

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:

DEU (HOL) Base change
CAN (HOL) Base change
ITA (HOL) Base change
GBR (HOL) Base change
FRA (HOL) Base change
NLD (HOL) Base change
POL (HOL) Base change

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 2020

Country Date

CAN	20200401
DFS	20200302
ITA	20200309
NLD	20200401
GBR	20200225
HUN	20200323
DEU	20200407
BEL	20190901

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Table 2.

Number of bulls in reference population for dce

CAN	35395.0						
DFS	3780.0	30320.0					
ITA	31423.0	2921.0	31943.0				
NLD	3805.0	29191.0	2862.0	31645.0			
GBR	32526.0	3846.0	30371.0	3953.0	34326.0		
HUN	1736.0	6901.0	1549.0	7126.0	1760.0	7842.0	
DEU	5916.0	29707.0	4738.0	29805.0	6016.0	7271.0	33802.0
BEL	1636.0	1084.0	1545.0	1201.0	1269.0	780.0	1301.0 2675.0

Number of bulls in reference population for mce

CAN 28030.0

DFS	3609.0	30998.0					
ITA	25484.0	2855.0	25903.0				
NLD	3582.0	29913.0	2761.0	31580.0			
GBR	25402.0	3696.0	24339.0	3672.0	26235.0		
HUN	1700.0	6522.0	1529.0	6745.0	1726.0	7432.0	
DEU	5317.0	30423.0	4366.0	30494.0	5417.0	6882.0	34011.0

Number of bulls in reference population for dsb

CAN	32286.0						
DFS	3628.0	28848.0					
ITA	28682.0	2839.0	29181.0				
NLD	3604.0	27742.0	2756.0	29496.0			
DEU	5665.0	28294.0	4602.0	28374.0	32226.0		

Number of bulls in reference population for msb

CAN	25898.0						
DFS	3466.0	29722.0					
ITA	23567.0	2759.0	23967.0				
NLD	3433.0	28672.0	2659.0	30227.0			
DEU	5089.0	29202.0	4201.0	29282.0	32631.0		