

APPENDIX II. Number of common bulls

BSW dlo

common bulls below diagonal

common three quarter sib group above diagonal

	CAN	CHE	DEA	NLD	NZL	USA	ITA	FRA	GBR	SVN
CAN	0	93	102	43	53	125	93	67	49	25
CHE	76	0	478	63	52	276	375	124	48	56
DEA	87	378	0	99	62	279	576	161	50	80
NLD	38	59	91	0	30	63	92	61	29	34
NZL	51	44	50	21	0	62	55	36	35	16
USA	122	261	254	59	58	0	207	106	62	33
ITA	83	320	471	73	44	145	0	143	50	73
FRA	59	87	115	48	28	66	109	0	39	40
GBR	52	42	37	27	30	64	41	34	0	16
SVN	22	54	71	30	13	27	70	38	14	0

GUE dlo

common bulls below diagonal

common three quarter sib group above diagonal

	AUS	CAN	NZL	USA	GBR	ZAF
AUS	0	42	37	50	32	41
CAN	41	0	20	58	26	37
NZL	37	17	0	42	23	23
USA	46	48	41	0	70	82
GBR	27	21	20	72	0	36
ZAF	39	38	17	88	34	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	CHR	CZE	SVN	ZAF
AUS	0	340	850	278	1129	865	572	873	1008	515	85	868	970	961	1254	574	201	664	110	375
BEL	242	0	314	200	486	362	295	417	423	253	46	381	532	282	416	280	175	341	78	184
CAN	686	264	0	383	1622	817	865	959	1150	363	76	1164	844	595	2165	766	279	822	109	384
CHE	223	177	245	0	455	307	281	295	357	215	34	335	330	240	408	256	263	275	61	172
DEU	637	373	671	345	0	1943	1050	1811	1641	644	125	1977	2158	827	2593	1071	447	1632	184	468
DFS	476	278	452	251	879	0	674	1162	1183	559	117	1174	1328	685	1379	749	226	984	153	414
ESP	385	266	419	230	607	467	0	765	797	362	90	878	730	451	1075	605	180	690	115	357
FRA	464	352	451	254	660	413	490	0	1224	557	104	1470	1375	679	1942	804	192	1040	117	386
GBR	813	361	1245	328	1065	819	675	664	0	742	116	1288	1363	851	1683	836	256	979	148	442
IRL	400	219	285	214	493	408	341	378	750	0	77	510	647	562	574	385	140	445	76	257
ISR	57	25	43	23	91	88	60	47	91	62	0	117	123	99	137	105	23	116	38	60
ITA	499	276	608	270	970	696	595	562	927	402	81	0	1292	712	2082	932	255	1094	151	424
NLD	731	520	551	309	1350	917	585	589	1142	552	99	823	0	882	1717	834	371	1224	157	400
NZL	938	212	597	205	580	465	354	350	790	468	80	511	794	0	949	517	169	634	102	329
USA	1037	302	1823	312	1232	769	622	781	1426	452	109	1022	1080	898	0	1170	377	1406	141	524
HUN	426	215	661	207	798	600	523	535	829	356	88	808	682	476	1203	0	175	904	118	353
CHR	169	162	232	284	362	192	146	173	244	128	13	220	338	153	358	148	0	226	55	111
CZE	418	255	526	204	1245	604	530	595	791	353	92	756	1006	505	1094	909	175	0	145	360
SVN	74	59	72	42	154	124	90	72	117	58	29	126	131	74	105	99	39	117	0	74
ZAF	310	142	312	142	327	297	307	235	394	223	44	304	319	271	483	308	89	259	55	0

JER dlo

 common bulls below diagonal

common three quarter sib group above diagonal

	AUS	CAN	DFS	NLD	NZL	USA	GBR	ZAF	IRL
AUS	0	152	100	55	334	336	153	165	32
CAN	160	0	67	29	133	240	120	105	5
DFS	72	57	0	68	130	142	123	107	24
NLD	49	24	67	0	68	63	67	61	16
NZL	384	154	108	65	0	303	174	165	59
USA	361	246	119	70	393	0	174	215	26
GBR	168	127	123	68	188	208	0	130	36
ZAF	155	102	86	55	173	222	136	0	25
IRL	31	4	20	15	61	27	38	25	0

RDC dlo

 common bulls below diagonal

common three quarter sib group above diagonal

	AUS	CAN	DEU	DFS	NZL	USA	GBR	NLD	ZAF
AUS	0	74	19	134	105	70	45	11	41
CAN	75	0	8	81	76	160	65	4	106
DEU	18	7	0	38	11	5	3	9	1
DFS	122	77	30	0	147	96	47	29	56
NZL	112	81	11	143	0	85	59	11	45
USA	75	143	5	95	83	0	69	17	86
GBR	45	65	3	46	57	65	0	7	56
NLD	9	4	9	29	11	17	7	0	1
ZAF	44	114	1	54	42	83	50	1	0

SIM dlo

common bulls below diagonal

common three quarter sib group above diagonal

FRM NLD CZE SVN

FRM 0 94 163 0
NLD 116 0 118 22
CZE 194 118 0 53
SVN 0 22 51 0
