

Introduction

The latest routine international evaluation for longevity trait took place as scheduled at the Interbull Centre. Data from twenty two (22) populations were included in this evaluation.

International genetic evaluations for direct longevity trait of bulls from Australia, Belgium, Canada, Switzerland, Germany, Denmark-Finland-Sweden Spain, France, The United Kingdom, Ireland, Israel, Italy, New Zealand, The Netherlands, The United States of America, Hungary, Norway, Slovenia, Czech Republic, Japan and Uruguay were computed. Brown Swiss, Guernsey, Holstein, Jersey, Red Dairy Cattle and Simmental breed data were included in this evaluation.

Changes in national procedures

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

JPN (HOL)	Small changes in proofs caused by additional records and in EDCs caused by modification of pedigree.
FRA (ALL)	Applied new MACE coding according to Interbull recommendations. Optimized data processing. Number of daughters, herds and EDC are now calculated directly from the pipeline based on the univariate model without permanent environment effects on single-step preadjusted performances in genomic-free EBVs computation. Before they were still computed from the traditional polygenic approach. Pedigree corrections. Decrease in EDC for a proportion of bulls caused by the different weights applied in the current univariate model without permanent environment effects running on single-step preadjusted performances.
CHE (ALL)	Breeding organizations have recently put more emphasis on correcting data, which contributes to some higher variation in data. This increased activity is related to the merge of two databases planned, which took place by the end of June 2026 which caused some decrease in information.
ISR (HOL)	Decrease in information due to data editings and pedigree verification
POL (HOL)	Drops in information due to data edits and pedigree verification
DFS (ALL)	Drops in information due to data edits
DEA (BSW)	Drops in information due to pedigree verification
GBR (HOL)	Drops in herds/daughters due to changes from data suppliers resulting in some of those bulls’ daughters failing validation.
AUS (ALL)	Updated type of proofs according to the latest interbull recommendation. Drops in information due to pedigree verification and changes in status of bulls that are no longer qualifying for the evaluation.
USA (ALL)	Decrease in information due to pedigree validation and daughterâ\200\223herdâ\200\223year minimum edits.
DEU (ALL)	Overall base change, some drops in information due to data edits
BEL (HOL)	Drops in information due to pedigree verification causing some bulls to no longer qualifying for inclusion.
NZL (ALL)	Decrease in information due to continuous pedigree verification and herd records being updated
IRL (ALL)	Drops in information due to pedigree correction
ITA (HOL)	Cut off of data causing drops in information and bulls missing in this submission.

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.

Direct Gestation Length (ges) has been added as the fifth trait in the calving evaluation starting from the August 2025 MACE routine evaluation, and therefore added in the calv{BRD}{RUNID}.itb and calv{BRD}{RUNID}.ipr.

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 Longevity (August Routine Evaluation 2026).
Number of records for direct longevity by breed

Country	BSW	GUE	HOL	JER	RDC	SIM
AUS		159	9323	1897	869	
BEL			2045			
CAN	286	116	14218	930	945	
CHE	3364		3544			
CZE			5625			
DEA	5436					
DEU			25213		326	
DFS			14669	2670	9683	
ESP			4881			
EST						
FRA	546		19068			
FRM						5441
GBR	159	349	9149	993	687	107
HUN			3651			
IRL			3878	291	90	
ISR			1970			
ITA	2552		9039	69		
JPN			7640			
KOR						
LTU						
LVA						
NLD	270		17310	298	101	487
NOR					4120	
NZL			8615	4968	1103	
POL			14023			
PRT						
SVK						
SVN	344		670			479
URY			2183			
USA	1281	858	44097	5775	867	127
ZAF			1265	739	136	
CAM					47	
=====						
No.Records	14238	1482	222076	18630	18974	6641
Pub. Proofs	11130	1201	159301	14812	16798	4897

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

BSW dlo

DFS	0.79	0.76	0.90	12.99									
NZL	0.80	0.55	0.67	0.59	2.55								
USA	0.71	0.86	0.88	0.85	0.60	2.44							
GBR	0.80	0.89	0.85	0.74	0.62	0.81	0.30						
NLD	0.60	0.66	0.70	0.77	0.46	0.77	0.67	287.48					
ZAF	0.63	0.91	0.79	0.63	0.55	0.82	0.83	0.47	31.82				
IRL	0.65	0.73	0.73	0.62	0.58	0.65	0.73	0.46	0.79	1.65			
NOR	0.71	0.75	0.68	0.80	0.53	0.80	0.70	0.86	0.63	0.44	40.69		
CAM	0.76	0.74	0.82	0.81	0.57	0.81	0.76	0.76	0.67	0.74	0.70	9.18	

SIM	dlo												

	FRM	NLD	SVN	GBR	USA								
FRM	0.94												
NLD	0.63	270.59											
SVN	0.84	0.49	24.10										
GBR	0.71	0.66	0.75	0.27									
USA	0.71	0.74	0.78	0.83	2.06								

^LAPPENDIX II. Number of common bulls

BSW dlo									

common bulls below diagonal									
common three quarter sib group above diagonal									
	CAN	CHE	DEA	NLD	USA	ITA	FRA	GBR	SVN

CAN	0	155	172	53	203	158	107	78	36
CHE	134	0	703	133	345	576	221	97	91
DEA	150	599	0	188	359	829	286	102	122
NLD	46	124	174	0	99	163	103	55	54
USA	199	322	325	88	0	276	150	111	42
ITA	143	515	736	137	204	0	262	104	110
FRA	99	179	233	88	113	220	0	85	59
GBR	75	79	77	50	107	83	83	0	31
SVN	33	85	112	54	34	102	57	27	0

GUE dlo				

common bulls below diagonal				
common three quarter sib group above diagonal				
	AUS	CAN	USA	GBR

AUS	0	59	79	50
CAN	59	0	80	38
USA	76	71	0	99
GBR	43	32	100	0

HOL dlo																						

common bulls below diagonal																						
common three quarter sib group above diagonal																						
	AUS	BEL	CAN	CHE	DEU	DFS	ESP	FRA	GBR	IRL	ISR	ITA	NLD	NZL	USA	HUN	CZE	SVN	ZAF	POL	JPN	URY

AUS	0	802	1725	717	1953	1484	1044	1497	1824	892	159	1240	1730	1234	2367	877	1049	154	482	1468	1084	798
BEL	711	0	858	616	1288	939	742	1066	1023	571	104	797	1295	470	1038	601	748	148	309	1017	607	372
CAN	1745	828	0	981	2806	1694	1505	1730	2107	681	204	2021	1949	712	4263	1231	1382	200	479	1964	1593	880
CHE	642	619	876	0	1287	759	627	816	889	477	82	787	1043	384	1135	486	598	126	252	844	548	351
DEU	1556	1320	2250	1223	0	3004	1821	2885	2706	1059	237	2801	4073	951	4130	1528	2273	367	547	3670	1674	925
DFS	1113	873	1444	700	2313	0	1243	1951	1959	882	203	1659	2432	812	2477	1106	1541	233	506	2311	1172	728
ESP	780	727	1007	526	1248	987	0	1481	1336	590	139	1405	1383	543	1845	927	1071	174	447	1543	1057	589
FRA	1095	1072	1247	765	1853	1243	1257	0	1970	872	166	1692	2386	797	2840	1139	1562	199	509	2374	1398	693
GBR	1718	1040	2372	891	2378	1638	1147	1512	0	1371	219	1804	2424	1063	2985	1141	1505	209	544	2171	1336	884
IRL	788	556	626	487	946	738	560	745	1469	0	146	648	1099	818	994	531	667	113	337	868	552	439
ISR	102	59	128	44	179	139	81	98	173	112	0	197	229	133	370	164	196	46	72	253	166	123
ITA	1057	819	1825	719	2236	1459	1085	1214	1663	591	137	0	1942	559	2909	1233	1435	252	375	2304	1263	721
NLD	1530	1433	1853	1029	3906	2154	1240	1745	2371	1050	175	1803	0	1041	3080	1213	1922	278	505	2710	1305	795

NZL	1210	366	641	316	699	563	398	493	963	712	101	440	924	0	1106	507	661	84	338	758	581	577
USA	2475	929	4763	1067	3302	2003	1304	1732	2978	931	366	2618	2720	1040	0	1670	2163	234	637	3112	2343	1377
HUN	684	512	1120	406	1275	931	770	860	1053	466	109	1149	1048	385	1687	0	1163	153	399	1363	886	592
CZE	727	599	1022	456	1866	1060	816	1093	1238	528	151	1182	1746	474	1846	1077	0	200	435	1910	1072	677
SVN	114	120	154	95	365	186	124	154	168	89	27	225	245	59	190	115	144	0	46	301	157	88
ZAF	420	263	402	212	426	383	389	389	493	294	44	302	412	265	612	317	304	33	0	459	440	319
POL	1203	995	1746	749	3699	2070	1282	1898	2180	790	205	2144	2704	603	3189	1285	1733	272	368	0	1335	843
JPN	689	421	934	399	894	724	580	617	834	390	82	778	819	337	1303	555	585	93	316	834	0	687
URY	629	267	783	257	669	497	445	435	762	332	71	538	619	469	1662	457	489	44	273	695	415	0

JER dlo

common bulls below diagonal										
common three quarter sib group above diagonal										
	AUS	CAN	DFS	NLD	NZL	USA	GBR	ZAF	IRL	ITA

AUS	0	306	169	93	459	588	291	267	80	44
CAN	314	0	120	62	180	544	230	173	20	37
DFS	139	110	0	182	152	225	231	158	71	37
NLD	85	54	182	0	98	136	142	85	56	23
NZL	499	189	130	91	0	374	286	203	164	37
USA	639	564	199	141	435	0	338	336	62	49
GBR	300	231	228	141	301	385	0	207	128	46
ZAF	256	168	139	81	210	350	216	0	46	42
IRL	75	18	66	54	188	64	137	45	0	13
ITA	42	35	35	20	36	51	45	41	12	0

RDC dlo

common bulls below diagonal												
common three quarter sib group above diagonal												
	AUS	CAN	DEU	DFS	NZL	USA	GBR	NLD	ZAF	IRL	NOR	CAM

AUS	0	120	50	256	141	170	125	48	39	32	90	14
CAN	122	0	13	193	59	248	122	7	71	8	8	0
DEU	49	12	0	77	20	32	17	23	3	11	20	0
DFS	232	197	68	0	158	233	161	64	48	31	167	0
NZL	141	58	19	151	0	92	78	24	31	18	42	9
USA	174	233	30	229	92	0	164	57	62	38	91	29
GBR	125	122	16	157	76	158	0	51	51	37	95	0
NLD	47	7	22	62	23	56	50	0	2	21	56	0
ZAF	39	73	3	47	27	56	44	2	0	3	0	0
IRL	30	8	10	27	17	38	37	21	3	0	70	0
NOR	80	7	19	142	40	92	99	55	0	68	0	0
CAM	14	0	0	0	9	29	0	0	0	0	0	0

SIM dlo

common bulls below diagonal					
common three quarter sib group above diagonal					
	FRM	NLD	SVN	GBR	USA

FRM	0	134	2	65	102
NLD	154	0	77	44	34
SVN	2	74	0	0	1
GBR	82	42	0	0	20
USA	116	35	1	27	0
