

INTRODUCTION

The latest routine international evaluation for calving traits took place as scheduled at the Interbull Centre. Data from twenty-one (21) countries were included in this evaluation.

International genetic evaluations for calving traits of bulls from Australia, Austria-Germany, Belgium, Canada, Denmark-Finland-Sweden, France, Germany, Hungary, Ireland, Israel, Italy, Netherlands, New Zealand, Norway,Japan Spain, Switzerland, the United Kingdom, Slovak Republic, Poland and the United States of America were computed. Brown Swiss, Holstein, and Red Dairy Cattle breed data were included in this evaluation.

CHANGES IN NATIONAL PROCEDURES

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

JPN (HOL)	Small changes in proofs caused by addition of 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 affecting especially maternal traits.
NOR (RDC)	Changes in the data extraction pipeline caused many bulls to loose from 1 to 10 daughters, depending on size of the progeny group.The National Herd Recording System is introducing new farmer reporting tools and central storage system. The data extraction pipeline is being modified to cope with this change.
NLD (ALL)	Decrease in information due to data edits. HOL ges: changes in type of proofs to align the coding used for this trait to the other traits in the trait group.
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 merging 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)	Decrease in information due to data edits and pedigree verification
DEA (BSW)	Small changes in information due to pedigree verification
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 continues DNA parentage testing and herds updates
IRL (ALL)	Decrease in information due to pedigree verification
ITA (HOL)	Cut off of data causing decrease in information and some bulls missing

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 calving (August Routine Evaluation 2026).
Number of records for direct calving ease by breed

Country	BSW	GUE	HOL	JER	RDC	SIM
AUS			6772			
BEL			1434			
CAN	182		14223		560	
CHE	1468		1994			
CZE						
DEA	3894					
DEU			21768		331	
DFS			11835		6822	
ESP			2608			
EST						
FRA	498		15639			
FRM						
GBR			3595			
HUN			1743			
IRL			1296		27	
ISR			756			
ITA			6966			
JPN			5061			
KOR						
LTU						
LVA						
NLD	214		16423		94	
NOR					4146	
NZL			665		34	
POL			5384			
PRT						
SVK			768			
SVN						
URY						
USA	594		39423			
ZAF						
CAM						
=====						
No.Records	6850		158353		12014	
Pub. Proofs	6403	0	141868	9852	14320	0

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

BSW	dce					

	DEA	NLD	USA	CHE	CAN	FRA

DEA	9.28					
NLD	0.82	5.39				
USA	0.66	0.84	0.13			
CHE	0.83	0.89	0.81	10.46		
CAN	0.79	0.94	0.89	0.90	7.78	
FRA	0.71	0.85	0.79	0.80	0.84	0.57

BSW	mce					
	DEA	NLD	USA	CHE	CAN	FRA
DEA	9.76					
NLD	0.55	4.55				
USA	0.65	0.73	0.15			
CHE	0.72	0.76	0.77	10.25		
CAN	0.35	0.75	0.84	0.72	6.43	
FRA	0.84	0.71	0.77	0.85	0.75	0.79

BSW	ges		
	AUS	USA	CHE
AUS	3.19		
USA	0.97	1.95	
CHE	0.97	0.97	9.46

HOL	dce																			
	AUS	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	GBR	HUN	DEU	BEL	IRL	SVK	ESP	POL	JPN	NZL	
AUS	0.04																			
CAN	0.77	8.19																		
CHE	0.73	0.91	8.29																	
DFS	0.76	0.92	0.82	11.02																
FRA	0.77	0.92	0.89	0.84	0.89															
ISR	0.69	0.78	0.60	0.80	0.70	2.57														
ITA	0.37	0.43	0.47	0.46	0.45	0.41	4.12													
NLD	0.85	0.96	0.87	0.93	0.89	0.79	0.43	7.15												
USA	0.71	0.89	0.88	0.84	0.87	0.78	0.43	0.86	0.12											
GBR	0.70	0.80	0.61	0.72	0.68	0.63	0.24	0.81	0.64	6.03										
HUN	0.46	0.52	0.43	0.35	0.49	0.50	0.23	0.53	0.47	0.45	1.23									
DEU	0.81	0.95	0.90	0.89	0.93	0.77	0.40	0.94	0.85	0.75	0.53	12.17								
BEL	0.56	0.57	0.65	0.61	0.62	0.41	0.31	0.65	0.61	0.37	0.44	0.57	8.52							
IRL	0.59	0.76	0.73	0.75	0.74	0.63	0.38	0.78	0.75	0.45	0.45	0.72	0.50	0.11						
SVK	0.35	0.20	0.18	0.19	0.20	0.20	0.19	0.22	0.19	0.18	0.20	0.19	0.20	0.18	13.31					
ESP	0.63	0.85	0.81	0.75	0.81	0.58	0.42	0.83	0.78	0.57	0.50	0.83	0.57	0.70	0.18	11.66				
POL	0.51	0.61	0.59	0.60	0.60	0.59	0.39	0.68	0.55	0.42	0.19	0.65	0.50	0.45	0.18	0.46	16.06			
JPN	0.70	0.79	0.76	0.82	0.78	0.63	0.38	0.82	0.74	0.60	0.45	0.78	0.56	0.61	0.20	0.69	0.51	2.68		
NZL	0.67	0.60	0.49	0.63	0.62	0.50	0.22	0.67	0.62	0.46	0.30	0.58	0.40	0.76	0.18	0.52	0.32	0.41	4.49	

HOL	mce									
	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	GBR	HUN
CAN	8.63									
CHE	0.87	9.35								
DFS	0.85	0.86	11.35							
FRA	0.79	0.87	0.80	1.12						
ISR	0.86	0.74	0.81	0.72	2.56					
ITA	0.30	0.41	0.42	0.41	0.51	7.26				
NLD	0.78	0.81	0.79	0.80	0.77	0.42	4.73			
USA	0.91	0.80	0.77	0.76	0.88	0.28	0.77	0.15		
GBR	0.43	0.40	0.39	0.60	0.40	0.21	0.45	0.44	5.73	
HUN	0.36	0.39	0.34	0.35	0.44	0.24	0.37	0.36	0.26	1.33
DEU	0.86	0.93	0.91	0.82	0.80	0.42	0.82	0.79	0.45	0.41
BEL	0.65	0.75	0.67	0.72	0.59	0.33	0.75	0.66	0.40	0.42
SVK	0.23	0.28	0.23	0.23	0.35	0.23	0.22	0.22	0.34	0.24
ESP	0.79	0.84	0.86	0.75	0.77	0.35	0.79	0.71	0.34	0.47
POL	0.72	0.83	0.80	0.70	0.74	0.42	0.73	0.71	0.43	0.22

JPN	0.66	0.73	0.63	0.85	0.66	0.34	0.71	0.67	0.47	0.42	0.70	0.67	0.30	0.69	0.54	1.77
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HOL	dsb											
	AUS	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	DEU	POL	JPN
AUS	2.94											
CAN	0.64	8.87										
CHE	0.48	0.73	9.96									
DFS	0.67	0.88	0.69	11.02								
FRA	0.65	0.88	0.70	0.82	1.03							
ISR	0.56	0.72	0.43	0.68	0.59	1.56						
ITA	0.42	0.55	0.45	0.51	0.61	0.39	6.43					
NLD	0.50	0.80	0.73	0.72	0.79	0.42	0.50	4.47				
USA	0.43	0.74	0.58	0.64	0.78	0.40	0.40	0.62	0.07			
DEU	0.57	0.92	0.81	0.86	0.86	0.59	0.54	0.82	0.69	11.89		
POL	0.33	0.67	0.51	0.67	0.62	0.34	0.46	0.64	0.51	0.71	19.72	
JPN	0.42	0.64	0.67	0.58	0.71	0.33	0.41	0.65	0.60	0.63	0.43	1.53

HOL	msb											
	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	DEU	POL	JPN	AUS
CAN	7.00											
CHE	0.91	9.56										
DFS	0.96	0.91	10.35									
FRA	0.93	0.90	0.92	1.18								
ISR	0.91	0.76	0.86	0.86	1.70							
ITA	0.65	0.63	0.70	0.65	0.65	6.51						
NLD	0.93	0.89	0.95	0.91	0.85	0.70	4.30					
USA	0.88	0.81	0.85	0.83	0.84	0.53	0.78	0.12				
DEU	0.95	0.94	0.97	0.93	0.87	0.72	0.95	0.82	12.33			
POL	0.86	0.84	0.86	0.81	0.82	0.61	0.81	0.75	0.85	16.29		
JPN	0.78	0.76	0.77	0.91	0.76	0.56	0.76	0.76	0.79	0.75	2.34	
AUS	0.76	0.75	0.75	0.82	0.78	0.40	0.75	0.78	0.75	0.75	0.75	2.85

HOL	ges			
	AUS	NLD	NZL	USA
AUS	2.75			
NLD	0.98	5.85		
NZL	0.97	0.98	2.96	
USA	0.97	1.00	0.98	1.58

JER	ges		
	AUS	NZL	USA
AUS	2.71		
NZL	0.96	3.08	
USA	0.97	0.95	1.60

RDC	dce						
	CAN	DFS	NOR	NLD	DEU	IRL	NZL
CAN	7.11						
DFS	0.88	10.78					
NOR	0.73	0.90	11.76				
NLD	0.95	0.90	0.88	4.88			
DEU	0.93	0.88	0.82	0.92	13.20		
IRL	0.74	0.72	0.76	0.77	0.71	0.12	
NZL	0.60	0.65	0.64	0.65	0.59	0.73	4.32

RDC	mce			
	CAN	DFS	NOR	DEU

CAN	7.16			
DFS	0.73	11.48		
NOR	0.56	0.75	13.32	
DEU	0.84	0.87	0.67	11.58

RDC	ges			
	AUS	NOR	NZL	USA
AUS	2.83			
NOR	0.97	12.56		
NZL	0.97	0.97	2.95	
USA	0.97	0.98	0.97	1.73

^LAPPENDIX II. Number of common bulls

BSW dce

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

DEA	0	132	194	436	103	236
NLD	122	0	51	78	23	74
USA	152	46	0	135	115	83
CHE	367	71	102	0	81	130
CAN	91	21	109	72	0	67
FRA	184	60	66	101	58	0

BSW mce

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

DEA	0	139	116	458	37	209
NLD	124	0	42	81	17	70
USA	106	39	0	91	32	62
CHE	377	78	76	0	29	124
CAN	33	14	30	24	0	27
FRA	162	60	55	97	24	0

BSW dsb

BSW msb

BSW ges

common bulls below diagonal
common three quarter sib group above diagonal
AUS USA CHE

AUS	0	20	24
USA	19	0	161
CHE	19	129	0

GUE dce

GUE mce

GUE dsb

GUE msb

GUE ges

HOL dce

common bulls below diagonal															common three quarter sib group above diagonal				
	AUS	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	GBR	HUN	DEU	BEL	IRL	SVK	ESP	POL	JPN	NZL
AUS	0	1499	394	1108	1184	100	962	1282	1853	828	435	1449	544	232	199	623	724	649	137
CAN	1438	0	656	1538	1658	141	1846	1717	4167	1089	695	2676	694	219	321	1039	1279	1212	57
CHE	328	559	0	401	459	30	451	540	679	344	156	804	341	109	94	308	338	324	17
DFS	770	1256	341	0	1622	129	1243	1793	2056	905	522	2369	659	220	271	728	1026	726	64
FRA	865	1322	407	992	0	100	1411	1952	2505	1007	654	2413	763	200	304	924	1226	891	68
ISR	61	95	14	89	61	0	129	159	238	100	54	146	58	44	39	82	128	94	16
ITA	793	1642	375	1003	1042	90	0	1448	2520	1049	630	2226	647	211	316	954	1255	1012	42
NLD	999	1533	501	1271	1225	114	1233	0	2565	1166	558	3295	871	297	356	827	1269	894	79
USA	1773	4553	568	1481	1560	227	2212	1988	0	1529	840	3634	745	273	422	1175	1784	1640	83
GBR	650	927	304	556	595	59	829	807	1181	0	379	1377	490	253	188	551	821	624	37
HUN	275	556	99	335	411	34	469	315	658	217	0	832	283	100	173	396	404	426	20
DEU	1147	2208	714	1714	1598	112	1693	2845	2825	929	544	0	995	274	533	1153	1835	1255	58
BEL	506	668	315	586	788	31	659	891	701	438	211	1032	0	166	174	471	519	426	25
IRL	218	191	97	184	180	26	186	277	257	237	74	249	154	0	54	128	178	128	75
SVK	97	221	39	149	195	20	220	233	302	83	110	430	102	24	0	187	241	201	12
ESP	496	835	243	605	810	44	798	706	949	414	279	820	460	113	94	0	715	635	33
POL	551	1121	227	795	910	90	1080	1044	1751	662	285	1512	436	142	151	541	0	763	26
JPN	501	854	234	510	502	52	670	622	1122	412	232	759	335	104	94	423	485	0	30
NZL	118	36	12	35	36	12	25	50	67	19	11	38	18	63	6	21	17	19	0

HOL mce

common bulls below diagonal															common three quarter sib group above diagonal				
	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	GBR	HUN	DEU	BEL	SVK	ESP	POL	JPN			
CAN	0	575	1473	1365	121	1586	1407	2743	980	653	2298	624	285	799	1120	1229			
CHE	472	0	480	490	36	470	551	607	365	170	803	340	93	273	353	326			
DFS	1328	434	0	1782	141	1468	2296	2141	981	632	2999	742	277	711	1301	1011			
FRA	1120	443	1156	0	104	1379	2019	2064	869	689	2587	795	271	790	1308	1118			
ISR	78	17	97	61	0	127	159	228	112	62	156	63	32	71	133	107			
ITA	1374	385	1281	1010	89	0	1476	2354	953	612	2237	636	273	781	1309	1097			
NLD	1353	507	1975	1436	119	1316	0	2224	1073	663	3421	914	331	723	1357	1076			
USA	2802	501	1799	1307	214	2052	1872	0	1286	852	3275	692	355	893	1693	1782			
GBR	1064	337	997	900	84	1010	1163	1470	0	401	1213	525	182	506	778	643			
HUN	548	120	435	445	40	472	452	721	368	0	901	304	176	363	464	525			
DEU	1805	695	2240	1615	119	1675	2993	2492	1282	603	0	963	405	937	1906	1451			
BEL	610	323	702	833	35	633	979	640	569	240	992	0	161	428	535	444			
SVK	197	33	156	157	16	198	222	261	118	119	303	90	0	160	226	205			
ESP	634	220	620	699	40	670	650	731	484	280	679	412	84	0	594	585			
POL	963	249	1044	939	95	1128	1163	1655	768	331	1577	459	141	455	0	826			
JPN	795	232	643	529	53	660	659	1064	524	290	765	338	89	394	498	0			

HOL dsb

common bulls below diagonal												common three quarter sib group above diagonal			
	AUS	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	DEU	POL	JPN			
AUS	0	1450	373	1108	1145	100	1023	1448	1727	1444	820	659			
CAN	1425	0	616	1494	1562	137	2010	2020	3842	2664	1516	1241			
CHE	317	521	0	383	442	29	476	575	612	762	371	314			
DFS	774	1261	327	0	1592	131	1358	1972	1919	2382	1238	740			
FRA	861	1307	397	998	0	98	1553	2063	2147	2372	1487	902			
ISR	61	94	13	89	60	0	136	162	234	148	143	95			
ITA	831	1781	392	1092	1134	98	0	1860	2699	2570	1680	1127			
NLD	1267	2011	543	1567	1599	125	1668	0	2714	3709	1707	1013			
USA	1686	4319	504	1426	1330	224	2347	2447	0	3406	2130	1660			
DEU	1149	2216	667	1721	1593	112	1957	3437	2695	0	2326	1292			
POL	654	1374	269	968	1124	108	1462	1522	2180	2004	0	905			
JPN	510	889	225	522	513	53	727	725	1165	789	588	0			

HOL msb

common bulls below diagonal

common three quarter sib group above diagonal												
	CAN	CHE	DFS	FRA	ISR	ITA	NLD	USA	DEU	POL	JPN	AUS
CAN	0	554	1480	1316	120	1680	1485	2547	2248	1328	1248	1049
CHE	455	0	481	470	36	496	560	561	750	402	325	353
DFS	1367	442	0	1746	144	1609	2407	1958	3017	1600	1050	1044
FRA	1106	433	1173	0	103	1485	1998	1731	2507	1580	1123	966
ISR	78	17	99	60	0	131	160	222	152	142	109	92
ITA	1440	406	1390	1061	94	0	1700	2439	2489	1675	1185	863
NLD	1475	528	2129	1481	121	1521	0	2079	3426	1723	1123	1128
USA	2684	459	1809	1220	212	2126	1889	0	2892	1997	1679	1213
DEU	1741	649	2261	1552	114	1795	3024	2297	0	2340	1470	1239
POL	1163	293	1327	1164	107	1421	1553	2021	1973	0	988	772
JPN	820	234	677	545	56	707	719	1110	782	601	0	714
AUS	1027	298	848	752	60	730	984	1250	996	633	516	0

HOL ges

common bulls below diagonal			
common three quarter sib group above diagonal			
	AUS	NLD	NZL
AUS	0	823	773
NLD	698	0	1194
NZL	714	1006	0
USA	1149	1838	1152

JER dce

JER mce

JER dsb

JER msb

JER ges

common bulls below diagonal			
common three quarter sib group above diagonal			
	AUS	NZL	USA
AUS	0	267	236
NZL	268	0	438
USA	232	464	0

RDC dce

common bulls below diagonal							
common three quarter sib group above diagonal							
	CAN	DFS	NOR	NLD	DEU	IRL	NZL
CAN	0	192	6	5	11	2	0
DFS	196	0	172	64	101	9	3
NOR	5	148	0	54	34	26	2
NLD	5	62	53	0	29	7	1
DEU	11	93	32	28	0	3	1
IRL	2	6	25	7	2	0	0
NZL	0	3	2	1	1	0	0

RDC mce

common bulls below diagonal				
common three quarter sib group above diagonal				
	CAN	DFS	NOR	DEU
CAN	0	125	5	9
DFS	124	0	154	66
NOR	4	129	0	21
DEU	9	58	20	0

RDC dsb

RDC msb

RDC ges

common bulls below diagonal
common three quarter sib group above diagonal
AUS NOR NZL USA

AUS 0 59 73 63
NOR 52 0 71 84
NZL 72 70 0 130
USA 61 85 131 0

SIM dce

SIM mce

SIM dsb

SIM msb

SIM ges
