INTRODUCTION

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 submitted GEBVs.

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

CHANGES IN NATIONAL PROCEDURES

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

CAN (HOL) Base change

DFS (HOL) Inclusion of females in reference population

FRA (HOL) Base change

ITA (HOL) Cut off one year of data and base change

NLD (HOL) Introduced the cow reference population in genomics.

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 April 2018

Country	Date
CAN	20180401
DEU	20180404
DFS	20180306
FRA	20180404
NLD	20180401
GBR	20180308
ITA	20180309

Table 2.

Number of bulls in reference population for msp

CAN	18438.0					
DEU	2561.0	28744.0				
DFS	2103.0	26597.0	27023.0			
FRA	2536.0	25915.0	25305.0	27500.0		
NLD	2285.0	27056.0	26512.0	25755.0	28052.0	
GBR	15648.0	2440.0	2021.0	2422.0	2250.0	16630.0
ITA	15220.0	1633.0	1309.0	1581.0	1472.0	14033.0	15324.0

Number of bulls in reference population for tem

DEU	26230.0			
DFS	24313.0	24692.0		
NLD	24799.0	24249.0	25749.0	
GBR	2320.0	1914.0	2149.0	16139.0