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
dsdb: 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:

BEL (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. 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
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Dates for next routine run can be found on http://www.interbull.org/ib/servicecalendar

NEXT TEST INTERNATIONAL EVALUATION
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Dates for next routine run can be found on http://www.interbull.org/ib/servicecalendar

PUBLICATION OF INTERBULL ROUTINE RUN
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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 minimizing 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
---------------------------------------------------------
CAN      20180801
DFS      20180807
ITA      20180704
NLD      20180801
GBR      20180708
HUN      20180711
DEU      20180807
BEL      20180701
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Table 2.
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Number of bulls in reference population for dce
------------------------------------------------------
Country  CAN  DFS  ITA  NLD  GBR  HUN  DEU  BEL
------------------------------------------------------
CAN  32192.0
DFS  2705.0  28394.0
ITA  29421.0  2178.0  29996.0
NLD  2892.0  27436.0  2348.0  29588.0
GBR  29531.0  2660.0  28396.0  2866.0  30095.0
HUN  1102.0  5919.0  1012.0  6160.0  1075.0  6746.0
DEU  3371.0  27554.0  2834.0  27778.0  3239.0  6200.0  30096.0
BEL  1311.0  848.0  1224.0  969.0  933.0  494.0  1048.0  2254.0
------------------------------------------------------
Number of bulls in reference population for mce
------------------------------------------------------
Country  CAN
------------------------------------------------------
CAN  26057.0
<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Bulls in Reference Population for dsb</th>
<th>Number of Bulls in Reference Population for mb</th>
<th>Number of Bulls in Reference Population for db</th>
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<td>DEU</td>
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<td>3236.0</td>
<td>3085.0</td>
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</tbody>
</table>

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Number of bulls in reference population for mab

| CAN     | 24291.0                                       | 29793.0                                       |
| DFS     | 2516.0                                        | 2842.0                                        |
| ITA     | 22576.0                                       | 2582.0                                        |
| NLD     | 2662.0                                        | 2842.0                                        |
| DEU     | 3085.0                                        | 2842.0                                        |