

APPENDIX II. Number of common bulls

BSW

 common bulls below diagonal

common three quarter sib group above diagonal

	CAN	CHE	DEA	NLD	NZL	USA	ITA	FRA	GBR	SVN
CAN	0	92	101	39	17	125	91	67	50	26
CHE	76	0	484	63	16	281	376	124	51	54
DEA	85	382	0	98	22	285	578	162	53	83
NLD	33	58	91	0	16	60	90	58	28	32
NZL	17	14	16	9	0	21	18	14	12	8
USA	122	263	255	54	17	0	207	106	64	33
ITA	81	323	474	72	15	145	0	144	52	76
FRA	58	87	116	45	11	66	110	0	40	40
GBR	52	44	39	24	10	65	42	35	0	17
SVN	22	52	74	28	6	27	74	38	14	0

GUE

common bulls below diagonal

common three quarter sib group above diagonal

AUS CAN NZL USA GBR ZAF

AUS	0	42	25	51	34	3
CAN	41	0	12	58	27	2
NZL	25	10	0	27	14	2
USA	47	48	25	0	70	7
GBR	28	22	12	72	0	3
ZAF	2	0	0	4	2	0

HOL

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	CHR	CZE	SVN	ZAF	POL
AUS	0	355	888	216	1182	876	592	905	1051	530	75	903	1014	897	1308	499	216	652	115	386	613
BEL	255	0	324	159	498	368	298	427	433	259	40	391	541	252	426	248	177	321	77	187	293
CAN	720	272	0	316	1661	818	865	963	1181	370	69	1162	853	511	2199	656	287	782	108	391	714
CHE	148	131	165	0	367	228	212	220	269	153	19	259	240	161	315	172	223	203	40	130	181
DEU	670	379	686	220	0	1951	1065	1833	1686	655	107	1997	2193	712	2646	924	449	1527	186	476	1373
DFS	481	278	447	153	861	0	671	1165	1178	561	99	1161	1328	599	1379	626	226	919	152	412	885
ESP	396	267	422	145	616	460	0	765	806	368	76	879	729	388	1078	531	184	654	115	364	627
FRA	486	354	453	162	667	407	489	0	1238	566	91	1456	1375	600	1951	673	194	995	117	390	977
GBR	852	367	1282	204	1093	804	680	666	0	754	100	1307	1380	742	1727	698	266	927	150	450	904
IRL	417	225	298	129	503	404	345	385	769	0	67	518	658	521	585	337	144	423	78	261	393
ISR	53	23	39	7	81	77	52	43	79	56	0	98	107	79	115	76	19	90	36	53	91
ITA	525	281	612	171	983	684	596	561	946	407	73	0	1290	604	2070	767	261	1022	151	431	982
NLD	764	525	568	192	1360	900	579	588	1155	563	88	816	0	757	1722	685	366	1133	157	406	1014
NZL	852	182	501	122	467	359	282	288	647	422	63	407	643	0	813	379	145	507	84	296	430
USA	1089	309	1873	197	1252	756	623	786	1471	471	91	1028	1091	728	0	949	386	1313	141	533	1180
HUN	353	186	522	115	651	453	425	400	646	296	60	615	521	300	852	0	154	734	102	321	620
CHR	183	163	236	235	369	193	148	174	252	132	11	224	339	121	364	125	0	213	52	115	204
CZE	389	227	474	117	1081	524	489	557	720	323	71	678	912	352	944	682	158	0	142	355	884
SVN	80	59	73	24	157	120	91	73	121	62	29	129	129	59	108	82	38	113	0	75	136
ZAF	321	146	319	98	334	292	312	239	403	225	40	308	324	237	493	265	93	247	57	0	320
POL	368	222	438	99	902	575	419	437	714	293	67	651	772	280	866	515	168	666	117	227	0

JER

common bulls below diagonal

common three quarter sib group above diagonal

	AUS	CAN	DFS	NLD	NZL	USA	GBR	ZAF	IRL
AUS	0	157	101	49	323	350	158	169	33
CAN	164	0	66	26	125	253	122	109	5
DFS	70	56	0	54	116	145	123	107	21
NLD	44	20	52	0	51	56	57	52	15
NZL	357	138	92	43	0	269	157	155	62
USA	376	259	121	60	335	0	176	220	26
GBR	171	131	123	57	168	213	0	132	35
ZAF	159	107	85	46	156	227	140	0	24
IRL	32	4	18	14	65	27	37	24	0

RDC

common bulls below diagonal

common three quarter sib group above diagonal

	AUS	CAN	DEU	DFS	NZL	USA	GBR	NLD	ZAF	IRL
AUS	0	76	20	140	97	74	46	13	27	6
CAN	76	0	8	79	60	161	64	4	59	2
DEU	19	7	0	40	6	5	3	9	0	2
DFS	125	74	31	0	120	99	48	28	33	8
NZL	98	58	6	116	0	67	49	6	28	4
USA	75	144	5	98	67	0	72	18	51	8
GBR	46	64	3	47	46	68	0	9	37	6
NLD	11	4	9	28	6	18	9	0	1	7
ZAF	27	59	0	32	26	46	32	1	0	1
IRL	5	2	2	6	4	8	6	7	1	0

SIM

common bulls below diagonal

common three quarter sib group above diagonal

FRM NLD CZE SVN

FRM	0	94	151	0
NLD	116	0	112	23
CZE	175	110	0	50
SVN	0	23	48	0
