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.

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

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

CHANGES IN NATIONAL PROCEDURES

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

NLD (HOL)   Included a deregression post-processing step to keep the animals with information in the system

BEL (HOL)   Corrected a small bug in their routines preparing final GEBV to be submitted
              Increase in the size of the reference population (mainly females)

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 August 2018

Country Date

BEL   20180701
CAN   20180801
DEU   20180807
DFS   20180807
ESP   20180620
FRA   20180808
GBR   20180708
ITA   20180706
NLD   20180801
HUN   20180711
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Table 2.

Number of bulls in reference population for   dlo

BEL 2783.0
CAN 1446.0 32852.0
DEU 1060.0 3399.0 36400.0
DFS   860.0 2717.0 33743.0 34813.0
ESP 1010.0 3004.0 34254.0 34150.0 35533.0
FRA 1083.0 3150.0 32381.0 32147.0 32948.0 34724.0
GBR 1014.0 29659.0 3253.0 2664.0 2944.0 3073.0 30769.0
ITA 1308.0 29793.0 2838.0 2176.0 2388.0 2527.0 28499.0 30312.0
NLD   997.0 2933.0 33722.0 33492.0 33995.0 32257.0 2878.0 2354.0 35791.0
HUN   493.0 1083.0 6223.0 5942.0 6187.0 6068.0 1047.0   993.0 6181.0 6747.0