

Genetic Resources Communication

GENETIC RESOURCES COMMUNICATION
No. 7 1984

RHIZOBIUM SCREENING FOR A RANGE OF CROP AND
PASTURE LEGUMES: LISTS OF STRAINS OF RHIZOBIUM
AND HOST LEGUMES FORMING EFFECTIVE NITROGEN
FIXING ASSOCIATIONS

H.V.A.BUSHBY, R.A.DATE, the late D.O.NORRIS
AND R.B.PANITZ



ISSN 0159-6071

ISBN 0643 02833 1

GENETIC RESOURCES COMMUNICATION

No. 7 1984

RHIZOBIUM SCREENING FOR A RANGE OF CROP AND
PASTURE LEGUMES: LISTS OF STRAINS OF RHIZOBIUM
AND HOST LEGUMES FORMING EFFECTIVE NITROGEN
FIXING ASSOCIATIONS

H.V.A.BUSHBY, R.A.DATE, the late D.O.NORRIS
AND R.B.PANITZ

SUMMARY:

This communication reports the results of nitrogen fixation effectiveness tests between accessions and cultivars of a range of crop and pasture legume genera and strains of Rhizobium. The data reported are the accumulated results of effectiveness screening tests during the period 1953-1980. Only those combinations that were effective or highly effective in nitrogen fixation are included in the lists.

The communication comprises two lists. The first contains legume names arranged by genus, species and accession and/or cultivar with the associated effective strains of rhizobia. The second is a list of strains of rhizobia arranged within host names. Accession numbers and/or cultivar names are followed by the strain number(s) with which they forms effective associations. A list of strains recommended for general use is included.

Division of Tropical Crops and Pastures, CSIRO, Cunningham Laboratory,
306 Carmody Road, St.Lucia, Queensland 4067, Australia

Published by:

CSIRO, Division of Tropical Crops and Pastures, St.Lucia, Brisbane,
Queensland 4067, Australia.

RHIZOBIUM SCREENING FOR A RANGE OF CROP AND PASTURE LEGUMES:
LISTS OF STRAINS OF RHIZOBIUM AND HOST LEGUMES FORMING EFFECTIVE
NITROGEN FIXING ASSOCIATIONS

H.V.A.BUSHBY, R.A.DATE, the late D.O.NORRIS AND R.B.PANITZ

Division of Tropical Crops and Pastures, Cunningham Laboratory,
CSIRO, 306 Carmody Road., St. Lucia, Queensland 4067, Australia

INTRODUCTION

The provision of rhizobia that will form effective nitrogen fixing associations with crop and pasture legumes is of basic importance to any agricultural program. Since its inception in 1953 this has been one of the aims of the Legume Bacteriology Section, such that in 1980 approximately 3250 legume by strain of Rhizobium combinations had been tested for effectiveness in nitrogen fixation. The Legume bacteriology Section maintains more than 3000 strains of Rhizobium, 656 of which are listed in the CB Strain Catalogue (Date, Bushby and Panitz 1984).

This communication reports the results of nitrogen fixation tests during the 1953-1980 period. All tests to evaluate nitrogen fixation were conducted in a glasshouse using the sand-jar technique (Norris and Date 1976). Strain of Rhizobium by legume host accession combinations were rated as highly effective(HE), effective(E), partially effective(EI) or ineffective(I) if plant dry weights were >80, 50-80, 35-50 or <35%, respectively, that of a "plus nitrogen" control. Only HE and E associations are reported in this communication. The information is in two lists: the first is a list of legume names by genus, species and accession and/or cultivar with the associated effective strains of rhizobia listed after each combination. In the second list strains of rhizobia are grouped within host names and are followed by a list of accessions and/or cultivars with which they form effective associations. Where a strain of Rhizobium originates from another collection the original isolation number is given immediately after the CB number. In both lists, cultivar names are included after CPI/CQ/Q numbers. These prefixes are Commonwealth Plant Introduction(CPI) numbers, Division of Tropical Crops and Pastures (CQ) plant introduction numbers, and Department of Primary Industries (Q) plant introduction numbers. A list of original identifying labels, acronyms, and abbreviations used to identify strains from other sources and a list of recommended strains of Rhizobium for general use are included at the end of this communication.

ACKNOWLEDGEMENTS

We acknowledge Mr R.W.Williams for assistance in the conduct of the sand-jar-glasshouse effectiveness assessments.

REFERENCES

Date, R.A., Bushby, H.V.A., and Panitz, R.B. (1984). The CB Rhizobium Strain Catalogue. CSIRO, Australia, Div. Tropical Crops and Pastures, Genetic Resources Commun. No. 5

Norris, D.O., and Date, R.A. (1976). Legume Bacteriology. In "Tropical Pasture Research. Principles and Methods" Bull. Commonw. Bur. Fld. Crops. No. 51, pp 134-174.

LEGUMES FORMING EFFECTIVE NITROGEN FIXING ASSOCIATIONS WITH VARIOUS STRAINS
OF RHIZOBIUM : LEGUMES ARRANGED BY GENUS, SPECIES, CPI/CQ/Q NUMBERS &/OR CULTIVAR
FOLLOWED BY RHIZOBIAL STRAIN NUMBERS

GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB
ABRUS	PRECATORIUS	...	.....	756										
ACACIA	HARPOPHYLLA	...	.....	205	402	513	888							
AESCHYNOMENE	FALCATA	CPI	11500	464	2298	2312	2388	2389	2390	2391				
ALYSICARPUS	RUGOSUS	CPI	29736	278	448									
ARACHIS	BURKARTII	CPI	58109	446	530	749	756	2802						
ARACHIS	HYPOGAEA	...	..... NATAL	31	446	530	743	744	745	746	748	749	751	756
				887	935	936								
ARACHIS	HYPOGAEA	...	..... RED SPANISH	31	446	447	530	741	742	743	744	745	746	748
				749	886	887	887	756						
ARACHIS	HYPOGAEA	...	..... VIRGINIA	31	44	82	741	742	743	744	745	746	748	749
				751										
ARACHIS	HYPOGAEA	CPI	13970 1	446	530	749	756	2802						
ARACHIS	MONTICOLA	CQ	990	446	530	749	756	2802						
ARACHIS	PINTOI	CPI	58113	446	530	749	756	2802	2927					
ARACHIS	PUSILLA	CPI	58116	446	530	749	756	2802						
CAJANUS	CAJAN	CPI	29947	136	479	483	756	987						
CALOPOGONIUM	CAERULEUM	...	.....	756	979									
CENTROSEMA	BRASILIANUM	CPI	55698	2944	2947	2949	2950	2951						
CENTROSEMA	PUBESCENS	...	.....	797	959	981	1043	1067	1102	1103	1490	1491	1494	1698
				1704	1895	1922	1923							
CENTROSEMA	PUBESCENS	Q	8333 BELALTO	1923	2945	2947	2948							
CLITORIA	LANCEOLATA	...	.....	756										
CLITORIA	TERNATEA	...	.....	279	756	929								
CODARIOCALYX	GYROIDES	CPI	32893	449	627	1517	2121							
CROTALARIA	LANCEOLATA	...	.....	188	210	755	830	979						
CYAMOPSIS	TETRAGONOLOBA	CPI	10329	121	532	756	886	895	898					
CYTISUS	PROLIFERUS	...	.....	969	1054									
DESMODIUM	ADSCENDENS	...	.....	1517										
DESMODIUM	DISTORTUM	CPI	28324	461	627	756	1057							
DESMODIUM	HETEROPHYLLUM	CPI	31953	46	190	456								
DESMODIUM	HETEROPHYLLUM	QA	934	2085	2122	2123	2163	2164						
DESMODIUM	INTORTUM	...	.....	627	792	794	817	902	934	975	978	1027	1053	1422
				1424	1467	1517	1524	1622	1627	1632	1709	1859		
DESMODIUM	INTORTUM	CPI	17916 GREENLEAF	128	185	207	456	627	756	1057	1467			
DESMODIUM	INTORTUM	CPI	18009 GREENLEAF	128	185	207	456	627	756	1057	1467			
DESMODIUM	INTORTUM	CPI	23189 GREENLEAF	128	185	207	456	627	756	1057	1467			
DESMODIUM	UNCINATUM	CPI	8990 SILVERLEAF	121	128	167	181	185	187	192	207	265	290	456
				457	460	461	462	627	756	792	794	831	934	962
				975	978	1263	1422	1424	1467	1517	1524	1564	1622	1632
				1771	1789	1859								
DOLICHOS	SERICEUS	CPI	25360	121	159	289	625	756	769					
DOLICHOS	TRILOBUS	CPI	15932	159	454	756								

GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	
GLYCINE	MAX		27	1003											
GLYCINE	MAX		37	1003											
GLYCINE	MAX		40	327	1003										
GLYCINE	MAX		57	1003	1056										
GLYCINE	MAX	3937		1003	1056										
GLYCINE	MAX	...	.....	453											
GLYCINE	MAX	...	.....	BOURKE	1003	1455	1750	1752	1753	1786	1791	1793	1794	1795	1797
					1799	1802	1803	1805	1809	1810	1911	1924	1925	1926	1927
					1928	1929	1930	1931	1932	1933	1934	1935	1938	1939	1940
					1941	1942	1943								
GLYCINE	MAX	...	.....	DORMAN	1799	1809	1924	1926							
GLYCINE	MAX	...	.....	HILL	1799	1809	1924	1926							
GLYCINE	MAX	...	.....	LESLIE	1003	1750	1752	1753	1786	1791	1793	1794	1795	1799	1802
					1803	1804	1805	1809	1810	1911	1924	1925	1926	1927	1928
					1930	1931	1932	1933	1934	1935	1938	1939	1942		
GLYCINE	MAX	...	.....	MASOY	327	1003									
GLYCINE	MAX	...	.....	NANDA	40	327	436	439	452	466	1003	1056	1164	1668	1750
					1752	1753	1786	1791	1793	1794	1795	1799	1801	1802	1803
					1804	1805	1809	1810	1911	1924	1925	1926	1927	1928	1929
					1930	1931	1932	1933	1934	1935	1938	1939	1940	1941	1942
					1943										
GLYCINE	MAX	...	.....	WILLS	1003	1455	1750	1752	1753	1786	1791	1794	1795	1799	1802
					1803	1805	1809	1911	1925	1926	1927	1928	1929	1931	1932
					1933	1934	1935	1938	1939	1940	1941	1942			
GLYCINE	MAX	CPI	17192		121	327	756	1003							
GLYCINE	MAX	MBH	72113		1003	1752	1786	1791	1795	1802	1809	1911	1927	1933	1934
					1939										
INDIGOFERA	HIRSUTA	CPI	21352		158	350	756	1012							
INDIGOFERA	SPICATA	CPI	11412		33	45	152	158	163	165	184	209	233	253	280
					282	286	330	331	332	333	334	336	337	338	339
					341	343	344	345	346	347	348	349	350	353	355
					356	358	359	441	498	501	509	532	625	654	
INDIGOFERA	SPICATA	CPI	24205		33	756									
LABLAB	PURPUREUS	CPI	16883	RONGAI	159	454	756	769	1024	1091	1406				
LABLAB	PURPUREUS	CPI	23551		159	170	454	625	756	769					
LABLAB	PURPUREUS	CPI	34004		159	454	463	756	769	1024	1091	1406			
LABLAB	PURPUREUS	CPI	34777		159	463	756	1024	1091	1406					
LESPEDEZA	JUNCEA	...	.....	SERICEA	159	241	756	854							
LESPEDEZA	SERICEA	...	.....	ARLINGTON	159	854									
LESPEDEZA	SERICEA	...	.....	LOCAL A	241	756	159	241	450	756	854				
LESPEDEZA	SERICEA	...	.....	OKINAWA	159	241	450	756	854						
LESPEDEZA	SERICEA	...	.....	TUPELO	450	854									
LESPEDEZA	STIPULACEA	...	.....	SUMMIT	159	756	854								

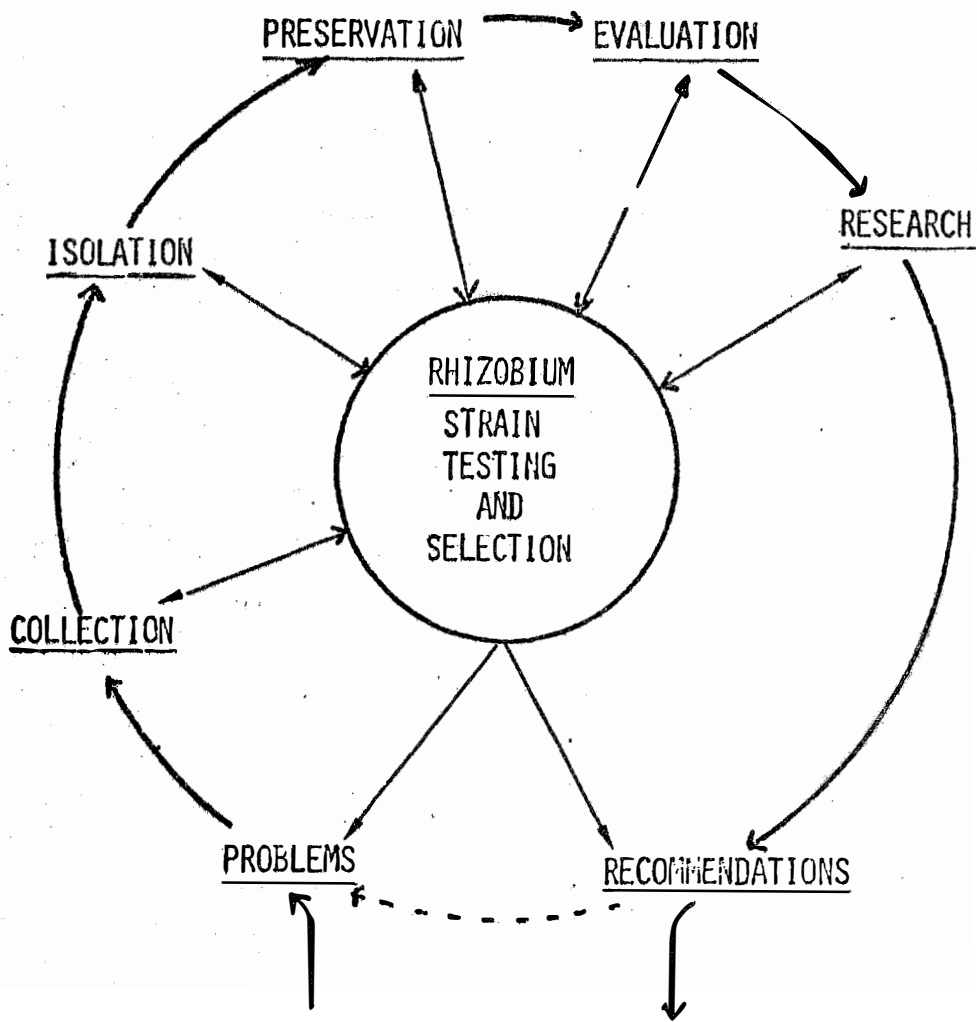
GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB
LESPEDEZA	STRIATA	...	KOBE	159	241	450	756	854						
LESPEDEZA	STRIATA	...	LOCAL A	159	756	854	159	241	450	756	854			
LEUCAENA	LEUCOCEPHALA	...	CUNNINGHAM	81	1397	2001	2002	2914	2915	2923	2929	2930		
LEUCAENA	LEUCOCEPHALA	CPI	18614 PERU	81	225	262	415	430	647	673	717	946	947	948
				952	1149	1150	1274	1353	2154	2919	2920	2921	2922	
LISTIA	HETEROPHYLLA	CPI	18424	376	730	768	1775	2343						
LOTNONIS	ANGOLENSIS	CPI	26293 COMMERCIAL	1297	1299	1298	1321	1322	1323	1348	2406			
LOTNONIS	ANGOLENSIS	CPI	32585	1323	2645	2833								
LOTNONIS	ANGOLENSIS	CPI	32655	1323	2406	2833								
LOTNONIS	ANGOLENSIS	CPI	32953	1323	2406	2645	2833							
LOTNONIS	ANGOLENSIS	CPI	43777	1323	2406	2645	2833							
LOTNONIS	BAINESII	CPI	16833 MILES	360	376	730	731	768	1775	1776	1777	1778	1779	2343
				2344	2908	2909	2910							
LOTNONIS	BAINESII	CPI	24130	376	1775	2343								
LOTNONIS	BAINESII	CPI	31810	376	730	1775	2343							
LOTNONIS	BAINESII	CPI	47573	376	730	1775	2343							
LOTNONIS	BAINESII	CPI	47574	376	730	1775	2343							
LOTNONIS	BAINESII	CPI	47575	376	730	1775	2343							
LOTNONIS	BAINESII	CPI	61572	376	730	1775	2343							
LOTNONIS	BAINESII	CQ	1114	376	730	1775	2343							
LOTNONIS	LAXA	CPI	62213	2648										
LOTNONIS	MUCRONATA	CPI	60286	1323	2695	2705								
LOTNONIS	MUCRONATA	CPI	60287	2705										
LOTNONIS	MUCRONATA	CPI	60288	2695										
LOTNONIS	MUCRONATA	CPI	62214	376										
LOTNONIS	ORTHORRHIZA	CPI	60289	2676										
LOTNONIS	STIPULOSA	CQ	1332	1394										
LOTUS	CORNICULATUS	CPI	32278 VIKING	668	669	670	1204							
LOTUS	EDULIS	CPI	32565	669	670	1300								
LOTUS	MAROCCANUS	CPI	23601	1300										
LOTUS	ULIGINOSUS	...	.....	1075	1076	1168	1193	1209						
MACROPTILIUM	ATROPURPUREUM	...	..... SIRATRO	42	53	54	103	121	170	289	451	482	491	512
				530	756	1675	1727	2033	2126	2229	2248			
MACROPTILIUM	ATROPURPUREUM	CPI	18556	121	170	284	451	477	478	480	491	512	661	791
				890	909	913								
MACROPTILIUM	LATHYROIDES	...	.....	121	170	284	289	756						
MACROPTILIUM	MARTII	CPI	49780	451	1571	1717								
MACROTYLOMA	AFRICANUM	CPI	24972	45	121	159	170	233	289	454	625	756		
MACROTYLOMA	AXILLARE	CPI	17814	45	121	159	170	233	289	441	454	625	756	786
MACROTYLOMA	UNIFLORUM	CPI	14629	45	121	159	170	233	289	454	625	756	769	
MEDICAGO	POLYMORPHA	...	.....	112										
MEDICAGO	SATIVA	...	.....	61	63	64	110	113	115	118	257	529	813	967
				1035	1170	1171	1368	1445	1446					

GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB
MEDICAGO	SATIVA	... ..	AFRICAN B	112	112	220	228	1170	1170	1171	1171	1445	1445	1446
				1446										
MEDICAGO	SATIVA	... ..	HAIRY PERU	112	227	1170	1171	1445	1446					
MEDICAGO	SCUTELLATA	... ..		61	967	1445								
MEDICAGO	TRUNCATULA	... ..		61	967	967								
MEDICAGO	TRUNCATULA	... ..	JEMALONG	61	63	64	98	110	112	113	115	119	214	217
				227	257	419	1035							
MEDICAGO	TRUNCATULA	... ..	WOODSIDE	1445	1445									
NEONOTONIA	WIGHTII	CPI 16673		40	121	232	249	283	291	327	428	439	452	453
				466	756	1057								
NEONOTONIA	WIGHTII	CPI 18419		453	756	1057	1913	1918						
NEONOTONIA	WIGHTII	CPI 25421		453	756	1057	1913	1918						
NEONOTONIA	WIGHTII	CPI 25700		453	1057	1057	1908	1913	1913	1918	1918			
NEONOTONIA	WIGHTII	CPI 25702	COOPER	453	756	1057	1267	1668	1908	1913	1915	1916	1918	
NEONOTONIA	WIGHTII	CPI 25703		453	756									
NEONOTONIA	WIGHTII	CPI 25919		453	756	1057	1908	1913	1918					
NEONOTONIA	WIGHTII	CPI 29744		453	756	1908	1913	1918						
NEONOTONIA	WIGHTII	CPI 30366		453	1057	1913	1918							
NEONOTONIA	WIGHTII	CPI 30497		453	756	1057	1913	1918						
NEONOTONIA	WIGHTII	CPI 32862		453	756	1057	1913	1918						
NEONOTONIA	WIGHTII	CPI 32942		756	1908	1913	1918							
NEONOTONIA	WIGHTII	CPI 32944		453	756	1057	1913	1918						
NEONOTONIA	WIGHTII	CQ 363	TINAROO	453	466	756	1057	1267	1311	1668	1908	1913	1914	1916
				1918										
NEONOTONIA	WIGHTII	CQ 560	CLARENCE	439	453	466	756	1057	1098	1913	1918	2195		
PHASEOLUS	COCCINEUS	CPI 37026		121	170	890	890	1071	1133	1224				
PHASEOLUS	COCCINEUS	CPI 37028		121	170	482	512	890	971	1071	1133	1224	1963	
PHASEOLUS	COCCINEUS	CPI 37029		170										
PHASEOLUS	COCCINEUS	CPI 37030		121	170	482	512	890	971	1071	1133	1224	1963	
PHASEOLUS	VULGARIS	... ..	FRENCH	121	170	512	890	971	1071	1133	1224	1963		
PISUM	SATIVUM	... ..		108	472	735	736							
PUERARIA	PHASEOLOIDES	CPI 16864		756	958									
PUERARIA	PHASEOLOIDES	CPI 32118		756	955	984								
TERAMNUS	(SP.)	CPI 40311		756										
TERAMNUS	(SP.)	CPI 40313		756										
TERAMNUS	(SP.)	CPI 40314		756										
TERAMNUS	UNCINATUS	CPI 22620		170	484	756	761							
TERAMNUS	UNCINATUS	CPI 25937		45	121	452	453	484	756	828	915	1003	1057	1066
				1350										
TERAMNUS	UNCINATUS	CPI 40307		756										
TERAMNUS	UNCINATUS	CPI 43791		756										
TRIFOLIUM	(SP.)	CPI 18246		527										
TRIFOLIUM	(SP.)	CPI 18247		714	771	772	773	775	780					

GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB
TRIFOLIUM	AFRICANUM	CPI 26612		728	773	775	780	937	939	944				
TRIFOLIUM	ALEXANDRINUM	... ..		147	149	150	151	219	220	325	370	371	372	420
TRIFOLIUM	ALEXANDRINUM	PE 343		806	875									
TRIFOLIUM	BACCARINII	CPI 25343		758	762	766	771	772	773	775	780			
TRIFOLIUM	BACCARINII	CPI 25344		527	714	758	762	766	771	772	773	774	775	780
TRIFOLIUM	BURCHELLIANUM	CPI 22163		526	527	714	727	728	758	762	772	773	779	780
				788	943	944								
TRIFOLIUM	BURCHELLIANUM	CPI 24132		720	727	728	732	766	772	773	780	944		
TRIFOLIUM	BURCHELLIANUM	CPI 31995		727										
TRIFOLIUM	CHERANGANIENSE	CPI 22164		938										
TRIFOLIUM	CHERLERI	CPI 14549		867	2179									
TRIFOLIUM	FRAGIFERUM	... .. PALESTINE		1	4	148	150	219	220	246	370	858		
TRIFOLIUM	FRAGIFERUM	... .. STRAWBERRY		876	1166	1444								
TRIFOLIUM	HIRTUM	... .. KONDININ		806	869	875	2178							
TRIFOLIUM	INCARNATUM	... .. DIXIE		4	150	219	220	246	370	371	372	420	766	806
TRIFOLIUM	MASAIENSE	CPI 25373		770	771	776	782	788						
TRIFOLIUM	PRATENSE	... .. MONTGOMERY		3	147	806								
TRIFOLIUM	PRATENSE	... .. NEW ZEALAND		806	875									
TRIFOLIUM	PSEUDOSTRIATUM	CPI 25372		783	937									
TRIFOLIUM	REPENS	... .. (ALUMY CK)		2178										
TRIFOLIUM	REPENS	... .. (PLAINS ST)		875										
6 TRIFOLIUM	REPENS	... .. GRASSLANDS		1	3	147	806	861	875	1165	1166	1444		
TRIFOLIUM	REPENS	... .. IRRIGATION		147	733	806	1165	2178						
TRIFOLIUM	REPENS	... .. LADINO		875	1444									
TRIFOLIUM	REPENS	... .. NZ WHITE		782	1990									
TRIFOLIUM	REPENS	CPI 15648		875	2178									
TRIFOLIUM	REPENS	P 9193	GRASSLANDS	2178										
TRIFOLIUM	REPENS	P 9194	GRASSLANDS	875	2178									
TRIFOLIUM	RUEPPELLIANUM	CPI 20744		527	773	780	944							
TRIFOLIUM	RUEPPELLIANUM	CPI 21155		527	714	728	729							
TRIFOLIUM	RUEPPELLIANUM	CPI 24977		779	938									
TRIFOLIUM	RUEPPELLIANUM	CPI 25346		526	527	758	772	773	780	944				
TRIFOLIUM	RUEPPELLIANUM	CPI 25375		527	758	773	780	944						
TRIFOLIUM	RUEPPELLIANUM	CPI 27217		527	758	772	773	780	944					
TRIFOLIUM	SEMPILOSUM	... .. EX BEERWAH		526	763	779	788							
TRIFOLIUM	SEMPILOSUM	CPI 21156		526	778	782	788							
TRIFOLIUM	SEMPILOSUM	CPI 24976		779										
TRIFOLIUM	SEMPILOSUM	CPI 25347		526	763	778	782	788	2031	2032	2102	2116	2117	2177
TRIFOLIUM	SEMPILOSUM	CPI 27218	SAFARI	526	778	782	788	944	2031	2102	2116	2117		
TRIFOLIUM	SEMPILOSUM	CPI 31996		526	778	782	788	2032	2102	2116	2117			
TRIFOLIUM	SEMPILOSUM	CPI 33182		526	778	782								
TRIFOLIUM	SEMPILOSUM	CPI 33183		526	772	778	782							
TRIFOLIUM	SEMPILOSUM	CPI 40617		526	778	782	788							

GENUS	SPECIES	CPI/CQ/Q	CV	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB	CB
TRIFOLIUM	SEMIPILOSUM	K	5154	526	778	782	788								
TRIFOLIUM	STEUDNERI	CPI	17845	714											
TRIFOLIUM	STEUDNERI	CPI	25348	714	771	772	780	783							
TRIFOLIUM	SUBTERRANEUM	...	.....	BACCHUS M	806	875	1165	1444							
TRIFOLIUM	SUBTERRANEUM	...	.....	CLARE	806	875	1165	1444							
TRIFOLIUM	SUBTERRANEUM	...	.....	GERALDTON	875	2178	2179								
TRIFOLIUM	SUBTERRANEUM	...	.....	WOOGENELLUP	806	867	877	2179							
TRIFOLIUM	TEMBENSE	CPI	20746	758	771	772	773	775							
TRIFOLIUM	TEMBENSE	CPI	24978	758	771	772	773	775	806						
TRIFOLIUM	TEMBENSE	CPI	25349	771	773	775									
TRIFOLIUM	TEMBENSE	CPI	25376	758	771	772	773	775							
TRIFOLIUM	USAMBARENSE	CPI	22165	758	771	772	773	775	780						
TRIFOLIUM	USAMBARENSE	CPI	25350	758	771	772	773	775							
TRIFOLIUM	USAMBARENSE	CPI	25377	758	771	772	773	775							
VICIA	SATIVA	...	.....	108	134	472									
VIGNA	ANGULARIS	...	.....	A2-15	121	284	491	512	661	756	786	890	985	1011	1015
					1017	1024	1042	1243	1247	1809					
VIGNA	MARINA	...	.....	121	159	170	453	466	480	625	756	786	915		
VIGNA	MUNGO	CPI	5979	REGUR	121	170	284	491	512	756	786	890	985	1011	1015
					1017	1042	1044	1243	1247	1809					
VIGNA	MUNGO	CPI	18118		756										
VIGNA	RADIATA	...	.....	BERKEN	121	284	491	512	661	756	890	985	1011	1015	1017
					1042	1243	1247								
VIGNA	RADIATA	CPI	12142		27	42	53	54	121	170	284	289	326	452	482
					512	661	791	890	913						
VIGNA	RADIATA	CPI	18118		121	512	890	1055							
VIGNA	UMBELLATA	CPI	12143		121	170	451	477	478	480	791	913			
VIGNA	UNGUICULATA	CPI	32551	POONA	40	45	121	159	233	428	436	439	452	453	454
					699	756	769								
ZORNIA	(SP.)	CPI	33207		756										
ZORNIA	(SP.)	CPI	34758		103	159	756	1408	1546	1550	1552				
ZORNIA	(SP.)	CPI	40334		756										
ZORNIA	DIPHYLLA	CPI	34941		530	1546	1550								
ZORNIA	DIPHYLLA	CPI	40327		756										
ZORNIA	GLOCHIDIATA	CPI	50377		756										

10



Flow diagram of Rhizobium strain testing selection and research studies for the Legume Bacteriology Sub-program of the Division of Tropical Crops and Pastures.

LIST OF HOST LEGUME SPECIES AND EFFECTIVE STRAINS OF RHIZOBIUM

WITH THE HOST ACCESSION AND/OR CULTIVAR TESTED

1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
ABRUS	PRECATORIUS	756		...	.....		
ACACIA	HARPOPHYLLA	205		...	.....		
ACACIA	HARPOPHYLLA	402		...	.....		
ACACIA	HARPOPHYLLA	513		...	.....		
ACACIA	HARPOPHYLLA	888		...	.....		
AESCHYNOMENE	FALCATA	464		CPI	11500				
AESCHYNOMENE	FALCATA	2298		CPI	11500				
AESCHYNOMENE	FALCATA	2312		CPI	11500				
AESCHYNOMENE	FALCATA	2388		CPI	11500				
AESCHYNOMENE	FALCATA	2389		CPI	11500				
AESCHYNOMENE	FALCATA	2390		CPI	11500				
AESCHYNOMENE	FALCATA	2391		CPI	11500				
ALYSICARPUS	RUGOSUS	278		CPI	29736				
ALYSICARPUS	RUGOSUS	448		CPI	29736				
ARACHIS	BURKARTII	446		CPI	58109				
ARACHIS	BURKARTII	530		CPI	58109				
ARACHIS	BURKARTII	749	C26(ARG)	CPI	58109				
ARACHIS	BURKARTII	756		CPI	58109				
ARACHIS	BURKARTII	2802		CPI	58109				
ARACHIS	HYPOGAEA	31		...	.....	NATAL	...	RED SPANISH	VIRGINIA
ARACHIS	HYPOGAEA	44		...	.....	VIRGINIA			
ARACHIS	HYPOGAEA	82		...	.....	VIRGINIA			
ARACHIS	HYPOGAEA	446		...	.....	NATAL	...	RED SPANISH	CPI 13970 1
ARACHIS	HYPOGAEA	447		...	.....	RED SPANISH			
ARACHIS	HYPOGAEA	530		...	.....	NATAL	...	RED SPANISH	CPI 13970 1
ARACHIS	HYPOGAEA	741	C26(ARG)	...	.....	RED SPANISH	...	VIRGINIA	
ARACHIS	HYPOGAEA	742	C15(ARG)	...	.....	RED SPANISH	...	VIRGINIA	
ARACHIS	HYPOGAEA	743	C13(ARG)	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	744	C25(ARG)	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	745	C16(ARG)	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	746	C10(ARG)	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	748	C17(ARG)	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	749	C26(ARG)	...	.....	NATAL	...	RED SPANISH	...
				CPI	13970 1				
ARACHIS	HYPOGAEA	751	C20(ARG)	...	.....	NATAL	...	VIRGINIA	
ARACHIS	HYPOGAEA	756		...	.....	NATAL	...	RED SPANISH	CPI 13970 1
ARACHIS	HYPOGAEA	886	SU318	...	.....	RED SPANISH			
ARACHIS	HYPOGAEA	887	SU319	...	.....	NATAL	...	RED SPANISH	...
ARACHIS	HYPOGAEA	935		...	.....	NATAL			
ARACHIS	HYPOGAEA	936		...	.....	NATAL			
ARACHIS	HYPOGAEA	2802		CPI	13970 1				
ARACHIS	MONTICOLA	446		CQ	990				
ARACHIS	MONTICOLA	530		CQ	990				

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
ARACHIS	MONTICOLA	749	C26(ARG)	CQ	990				
ARACHIS	MONTICOLA	756		CQ	990				
ARACHIS	MONTICOLA	2802		CQ	990				
ARACHIS	PINTOI	446		CPI	58113				
ARACHIS	PINTOI	530		CPI	58113				
ARACHIS	PINTOI	749	C26(ARG)	CPI	58113				
ARACHIS	PINTOI	756		CPI	58113				
ARACHIS	PINTOI	2802		CPI	58113				
ARACHIS	PINTOI	2927		CPI	58113				
ARACHIS	PUSILLA	446		CPI	58116				
ARACHIS	PUSILLA	530		CPI	58116				
ARACHIS	PUSILLA	749	C26(ARG)	CPI	58116				
ARACHIS	PUSILLA	756		CPI	58116				
ARACHIS	PUSILLA	2802		CPI	58116				
CAJANUS	CAJAN	136		CPI	29947				
CAJANUS	CAJAN	479		CPI	29947				
CAJANUS	CAJAN	483		CPI	29947				
CAJANUS	CAJAN	756		CPI	29947				
CAJANUS	CAJAN	987	T10H	CPI	29947				
CALOPOGONIUM	CAERULEUM	756		...	.....		
CALOPOGONIUM	CAERULEUM	979		...	.....		
CENTROSEMA	BRASILIANUM	2944		CPI	55698				
CENTROSEMA	BRASILIANUM	2947		CPI	55698				
CENTROSEMA	BRASILIANUM	2949		CPI	55698				
CENTROSEMA	BRASILIANUM	2950		CPI	55698				
CENTROSEMA	BRASILIANUM	2951		CPI	55698				
CENTROSEMA	PUBESCENS	797		...	.....		
CENTROSEMA	PUBESCENS	959		...	.....		
CENTROSEMA	PUBESCENS	981		...	.....		
CENTROSEMA	PUBESCENS	1043		...	.....		
CENTROSEMA	PUBESCENS	1067		...	.....		
CENTROSEMA	PUBESCENS	1102		...	.....		
CENTROSEMA	PUBESCENS	1103		...	.....		
CENTROSEMA	PUBESCENS	1490		...	.....		
CENTROSEMA	PUBESCENS	1491		...	.....		
CENTROSEMA	PUBESCENS	1494		...	.....		
CENTROSEMA	PUBESCENS	1698	SFS79	...	.....		
CENTROSEMA	PUBESCENS	1704	SFS80	...	.....		
CENTROSEMA	PUBESCENS	1895		...	.....		
CENTROSEMA	PUBESCENS	1922	SFS237	...	.....		
CENTROSEMA	PUBESCENS	1923	SFS261	Q	8333	BELALTO			
CENTROSEMA	PUBESCENS	2945		Q	8333	BELALTO			
CENTROSEMA	PUBESCENS	2947		Q	8333	BELALTO			

14

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV	
CENTROSEMA	PUBESCENS	2948		Q	8333	BELALTO				
CLITORIA	LANCEOLATA	756		...	.....			
CLITORIA	TERNATEA	279		...	.....			
CLITORIA	TERNATEA	756		...	.....			
CLITORIA	TERNATEA	929		...	.....			
CODARIOCALYX	GYROIDES	449		CPI	32893					
CODARIOCALYX	GYROIDES	627		CPI	32893					
CODARIOCALYX	GYROIDES	1517		CPI	32893					
CODARIOCALYX	GYROIDES	2121		CPI	32893					
CROTALARIA	LANCEOLATA	188		...	.....			
CROTALARIA	LANCEOLATA	210		...	.....			
CROTALARIA	LANCEOLATA	755		...	.....			
CROTALARIA	LANCEOLATA	830		...	.....			
CROTALARIA	LANCEOLATA	979		...	.....			
CYAMOPSIS	TETRAGONOLOBA	121		CPI	10329					
CYAMOPSIS	TETRAGONOLOBA	532		CPI	10329					
CYAMOPSIS	TETRAGONOLOBA	756		CPI	10329					
CYAMOPSIS	TETRAGONOLOBA	886		CPI	10329					
CYAMOPSIS	TETRAGONOLOBA	895	USDA3021	CPI	10329					
CYAMOPSIS	TETRAGONOLOBA	898	USDA3241	CPI	10329					
CYTISUS	PROLIFERA	969	7/7	...	.....			
CYTISUS	PROLIFERA	1054	QA715	...	.....			
DESMODIUM	ADSCENDENS	1517		...	.....			
DESMODIUM	DISTORTUM	461		CPI	28324					
DESMODIUM	DISTORTUM	627		CPI	28324					
DESMODIUM	DISTORTUM	756		CPI	28324					
DESMODIUM	DISTORTUM	1057	QA922	CPI	28324					
DESMODIUM	HETEROPHYLLUM	46		CPI	31953					
DESMODIUM	HETEROPHYLLUM	190		CPI	31953					
DESMODIUM	HETEROPHYLLUM	456		CPI	31953					
DESMODIUM	HETEROPHYLLUM	2085		QA	934					
DESMODIUM	HETEROPHYLLUM	2122		QA	934					
DESMODIUM	HETEROPHYLLUM	2123		QA	934					
DESMODIUM	HETEROPHYLLUM	2163		QA	934					
DESMODIUM	HETEROPHYLLUM	2164		QA	934					
DESMODIUM	INTORTUM	128		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	185		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	207		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	456		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	627		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	756		CPI	17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM	792		...	.....			
DESMODIUM	INTORTUM	794		...	.....			

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV	
DESMODIUM	INTORTUM		817	...	.....			
DESMODIUM	INTORTUM		902	USDA3195	...	.....		
DESMODIUM	INTORTUM		934	...	.....			
DESMODIUM	INTORTUM		975	...	.....			
DESMODIUM	INTORTUM		978	...	.....			
DESMODIUM	INTORTUM		1027	...	.....			
DESMODIUM	INTORTUM		1053	...	.....			
DESMODIUM	INTORTUM		1057	QA922	CPI 17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF
DESMODIUM	INTORTUM		1422	...	.....			
DESMODIUM	INTORTUM		1424	...	.....			
DESMODIUM	INTORTUM		1467	CPI 17916	GREENLEAF	CPI 18009	GREENLEAF	CPI 23189	GREENLEAF	
								
DESMODIUM	INTORTUM		1517	...	.....			
DESMODIUM	INTORTUM		1524	...	.....			
DESMODIUM	INTORTUM		1622	...	.....			
DESMODIUM	INTORTUM		1627	...	.....			
DESMODIUM	INTORTUM		1632	SFS97	...	.....		
DESMODIUM	INTORTUM		1709	...	.....			
DESMODIUM	INTORTUM		1859	QA982	...	.....		
DESMODIUM	UNCINATUM		121	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		128	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		167	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		181	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		185	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		187	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		192	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		207	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		265	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		290	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		456	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		457	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		460	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		461	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		462	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		627	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		756	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		792	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		794	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		831	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		934	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		962	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		975	CPI 8990	SILVERLEAF					
DESMODIUM	UNCINATUM		978	CPI 8990	SILVERLEAF					

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
DESMODIUM	UNCINATUM		1263	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1422	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1424	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1467	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1517	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1524	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1564	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1622	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1632	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1771	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1789	CPI	8990	SILVERLEAF			
DESMODIUM	UNCINATUM		1859	QA982	CPI	8990	SILVERLEAF		
DOLICHOS	SERICEUS		121	CPI	25360				
DOLICHOS	SERICEUS		159	CPI	25360				
DOLICHOS	SERICEUS		289	CPI	25360				
DOLICHOS	SERICEUS		625	CPI	25360				
DOLICHOS	SERICEUS		756	CPI	25360				
DOLICHOS	SERICEUS		769	CPI	25360				
DOLICHOS	TRILOBUS		159	CPI	15932				
DOLICHOS	TRILOBUS		454	CPI	15932				
DOLICHOS	TRILOBUS		756	CPI	15932				
GLYCINE	MAX		40	...	...	NANDA			
GLYCINE	MAX		121	CPI	17192				
GLYCINE	MAX		327	...	...	MASOY	...	...	NANDA
				CPI	17192				40
GLYCINE	MAX		436	S1	...	...	NANDA		
GLYCINE	MAX		439	...	...	NANDA			
GLYCINE	MAX		452	...	...	NANDA			
GLYCINE	MAX		453	...	...		
GLYCINE	MAX		466	...	...	NANDA			
GLYCINE	MAX		756	CPI	17192				
GLYCINE	MAX		1003	...	...	BOURKE	...	...	LESLIE
				...	...	NANDA	...	...	WILLS
						37			40
						3937	CPI	17192	MBH 72113
GLYCINE	MAX		1056	USDA41	...	...	57		3937
GLYCINE	MAX		1164	HDLC362A	...	...	
GLYCINE	MAX		1455	...	...	BOURKE	...	...	WILLS
GLYCINE	MAX		1668	...	...	NANDA			
GLYCINE	MAX		1750	GP20-A1	...	...	...	...	LESLIE
				...	...	WILLS			NANDA
GLYCINE	MAX		1752	...	...	BOURKE	...	...	LESLIE
				...	...	WILLS	...	...	NANDA
							MBH	72113	

17

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
GLYCINE	MAX	1753		...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1786		...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1791	USDA6	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1793	USDA40	...	BOURKE	...	LESLIE	...	NANDA
GLYCINE	MAX	1794	USDA44	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1795	USDA46	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1797	USDA62	...	BOURKE				
GLYCINE	MAX	1799	USDA110	...	BOURKE	...	DORMAN	...	HILL
				...	LESLIE	...	NANDA	...	WILLS
GLYCINE	MAX	1801	USDA120	...	NANDA				
GLYCINE	MAX	1802	USDA122	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1803	USDA121	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1804	USDA123	...	LESLIE	...	NANDA		
GLYCINE	MAX	1805	USDA125	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1809	USDA136	...	BOURKE	...	DORMAN	...	HILL
				...	LESLIE	...	NANDA	...	WILLS
				...	MBH 72113				
GLYCINE	MAX	1810	JAP36-2	...	BOURKE	...	LESLIE	...	NANDA
GLYCINE	MAX	1911	QA981	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1924	SFS84	...	BOURKE	...	DORMAN	...	HILL
				...	LESLIE	...	NANDA		
GLYCINE	MAX	1925	SFS85	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1926	SFS86	...	BOURKE	...	DORMAN	...	HILL
				...	LESLIE	...	NANDA	...	WILLS
GLYCINE	MAX	1927	SFS87	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS	MBH 72113			
GLYCINE	MAX	1928	SFS88	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1929	SFS89	...	BOURKE	...	NANDA	...	WILLS
GLYCINE	MAX	1930	SFS112	...	BOURKE	...	LESLIE	...	NANDA
GLYCINE	MAX	1931	SFS113	...	BOURKE	...	LESLIE	...	NANDA
				...	WILLS				
GLYCINE	MAX	1932	SFS114	...	BOURKE	...	LESLIE	...	NANDA

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
GLYCINE	MAX	1933	SFS115	...	WILLS	...	LESLIE	...	NANDA
GLYCINE	MAX	1934	SFS116	...	BOURKE	MBH 72113	LESLIE	...	NANDA
GLYCINE	MAX	1935	SFS117	...	WILLS	MBH 72113	LESLIE	...	NANDA
GLYCINE	MAX	1938	SFS122	...	BOURKE	...	LESLIE	...	NANDA
GLYCINE	MAX	1939	SFS123	...	WILLS	...	LESLIE	...	NANDA
GLYCINE	MAX	1940	SFS124	...	BOURKE	MBH 72113	NANDA	...	WILLS
GLYCINE	MAX	1941	SFS125	...	BOURKE	...	NANDA	...	WILLS
GLYCINE	MAX	1942	SFS126	...	BOURKE	...	LESLIE	...	NANDA
GLYCINE	MAX	1943	SFS127	...	WILLS	...	NANDA	...	
INDIGOFERA	HIRSUTA	158		CPI	21352				
INDIGOFERA	HIRSUTA	350		CPI	21352				
INDIGOFERA	HIRSUTA	756		CPI	21352				
INDIGOFERA	HIRSUTA	1012		CPI	21352				
INDIGOFERA	SPICATA	33		CPI	11412	CPI 24205			
INDIGOFERA	SPICATA	45		CPI	11412				
INDIGOFERA	SPICATA	152		CPI	11412				
INDIGOFERA	SPICATA	158		CPI	11412				
INDIGOFERA	SPICATA	163		CPI	11412				
INDIGOFERA	SPICATA	165		CPI	11412				
INDIGOFERA	SPICATA	184		CPI	11412				
INDIGOFERA	SPICATA	209		CPI	11412				
INDIGOFERA	SPICATA	233		CPI	11412				
INDIGOFERA	SPICATA	253		CPI	11412				
INDIGOFERA	SPICATA	280		CPI	11412				
INDIGOFERA	SPICATA	282		CPI	11412				
INDIGOFERA	SPICATA	286		CPI	11412				
INDIGOFERA	SPICATA	330		CPI	11412				
INDIGOFERA	SPICATA	331		CPI	11412				
INDIGOFERA	SPICATA	332		CPI	11412				
INDIGOFERA	SPICATA	333		CPI	11412				
INDIGOFERA	SPICATA	334		CPI	11412				
INDIGOFERA	SPICATA	336		CPI	11412				
INDIGOFERA	SPICATA	337		CPI	11412				
INDIGOFERA	SPICATA	338		CPI	11412				
INDIGOFERA	SPICATA	339		CPI	11412				
INDIGOFERA	SPICATA	341		CPI	11412				

20

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
INDIGOFERA	SPICATA	343		CPI	11412				
INDIGOFERA	SPICATA	344		CPI	11412				
INDIGOFERA	SPICATA	345		CPI	11412				
INDIGOFERA	SPICATA	346		CPI	11412				
INDIGOFERA	SPICATA	347		CPI	11412				
INDIGOFERA	SPICATA	348		CPI	11412				
INDIGOFERA	SPICATA	349		CPI	11412				
INDIGOFERA	SPICATA	350		CPI	11412				
INDIGOFERA	SPICATA	353		CPI	11412				
INDIGOFERA	SPICATA	355		CPI	11412				
INDIGOFERA	SPICATA	356		CPI	11412				
INDIGOFERA	SPICATA	358		CPI	11412				
INDIGOFERA	SPICATA	359		CPI	11412				
INDIGOFERA	SPICATA	441		CPI	11412				
INDIGOFERA	SPICATA	498		CPI	11412				
INDIGOFERA	SPICATA	501		CPI	11412				
INDIGOFERA	SPICATA	509		CPI	11412				
INDIGOFERA	SPICATA	532		CPI	11412				
INDIGOFERA	SPICATA	625		CPI	11412				
INDIGOFERA	SPICATA	654		CPI	11412				
INDIGOFERA	SPICATA	756		CPI	24205				
LABLAB	PURPUREUS	159		CPI	16883	RONGAI	CPI 23551		CPI 34004
				CPI	34777				
LABLAB	PURPUREUS	170		CPI	23551				
LABLAB	PURPUREUS	454		CPI	16883	RONGAI	CPI 23551		CPI 34004
LABLAB	PURPUREUS	463		CPI	34004		CPI 34777		
LABLAB	PURPUREUS	625		CPI	23551				
LABLAB	PURPUREUS	756		CPI	16883	RONGAI	CPI 23551		CPI 34004
				CPI	34777				
LABLAB	PURPUREUS	769		CPI	16883	RONGAI	CPI 23551		CPI 34004
LABLAB	PURPUREUS	1024		CPI	16883	RONGAI	CPI 34004		CPI 34777
LABLAB	PURPUREUS	1091	SU451	CPI	16883	RONGAI	CPI 34004		CPI 34777
LABLAB	PURPUREUS	1406		CPI	16883	RONGAI	CPI 34004		CPI 34777
LESPEDA	JUNCEA	159		...	.....	(SERICEA)			
LESPEDA	JUNCEA	241		...	.....	(SERICEA)			
LESPEDA	JUNCEA	756		...	.....	(SERICEA)			
LESPEDA	JUNCEA	854		...	.....	(SERICEA)			
LESPEDA	SERICEA	159		...	.....	ARLINGTON	...	LOCAL B	... OKINAWA
LESPEDA	SERICEA	241		...	.....	LOCAL A	...	LOCAL B	... OKINAWA
LESPEDA	SERICEA	450		...	.....	LOCAL B	...	OKINAWA	... TUPELO
LESPEDA	SERICEA	756		...	.....	LOCAL A	...	LOCAL B	... OKINAWA
LESPEDA	SERICEA	854		...	.....	ARLINGTON	...	LOCAL B	... OKINAWA
				...	.....	TUPELO			

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
LESPEDEZA	STIPULACEA	159		...	SUMMIT				
LESPEDEZA	STIPULACEA	756		...	SUMMIT				
LESPEDEZA	STIPULACEA	854		...	SUMMIT				
LESPEDEZA	STRIATA	159		...	KOBE	...	LOCAL A	...	LOCAL B
LESPEDEZA	STRIATA	241		...	KOBE	...	LOCAL B		
LESPEDEZA	STRIATA	450		...	KOBE	...	LOCAL B		
LESPEDEZA	STRIATA	756		...	KOBE	...	LOCAL A	...	LOCAL B
LESPEDEZA	STRIATA	854		...	KOBE	...	LOCAL A	...	LOCAL B
LEUCAENA	LEUCOCEPHALA	81		CPI 18614	PERU	...	CUNNINGHAM		
LEUCAENA	LEUCOCEPHALA	225		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	262		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	415		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	430		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	647		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	673		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	717		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	946	WIS711	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	947	WIS712	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	948	NGR8	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	952		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	1149	NGR31	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	1150	NGR44	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	1274		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	1353		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	1397		...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2001		...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2002		...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2154	CB952	CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	2914	J1011	...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2915	NGR8	...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2919		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	2920		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	2921		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	2922		CPI 18614	PERU				
LEUCAENA	LEUCOCEPHALA	2923	TAL82	...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2929	NZP5460/1	...	CUNNINGHAM				
LEUCAENA	LEUCOCEPHALA	2930	NZP5468	...	CUNNINGHAM				
LISTIA	HETEROPHYLLA	376		CPI 18424					
LISTIA	HETEROPHYLLA	730		CPI 18424					
LISTIA	HETEROPHYLLA	768		CPI 18424					
LISTIA	HETEROPHYLLA	1775	HDL969BA	CPI 18424					
LISTIA	HETEROPHYLLA	2343	HDL9700	CPI 18424					
LOTONONIS	ANGOLENSIS	1297		CPI 26293	COMMERCIAL				

21

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
LOTNONIS	ANGOLENSIS		1298	CPI	26293	COMMERCIAL			
LOTNONIS	ANGOLENSIS		1299	CPI	26293	COMMERCIAL			
LOTNONIS	ANGOLENSIS		1321	CPI	26293	COMMERCIAL			
LOTNONIS	ANGOLENSIS		1322	CPI	26293	COMMERCIAL			
LOTNONIS	ANGOLENSIS		1323	CPI	26293	COMMERCIAL	CPI 32585	CPI 32655	
					32953		CPI 43777		
LOTNONIS	ANGOLENSIS		1348	CPI	26293	COMMERCIAL			
LOTNONIS	ANGOLENSIS		2406	QA9887	CPI	26293	COMMERCIAL	CPI 32655	CPI 32953
					43777				
LOTNONIS	ANGOLENSIS		2645	CPI	32585		CPI 32953	CPI 43777	
LOTNONIS	ANGOLENSIS		2833	CPI	32585		CPI 32655	CPI 32953	
					43777				
LOTNONIS	BAINESII		360	CPI	16833	MILES			
LOTNONIS	BAINESII		376	CPI	16833	MILES	CPI 24130	CPI 31810	
					47573		CPI 47574	CPI 47575	
					61572		CQ 1114		
LOTNONIS	BAINESII		730	CPI	16833	MILES	CPI 31810	CPI 47573	
					47574		CPI 47575	CPI 61572	
					CQ 1114				
LOTNONIS	BAINESII		731	CPI	16833	MILES			
LOTNONIS	BAINESII		768	CPI	16833	MILES			
LOTNONIS	BAINESII		1775	HDLC969	CPI	16833	MILES	CPI 24130	CPI 31810
					47573		CPI 47574	CPI 47575	
					61572		CQ 1114		
LOTNONIS	BAINESII		1776	HDLC970	CPI	16833	MILES		
LOTNONIS	BAINESII		1777	HDLC968	CPI	16833	MILES		
LOTNONIS	BAINESII		1778	HDLC971	CPI	16833	MILES		
LOTNONIS	BAINESII		1779	HDLC932	CPI	16833	MILES		
LOTNONIS	BAINESII		2343	CPI	16833	MILES			
LOTNONIS	BAINESII		2343	HDLC700	CPI	24130		CPI 31810	CPI 47573
					47574		CPI 47575	CPI 61572	
					CQ 1114				
LOTNONIS	BAINESII		2344	HDLC933	CPI	16833	MILES		
LOTNONIS	BAINESII		2908	CPI	16833	MILES			
LOTNONIS	BAINESII		2909	CPI	16833	MILES			
LOTNONIS	BAINESII		2910	CPI	16833	MILES			
LOTNONIS	LAXA		2648	CPI	62213				
LOTNONIS	MUCRONATA		376	CPI	62214				
LOTNONIS	MUCRONATA		1323	CPI	60286				
LOTNONIS	MUCRONATA		2695	CPI	60286		CPI 60288		
LOTNONIS	MUCRONATA		2705	CPI	60286		CPI 60287		
LOTNONIS	ORTHORRHIZA		2676	CPI	60289				
LOTNONIS	STIPULOSA		1394	HDLC203	CQ	1332			

22

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
LOTUS	CORNICULATUS	668	USDA3074	CPI 32278	VIKING				
LOTUS	CORNICULATUS	669	USDA3074A	CPI 32278	VIKING				
LOTUS	CORNICULATUS	670	USDA3075	CPI 32278	VIKING				
LOTUS	CORNICULATUS	1204	NIT95C1	CPI 32278	VIKING				
LOTUS	EDULIS	669	USDA3074A	CPI 32565					
LOTUS	EDULIS	670	USDA3075	CPI 32565					
LOTUS	EDULIS	1300		CPI 32565					
LOTUS	MAROCCANUS	1300		CPI 23601					
LOTUS	ULIGINOSUS	1075	CC806	...	.....		
LOTUS	ULIGINOSUS	1076	CC807	...	.....		
LOTUS	ULIGINOSUS	1168	CC829	...	.....		
LOTUS	ULIGINOSUS	1193	USDA3E0C5	...	.....		
LOTUS	ULIGINOSUS	1209	NIT95E3	...	.....		
MACROPTILIUM	ATROPURPUREUM	42		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	53		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	54		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	103		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	121		...	.....	SIRATRO	CPI 18556		
MACROPTILIUM	ATROPURPUREUM	170		...	.....	SIRATRO	CPI 18556		
MACROPTILIUM	ATROPURPUREUM	284		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	289		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	451		...	.....	SIRATRO	CPI 18556		
MACROPTILIUM	ATROPURPUREUM	477		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	478		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	480		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	482		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	491		...	.....	SIRATRO	CPI 18556		
MACROPTILIUM	ATROPURPUREUM	512		...	.....	SIRATRO	CPI 18556		
MACROPTILIUM	ATROPURPUREUM	530		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	661		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	756		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	791		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	890		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	909		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	913		CPI 18556					
MACROPTILIUM	ATROPURPUREUM	1675		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	1727		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	2033		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	2126		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	2229		...	.....	SIRATRO			
MACROPTILIUM	ATROPURPUREUM	2248		...	.....	SIRATRO			
MACROPTILIUM	LATHYROIDES	121		...	.....		
MACROPTILIUM	LATHYROIDES	170		...	.....		

23

24

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
MACROPTILIMUM	LATHYROIDES	284		...	.....		
MACROPTILIMUM	LATHYROIDES	289		...	.....		
MACROPTILIMUM	LATHYROIDES	756		...	.....		
MACROPTILIMUM	MARTII	451		CPI	49780				
MACROPTILIMUM	MARTII	1571		CPI	49780				
MACROPTILIMUM	MARTII	1717		CPI	49780				
MACROTYLOMA	AFRICANUM	45		CPI	24972				
MACROTYLOMA	AFRICANUM	121		CPI	24972				
MACROTYLOMA	AFRICANUM	159		CPI	24972				
MACROTYLOMA	AFRICANUM	170		CPI	24972				
MACROTYLOMA	AFRICANUM	233		CPI	24972				
MACROTYLOMA	AFRICANUM	289		CPI	24972				
MACROTYLOMA	AFRICANUM	454		CPI	24972				
MACROTYLOMA	AFRICANUM	625		CPI	24972				
MACROTYLOMA	AFRICANUM	756		CPI	24972				
MACROTYLOMA	AXILLARE	45		CPI	17814				
MACROTYLOMA	AXILLARE	121		CPI	17814				
MACROTYLOMA	AXILLARE	159		CPI	17814				
MACROTYLOMA	AXILLARE	170		CPI	17814				
MACROTYLOMA	AXILLARE	233		CPI	17814				
MACROTYLOMA	AXILLARE	289		CPI	17814				
MACROTYLOMA	AXILLARE	441		CPI	17814				
MACROTYLOMA	AXILLARE	454		CPI	17814				
MACROTYLOMA	AXILLARE	625		CPI	17814				
MACROTYLOMA	AXILLARE	756		CPI	17814				
MACROTYLOMA	AXILLARE	786		CPI	17814				
MACROTYLOMA	UNIFLORUM	45		CPI	14629				
MACROTYLOMA	UNIFLORUM	121		CPI	14629				
MACROTYLOMA	UNIFLORUM	159		CPI	14629				
MACROTYLOMA	UNIFLORUM	170		CPI	14629				
MACROTYLOMA	UNIFLORUM	233		CPI	14629				
MACROTYLOMA	UNIFLORUM	289		CPI	14629				
MACROTYLOMA	UNIFLORUM	454		CPI	14629				
MACROTYLOMA	UNIFLORUM	625		CPI	14629				
MACROTYLOMA	UNIFLORUM	756		CPI	14629				
MACROTYLOMA	UNIFLORUM	769		CPI	14629				
MEDICAGO	POLYMORPHEA	112		...	.....		
MEDICAGO	SATIVA	61	AH2	...	.....		
MEDICAGO	SATIVA	63		...	.....		
MEDICAGO	SATIVA	64		...	.....		
MEDICAGO	SATIVA	110		...	.....		
MEDICAGO	SATIVA	112		...	.....	AFRICAN A	...	AFRICAN B	...
MEDICAGO	SATIVA	113		...	.....				HAIRY PERU

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
MEDICAGO	SATIVA		115	...	.....		
MEDICAGO	SATIVA		118	...	.....		
MEDICAGO	SATIVA		220	...	.....		AFRICAN B		
MEDICAGO	SATIVA		227	...	.....		HAIRY PERU		
MEDICAGO	SATIVA		228	...	.....		AFRICAN A		
MEDICAGO	SATIVA		257	...	.....		
MEDICAGO	SATIVA		529 QA52	...	.....		
MEDICAGO	SATIVA		813 LUCERNE51	...	.....		
MEDICAGO	SATIVA		967	...	.....		
MEDICAGO	SATIVA		1035	...	.....		
MEDICAGO	SATIVA		1170	...	.....		AFRICAN A	...	AFRICAN B
MEDICAGO	SATIVA		1171 LYNGBYH58	...	.....		AFRICAN A	...	AFRICAN B
MEDICAGO	SATIVA		1368	...	.....		AFRICAN A	...	AFRICAN B
MEDICAGO	SATIVA		1445 U45	...	.....		AFRICAN A	...	AFRICAN B
MEDICAGO	SATIVA		1446 SU47	...	.....		AFRICAN A	...	AFRICAN B
MEDICAGO	SCUTELLATA		61 AH2	...	.....		
MEDICAGO	SCUTELLATA		967	...	.....		
MEDICAGO	SCUTELLATA		1445 U45	...	.....		
MEDICAGO	TRUNCATULA		61 AH2	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		63	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		64	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		98	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		110	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		112	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		113	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		115	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		119	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		214	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		217	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		227	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		257	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		419	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		967	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		1035	...	.....		JEMALONG		
MEDICAGO	TRUNCATULA		1445 U45	...	.....		WOODSIDE		
NEONOTONIA	WIGHTII		40			CPI	16673		
NEONOTONIA	WIGHTII		121			CPI	16673		
NEONOTONIA	WIGHTII		232			CPI	16673		
NEONOTONIA	WIGHTII		249			CPI	16673		
NEONOTONIA	WIGHTII		283			CPI	16673		
NEONOTONIA	WIGHTII		291			CPI	16673		
NEONOTONIA	WIGHTII		327			CPI	16673		
NEONOTONIA	WIGHTII		428			CPI	16673		

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
NEONOTONIA	WIGHTII	439		CPI 16673		CQ 560	CLARENCE		
NEONOTONIA	WIGHTII	452		CPI 16673					
NEONOTONIA	WIGHTII	453		CPI 16673		CPI 18419		CPI 25421	
				CPI 25700		CPI 25702	COOPER	CPI 25703	
				CPI 25919		CPI 29744		CPI 30366	
				CPI 30497		CPI 32862		CPI 32944	
				CQ 363	TINAROO	CQ 560	CLARENCE		
NEONOTONIA	WIGHTII	466		CPI 16673		CQ 363	TINAROO	CQ 560	CLARENCE
NEONOTONIA	WIGHTII	756		CPI 16673		CPI 18419		CPI 25421	
				CPI 25702	COOPER	CPI 25703		CPI 25919	
				CPI 29744		CPI 30497		CPI 32862	
				CPI 32942		CPI 32944		CQ 363	TINAROO
				CQ 560	CLARENCE				
NEONOTONIA	WIGHTII	1057	QA922	CPI 16673		CPI 18419		CPI 25421	
				CPI 25700		CPI 25700		CPI 25702	COOPER
				CPI 25919		CPI 30366		CPI 30497	
				CPI 32862		CPI 32944		CQ 363	TINAROO
				CQ 560	CLARENCE				
NEONOTONIA	WIGHTII	1267		CPI 25702	COOPER	CQ 363	TINAROO		
NEONOTONIA	WIGHTII	1311		CQ 363	TINAROO				
NEONOTONIA	WIGHTII	1668		CPI 25702	COOPER	CQ 363	TINAROO		
NEONOTONIA	WIGHTII	1908		CPI 25700		CPI 25702	COOPER	CPI 25919	
				CPI 29744		CPI 32942		CQ 363	TINAROO
				CQ 560	CLARENCE				
NEONOTONIA	WIGHTII	1913	SFS1	CPI 18419		CPI 25421		CPI 25700	
				CPI 25700		CPI 25702	COOPER	CPI 25919	
				CPI 29744		CPI 30366		CPI 30497	
				CPI 32862		CPI 32942		CPI 32944	
				CQ 363	TINAROO	CQ 560	CLARENCE		
NEONOTONIA	WIGHTII	1914	SFS13	CQ 363	TINAROO				
NEONOTONIA	WIGHTII	1915	SFS14	CPI 25702	COOPER				
NEONOTONIA	WIGHTII	1916	SFS19	CPI 25702	COOPER	CQ 363	TINAROO		
NEONOTONIA	WIGHTII	1918	SFS31	CPI 18419		CPI 25421		CPI 25700	
				CPI 25700		CPI 25702	COOPER	CPI 25919	
				CPI 29744		CPI 30366		CPI 30497	
				CPI 32862		CPI 32942		CPI 32944	
				CQ 363	TINAROO	CQ 560	CLARENCE		
NEONOTONIA	WIGHTII	2195		CQ 560	CLARENCE				
PHASEOLUS	COCCINEUS	121		CPI 37026		CPI 37028		CPI 37030	
PHASEOLUS	COCCINEUS	170		CPI 37026		CPI 37028		CPI 37029	
				CPI 37030					
PHASEOLUS	COCCINEUS	482		CPI 37028		CPI 37030			
PHASEOLUS	COCCINEUS	512		CPI 37028		CPI 37030			

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
PHASEOLUS	COCCINEUS	890		CPI 37026		CPI 37026		CPI 37028	
				CPI 37030					
PHASEOLUS	COCCINEUS	971		CPI 37028		CPI 37030			
PHASEOLUS	COCCINEUS	1071	CC511	CPI 37026		CPI 37028		CPI 37030	
PHASEOLUS	COCCINEUS	1133		CPI 37026		CPI 37028		CPI 37030	
PHASEOLUS	COCCINEUS	1224		CPI 37026		CPI 37028		CPI 37030	
PHASEOLUS	COCCINEUS	1963		CPI 37028		CPI 37030			
PHASEOLUS	VULGARIS	121		... ..	FRENCH				
PHASEOLUS	VULGARIS	170		... ..	FRENCH				
PHASEOLUS	VULGARIS	512		... ..	FRENCH				
PHASEOLUS	VULGARIS	890		... ..	FRENCH				
PHASEOLUS	VULGARIS	971		... ..	FRENCH				
PHASEOLUS	VULGARIS	1071	CC511	... ..	FRENCH				
PHASEOLUS	VULGARIS	1133		... ..	FRENCH				
PHASEOLUS	VULGARIS	1224		... ..	FRENCH				
PHASEOLUS	VULGARIS	1963		... ..	FRENCH				
PISUM	SATIVUM	108		... ..				
PISUM	SATIVUM	472		... ..				
PISUM	SATIVUM	735	SU302	... ..				
PISUM	SATIVUM	736	SU331	... ..				
PUERARIA	PHASEOLOIDES	756		CPI 16864		CPI 32118			
PUERARIA	PHASEOLOIDES	955		CPI 32118					
PUERARIA	PHASEOLOIDES	957		CPI 32118					
PUERARIA	PHASEOLOIDES	958		CPI 16864					
PUERARIA	PHASEOLOIDES	984		CPI 32118					
TERAMNUS	(SP.)	756		CPI 40311		CPI 40313		CPI 40314	
TERAMNUS	UNCINATUS	45		CPI 25937					
TERAMNUS	UNCINATUS	121		CPI 25937					
TERAMNUS	UNCINATUS	170		CPI 22620					
TERAMNUS	UNCINATUS	452		CPI 25937					
TERAMNUS	UNCINATUS	453		CPI 25937					
TERAMNUS	UNCINATUS	484		CPI 22620		CPI 25937			
TERAMNUS	UNCINATUS	756		CPI 22620		CPI 25937		CPI 40307	
				CPI 43791					
TERAMNUS	UNCINATUS	761		CPI 22620					
TERAMNUS	UNCINATUS	828		CPI 25937					
TERAMNUS	UNCINATUS	915		CPI 25937					
TERAMNUS	UNCINATUS	1003		CPI 25937					
TERAMNUS	UNCINATUS	1057	QA922	CPI 25937					
TERAMNUS	UNCINATUS	1066		CPI 25937					
TERAMNUS	UNCINATUS	1350		CPI 25937					
TRIFOLIUM	(SP.)	527		CPI 18246					
TRIFOLIUM	(SP.)	714		CPI 18247					

28

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
TRIFOLIUM	(SP.)		771	CPI	18247				
TRIFOLIUM	(SP.)		772	CPI	18247				
TRIFOLIUM	(SP.)		773	CPI	18247				
TRIFOLIUM	(SP.)		775	CPI	18247				
TRIFOLIUM	(SP.)		780	CPI	18247				
TRIFOLIUM	AFRICANUM		728	CPI	26612				
TRIFOLIUM	AFRICANUM		773	CPI	26612				
TRIFOLIUM	AFRICANUM		775	CPI	26612				
TRIFOLIUM	AFRICANUM		780	CPI	26612				
TRIFOLIUM	AFRICANUM		937	CPI	26612				
TRIFOLIUM	AFRICANUM		939	CPI	26612				
TRIFOLIUM	AFRICANUM		944	CPI	26612				
TRIFOLIUM	ALEXANDRINUM		147	...	.....		
TRIFOLIUM	ALEXANDRINUM		149	...	.....		
TRIFOLIUM	ALEXANDRINUM		150	...	.....		
TRIFOLIUM	ALEXANDRINUM		151	...	.....		
TRIFOLIUM	ALEXANDRINUM		219	...	.....		
TRIFOLIUM	ALEXANDRINUM		220	...	.....		
TRIFOLIUM	ALEXANDRINUM		325	...	.....		
TRIFOLIUM	ALEXANDRINUM		370	...	.....		
TRIFOLIUM	ALEXANDRINUM		371	...	.....		
TRIFOLIUM	ALEXANDRINUM		372	...	.....		
TRIFOLIUM	ALEXANDRINUM		420	...	.....		
TRIFOLIUM	ALEXANDRINUM		806	PE	343				
TRIFOLIUM	ALEXANDRINUM		875	PE	343				
TRIFOLIUM	BACCARINII		527	CPI	25344				
TRIFOLIUM	BACCARINII		714	CPI	25344				
TRIFOLIUM	BACCARINII		758	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		762	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		766	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		771	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		772	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		773	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		774	CPI	25344				
TRIFOLIUM	BACCARINII		775	CPI	25343	CPI	25344		
TRIFOLIUM	BACCARINII		780	CPI	25343	CPI	25344		
TRIFOLIUM	BURCHELLIANUM		526	CPI	22163				
TRIFOLIUM	BURCHELLIANUM		527	CPI	22163				
TRIFOLIUM	BURCHELLIANUM		714	CPI	22163				
TRIFOLIUM	BURCHELLIANUM		720	CPI	24132				
TRIFOLIUM	BURCHELLIANUM		727	CPI	22163	CPI	24132	CPI	31995
TRIFOLIUM	BURCHELLIANUM		728	CPI	22163	CPI	24132		
TRIFOLIUM	BURCHELLIANUM		732	CPI	24132				

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
TRIFOLIUM	BURCHELLIANUM	758		CPI	22163				
TRIFOLIUM	BURCHELLIANUM	762		CPI	22163				
TRIFOLIUM	BURCHELLIANUM	766		CPI	24132				
TRIFOLIUM	BURCHELLIANUM	772		CPI	22163	CPI	24132		
TRIFOLIUM	BURCHELLIANUM	773		CPI	22163	CPI	24132		
TRIFOLIUM	BURCHELLIANUM	779		CPI	22163				
TRIFOLIUM	BURCHELLIANUM	780		CPI	22163	CPI	24132		
TRIFOLIUM	BURCHELLIANUM	788		CPI	22163				
TRIFOLIUM	BURCHELLIANUM	943		CPI	22163				
TRIFOLIUM	BURCHELLIANUM	944		CPI	22163	CPI	24132		
TRIFOLIUM	CHERANGANIENSE	938		CPI	22164				
TRIFOLIUM	CHERLERI	867		CPI	14549				
TRIFOLIUM	CHERLERI	2179	WU290	CPI	14549				
TRIFOLIUM	FRAGIFERUM	1		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	4		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	148		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	150		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	219		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	220		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	246		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	370		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	858		...	.....	PALESTINE			
TRIFOLIUM	FRAGIFERUM	876		...	.....	STRAWBERRY			
TRIFOLIUM	FRAGIFERUM	1166	TA1	...	.....	STRAWBERRY			
TRIFOLIUM	FRAGIFERUM	1444	TA2	...	.....	STRAWBERRY			
TRIFOLIUM	HIRTUM	806		...	.....	KONDININ			
TRIFOLIUM	HIRTUM	869		...	.....	KONDININ			
TRIFOLIUM	HIRTUM	875		...	.....	KONDININ			
TRIFOLIUM	HIRTUM	2178	TA1	...	.....	KONDININ			
TRIFOLIUM	INCARNATUM	4		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	150		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	219		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	220		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	246		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	370		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	371		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	372		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	420		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	766		...	.....	DIXIE			
TRIFOLIUM	INCARNATUM	806		...	.....	DIXIE			
TRIFOLIUM	MASAIENSE	770		CPI	25373				
TRIFOLIUM	MASAIENSE	771		CPI	25373				
TRIFOLIUM	MASAIENSE	776		CPI	25373				

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
TRIFOLIUM	MASAIENSE	782		CPI 25373					
TRIFOLIUM	MASAIENSE	788		CPI 25373					
TRIFOLIUM	PRATENSE	3		... ..	MONTGOMERY				
TRIFOLIUM	PRATENSE	147		... ..	MONTGOMERY				
TRIFOLIUM	PRATENSE	806		... ..	MONTGOMERY	... ..	NEW ZEALAND		
TRIFOLIUM	PRATENSE	875	AR43	... ..	NEW ZEALAND				
TRIFOLIUM	PSEUDOSTRIATUM	783		CPI 25372					
TRIFOLIUM	PSEUDOSTRIATUM	937		CPI 25372					
TRIFOLIUM	REPENS	1		... ..	GRASSLANDS				
TRIFOLIUM	REPENS	3		... ..	GRASSLANDS				
TRIFOLIUM	REPENS	147		... ..	GRASSLANDS	... ..	IRRIGATION		
TRIFOLIUM	REPENS	733		... ..	IRRIGATION				
TRIFOLIUM	REPENS	782		... ..	NZ WHITE				
TRIFOLIUM	REPENS	806		... ..	GRASSLANDS	... ..	IRRIGATION		
TRIFOLIUM	REPENS	861		... ..	GRASSLANDS				
TRIFOLIUM	REPENS	875	AR43	CPI 15648		P 9194	GRASSLANDS	... ..	(PLAINS ST)
				... ..	GRASSLANDS	... ..	IRRIGATION	... ..	LADINO
TRIFOLIUM	REPENS	1165	TA1	... ..	GRASSLANDS	... ..	IRRIGATION		
TRIFOLIUM	REPENS	1166	TA2	... ..	GRASSLANDS				
TRIFOLIUM	REPENS	1444	UNZ29	... ..	GRASSLANDS	... ..	LADINO		
TRIFOLIUM	REPENS	1990	TA1	... ..	NZ WHITE				
TRIFOLIUM	REPENS	2170	TA1	CPI 15648		P 9194	GRASSLANDS	P 9194	GRASSLANDS
				... ..	(ALUMY CK)	... ..	IRRIGATION	... ..	LADINO
TRIFOLIUM	RUEPPELLIANUM	526		CPI 25346					
TRIFOLIUM	RUEPPELLIANUM	527		CPI 20744		CPI 21155		CPI 25346	
				CPI 25375		CPI 27217			
TRIFOLIUM	RUEPPELLIANUM	714		CPI 21155					
TRIFOLIUM	RUEPPELLIANUM	728		CPI 21155					
TRIFOLIUM	RUEPPELLIANUM	729		CPI 21155					
TRIFOLIUM	RUEPPELLIANUM	758		CPI 25346		CPI 25375		CPI 27217	
TRIFOLIUM	RUEPPELLIANUM	772		CPI 25346		CPI 27217			
TRIFOLIUM	RUEPPELLIANUM	773		CPI 20744		CPI 25346		CPI 25375	
				CPI 27217					
TRIFOLIUM	RUEPPELLIANUM	779		CPI 24977					
TRIFOLIUM	RUEPPELLIANUM	780		CPI 20744		CPI 25346		CPI 25375	
				CPI 27217					
TRIFOLIUM	RUEPPELLIANUM	938		CPI 24977					
TRIFOLIUM	RUEPPELLIANUM	944		CPI 20744		CPI 25346		CPI 25375	
				CPI 27217					
TRIFOLIUM	SEMIPILOSUM	526		... ..	EX BEERWAH	CPI 21156		CPI 25347	
				CPI 27218	SAFARI	CPI 31996		CPI 33182	
				CPI 33183		CPI 40617		K 5154	
TRIFOLIUM	SEMIPILOSUM	763		... ..	EX BEERWAH	CPI 25347			

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
TRIFOLIUM	SEMPILOSUM	772		CPI 33183					
TRIFOLIUM	SEMPILOSUM	778		CPI 21156		CPI 25347		CPI 27218	SAFARI
				CPI 31996		CPI 33182		CPI 33183	
				CPI 40617		K 5154			
TRIFOLIUM	SEMPILOSUM	779		... ..	EX BEERWAH	CPI 24976			
TRIFOLIUM	SEMPILOSUM	782		CPI 21156		CPI 25347		CPI 27218	SAFARI
				CPI 31996		CPI 33182		CPI 33183	
				CPI 40617		K 5154			
TRIFOLIUM	SEMPILOSUM	788		... ..	EX BEERWAH	CPI 21156		CPI 25347	
				CPI 27218	SAFARI	CPI 31996		CPI 40617	
				K 5154					
TRIFOLIUM	SEMPILOSUM	944		CPI 27218	SAFARI				
TRIFOLIUM	SEMPILOSUM	2031		CPI 25347		CPI 27218	SAFARI		
TRIFOLIUM	SEMPILOSUM	2032		CPI 25347		CPI 31996			
TRIFOLIUM	SEMPILOSUM	2102		CPI 25347		CPI 27218	SAFARI	CPI 31996	
TRIFOLIUM	SEMPILOSUM	2116		CPI 25347		CPI 27218	SAFARI	CPI 31996	
TRIFOLIUM	SEMPILOSUM	2117		CPI 25347		CPI 27218	SAFARI	CPI 31996	
TRIFOLIUM	SEMPILOSUM	2177		CPI 25347					
TRIFOLIUM	STEUDNERI	714		CPI 17845		CPI 25348			
TRIFOLIUM	STEUDNERI	771		CPI 25348					
TRIFOLIUM	STEUDNERI	772		CPI 25348					
TRIFOLIUM	STEUDNERI	780		CPI 25348					
TRIFOLIUM	STEUDNERI	783		CPI 25348					
TRIFOLIUM	SUBTERRANEUM	806		... ..	BACCHUS M	... ..	CLARE	... ..	WOOGENELLUP
TRIFOLIUM	SUBTERRANEUM	867		... ..	WOOGENELLUP				
TRIFOLIUM	SUBTERRANEUM	875		... ..	BACCHUS M	... ..	CLARE	... ..	GERALDTON
TRIFOLIUM	SUBTERRANEUM	877		... ..	WOOGENELLUP				
TRIFOLIUM	SUBTERRANEUM	1165	TAL	... ..	BACCHUS M	... ..	CLARE		
TRIFOLIUM	SUBTERRANEUM	1444	UNZ29	... ..	BACCHUS M	... ..	CLARE		
TRIFOLIUM	SUBTERRANEUM	2178	TAL	... ..	GERALDTON				
TRIFOLIUM	SUBTERRANEUM	2179	WU290	... ..	GERALDTON	... ..	WOOGENELLUP		
TRIFOLIUM	TEMBENSE	758		CPI 20746		CPI 24978		CPI 25376	
TRIFOLIUM	TEMBENSE	771		CPI 20746		CPI 24978		CPI 25349	
				CPI 25376					
TRIFOLIUM	TEMBENSE	772		CPI 20746		CPI 24978		CPI 25376	
TRIFOLIUM	TEMBENSE	773		CPI 20746		CPI 24978		CPI 25349	
				CPI 25376					
TRIFOLIUM	TEMBENSE	775		CPI 20746		CPI 24978		CPI 25349	
				CPI 25376					
TRIFOLIUM	TEMBENSE	806		CPI 24978					
TRIFOLIUM	USAMBARENSE	758		CPI 22165		CPI 25350		CPI 25377	
TRIFOLIUM	USAMBARENSE	771		CPI 22165		CPI 25350		CPI 25377	
TRIFOLIUM	USAMBARENSE	772		CPI 22165		CPI 25350		CPI 25377	

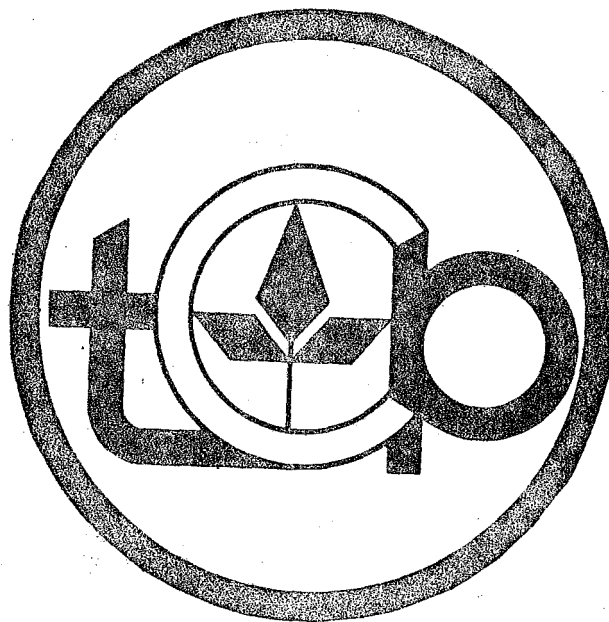
GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
TRIFOLIUM	USAMBARENSE	773		CPI 22165		CPI 25350		CPI 25377	
TRIFOLIUM	USAMBARENSE	775		CPI 22165		CPI 25350		CPI 25377	
TRIFOLIUM	USAMBARENSE	780		CPI 22165					
VICIA	SATIVA	108		...	.....		
VICIA	SATIVA	134		...	.....		
VICIA	SATIVA	472		...	.....		
VIGNA	ANGULARIS	121		...	..... A2-15				
VIGNA	ANGULARIS	284		...	..... A2-15				
VIGNA	ANGULARIS	491		...	..... A2-15				
VIGNA	ANGULARIS	512		...	..... A2-15				
VIGNA	ANGULARIS	661		...	..... A2-15				
VIGNA	ANGULARIS	756		...	..... A2-15				
VIGNA	ANGULARIS	786		...	..... A2-15				
VIGNA	ANGULARIS	890		...	..... A2-15				
VIGNA	ANGULARIS	985		...	..... A2-15				
VIGNA	ANGULARIS	1011		...	..... A2-15				
VIGNA	ANGULARIS	1015		...	..... A2-15				
VIGNA	ANGULARIS	1017		...	..... A2-15				
VIGNA	ANGULARIS	1024		...	..... A2-15				
VIGNA	ANGULARIS	1042		...	..... A2-15				
VIGNA	ANGULARIS	1243		...	..... A2-15				
VIGNA	ANGULARIS	1247		...	..... A2-15				
VIGNA	ANGULARIS	1809	USDA136	...	..... A2-15				
VIGNA	MARINA	121		...	.....		
VIGNA	MARINA	159		...	.....		
VIGNA	MARINA	170		...	.....		
VIGNA	MARINA	453		...	.....		
VIGNA	MARINA	466		...	.....		
VIGNA	MARINA	480		...	.....		
VIGNA	MARINA	625		...	.....		
VIGNA	MARINA	756		...	.....		
VIGNA	MARINA	786		...	.....		
VIGNA	MARINA	915		...	.....		
VIGNA	MUNGO	121		CPI 5979	REGUR				
VIGNA	MUNGO	170		CPI 5979	REGUR				
VIGNA	MUNGO	284		CPI 5979	REGUR				
VIGNA	MUNGO	491		CPI 5979	REGUR				
VIGNA	MUNGO	512		CPI 5979	REGUR				
VIGNA	MUNGO	756		CPI 5979	REGUR	CPI 18118			
VIGNA	MUNGO	786		CPI 5979	REGUR				
VIGNA	MUNGO	890		CPI 5979	REGUR				
VIGNA	MUNGO	985		CPI 5979	REGUR				
VIGNA	MUNGO	1011		CPI 5979	REGUR				

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
VIGNA	MUNGO		1015	CPI	5979	REGUR			
VIGNA	MUNGO		1017	CPI	5979	REGUR			
VIGNA	MUNGO		1042	CPI	5979	REGUR			
VIGNA	MUNGO		1044	CPI	5979	REGUR			
VIGNA	MUNGO		1243	CPI	5979	REGUR			
VIGNA	MUNGO		1247	CPI	5979	REGUR			
VIGNA	MUNGO	1809	USDA136	CPI	5979	REGUR			
VIGNA	RADIATA		27	CPI	12142				
VIGNA	RADIATA		42	CPI	12142				
VIGNA	RADIATA		53	CPI	12142				
VIGNA	RADIATA		54	CPI	12142				
VIGNA	RADIATA		121	...	...	BERKEN	CPI 12142		CPI 18118
VIGNA	RADIATA		170	CPI	12142				
VIGNA	RADIATA		284	...	...	BERKEN	CPI 12142		
VIGNA	RADIATA		289	CPI	12142				
VIGNA	RADIATA		326	CPI	12142				
VIGNA	RADIATA		452	CPI	12142				
VIGNA	RADIATA		482	CPI	12142				
VIGNA	RADIATA		491	...	...	BERKEN			
VIGNA	RADIATA		512	...	...	BERKEN	CPI 12142		CPI 18118
VIGNA	RADIATA		661	...	...	BERKEN	CPI 12142		
VIGNA	RADIATA		756	...	...	BERKEN			
VIGNA	RADIATA		791	CPI	12142				
VIGNA	RADIATA		890	...	...	BERKEN	CPI 12142		CPI 18118
VIGNA	RADIATA		913	CPI	12142				
VIGNA	RADIATA		985	...	...	BERKEN			
VIGNA	RADIATA		1011	...	...	BERKEN			
VIGNA	RADIATA		1015	...	...	BERKEN			
VIGNA	RADIATA		1017	...	...	BERKEN			
VIGNA	RADIATA		1042	...	...	BERKEN			
VIGNA	RADIATA		1055	QA809	CPI	18118			
VIGNA	RADIATA		1243	...	...	BERKEN			
VIGNA	RADIATA		1247	...	...	BERKEN			
VIGNA	UMBELLATA		121	CPI	12143				
VIGNA	UMBELLATA		170	CPI	12143				
VIGNA	UMBELLATA		451	CPI	12143				
VIGNA	UMBELLATA		477	CPI	12143				
VIGNA	UMBELLATA		478	CPI	12143				
VIGNA	UMBELLATA		480	CPI	12143				
VIGNA	UMBELLATA		791	CPI	12143				
VIGNA	UMBELLATA		913	CPI	12143				
VIGNA	UNGUICULATA		40	CPI	23551	POONA			
VIGNA	UNGUICULATA		45	CPI	23551	POONA			

33

GENUS	SPECIES	CB	ORIG.NO.	CPI/CQ/Q	CV	CPI/CQ/Q	CV	CPI/CQ/Q	CV
VIGNA	UNGUICULATA		121	CPI	23551 POONA				
VIGNA	UNGUICULATA		159	CPI	23551 POONA				
VIGNA	UNGUICULATA		233	CPI	23551 POONA				
VIGNA	UNGUICULATA		428	CPI	23551 POONA				
VIGNA	UNGUICULATA		436 S1	CPI	23551 POONA				
VIGNA	UNGUICULATA		439	CPI	23551 POONA				
VIGNA	UNGUICULATA		452	CPI	23551 POONA				
VIGNA	UNGUICULATA		453	CPI	23551 POONA				
VIGNA	UNGUICULATA		454	CPI	23551 POONA				
VIGNA	UNGUICULATA		699	CPI	23551 POONA				
VIGNA	UNGUICULATA		756	CPI	23551 POONA				
VIGNA	UNGUICULATA		769	CPI	23551 POONA				
ZORNIA	(SP.)		103	CPI	34758				
ZORNIA	(SP.)		159	CPI	34758				
ZORNIA	(SP.)		756	CPI	33207	CPI 34758		CPI 40334	
ZORNIA	(SP.)		1408	CPI	34758				
ZORNIA	(SP.)		1546	CPI	34758				
ZORNIA	(SP.)		1550	CPI	34758				
ZORNIA	(SP.)		1552	CPI	34758				
ZORNIA	DIPHYLLA		530	CPI	34941				
ZORNIA	DIPHYLLA		756	CPI	40327				
ZORNIA	DIPHYLLA		1546	CPI	34941				
ZORNIA	DIPHYLLA		1550	CPI	34941				
ZORNIA	GLOCHIDIATA		756	CPI	50377				

34



Legume Bacteriology

~~ACRONYMS~~ ABBREVIATIONS AND SOURCE LABORATORIES

This table lists acronyms, abbreviations and codes as they appear on labels of cultures received from source laboratories. The laboratory named as the source refers to that from which the CB Collection received the culture and may not represent the laboratory of isolation.

ACRONYMS, ABBREVIATIONS AND STRAIN CODES		SOURCE LABORATORY
Letter or No. prefix	Examples of original No.	
A	A1 to A3	Tamil Nadu University, Coimbatore, India
A	A4	Ministry of Agriculture, Castellar, Buenos Aires, Argentina
AH	AH2	Rothamsted Experimental Station, Harpenden, Herts, U.K.
AR	AR25A	NSW Department of Agriculture, Tamworth, Australia
B	B1 to B9	See A A1 to A3
BR	BR-11C	EMBRAPA, Km47, Seropedica, Brazil
C	C12(ARG) to C25(ARG)	See A A4
C	C101a	See BR
CE	CB756	CSIRO, Division of Tropical Crops and Pastures, St. Lucia, Australia
CC	CC2480a	CSIRO, Division of Plant Industry, Canberra, Australia
CIAT	CIAT170	Tropical Pastures Program, CIAT, AA 6713, Cali, Colombia
DR	DR/I	New isolate series DR. See CB
EX		Meaning from
G'LANDS	G'LANDS308	Agricultural Research Station, Marrandellas, Zimbabwe
GP	GP20-A1	Dr T.C.Wu, Taiwan
HDLC	HDLC362A	See G'LANDS
IAC	IAC331	See SFS
J	J1011	Dr. I. Ishizawa, Japan via DSIR, Palmerston North, New Zealand
JAP	JAP36-2	USDA, Beltsville, USA
LOTON	LOTON1068	See G'LANDS
LP	LP4	See CC
LUC	LUCERNE51	Unknown
LYNGBY	LYNGBY H58	Soil Research Laboratory, Lyngby, Denmark
NA	NA34	NSW Department of Agriculture, Gosford, Australia
NGR	NGR8	Department of Agriculture and Stock, Konedobu, New Guinea
NITRAGIN		Nitragin Company, Milwaukee, USA
NIT	NIT32Z3	See NITRAGIN
NO	NO409	See G'LANDS

93

NODGEN

NZP NZP5435
 QA QA549
 R R700
 RAD RAD107/3
 ROTH ROTH CLF
 S S1
 S.GUI S.GUI7.6
 SFS(=SMS) SFS97
 ST ST78/1/1
 SU SU302
 T T10H
 TA TA1
 TAL TAL82
 U U45

 UNZ UNZ29
 USDA USDA3073 or USDA3G5C1

 V V.UNGUIC14.4
 VI VI ROTH'D
 W W72
 WA WA67
 WIS WIS711
 WU WU95

 1 1085B
 2 203A
 2 22-4
 2 27A1, 27A2
 5 58A66
 6 606B
 7 7/7
 7 75C14
 7 711, 712
 9 95A2, 95C4, 95E3
 9 968AA, 969BA, 970AA, 971AA

Nodogen Company, Illinois, USA
 Plant Biochemistry, DSIR, New Zealand
 Plant Pathology Branch, DPI, Meiers Rd., Longpocket, Qld Australia
 See G'LANDS
 New Collection Series RAD. See CB
 See AH
 Dept Microbiology, University of Iowa, Ames, Iowa, USA
 Dr C. Bonnier, Belgian Congo
 Seccao de Microbiologia do Solo, IAC, Campinas, SP, Brazil
 New Collection Series ST. See CB
 Microbiology Department, University of Sydney, Australia
 ?, Poona, India
 Department of Agriculture, Launceston, Australia
 Niftal Project, University of Hawaii, Maui, Hawaii, USA
 Laboratorio de Microbiologia de Suelos y Control de Inoculantes, MGA,
 Montevideo, Uruguay
 See U (Ex New Zealand)
 Cell Culture and Nitrogen Fixation Laboratory, SEA, ARS, USDA,
 Beltsville, USA. See also JAP
 See S.GUI
 See AH
 Waite Agricultural Research Institute, Adelaide, Australia
 Department of Agriculture, South Perth, W.A., Australia
 Dept Microbiology, University of Wisconsin, Wisconsin, USA
 University of Western Australia, Nedlands, Western Australia

See G'LANDS
 See G'LANDS
 See S.GUI
 See NITRAGIN
 Scott Laboratories, Nairobi, Kenya
 See G'LANDS
 See WA
 See 5
 University of Hawaii, USA
 See NITRAGIN
 See G'LANDS

RHIZOBIUM STRAIN RECOMMENDATIONS

The following strains of Rhizobium are those currently recommended by the Legume Bacteriology Section for all experimental and commercial legume sowings.

These strains are available as ampoules of liophilized broth culture, agar culture and in special circumstances as peat cultures. The strains marked with an asterisk (*) are available in commercially produced inoculant peat cultures.

When requesting strains and when referring to them in any published material please use the correct identification, i.e. the the label of the laboratory in which the strain was isolated.

Tropical legumes:

General cowpea group

Arachis spp.)	
Cajanus cajan (pigeon pea))	
Calopogonium spp.)	
Crotalaria spp.)	
Indigofera spp.)	
Lespedeza spp.)	
Macroptilium atropurpureum (cv Siratro)	)	CB756 *
Neonotonia wightii (all cultivars))	
Peuraria spp.)	
Stylosanthes spp. (see below))	
Teramnus spp.)	
Vigna spp. (except mungbean, see below))	

Other species

Aeschynomene falcata	CB2312
Cassia spp.	CB1483
Centrosema pubescens	CB1923 * (=C101a Brazil)
Cicer arietinum (Chick pea)	CB2855 * (=CC1192)
Cyamopsis tetragonolbus (Guar)	CB3035 (=QA1083)
Desmodium spp.	CB627 *
Desmodium heterophyllum	CB2085
Glycine max (all cultivars except Hardee-CC709)	CB1809 * (=USDA136)
Lablab purpureus	CB1024 *
Leucaena leucocephala	CB81 *
Lotononis angolensis	CB1323
Lotononis bainesii	CB376 *

Lotus corniculatus
Lotus pedunculatus
Lupinus spp.(including *Serradella-Ornithopus* spp.)
Macroptilium martii
Macrotyloma spp.
Stylosanthes capitata
Stylosanthes guianensis(fine stem types)
Stylosanthes guianensis(cv types Cook, Endeavour, Schofield)
Stylosanthes hamata(alkaline soil types)
Stylosanthes hamata (Verano and Verano types)
Stylosanthes spp.
Stylosanthes spp.(untested lines)
Vigna mungo, *V. radiata* (Mungbeans)

CB2938 * (=SU343)
 CB2270 * (=CC829)
 CB2026 * (=WU425)
 CB1717
 CB1024 *
 CB2898
 CB82 * or CB1650
 CB756 *
 CB2126
 CB756 * or CB1650
 CB756 *
 CB756 * or CB82 * (or CB328 or CB2229)
 CB1015 *

Temperate legumes:

Clovers

Trifolium fragiferum, *T. pratense*, *T. repens*
Trifolium cherleri, *T. hirtum*, *T. incarnatum*, *T. subterraneum*
Trifolium semipilosum

CB3062 * (=CC275e)
 CB2937 * (=WU95)
 CB782 *

Medics

Medicago spp. (all medics and *Melilotus*)

CB3061 * (=CC169)

Other species

Coronilla varia (Crown vetch)
Onobrychis sativa (Sainfoin)
Phaseolus vulgaris
Pisum sativum, *Vicia faba*, *v. sativa*

CB2012 (=CC401)
 CB2000 (=NITRAGIN116A5)
 CB2899 * (=CC511)
 CB1447 * (=SU391)

