Introduction

The latest routine international evaluation for SNP Training for clinical mastitis took place as scheduled at the Interbull Centre. Data from five (5) countries were included in this evaluation.

International genetic evaluations for SNP Training for clinical mastitis of bulls from Canada, France, Germany, Switzerland, and the United States of America were computed. Brown Swiss, Holstein and Jersey breed data were included in this evaluation.

Changes in national procedures

Changes in the national genetic evaluation of SNP Training for clinical mastitis are as follows:

DEU (HOL)	overall base change: cowbase previous routine run 2504r: 201901 - 202112, cowbase current routine run 2508r: 201905 - 202204
USA (ALL)	Decrease in information due to pedigree verification and herd-year minimum edits.
CHE (ALL)	Decrease in information due to the database edits and also the change of herd-year-season assignment of certain data records
FRA (ALL)	Decrease in information due to pedigree verification

INTERBULL CHANGES COMPARED TO THE PREVIOUS ROUTINE RUN

A new document called confdoc_DEFINITION{runid}.itb has been introduced reporting all the trait definitions applied by countries as reported in the PREP.

During 2023-2024, Interbull Centre and the Interbull Technical Committee (ITC) have worked on developing a new procedures for adjusting of the international correlations after a given test run in case countries would decide NOT TO implement the changes tested in the next routine run.
Until now, the relative difference between the previous routineâ\200\231s and test runâ\200\231s correlations, for each pair of countries, was assessed and the average value of the two was used whenever such difference did exceed a threshold of 0.01. Otherwise, correlations from the latest test run were used.
However, in some cases, the difference in correlations between routine/test runs were way above a 1% difference so that by using the average value the newly derived correlations would still be greatly affected by the changes tested but not implemented. This remark has been made in few occasions by some participating countries.
A new approach proposed by Peter Sullivan, was developed and extensively tested. The new approach is based on first identifying the relative impact of the changes tested by a country during the test run (but not implemented in a routine run) and then correcting the whole correlation matrix detracting such estimated impact.
This new approach would assure that the new correlations would be free from any effect from any changes tested but not implemented.
The new procedure has been fully developed during 2023 and extensively tested during 2024 and introduced officially in the April 2025 routine evaluation.

DATA AND METHOD OF ANALYSIS

Data were national genetic evaluations of AI sampled bulls with at least 10 daughters or 10 EDC (for clinical mastitis and maternal calving traits at least 50 daughters or 50 EDC, and for direct calving traits at least 50 calvings or 50 EDC) in at least 10 herds. Table 1 presents the amount of data included in this Interbull evaluation for all breeds.

National proofs were first de-regressed within country and then analysed jointly with a linear model including the effects of evaluation country, genetic group of bull and bull merit. Heritability estimates used in both the de-regression and international evaluation were as in each country’s national evaluation.

Table 2 presents the date of evaluation as supplied by each country

Estimated genetic parameters and sire standard deviations are shown in APPENDIX I and the corresponding number of common bulls are listed in APPENDIX II.

SCIENTIFIC LITERATURE

The international genetic evaluation procedure is based on international work described in the following scientific publications:

International genetic evaluation computation:
Schaeffer. 1994. J. Dairy Sci. 77:2671-2678
Klei, 1998. Interbull Bulletin 17:3-7

Verification and Genetic trend validation:
Klei et al., 2002. Interbull Bulletin 29:178-182.
Boichard et al., 1995. J. Dairy Sci. 78:431-437

Weighting factors:
Fikse and Banos, 2001. J. Dairy Sci. 84:1759-1767

De-regression:
Sigurdsson and G. Banos. 1995. Acta Agric. Scand. 45:207-219
Jairath et al. 1998. J. Dairy Sci. Vol. 81:550-562

Genetic parameter estimation:
Klei and Weigel, 1998, Interbull Bulletin 17:8-14
Sullivan, 1999. Interbull Bulletin 22:146-148

Post-processing of estimated genetic correlations:
Mark et al., 2003, Interbull Bulletin 30:126-135
Jorjani et al., 2003. J. Dairy Sci. 86:677-679
https://wiki.interbull.org/public/rG%20procedure?action=print

Time edits
Weigel and Banos. 1997. J. Dairy Sci. 80:3425-3430

International reliability estimation
Harris and Johnson. 1998. Interbull Bulletin 17:31-36

NEXT ROUTINE INTERNATIONAL EVALUATION

Dates for the next routine evaluation can be found on
https://interbull.org/ib/servicecalendar

NEXT TEST INTERNATIONAL EVALUATION

Dates for the next test run can be found on
https://interbull.org/ib/servicecalendar

From 2025 an extra MACE test run has been scheduled in May, data submissions' deadline and
target for distribution of results are all reported in the above link.

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 minimizing the need to resort to
conversions.

At the same time, all recipients of Interbull results are expected to honor
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.

PUBLICATION OF INTERBULL TEST RUN

Test evaluation results are meant for review purposes only and should not be
published.

^LTable 1. National evaluation data considered in the Interbull
evaluation for SNP training for clinical mastitis (August Routine Evaluation 2025).
Number of records for clinical mastitis by breed

Country	BSW	GUE	HOL	JER	RDC	SIM
AUS						
BEL						
CAN			5591	284		
CHE	830		941			
CZE						
DEA						
DEU			5485			
DFS						
ESP						
EST						
FRA	439		13338			
FRM						
GBR						
HUN						
IRL						
ISR						
ITA						
JPN						
KOR						
LTU						
LVA						
NLD						
NOR						
NZL						
POL						
PRT						
SVK						
SVN						
URY						
USA	108		9348	1126		
ZAF						
HRV						
CAM						
No.Records	1377		34703	1410		
Pub. Proofs	1258	0	27806	1239	0	0

^LAPPENDIX I. Sire standard deviations in diagonal and genetic correlations below diagonal

BSW cma

	CHE	FRA	USA
CHE	11.62		
FRA	0.87	0.95	
USA	0.85	0.88	2.77

HOL cma

	CAN	CHE	DEU	FRA	USA
CAN	8.10				
CHE	0.90	11.10			
DEU	0.88	0.94	9.62		
FRA	0.90	0.96	0.92	1.15	
USA	0.82	0.86	0.88	0.90	2.53

JER cma

	CAN	USA
CAN	8.21	
USA	0.82	2.54

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^LAPPENDIX II. Number of common bulls

BSW cma

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common bulls below diagonal

common three quarter sib group above diagonal

	CHE	FRA	USA
CHE	0	86	35
FRA	73	0	31
USA	31	30	0

GUE cma

HOL cma

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common bulls below diagonal

common three quarter sib group above diagonal

	CAN	CHE	DEU	FRA	USA
CAN	0	333	943	980	1540
CHE	299	0	344	310	314
DEU	771	319	0	1170	953
FRA	827	286	894	0	1060
USA	1735	273	843	871	0

JER cma

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common bulls below diagonal

common three quarter sib group above diagonal

	CAN	USA
CAN	0	109
USA	102	0

RDC cma

SIM cma
