INTRODUCTION

The latest **genomic routine international evaluation for longevity trait** took place as scheduled at the Interbull Centre. Data from 21 populations were included in this evaluation.

International genetic evaluations for direct longevity trait of bulls from Australia, Belgium, Canada, Switzerland, Germany, Denmark-Finland-Sweden Spain, France, The United Kingdom, Ireland, Israel, Italy, New Zealand, The Netherlands, The United States of America Hungary, Norway, Slovenia and Czech Republic were computed. Holstein breed data were included in this evaluation.

CAN, DEU, ESP, FRA, DFS, GBR, ITA, NLD submitted GEBVs.

dlo: CAN, DEU, ESP, FRA, DFS, GBR, ITA, NLD

CHANGES IN NATIONAL PROCEDURES

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

DEU (HOL) Base change

CAN (HOL) Update of reliability calculations
Corrected status of about 7500 bulls from 0 to 10

FRA (HOL) -Base change
-corrected proofs status and bull status for some records

DFS (HOL) -corrected proofs status and bull status for some records

NLD (HOL) -corrected proofs status for some records

BEL (HOL) -some changes in GEBV due to the correction of a bug in their programs

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 April 2016

Country	Date
BEL	20160401
CAN	20160401
DEU	20160405
DFS	20160202
ESP	20160311
FRA	20151204
GBR	20160309
ITA	20160308
NLD	20160401

Table 2.

Number of bulls in reference population for	dlo							
BEL	2446.0							
CAN	1177.0	27963.0						
DEU	860.0	1713.0	31889.0					
DFS	775.0	1542.0	29956.0	30549.0				
ESP	786.0	1564.0	29368.0	29187.0	29932.0			
FRA	836.0	1791.0	26918.0	26597.0	26789.0	28485.0		
GBR	749.0	24947.0	1543.0	1398.0	1409.0	1606.0	25178.0	
ITA	670.0	24182.0	1235.0	1077.0	1100.0	1271.0	23981.0	24430.0
NLD	866.0	1829.0	27639.0	27245.0	26878.0	24215.0	1647.0	1310.0	29010.0