Introduction

The latest genomic routine international evaluation for workability traits took place as
scheduled at the Interbull Centre. Data from six (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, Norway
and Switzerland were computed.
Holstein data were included in this evaluation.

Changes in national procedures

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

GBR (HOL)   Drop in reliability due to a group of 42 bulls that had a MACE proof with a high
reliability in December but now have an official domestic
            proof with a much lower reliability which replaces the MACE proof. These 42 bulls are
used in our reference population which would result in
            lower reliabilities for DGVs and polygenic effects.

DEU (HOL)   Some bulls are no longer published as they are no longer AI bulls and some appear now
with a new ID.

FRA (HOL)   The list of QTLs has been updated and enlarged, the residual polygenic effects are now
estimated using a genomic matrix instead of a kinship matrix

NLD (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.

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

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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 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 2015
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Country  Date
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CAN      20150401
DEU      20150408
DFS      20150202
FRA      20150410
GBR      20150401
NLD      20150401
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Table 2.
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Number of bulls in reference population for        msp
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CAN 10162.0
DEU  1160.0 25113.0
DFS  1103.0 23647.0 23957.0
FRA  1237.0 20748.0 20487.0 21739.0
GBR  9250.0  1015.0   961.0  1083.0  9308.0
NLD  1118.0 19142.0 18918.0 17447.0   992.0 19839.0


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Number of bulls in reference population for        tem
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DFS 21856.0
GBR   943.0  9015.0
NLD 18279.0   983.0 19166.0
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