HUN	20181119
DEU	20181204
BEL	20181201

Table 2.

 Number of bulls in reference population for dce

CAN	32999.0						
DFS	3116.0	29304.0					
ITA	30366.0	2569.0	31006.0				
NLD	3181.0	28291.0	2652.0	30414.0			
GBR	30319.0	3182.0	29320.0	3283.0	31546.0		
HUN	1230.0	6219.0	1146.0	6447.0	1210.0	6978.0	
DEU	3935.0	28533.0	3471.0	28629.0	3959.0	6469.0	31219.0
BEL	1445.0	969.0	1391.0	1095.0	1071.0	566.0	1143.0 2454.0

 Number of bulls in reference population for mce

CAN	26702.0			
DFS	2965.0	29963.0		
ITA	24984.0	2508.0	25443.0	
NLD	3011.0	28969.0	2552.0	30383.0

GBR	24230.0	3051.0	23867.0	3057.0	24816.0				
HUN	1209.0	5843.0	1127.0	6071.0	1192.0	6581.0			
DEU	3668.0	29277.0	3261.0	29334.0	3714.0	6094.0	31791.0		
BEL	1417.0	966.0	1374.0	1057.0	1012.0	564.0	1138.0	2182.0	

Number of bulls in reference population for dsb

CAN	30301.0								
DFS	2996.0	27964.0							
ITA	27895.0	2505.0	28517.0						
NLD	3033.0	26959.0	2564.0	28435.0					
DEU	3778.0	27272.0	3364.0	27357.0	29870.0				

Number of bulls in reference population for msb

CAN	24847.0								
DFS	2864.0	28946.0							
ITA	23303.0	2445.0	23753.0						
NLD	2905.0	27969.0	2483.0	29277.0					
DEU	3545.0	28313.0	3177.0	28367.0	30749.0				