

Introduction

The latest routine international evaluation for udder traits took place as scheduled at the Interbull Centre. Data from thirty-three (33) countries were included in this evaluation.

International genetic evaluations for udder health traits of bulls from Australia, Austria-Germany, Belgium, Canada, Croatia, Czech Republic, Denmark-Finland-Sweden, Estonia, France, Hungary, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, South Africa, Slovak Republic, Spain, Switzerland, the United Kingdom, the United States of America, Poland, Lithuania, Latvia, Croatia, Slovenia, Portugal and Uruguay were computed. Brown Swiss, Holstein, Red Dairy Cattle, Guernsey, Jersey and Simmental breed data were included in this evaluation.

Countries sending real MAS data (other countries participate to the MAS evaluation using SCS data as predictor):

HOL : DFS, NLD, FRA, CAN, ITA, CHE, USA, DEU, GBR, AUS
RDC : DFS, NLD, CAN, GBR, AUS
BSW : NLD, FRA, CHE, GBR
JER : DFS, NLD, CAN, GBR, AUS, USA
SIM : NLD, CHE, GBR
GUE : No evaluation for MAS yet

Changes in national procedures

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

BEL (HOL)	Few bulls missing due to drop in daughters, changes in type of proofs caused by the program assigning them.
DEA (BSW)	Drops in info causing changes in rel.
ISR (HOL)	Some bulls had slight reductions in the numbers of records, due to editing and parentage corrections.
JPN (HOL)	Changes in information caused by additional records and modification of pedigree.
NZL (ALL)	Changes in information caused by continuous DNA parentage testing.
DFS (HOL, JER, RDC)	Changes in type of proofs, Type of proof is based information from production. When production information for foreign bulls comes, they might change type of proof for other traits from unknown to XX, drops in information.
DEA (SIM)	Drops in EDC.
SVN (ALL)	Small changes in information due changes in data base related to the pedigree completeness as well as phenotypic data improvement.
ITA (SIM)	Some drops in information due to edits on very old test day records used to estimate the ebvs and some pedigree's correction.
ESP (HOL)	Base change.
ZAF (HOL, JER)	Reliabilities estimated with Jamrozik et al. method.
LTU (HOL)	Decrease in information due to pedigree correction for old animals.

INTERBULL CHANGES COMPARED TO THE PREVIOUS ROUTINE RUN

Post-processing Windows:

According to the decision taken by ITC in Orlando (2015) to review the post-processing windows every 5 years, during the 2020 the relative working group has been re-activated and new windows have been identified.

As before, the upper bounds have been set to 0.99 as these were judged to have very little effect on evaluations while the lower values have been reduced to the 10th percentile. This reduction would provide post-processed correlations to be closer to the real estimated ones. Over the past five years, in fact, the previous adopted lower value (25th percentile) had been found too high causing estimated and post-processed correlations to differ significantly from each other. The new lower values have been applied to all breeds and traits.

The weight assigned to the magnitude of the changes tested by each country has also been revised. The new weight will allow post-processed correlations to take more in consideration the value of the new estimated ones even when no changes are applied by the countries.

The new weights are as follows:

No changes :: 2
Small changes:: 1
Big changes :: 0

More information can be read on https://interbull.org/ib/rg_procedure

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 <http://www.interbull.org/ib/servicecalendar>.

NEXT TEST INTERNATIONAL EVALUATION

 Dates for the next test 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 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 udder health (August Routine Evaluation 2021).
 Number of records for milk somatic cells by breed

Country	BSW	GUE	HOL	JER	RDC	SIM
AUS		145	8499	1697	769	
BEL			2170			
CAN	267	103	13265	823	847	
CHE	3089		3630	96		3435
CZE			4510			
DEA	5849					23709
DEU			23203		283	
DFS			13880	2264	8026	
ESP			4269			
EST			1248		465	
FRA	420		17628			488
FRM						4569
GBR	138	294	7219	736	549	84
HUN			3122			190
IRL			2795			
ISR			1586			
ITA	2047		9644	76		1644
JPN			6605			
KOR			1494			
LTU			1268		435	
LVA			527		564	
NLD	210		16460	210	94	462
NOR					4238	
NZL	60	57	8293	4811	1373	
POL			11627			
PRT			2459			
SVK			1148			
SVN	402		644			698
URY			1917			
USA	1129	717	40472	4954	723	80
ZAF			1211	600	124	
HRV			880			983
CAM					44	

NLD	0.85	0.84	0.81	4.12										
USA	0.80	0.79	0.77	0.78	2.49									
AUS	0.73	0.73	0.73	0.73	0.73	0.11								
ZAF	0.75	0.73	0.73	0.80	0.72	0.71	21.30							
NZL	0.65	0.65	0.64	0.69	0.65	0.68	0.80	0.35						
CHE	0.86	0.81	0.75	0.78	0.76	0.73	0.81	0.74	12.36					
ITA	0.76	0.74	0.73	0.78	0.68	0.67	0.80	0.71	0.81	6.98				

RDC scs

	CAN	DFS	GBR	NOR	USA	DEU	AUS	EST	ZAF	NZL	LTU	LVA	NLD	CAM
CAN	5.72													
DFS	0.94	12.90												
GBR	0.93	0.92	11.47											
NOR	0.90	0.91	0.87	14.17										
USA	0.92	0.87	0.89	0.86	0.23									
DEU	0.94	0.96	0.95	0.91	0.89	14.05								
AUS	0.84	0.87	0.88	0.87	0.81	0.87	0.27							
EST	0.89	0.90	0.90	0.88	0.89	0.94	0.85	19.28						
ZAF	0.87	0.88	0.88	0.92	0.87	0.92	0.83	0.89	25.33					
NZL	0.83	0.83	0.84	0.85	0.80	0.84	0.90	0.85	0.83	0.38				
LTU	0.87	0.90	0.88	0.90	0.86	0.90	0.83	0.90	0.89	0.82	0.34			
LVA	0.88	0.88	0.90	0.88	0.87	0.93	0.85	0.96	0.88	0.85	0.90	0.44		
NLD	0.91	0.95	0.95	0.89	0.87	0.96	0.87	0.91	0.88	0.85	0.88	0.90	4.24	
CAM	0.92	0.92	0.92	0.92	0.87	0.92	0.92	0.92	0.91	0.88	0.91	0.91	0.92	6.37

RDC mas

	CAN	DFS	GBR	NOR	USA	AUS	EST	ZAF	NZL	LTU	LVA	NLD	CAM
CAN	7.86												
DFS	0.90	13.64											
GBR	0.87	0.86	2.06										
NOR	0.86	0.79	0.80	14.17									
USA	0.81	0.77	0.80	0.83	0.23								
AUS	0.76	0.75	0.76	0.77	0.73	0.12							
EST	0.83	0.77	0.82	0.85	0.82	0.74	19.28						
ZAF	0.84	0.84	0.82	0.90	0.80	0.74	0.86	25.39					
NZL	0.66	0.64	0.69	0.79	0.70	0.72	0.81	0.78	0.38				
LTU	0.82	0.78	0.83	0.88	0.82	0.76	0.90	0.86	0.79	0.34			
LVA	0.81	0.78	0.82	0.87	0.81	0.75	0.95	0.86	0.84	0.91	0.44		
NLD	0.86	0.82	0.84	0.86	0.84	0.77	0.88	0.86	0.75	0.85	0.87	4.41	
CAM	0.87	0.87	0.88	0.90	0.84	0.85	0.90	0.89	0.88	0.90	0.91	0.88	6.37

SIM scs

	FRM	FRA	ITA	NLD	CHE	DEA	HUN	SVN	GBR	HRV	USA
FRM	1.09										
FRA	0.91	1.01									
ITA	0.89	0.88	12.62								
NLD	0.91	0.93	0.87	4.28							
CHE	0.93	0.93	0.89	0.93	10.36						
DEA	0.92	0.93	0.87	0.90	0.89	12.25					
HUN	0.91	0.91	0.93	0.88	0.89	0.92	16.37				
SVN	0.89	0.86	0.85	0.86	0.87	0.85	0.88	8.98			
GBR	0.91	0.95	0.89	0.95	0.90	0.93	0.89	0.86	11.64		
HRV	0.89	0.83	0.84	0.83	0.84	0.83	0.86	0.83	0.83	9.81	
USA	0.86	0.90	0.88	0.88	0.87	0.86	0.91	0.85	0.90	0.83	0.20

SIM mas

	FRM	FRA	ITA	NLD	CHE	DEA	HUN	SVN	GBR	HRV	USA
FRM	1.08										
FRA	0.89	1.00									
ITA	0.91	0.83	12.61								
NLD	0.86	0.86	0.80	4.11							

EST	166	97	316	196	0	271	262	392	362	52	294	225	215	205	222	221	109	143	125	282	122	354	122	87	200	127	101	133	145
FRA	1035	627	1270	915	130	0	1547	2037	2544	129	1684	1315	977	970	1242	1203	476	811	652	1279	434	1772	310	187	941	529	215	313	619
GBR	1908	667	1553	1216	150	961	0	1808	2260	154	1576	1439	908	883	1072	1103	510	918	862	1096	386	1426	329	180	942	505	226	352	696
NLD	1599	934	3181	2030	283	1276	1574	0	2651	171	1838	1540	1039	1339	1126	1202	517	1069	809	1604	561	2065	425	227	1064	500	291	476	702
USA	4104	951	2583	1746	245	1358	2017	2358	0	206	2698	2010	1409	1013	2043	1624	637	1108	726	1738	556	2300	436	260	1309	875	263	416	1171
ISR	105	39	134	116	32	66	106	129	195	0	153	120	122	86	114	116	65	115	91	137	53	156	60	28	105	64	51	71	97
ITA	1542	696	1834	1311	166	934	1229	1556	1987	104	0	1238	1090	854	1213	1334	468	724	583	1319	403	1788	358	220	1000	612	263	418	708
AUS	1526	565	1269	1001	114	880	1243	1352	2034	77	930	0	781	784	948	936	484	1231	663	902	319	1125	274	167	792	460	192	313	705
HUN	1042	374	1049	792	131	664	792	889	1384	82	952	594	0	577	770	830	397	521	405	984	327	1063	247	140	719	471	178	283	548
BEL	856	637	1294	859	130	952	870	1550	907	55	840	688	505	0	582	719	340	531	469	696	308	873	221	144	670	313	193	288	379
JPN	769	335	674	589	84	456	573	624	975	51	608	547	447	382	0	958	429	587	413	889	327	1069	241	149	724	574	185	248	617
ESP	912	481	1041	842	110	877	881	1090	1080	68	998	676	674	711	475	0	451	562	460	914	328	1157	253	167	843	498	208	306	554
ZAF	469	220	431	392	55	337	447	440	624	42	371	423	323	289	301	402	0	366	291	408	181	419	118	99	437	264	101	156	326
NZL	783	347	744	612	74	483	790	980	1054	92	543	1240	403	431	321	299	0	667	642	261	690	192	114	572	321	142	229	558	
IRL	463	352	622	536	64	466	810	711	610	65	461	539	327	440	254	415	238	541	0	479	195	569	153	94	419	205	117	173	347
CZE	899	416	1486	925	180	807	797	1458	1392	102	969	616	905	563	429	677	289	474	348	0	514	1448	338	191	804	493	236	390	592
SVK	312	124	513	223	54	233	221	394	371	22	243	159	230	188	123	167	97	157	93	439	0	469	140	96	324	206	93	150	247
POL	1375	605	2465	1480	252	1170	1206	1941	2233	121	1429	859	963	804	589	834	318	526	437	1213	326	0	475	251	1030	594	285	506	692
LTU	173	85	593	225	63	116	168	267	297	29	197	121	152	115	82	109	48	90	71	228	73	368	0	101	244	155	86	176	183
LVA	131	78	204	126	62	87	103	149	208	20	150	79	100	91	66	95	58	55	52	126	47	186	73	0	189	99	43	115	122
PRT	1086	453	1113	842	139	793	875	1068	1368	76	931	636	717	678	452	814	393	465	353	673	224	1029	155	142	0	470	170	328	561
KOR	693	196	436	371	63	308	370	358	993	38	498	336	380	232	353	351	197	231	136	358	126	494	68	59	391	0	109	156	400
SVN	168	109	334	221	60	149	168	253	201	36	223	133	133	155	104	158	73	100	89	178	50	258	45	26	135	66	0	124	118
HRV	193	137	689	340	96	193	248	434	315	48	322	195	205	234	116	234	107	132	114	289	74	454	123	91	267	70	96	0	194
URY	782	251	579	480	84	370	573	567	1448	53	517	549	444	303	361	442	283	448	266	432	150	572	105	81	496	316	66	116	0

HOL

common bulls below diagonal																													
common three quarter sib group above diagonal																													
	CAN	CHE	DEU	DFS	EST	FRA	GBR	NLD	USA	ISR	ITA	AUS	HUN	BEL	JPN	ESP	ZAF	NZL	IRL	CZE	SVK	POL	LTU	LVA	PRT	KOR	SVN	HRV	URY
CAN	0	228	669	798	167	847	907	343	1149	91	1183	849	704	541	840	885	253	412	309	735	244	1050	206	107	632	498	166	226	473
CHE	194	0	217	200	55	200	207	136	210	21	221	202	115	184	154	179	62	128	114	150	62	226	57	15	126	98	59	58	85
DEU	501	190	0	861	207	722	710	491	617	78	893	602	523	524	502	634	196	354	299	652	209	1134	272	121	456	274	230	378	297
DFS	801	177	733	0	283	1271	1319	714	940	145	1297	1230	891	807	969	1027	490	801	657	1231	346	1574	341	186	873	455	253	392	572
EST	102	27	144	177	0	228	238	166	208	51	260	217	207	195	216	216	106	138	122	276	108	337	112	83	190	122	100	130	132
FRA	634	173	472	706	114	0	1166	483	839	108	1291	1038	845	811	973	1032	387	641	549	1107	320	1538	249	153	802	438	192	271	457
GBR	918	188	562	1033	143	771	0	541	1057	153	1313	1294	860	818	973	1039	468	835	807	1049	334	1340	285	154	865	465	215	326	595
NLD	316	120	432	715	112	355	520	0	349	82	510	481	369	512	345	423	209	411	328	653	168	833	188	82	417	180	151	271	246
USA	1318	179	493	942	152	635	1154	309	0	143	1304	963	842	547	962	843	352	516	402	886	257	1250	237	153	728	587	186	221	659
ISR	60	10	55	102	32	59	105	63	139	0	137	119	119	86	112	116	63	113	90	137	51	153	54	28	105	63	50	68	90
ITA	974	194	654	1040	158	740	1073	449	1304	91	0	1051	991	741	1094	1195	391	588	486	1169	335	1582	303	184	884	559	242	344	587
AUS	917	175	459	874	114	721	1137	408	1043	76	827	0	764	756	944	933	468	1201	658	895	292	1099	245	158	764	437	189	295	632
HUN	682	87	401	724	131	580	769	309	896	80	884	586	0	557	761	820	385	515	399	978	303	1039	228	136	695	451	175	270	488
BEL	567	176	526	756	128	797	836	525	527	55	754	682	501	0	561	703	333	516	463	680	278	840	201	135	648	303	191	278	350
JPN	571	117	292	532	84	403	560	246	749	51	575	545	447	382	0	958	425	579	413	889	303	1055	221	144	698	548	181	234	540
ESP	596	140	437	779	110	772	862	399	670	68	859	671	673	711	475	0	446	561	459	914	299	1141	234	161	827	484	204	295	503
ZAF	239	51	153	375	55	292	432	187	394	42	325	417	322	289	301	402	0	362	288	402	171	410	109	95	425	250	99	146	304
NZL	381	111	281	558	73	410	698	368	487	92	472	1206	402	428	321	431	298	0	665	640	249	673	176	109	557	308	141	218	510
IRL	309	111	264	490	64	422	778	307	386	65	403	533	327	440	254	415	238	541	0	479	183	559	145	92	411	198	115	168	324
CZE	562	103	485	819	180	654	785	619	825	102	857	609	905	563	429	677	289	474	348	0	483	1427	311	183	783	475	234	372	533
SVK	176	24	118	191	53	178	214	94	179	22	213	155	226	182	123	167	96	155	93	439	0	419	115	88	304	192	87	137	219
POL	978	181	1124	1279	248	1033	1173	823	1414	120	1316	854	953	791	589	832	317	521	437	1213	311	0	438	236	980	566	277	477	615
LTU	125	20	223	208	61	104	167	124	170	29	171	121	150	114	82	109	48	89	71	228	69	355	0	95	219	136	81	159	160
LVA	72	8	104	114	62	76	96	50	127	20	121	79	99	91	66	95	58	54	52	126	47	179	73	0	180	95	43	107	108
PRT	646	114	405	776	138	704	843	422	791	76	858	625	710	676	452	814	391	463	353	673	217	1005							

DFS	109	0	176	139	203	162	155	153	59	41
GBR	163	167	0	92	239	226	169	221	72	48
NLD	37	141	84	0	94	76	76	77	40	29
USA	487	183	260	101	0	506	286	374	70	48
AUS	274	131	227	68	552	0	235	440	57	46
ZAF	149	137	168	72	302	225	0	200	56	44
NZL	188	129	222	70	444	487	208	0	53	39
CHE	33	57	67	34	70	46	48	43	0	33
ITA	32	41	48	24	47	40	39	36	32	0

JER

common bulls below diagonal
common three quarter sib group above diagonal

	CAN	DFS	GBR	NLD	USA	AUS	ZAF	NZL	CHE	ITA
CAN	0	42	72	19	84	122	69	84	24	24
DFS	37	0	110	110	53	128	129	126	56	38
GBR	68	101	0	66	78	156	127	153	64	43
NLD	12	104	61	0	33	73	73	72	37	29
USA	77	44	77	30	0	153	112	111	36	26
AUS	111	92	158	67	163	0	227	434	53	45
ZAF	63	107	127	70	123	222	0	196	53	44
NZL	76	98	153	65	111	479	206	0	49	39
CHE	21	52	59	32	29	45	47	42	0	32
ITA	20	36	42	24	24	39	39	36	32	0

RDC

common bulls below diagonal
common three quarter sib group above diagonal

	CAN	DFS	GBR	NOR	USA	DEU	AUS	EST	ZAF	NZL	LTU	LVA	NLD	CAM
CAN	0	178	80	7	208	14	103	3	69	90	17	7	7	0
DFS	183	0	105	132	200	54	195	117	50	168	111	91	58	0
GBR	81	99	0	56	112	14	85	8	38	83	27	11	39	0
NOR	6	106	59	0	78	14	70	24	0	41	26	17	44	0
USA	194	196	106	79	0	23	136	22	58	122	35	14	44	25
DEU	13	45	14	13	22	0	38	24	1	17	30	28	15	0
AUS	104	168	82	59	137	37	0	32	33	146	46	28	34	12
EST	2	106	7	24	21	24	30	0	0	11	26	36	18	0
ZAF	71	47	34	0	52	1	32	0	0	33	5	1	3	0
NZL	88	166	78	41	124	17	146	10	29	0	28	13	22	12
LTU	16	98	24	22	29	28	42	25	5	25	0	38	16	0
LVA	7	59	11	15	10	22	25	28	1	10	32	0	9	0
NLD	7	56	38	43	43	14	32	17	3	22	14	8	0	0
CAM	0	0	0	0	25	0	12	0	0	12	0	0	0	0

RDC

common bulls below diagonal
common three quarter sib group above diagonal

	CAN	DFS	GBR	NOR	USA	AUS	EST	ZAF	NZL	LTU	LVA	NLD	CAM
CAN	0	75	29	3	73	33	0	35	34	13	4	3	0
DFS	74	0	74	134	191	209	117	45	166	110	92	55	0
GBR	28	69	0	51	79	54	5	26	58	22	9	30	0
NOR	3	107	54	0	78	70	24	0	41	26	17	40	0
USA	73	188	77	79	0	125	22	53	120	35	14	41	25
AUS	33	186	52	59	128	0	32	30	139	43	27	31	10
EST	0	106	5	24	21	30	0	0	11	26	36	17	0
ZAF	36	45	25	0	51	32	0	0	31	5	1	2	0
NZL	34	162	56	41	124	140	10	29	0	28	13	20	12
LTU	12	97	19	22	29	40	25	5	25	0	38	15	0
LVA	4	59	9	15	10	25	28	1	10	32	0	8	0
NLD	3	53	30	39	41	29	16	2	20	13	7	0	0
CAM	0	0	0	0	25	10	0	0	12	0	0	0	0

SIM

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common bulls below diagonal
common three quarter sib group above diagonal
  FRM  FRA  ITA  NLD  CHE  DEA  HUN  SVN  GBR  HRV  USA
-----
FRM    0    3  173  127  217  270    2   17   66    2   60
FRA    1    0  152   77   12  275    6   59    0  108    3
ITA  198  135    0  231   95  913   18  135   45  300   33
NLD  152   74  228    0   91  348    8   67   48  149   27
CHE  269    9   98   95    0  346    2    5   52    2   30
DEA  315  233  822  368  314    0  37  234   49  661   34
HUN    0    5   15    8    1   24    0   12    0   19    0
SVN   17   56  129   64    5  217   11    0    0  115    1
GBR   83    0   49   48   59   52    0    0    0    0   19
HRV    1   98  289  147    2  694   17  104    0    0    4
USA   75    3   38   29   29   40    0    1   26    4    0
-----

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SIM
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common bulls below diagonal
common three quarter sib group above diagonal
  FRM  FRA  ITA  NLD  CHE  DEA  HUN  SVN  GBR  HRV  USA
-----
FRM    0    2  157  104    5  228    2   17   25    2   36
FRA    1    0   85   31    1  161    3   34    0   58    1
ITA  182   74    0  219    7  912   18  135   18  300   33
NLD  127   30  215    0    5  319    8   64   18  142   24
CHE    5    1    7    5    0   77    0    0    1    0    4
DEA  276  124  822  338   67    0  37  234   20  661   34
HUN    0    2   15    8    0   24    0   12    0   19    0
SVN   17   29  129   61    0  217   11    0    0  115    1
GBR   34    0   23   20    1   25    0    0    0    0   16
HRV    1   51  289  141    0  694   17  104    0    0    4
USA   51    1   38   26    4   40    0    1   22    4    0
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