

INTRODUCTION

The latest genomic international evaluation for dairy production traits took place as scheduled at the Interbull Centre. Data 32 countries were included in this evaluation.

International genetic evaluations for milk, fat and protein yields of bulls from Australia, Austria-Germany, Belgium, Canada, Czech Republic, Denmark-Finland-Sweden, Estonia, France, Hungary, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Netherlands, New Zealand, Norway, Poland, Republic of South Africa, Slovak Republic, Slovenia, Spain, Switzerland, the United Kingdom, the United States of America, Portugal, Korea, Argentina and Uruguay were computed. Holstein breed data were included in this evaluation.

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

fat: BEL, CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN
mil: BEL, CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN
pro: BEL, CAN, DEU, ESP, FRA, AUS, DFS, GBR, ITA, NLD, POL, HUN

CHANGES IN NATIONAL PROCEDURES

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

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

BEL (HOL) Changed the pedigree rules for the genomic evaluation, the pedigree is now reduced and limited to birth year of YYYY-15

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

AUS	1316.0	748.0	661.0	713.0	872.0	766.0	1465.0	4389.0				
BEL	1595.0	1158.0	983.0	1169.0	1503.0	1126.0	1161.0	399.0	3007.0			
ESP	3208.0	35105.2	34949.2	33279.2	2690.0	34629.0	3204.0	698.0	1094.0	35968.2		
HUN	1232.0	6502.0	6248.0	6290.0	1147.0	6478.0	1211.0	479.0	566.0	6373.0	7014.0	
POL	3565.0	30599.0	30812.0	29354.0	2935.0	30428.0	3252.0	653.0	1612.0	30683.0	6399.0	32786.0

Number of bulls in reference population for pro

CAN	37671.0											
DEU	4076.0	37799.2										
DFU	3226.0	34935.2	36119.2									
FRA	3410.0	33311.2	33230.2	35587.2								
ITA	31414.0	3556.0	2625.0	2793.0	32083.0							
NLD	3321.0	34699.0	34578.0	33266.0	2716.0	36866.0						
GBR	31347.0	4073.0	3266.0	3419.0	30111.0	3375.0	32632.0					
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