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INTRODUCTION
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The latest genomic  routine international evaluation for workability traits took place as
scheduled at the Interbull Centre. Data from 6 countries were included
in this evaluation.

International genetic evaluations for workability traits of bulls from
Austria-Germany, Canada, Denmark-Finland-Sweden, France, Italy, Netherlands, the United Kingdom, Norway
and Switzerland were computed.
Holstein data were included in this evaluation.

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

msp: CAN, DEU, FRA, DFS, GBR, NLD, ITA
tem:    , DEU, FRA, DFS, GBR, NLD


CHANGES IN NATIONAL PROCEDURES
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Changes in the national genetic evaluation of workability traits are as follows:

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

INTERBULL CHANGES COMPARED TO THE DECEMBER ROUTINE RUN
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No changes in Interbull procedures

DATA AND METHOD OF ANALYSIS
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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
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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
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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
DEU   20181204
DFS   20181106
FRA   20181205
NLD   20181201
GBR   20181105
ITA   20181116
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Table 2.

Number of bulls in reference population for   msp

CAN 19070.0
DEU   2991.0 29751.0
DFS   2440.0 27653.0 28168.0
FRA   2761.0 26720.0 26339.0 28192.0
NLD   2565.0 27776.0 27450.0 26550.0 28968.0
GBR 16521.0   3072.0   2558.0   2867.0   2731.0 17635.0
ITA 17103.0   2649.0   2034.0   2344.0   2171.0 15831.0 17347.0

Number of bulls in reference population for   tem

DEU 27070.0
DFS 25250.0 25717.0
NLD 25421.0 25078.0 26559.0
GBR   2832.0   2383.0   2561.0 16998.0