

Genetic Resources Communication

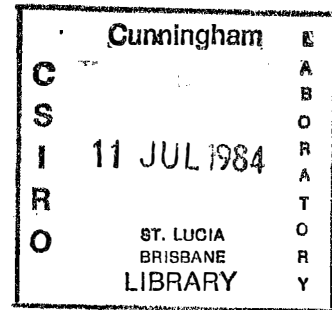
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No. 5 1984

THE CB RHIZOBIUM STRAIN CATALOGUE

R.A. DATE, H.V.A. BUSHBY and R.B. PANITZ



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SUMMARY:

This is a catalogue of 656 strains of Rhizobium available from the Division of Tropical Crops and Pastures, CSIRO, Brisbane. The catalogue is in three parts: The first is a list of strains of Rhizobium by accession number and includes information concerning host and country of origin, and growth characteristics on a yeast - mannitol medium. The second is an inverse list by host (genus and species) and includes a listing of strains isolated from each host. The third is a list of recommended strains of Rhizobium for commonly sown legumes.

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

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

The Rhizobium Collection of the Division of Tropical Crops and Pastures began in 1956 when the late Dr. D. O. Norris commenced his studies of rhizobia for tropical legumes. The total germplasm bank now contains more than 3000 isolates of Rhizobium suitable for a wide range of tropical forage and grain legume species. This catalogue lists only those strains (656) that have been evaluated for effectiveness in nitrogen fixation in glasshouse sand-jar (Norris and Date 1976) or soil-pot tests. Information related to effectiveness is published separately (Bushby, Date, Norris and Panitz 1984, Date and Norris 1984). The remaining strains represent indigenous rhizobia (about 850 strains) isolated from nodules of both native and introduced legumes, and introduced rhizobia (about 1500 strains) representing new collections that correspond to new plant germplasm collections introduced via the Division's plant introduction program. A summary of the number of strains isolated from the various host genera is included in Table 1 for both the whole collection and that part of it listed in this catalogue.

All cultures in the collection germplasm bank are maintained freeze-dried in vacuum sealed ampoules stored at room temperature (20-25 deg.C.). The method of preservation is a modification of the procedure described by Vincent (1970), and is similar to that described by Dye (1980). The collection is listed in the World Directory of Collections of Cultures of Microorganisms (World Data Center on Microorganisms 1982) as Collection No. 57, and has the Australian Rhizobium Collection identifying acronym CB (CSIRO, Brisbane) (Note - the acronym RSC in the World Directory is incorrect).

The catalogue has been prepared from computerized data records as the CB Rhizobium strain accession list and as a list of the names of the legume plants from which the strains were isolated. General requests for strains should be limited to those in the recommended strain list at the end of this catalogue, however, for specific studies all strains in the catalogue are available gratis to bona fide research organizations.

THE CB ACCESSION LIST

Strains of Rhizobium are listed by their CB accession number with details of host and country of origin. The headings GENUS, SPECIES, COUNTRY and TOWN are self explanatory.

ORIG.NO. indicates the label or number of a strain received from another laboratory (see Table 2), which may or may not be the laboratory of isolation. If listed as NOD then the strain was isolated by CSIRO, Brisbane prior to 1972. Strains isolated since that time have a prefix D, DR, F, RAD, ST or VB.

GROWTH and REACTION refer to the general rate of growth and the culture medium pH when grown in standard yeast- mannitol medium. GROWTH is recorded as either FAST(2-3days), INT'MED(=INTERMEDIATE) (3-5days), SLOW(5-7days), V.SLOW (10-14days) or VARIABLE (? days). REACTION is final pH at the end of growth (Norris 1965). We use the information listed under GROWTH and REACTION as a general guide to a strain's behaviour. Many strains react differently with small changes in medium composition and growth condition (Date and Halliday 1979).

The COMMENT column is used to amplify previous information or report a special characteristic. Abbreviations used are: E = effective, EX = from, I = ineffective, = kilometres and ORIG = origin.

THE HOST LIST

This section of the catalogue is a list of legumes from which the CB Collection of rhizobia has been isolated. The strains isolated from each host are listed by CB number after each host plant name.

RECOMMENDED STRAINS

A list of strains recommended for the inoculation of most of the commonly sown legumes is provided in this section. Strains are listed by CB number only after each host or host group. These strains are available as freeze-dried culture in vacuum sealed ampoules, agar culture and in special circumstances as peat culture. The strains marked with an asterisk (*) are available in commercially produced (in Australia) peat inoculants. They may not necessarily form effective associations with all lines, varieties and accessions of the species indicated in the list.

ACKNOWLEDGEMENTS

The information relating to origin and effectiveness of strains of Rhizobium in the CB Collection is maintained in two data bases on the Division's ONYX 8000 series micro computer. We acknowledge the assistance

of Mr. B.D.Thomas of the Plant Introduction staff for assistance in establishing the computerized data bases and the printing of this catalogue. We also acknowledge the help of Mr.R.W.Williams in transferring the culture collection information from card index to computer file.

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TABLE 1

Summary of number of genera and species of legume hosts and strains of Rhizobium represented in the CB Rhizobium Culture Collection and in this catalogue.

GENUS	TOTAL COLLECTION		THIS CATALOGUE	
	No. species host	No. strains rhizobia	No. species host	No. strains rhizobia
ACACIA	21	27	3	3
CAJANUS	3	40	1	4
CALOPOGONIUM	4	41	1	1
CENTROSEMA	5	131	6	21
DESMODIUM	28	313	24	61
GLYCINE	6	127	5	59
LEUCAENA	2	144	1	22
LOTONONIS	8	42	6	35
MACROPTILIUM	6	274	6	41
MACROTYLOMA	5	10	3	5
MEDICAGO	8	45	5	39
NEONOTONIA	1	32	1	14
PHASEOLUS	5	76	4	16
PSORALEA	8	46	5	6
SESBANIA	8	44	4	6
STYLOSANTHES	10	779	7	91
TERAMNUS	6	26	1	4
TRIFOLIUM	17	113	14	57
VIGNA	16	110	10	37
Other Genera	226	868	72	134
TOTALS(114)	393	3016	179	656

TABLE 2

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
CB	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

NODGEN		Nodogen Company, Illinois, USA
NZF	NZP5435	Plant Biochemistry, DSIR, New Zealand
QA	QA549	Plant Pathology Branch, DPI, Meiers Rd., Longpocket, Qld Australia
R	R700	See G'LANDS
RAD	RAD107/3	New Collection Series RAD. See CB
ROTH	ROTH CLF	See AH
S	S1	Dept Microbiology, University of Iowa, Ames, Iowa, USA
S.GUI	S.GUI7.6	Dr C. Bonnier, Belgian Congo
SFS(=SMS)	SFS97	Seccao de Microbiologia do Solo, IAC, Campinas, SP, Brazil
ST	ST78/1/1	New Collection Series ST. See CB
SU	SU302	Microbiology Department, University of Sydney, Australia
T	T10H	?, Poona, India
TA	TAL	Department of Agriculture, Launceston, Australia
TAL	TAL82	Niftal Project, University of Hawaii, Maui, Hawaii, USA
U	U45	Laboratorio de Microbiologia de Suelos y Control de Inoculantes, MGA, Montevideo, Uruguay
UNZ	UNZ29	See U (Ex New Zealand)
USDA	USDA3073 or USDA3G5C1	Cell Culture and Nitrogen Fixation Laboratory, SEA, ARS, USDA, Beltsville, USA. See also JAP
V	V.UNGUIC14.4	See S.GUI
VI	VI ROTH'D	See AH
W	W72	Waite Agricultural Research Institute, Adelaide, Australia
WA	WA67	Department of Agriculture, South Perth, W.A., Australia
WIS	WIS711	Dept Microbiology, University of Wisconsin, Wisconsin, USA
WU	WU95	University of Western Australia, Nedlands, Western Australia
1	1085B	See G'LANDS
2	203A	See G'LANDS
2	22-4	See S.GUI
2	27A1, 27A2	See NITRAGIN
5	58A66	Scott Laboratories, Nairobi, Kenya
6	606B	See G'LANDS
7	7/7	See WA
7	75C14	See 5
7	711, 712	University of Hawaii, USA
9	95A2, 95C4, 95E3	See NITRAGIN
9	968AA, 969BA, 970AA, 971AA	See G'LANDS

RHIZOBIUM CATALOGUE

January, 1984 CSIRO, Division of Tropical Crops and Pastures, Brisbane

CB RHIZOBIUM STRAIN CATALOGUE

ACCESSION LIST

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RHIZOBIUM CATALOGUE

January, 1984 CSIRO, Division of Tropical Crops and Pastures, Brisbane

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
1	SU157	TRIFOLIUM	REPENS	AUSTRALIA	GLEN INNES	FAST	ACID	
3	NA34	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA		FAST	ACID	
26	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
27	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	BEERWAH	SLOW	ACID	
28	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
29	NOD	INDIGOFERA	HIRSUTA	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
31	NOD	ARACHIS	DIOGOI	AUSTRALIA	ELIMBAH	SLOW	ALKALINE	
33	NOD	INDIGOFERA	SPICATA	AUSTRALIA	BEERWAH	SLOW	ALKALINE	GROWS 33 DEG
35	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
40	NOD	GLYCINE	TABACINA	AUSTRALIA	GRANTHAM	SLOW		
42	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	GATTON	SLOW		
44	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	GATTON	SLOW	ALKALINE	
45	NOD	VIGNA	UNGUICULATA	AUSTRALIA	GRANTHAM	VARIABLE	ALKALINE	
46	NOD	DESMODIUM	TRIFLORUM	AUSTRALIA	BRISBANE	SLOW		
52	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	GATTON	SLOW	ALKALINE	
53	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	GATTON	SLOW	ALKALINE	
54	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	GATTON	SLOW	ALKALINE	
57	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	PITTSWORTH	SLOW	ALKALINE	
59	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
61	AH2	MEDICAGO	SATIVA	UK		FAST	ACID	
64		MEDICAGO	TRUNCATULA	AUSTRALIA		FAST	ACID	
65	NOD	STYLOSANTHES	(SP.)	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
76	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	TOWNSVILLE	SLOW	ALKALINE	
81	NOD	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	BRISBANE	FAST	ALKALINE	
82	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	FITZROYVALE	SLOW	NEUTRAL	
96	NOD	MEDICAGO	SATIVA	AUSTRALIA	GIN GIN	FAST	ACID	
97	NOD	MEDICAGO	SATIVA	AUSTRALIA	ROCKHAMPTON	FAST	ACID	
98	NOD	MEDICAGO	TRUNCATULA	AUSTRALIA	CECIL PLAIN	FAST	ACID	FROM NODULOID PEAT CULTURE
103	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	KATHERINE	SLOW	NEUTRAL	REISOLATE FROM CT GATES
105	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
110	NOD	MEDICAGO	TRUNCATULA	AUSTRALIA	GATTON	FAST	ACID	
112	NOD	MEDICAGO	(SP.)	AUSTRALIA	GATTON	FAST	ALKALINE	
113	NOD	MEDICAGO	SATIVA	AUSTRALIA	GATTON	FAST	ACID	
115	NOD	MEDICAGO	SATIVA	AUSTRALIA	GATTON	FAST	ACID	
116	NOD	MEDICAGO	SATIVA	AUSTRALIA	ROCKHAMPTON	FAST	ACID	
117	NOD	MEDICAGO	SATIVA	AUSTRALIA	GOOMERI	FAST	ACID	
118	NOD	MEDICAGO	SATIVA	AUSTRALIA	KINGAROY	FAST	ACID	
119	NOD	MEDICAGO	SATIVA	AUSTRALIA	GATTON	FAST	ACID	
121	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	ROCKHAMPTON	SLOW	ALKALINE	
128	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	REDLAND BAY	INT' MED	ALKALINE	
134	NOD	VICIA	SATIVA	AUSTRALIA	BRISBANE	FAST	ACID	
136	NOD	CAJANUS	CAJAN	AUSTRALIA	BILOELA	SLOW	ALKALINE	
147	ROTH CLF	TRIFOLIUM	REPENS	UK		FAST	ACID	ROTH CLF

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
151	SU306	TRIFOLIUM	REPENS	AUSTRALIA		FAST	ACID	NA30
152	NOD	INDIGOFERA	TRIFOLIATA	AUSTRALIA	CALLIOPE	SLOW	ALKALINE	
158	NOD	INDIGOFERA	HIRSUTA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
159	NOD	DOLICHOS	TRILOBUS	AUSTRALIA	MARYBOROUGH	INT 'MED	ALKALINE	
163	NOD	INDIGOFERA	COLUTEA	AUSTRALIA	GAYNDAH	SLOW	ALKALINE	
164	NOD	VIGNA	UNGUICULATA	AUSTRALIA	CHILDERS	SLOW	ALKALINE	
165	NOD	INDIGOFERA	HIRSUTA	AUSTRALIA	CALLIOPE	SLOW	ALKALINE	
170	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	CALLIOPE	SLOW	ALKALINE	
174	NOD	VIGNA	LANCEOLATA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
184	NOD	INDIGOFERA	COLUTEA	AUSTRALIA	ROCKHAMPTON	SLOW	ALKALINE	
185	NOD	DESMODIUM	INTORTUM	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
187	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	REDLAND BAY	SLOW	ALKALINE	
188	NOD	CROTALARIA	BREIVIDENS	AUSTRALIA	REDLAND BAY	SLOW	ALKALINE	GROWS 41.4 DEG
190	NOD	DESMODIUM	TRICHOCAULON	AUSTRALIA	CABOOLTURE	SLOW	ALKALINE	
192	NOD	DESMODIUM	TRIFLORUM	AUSTRALIA	GIN GIN	SLOW	ALKALINE	
203	NOD	DESMODIUM	TRIFLORUM	AUSTRALIA	CABOOLTURE	SLOW	ALKALINE	
207	NOD	DESMODIUM	CANUM	AUSTRALIA	REDLAND BAY	SLOW	ALKALINE	
208	NOD	CROTALARIA	LANCEOLATA	AUSTRALIA	ROCKHAMPTON	SLOW	ALKALINE	
209	NOD	TEPHROSIA	CANDIDA	AUSTRALIA	LISMORE	SLOW	ALKALINE	
210	NOD	CROTALARIA	LANCEOLATA	AUSTRALIA	FITZROYVALE	SLOW	ALKALINE	
214	NOD	MEDICAGO	(SP.)	AUSTRALIA	TOOWOOMBA	FAST	ACID	
217	NOD	MEDICAGO	SATIVA	AUSTRALIA	STANTHORPE	FAST	ACID	
227	NOD	MEDICAGO	SATIVA	AUSTRALIA	RODDS BAY	FAST	ALKALINE	
231	NOD	MEDICAGO	MINIMA	AUSTRALIA	YELARBON	FAST	ACID	
232	NOD	GLYCINE	TOMENTELLA	AUSTRALIA	JONDARYAN	SLOW	ALKALINE	
233	NOD	VIGNA	UNGUICULATA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
241	NOD	LESPEDeza	STRIATA	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
251		LOTUS	ULIGINOSUS	AUSTRALIA		FAST	ACID	
252	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	YALLEROI	SLOW	ALKALINE	
257	NOD	MEDICAGO	SATIVA	AUSTRALIA	GATTON	FAST	ACID	
259	NOD	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	GATTON	FAST	ACID	
261	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	GATTON	SLOW	ALKALINE	
273	NOD	STYLOSANTHES	FRUTICOSA	NEW GUINEA	LAE	INT 'MED	ACID	
278	NOD	ALYSICARPUS	VAGINALIS	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
279	NOD	CLITORIA	TERNATEA	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
283	NOD	GLYCINE	TOMENTELLA	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
284	NOD	VIGNA	MUNGO	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
289	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
290	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
291	NOD	GLYCINE	TABACINA	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
295	NOD	SESBANIA	CANNABINA	AUSTRALIA	RICHMOND	FAST	ACID	
308	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	TOWNSVILLE	SLOW	ACID	
311	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	FITZROYVALE	SLOW	ALKALINE	

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CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
315	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	FITZROYVALE	SLOW	ALKALINE	
319	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	RODDS BAY	SLOW	ALKALINE	
322	NOD	ALYSICARPUS	BUPLEURIFOLIUS	AUSTRALIA	RODDS BAY	SLOW	ALKALINE	
323	NOD	CENTROSEMA	PUBESCENS	AUSTRALIA	RODDS BAY	SLOW	ALKALINE	
326	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	ESK	SLOW	ALKALINE	
327	NOD	GLYCINE	CLANDESTINA	AUSTRALIA	ESK	SLOW	ALKALINE	
328	NOD	ZORNIA	DIPHYLLA	AUSTRALIA	KATHERINE	SLOW	NEUTRAL	E MANY STYLOSANTHES
331	NOD	INDIGOFERA	SUFFRUTICOSA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
332	NOD	INDIGOFERA	(SP.)	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
333	NOD	INDIGOFERA	SUFFRUTICOSA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
334	NOD	INDIGOFERA	AUSTRALIS	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
336	NOD	INDIGOFERA	TRITA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
337	NOD	INDIGOFERA	TRITA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
338	NOD	INDIGOFERA	TRITA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
340	NOD	INDIGOFERA	TRITA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
341	NOD	INDIGOFERA	SUFFRUTICOSA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
344	NOD	INDIGOFERA	MUCRONATA	AUSTRALIA	BRISBANE	INT' MED	ACID	
345	NOD	INDIGOFERA	ARRECTA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
346	NOD	INDIGOFERA	ZOLLINGERIANA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
348	NOD	INDIGOFERA	SUFFRUTICOSA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
349	NOD	INDIGOFERA	ARRECTA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
350	NOD	INDIGOFERA	HIRSUTA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
352	NOD	INDIGOFERA	(SP.)	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
354	NOD	INDIGOFERA	MUCRONATA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
356	NOD	INDIGOFERA	(SP.)	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
358	NOD	INDIGOFERA	TRITA	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
359	NOD	INDIGOFERA	(SP.)	AUSTRALIA	BRISBANE	SLOW	ALKALINE	
360	NOD	LOTONONIS	BAINESII	S AFRICA	PRETORIA	SLOW	ALKALINE	
362	NOD	PSORALEA	ERIANTHOIDES	AUSTRALIA	CHARLEVILLE	FAST	ACID	GROWS 38 DEG
368	NOD	PULTENAEA	VILLOSA	AUSTRALIA	BEERWAH	FAST	ACID	
371	NOD	TRIFOLIUM	INCARNATUM	AUSTRALIA	BEERWAH	FAST	ACID	
376	NOD	LOTONONIS	BAINESII	S AFRICA	PRETORIA	SLOW	ALKALINE	160KM N PRETORIA
402	NOD	ACACIA	CONCURRENS	AUSTRALIA	SAMFORD	SLOW	ALKALINE	
420	NOD	TRIFOLIUM	FRAGIFERUM	AUSTRALIA	DAGUILAR	FAST	ACID	
421	QA549	CENTROSEMA	PUBESCENS			INT' MED	ACID	
424	NOD	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	GAYNDAH	SLOW	ALKALINE	
428	NOD	GLYCINE	(SP.)	AUSTRALIA	MILLARCO	SLOW	ALKALINE	
430	NOD	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	RODDS BAY	INT' MED	NEUTRAL	
439	NOD	NEONOTONIA	WIGHTII	AUSTRALIA	STHJOHNSTONE	SLOW	ALKALINE	
440	NOD	LOTUS	ULIGINOSUS	AUSTRALIA	RODDS BAY	FAST	ACID	GROWS 35.5 DEG
446	NOD	ARACHIS	PROSTRATA	AUSTRALIA	STRATHPINE	INT' MED	ACID	
448	NOD	ALYSICARPUS	GLUMACEUS	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
449	NOD	CODARIOCALYX	GYROIDES	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	

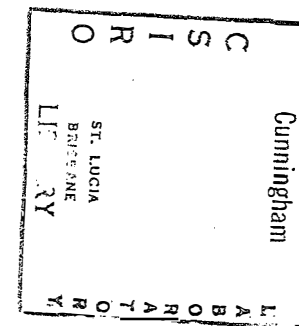
CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
450	NOD	LESPEDEZA	STRIATA	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
451	NOD	VIGNA	RADIATA	AUSTRALIA	STRATHPINE	INT 'MED	ACID	
452	NOD	NEONOTONIA	WIGHTII	AUSTRALIA	MAREEBA	SLOW	ALKALINE	
453	NOD	NEONOTONIA	WIGHTII	AUSTRALIA	MAREEBA	INT 'MED	NEUTRAL	
454	NOD	MACROTYLOMA	UNIFLORUM	AUSTRALIA	STRATHPINE	INT 'MED	NEUTRAL	
455	NOD	DESMODIUM	DISCOLOR	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
456	NOD	DESMODIUM	INTORTUM	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
457	NOD	DESMODIUM	DISTORTUM	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
460	NOD	DESMODIUM	RENSONII	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
461	NOD	DESMODIUM	DISTORTUM	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
462	NOD	TADEHAGI	TRIQUETRUM	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
463	NOD	LABLAB	PURPUREUS	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
464	NOD	AESCHYNOMENE	FALCATA	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
465	NOD	PUERARIA	PHASEOLOIDES	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
466	NOD	NEONOTONIA	WIGHTII	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
472	NOD	LATHYRUS	SYLVESTRIS	AUSTRALIA	STRATHPINE	FAST	ACID	
476	NOD	CENTROSEMA	PUBESCENS	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
477	NOD	VIGNA	UMBELLATA	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
479	NOD	CAJANUS	CAJAN	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
480	NOD	MACROPTILIUM	BRACTEATUM	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
482	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
483	NOD	CAJANUS	CAJAN	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
484	NOD	TERAMNUS	UNCINATUS	AUSTRALIA	STRATHPINE	SLOW	ALKALINE	
491	NOD	VIGNA	MUNGO	AUSTRALIA	GATTON	SLOW	ALKALINE	
498	NOD	INDIGOFERA	COLUTEA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
499	NOD	VIGNA	VEXILLATA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
500	NOD	VIGNA	LANCEOLATA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
502	NOD	DESMODIUM	TRICHOCAULON	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
503	NOD	TEPHROSIA	JUNCEA	AUSTRALIA	MOOLBOOLAMAN	SLOW	ALKALINE	
509	NOD	INDIGOFERA	LINNAEI	AUSTRALIA	TAROOM	SLOW	ALKALINE	
512	NOD	VIGNA	RADIATA	AUSTRALIA	TAROOM	SLOW	ALKALINE	
516	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	TAROOM	SLOW	ALKALINE	
526	58A 6 6	TRIFOLIUM	SEMPILOSUM	KENYA	NAIROBI	FAST	ACID	
527	75 C 1 4	TRIFOLIUM	RUEPELLIANUM	KENYA	NAIROBI	FAST	ACID	
530	NOD	ARACHIS	PROSTRATA	AUSTRALIA	SAMFORD	INT 'MED	ALKALINE	
532	NOD	CYAMOPSIS	TETRAGONOLOBA	AUSTRALIA	BRISBANE	INT 'MED	ACID	
541	NOD	PSORALEA	PATENS	AUSTRALIA	QUILPIE	INT 'MED	ACID	THYLLUNGRA STN
548		TRIGONELLA	SUAVISSIMA	AUSTRALIA		INT 'MED	ACID	
576	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	MISSIONBEACH	SLOW	ALKALINE	
579	NOD	DENDROLOBIUM	UMBELLATUM	AUSTRALIA	BINGIL BAY	SLOW	ACID	
596	VI ROTH'D	PISUM	SATIVUM	ENGLAND		INT 'MED	ACID	
625	V UNG14.4	VIGNA	UNGUICULATA	BELG. CONGO		SLOW	ALKALINE	
627	22-4	DESMODIUM	INTORTUM	BELG. CONGO		INT 'MED	ALKALINE	

CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
635	S, GUI7.6	STYLOSANTHES	GUIANENSIS	BELG. CONGO		SLOW	ACID	
647	NOD	DALBERGIA	CANDENATENSIS	AUSTRALIA	BINGIL BAY	INT 'MED	NEUTRAL	
652	NOD	ABRUS	PRECATORIUS	AUSTRALIA	CAPE YORK P	SLOW	ALKALINE	
654	NOD	PITHECELLOBIUM	MONILIFORME	AUSTRALIA	CAPE YORK P	SLOW	ALKALINE	
661	NOD	VIGNA	RADIATA	INDIA	MODHYA	SLOW	ALKALINE	
668	USDA3074	LOTUS	CORNICULATUS	USA		FAST	ACID	
670	USDA3073	LOTUS	CORNICULATUS	USA		FAST	ACID	
671	CC805	MACROPTILIUM	ATROPURPUREUM	USA	MADISON	FAST	ACID	
673	NOD	LEUCAENA	LEUCOCEPHALA	TIMOR	LAEWA	FAST	ACID	
675	NOD	ACACIA	SOPHORA	AUSTRALIA	MOOLOOLABA	SLOW	ACID	
699	NOD	VIGNA	MARINA	AUSTRALIA	GREEN ISLAND	SLOW	ALKALINE	
712	NOD	PSORALEA	ERIANTHA	AUSTRALIA	BRISBANE	INT 'MED	ACID	
714	NOD	TRIFOLIUM	RUEPPELLIANUM	TANZANIA	MBULU	FAST	ACID	
721	NOD	TRIFOLIUM	POLYMORPHUM	URUGUAY		FAST	ACID	
727	NOD	TRIFOLIUM	BURCHELLIANUM	S AFRICA		FAST	ACID	
730	NOD	LOTONONIS	BAINESII	S AFRICA	LOUIS TRICH	SLOW	ALKALINE	
735	SU302	VICIA	SATIVA	AUSTRALIA	DUNOON	FAST	ACID	
737	A4	TRIFOLIUM	REPENS	ARGENTINA		FAST	ACID	
741	C12(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		INT 'MED	ACID	
742	C15(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		INT 'MED	ACID	
744	C25(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		INT 'MED	ACID	
745	C16(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		INT 'MED	ACID	
748	C17(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		SLOW	ACID	
751	C20(ARG)	ARACHIS	HYPOGAEA	ARGENTINA		INT 'MED	ACID	
755	NOD	CROTALARIA	ANTHYLLOPSIS	ZIMBABWE	RUSAFE	INT 'MED	ACID	
756	NOD	MACROTYLOMA	AFRICANUM	ZIMBABWE	MARANDELLAS	INT 'MED	NEUTRAL	
758	NOD	TRIFOLIUM	TEMBENSE	TANZANIA	BASHAI	FAST	ACID	
763	NOD	TRIFOLIUM	SEMPILOSUM	UGANDA	ENTEBBE	FAST	ACID	
764	NOD	TRIFOLIUM	(SP.)	UGANDA	ENTEBBE	SLOW	ALKALINE	
766	NOD	TRIFOLIUM	RUEPPELLIANUM	TANZANIA		FAST	ACID	
768	NOD	LISTIA	HETEROPHYLLA	NYASALAND	BVUMBWE	SLOW	ALKALINE	
769	NOD	DOLICHOS	SERICEUS	TANZANIA	TENGERU	SLOW	ALKALINE	
771	NOD	TRIFOLIUM	USAMBARENSE	TANZANIA		FAST	ACID	
772	NOD	TRIFOLIUM	RUEPPELLIANUM	TANZANIA		FAST	ACID	
773	NOD	TRIFOLIUM	TEMBENSE	TANZANIA		FAST	ACID	
774	NOD	TRIFOLIUM	RUEPPELLIANUM	TANZANIA	LK TLAWI	FAST	ACID	
775	NOD	TRIFOLIUM	USAMBARENSE	TANZANIA	BASHAI	FAST	ACID	
778	NOD	TRIFOLIUM	SEMPILOSUM	KENYA	OL JORO ORO	FAST	ACID	
782	NOD	TRIFOLIUM	SEMPILOSUM	KENYA	KITALE	FAST	ACID	
786	NOD	VIGNA	OBLONGIFOLIA	UGANDA	MURCHISON F	INT 'MED	ACID	
788	NOD	TRIFOLIUM	SEMPILOSUM	AUSTRALIA	BEERWAH	FAST	ACID	
790	NOD	MACROPTILIUM	(SP.)	MEXICO	LA PIEDAD	INT 'MED	ACID	
792	NOD	DESMODIUM	(SP.)	MEXICO	VERACRUZ	INT 'MED	ACID	

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
794	NOD	DESMODIUM	(SP.)	MEXICO	VERACRUZ	INT'MED	ACID	
796	NOD	ACACIA	ANEURA	AUSTRALIA	CHARLEVILLE	SLOW	ALKALINE	GOWRIE STN
797	NOD	PUBROSEMA	PNEUSCENS	AUSTRALIA	REDLAND BAY	INT'MED	ACID	
806	NOD	TRIFOLIUM	ISTHOCARPUM	BRAZIL	MONTENEGRO	FAST	ACID	
813	LUC51	MEDICAGO	SATIVA	AUSTRALIA	PERTH	FAST	ACID	
817	NOD	DESMODIUM	VARIANS	AUSTRALIA	NEBO	INT'MED	ALKALINE	
827	NOD	GLYCINE	TOMETELLA	AUSTRALIA	MT COOLAN	SLOW	ALKALINE	
828	NOD	MACROPTILIUM	LATHYROIDES	AUSTRALIA	SUTTON R	SLOW	ALKALINE	
830	NOD	CROTALARIA	DISSITIFLORA	AUSTRALIA	MC GREGOR C	SLOW	ALKALINE	
831	NOD	DESMODIUM	CAMPYLOCAULON	AUSTRALIA	KINGSBOROUGH	SLOW	ALKALINE	
834	NOD	PSORALEA	CINEREA	AUSTRALIA	BARCALDINE	FAST	ACID	
838	NOD	PSORALEA	CINEREA	AUSTRALIA	LK MACHATTIE	FAST	ACID	
859	AR6N	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	
860	AR7A	TRIFOLIUM	REPENS	AUSTRALIA	URALLA	FAST	ACID	
865	AR25A	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	BUNDARRA	FAST	ACID	
867	AR30	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	BUNDARRA	FAST	ACID	
870	AR39N	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	
873	AR41	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	
875	AR43	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	32KM SW URALLA
876	AR44A	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	
877	AR46A	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	24KM SW URALLA
879	AR59	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	URALLA	FAST	ACID	24KM SW URALLA
885	QA323	PULTENAEA	VILLOSA	AUSTRALIA	COOLUM	SLOW	ALKALINE	
887	SU319	ARACHIS	HYPOGAEA	AUSTRALIA	LISMORE	SLOW	ALKALINE	
889	NOD	ALYSICARPUS	RUGOSUS	AUSTRALIA	KILCUMMIN	SLOW	ALKALINE	
890	NOD	VIGNA	RADIATA	AUSTRALIA	KILCUMMIN	SLOW	ALKALINE	
895	USDA3021	CROTALARIA	SAGITTALIS	USA	BELTSVILLE	INT'MED	ALKALINE	E ON GUAR
898	USDA312B1	MACROPTILIUM	ATROPURPUREUM	USA	BELTSVILLE	INT'MED	ALKALINE	
902	USDA3G5C1	DESMODIUM	PURPUREUM	USA	BELTSVILLE	SLOW	ALKALINE	
903	USDA3189	DESMODIUM	PURPUREUM	USA	BELTSVILLE	SLOW	ALKALINE	
904	USDA3278	MACROPTILIUM	LATHYROIDES	USA	BELTSVILLE	SLOW	ALKALINE	
905		SESBANIA	MACROCARPA	USA	BELTSVILLE	FAST	ACID	
909	NOD	PHASEOLUS	LUNATUS	AUSTRALIA	CANNONVALE	SLOW	ALKALINE	
913	NOD	MACROPTILIUM	LATHYROIDES	S AMERICA		INT'MED	ACID	
915	NOD	VIGNA	MARINA	AUSTRALIA	BINGIL BAY	SLOW	ALKALINE	
916	NOD	DENDROLOBIUM	UMBELLATUM	AUSTRALIA	BINGIL BAY	SLOW	ALKALINE	
919	NOD	STYLOSANTHES	HUMILIS	AUSTRALIA	COOKTOWN	INT'MED	ACID	
924	NOD	NEPTUNIA	(SP.)	AUSTRALIA	CAMOOWEAL	FAST	ACID	
934	NOD	DESMODIUM	FILIFORME	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
935	NOD	ARACHIS	HYPOGAEA	AUSTRALIA	KATHERINE	INT'MED	ACID	
938	NOD	TRIFOLIUM	CHERANGANIENSE	KENYA	KITALE	FAST	ACID	
946	711	LEUCAENA	LEUCOCEPHALA	USA		FAST	ACID	
947	712	LEUCAENA	LEUCOCEPHALA	USA		FAST	ACID	

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
948	NGR8	LEUCAENA	LEUCOCEPHALA	NEW GUINEA		FAST	ACID	
952	NOD	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	DARWIN	FAST	ACID	
953	NOD	ABRUS	PRECATORIUS	AUSTRALIA	KATHERINE	SLOW	ALKALINE	
955	NOD	PUERARIA	PHASEOLOIDES	MALAYA	LAYANG	SLOW	ALKALINE	
958	NOD	PUERARIA	PHASEOLOIDES	MALAYA	LAYANG	SLOW	ALKALINE	
959	NOD	CENTROSEMA	PUBESCENS	MALAYA	LAYANG	SLOW	ALKALINE	
962	NOD	DESMODIUM	HETEROCARPON	MALAYA	LAYANG	SLOW	ALKALINE	
964	NOD	ORNITHOPUS	SATIVUS	AUSTRALIA	ESPERANCE	SLOW	ALKALINE	
967	NOD	MEDICAGO	SATIVA	AUSTRALIA	TAROOM	FAST	ACID	NUNBANK STN
969	7/7	CYTISUS	MULTIFLORUS	AUSTRALIA		SLOW	ALKALINE	
970	NOD	CYTISUS	MULTIFLORUS	AUSTRALIA		SLOW	ALKALINE	
971	NOD	PHASEOLUS	VULGARIS	PHILIPPINES	BAGUIO	FAST	ACID	
975	NOD	MACROPTILIUM	LATHYROIDES	PHILIPPINES	LIPA	SLOW	ALKALINE	CITRUS EXP STN
978	NOD	DESMODIUM	INTORTUM	PHILIPPINES	BAGUIO	SLOW	ALKALINE	
979	NOD	CALOPOGONIUM	CAERULEUM	PHILIPPINES	TIAONG	SLOW	ALKALINE	
984	NOD	PUERARIA	PHASEOLOIDES	PHILIPPINES	TIAONG	SLOW	ALKALINE	
985	NOD	VIGNA	MUNGO	PHILIPPINES	BAGUIO	SLOW	ALKALINE	
987	T1OH	CAJANUS	CAJAN	INDIA	POONA	SLOW	ALKALINE	
1001	NOD	VIGNA	UMBELLATA	THAILAND	CHUL CUNVON	SLOW	ALKALINE	CITRUS FARM PETCHBOON
1002	NOD	ALYSICARPUS	VAGINALIS	THAILAND	CHUL CUNVON	SLOW	ALKALINE	DR BANCHEADS FARM
1003	NOD	GLYCINE	MAX	THAILAND	SRISOMMONG F	INT'MED	ALKALINE	
1004	NOD	DESMODIUM	TRIFLORUM	THAILAND	FRIENDSHIP H	SLOW	ALKALINE	
1008	NOD	VIGNA	TRILOBA	INDIA	HARINGHATA F	SLOW	ALKALINE	
1009	NOD	VIGNA	RADIATA	INDIA	HARINGHATA F	SLOW	ALKALINE	
1011	NOD	VIGNA	MUNGO	INDIA	HARINGHATA F	SLOW	ALKALINE	
1012	NOD	INDIGOFERA	HIRSUTA	INDIA	HARINGHATA F	SLOW	ALKALINE	
1013	NOD	NEONOTONIA	WIGHTII	INDIA	NEW DELHI	SLOW	ALKALINE	
1015	NOD	VIGNA	RADIATA	INDIA	HARINGHATA F	SLOW	ALKALINE	
1017	NOD	VIGNA	RADIATA	INDIA	HARINGHATA F	SLOW	ALKALINE	
1024	NOD	MACROTYLOMA	UNIFLORUM	INDIA	COIMBATORE	INT'MED	ALKALINE	
1027	NOD	DESMODIUM	INTORTUM	SRI LANKA	PERADERIYA	INT'MED	ACID	
1029	NOD	ALYSICARPUS	VAGINALIS	SRI LANKA	MAHA	SLOW	ALKALINE	
1030	NOD	SESBANIA	(SP.)	SRI LANKA	PERADERIYA	FAST	ACID	
1031	NOD	DESMODIUM	DIFFUSUM	SRI LANKA	PERADERIYA	SLOW	ALKALINE	
1035	NOD	MEDICAGO	SATIVA	PAKISTAN	LYALLPUR	FAST	ACID	
1042	NOD	VIGNA	RADIATA	PAKISTAN		SLOW	ALKALINE	
1043	NOD	CENTROSEMA	PUBESCENS	INDIA	HARINGHATA	SLOW	ALKALINE	
1045	NOD	SESBANIA	CANNABINA	PAKISTAN	DACCA	FAST	ACID	
1047	NOD	DESMODIUM	MUELLERI	AUSTRALIA	LONGREACH	SLOW	ALKALINE	
1053	NOD	DESMODIUM	MUELLERI	AUSTRALIA	LONGREACH	SLOW	ALKALINE	
1054	QA715	CYTISUS	MULTIFLORUS	AUSTRALIA		SLOW	ALKALINE	
1055	QA809	VIGNA	RADIATA	AUSTRALIA		SLOW	ALKALINE	
1057	QA922	NEONOTONIA	WIGHTII	AUSTRALIA		SLOW	ALKALINE	

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CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
1066	NOD	NEONOTONIA	WIGHTII	UGANDA	SERERE	SLOW	ALKALINE	
1071	CC511	PHASEOLUS	VULGARIS	USA		FAST	ACID	
1075	CC806	LOTUS	ULIGINOSUS	AUSTRALIA	CANBERRA	SLOW	ALKALINE	
1076	CC807	LOTUS	ULIGINOSUS	AUSTRALIA	CANBERRA	SLOW	ALKALINE	
1091	USDA31.6T2	LABLAB	PURPUREUS	USA		FAST	ACID	EX SU450
1101	NOD	LOTONONIS	ANGOLENSIS	UGANDA	SERERE	SLOW	ALKALINE	
1103	NOD	CENTROSEMA	PUBESCENS	AUSTRALIA	UTCHEE CK	SLOW	ALKALINE	
1114	NOD	PHASEOLUS	VULGARIS	AUSTRALIA	ESKDALE	FAST	ACID	
1127	NOD	PHASEOLUS	VULGARIS	AUSTRALIA	WEIR R	FAST	ACID	
1133	NGD	PHASEOLUS	VULGARIS	AUSTRALIA	BEERWAH	FAST	ACID	
1149	NGR31	LEUCAENA	LEUCOCEPHALA	NEW GUINEA	PORT MORESBY	FAST	ACID	
1150	NGR44	LEUCAENA	LEUCOCEPHALA	NEW GUINEA	PORT MORESBY	FAST	ACID	
1151	NGR63	LEUCAENA	LEUCOCEPHALA	NEW GUINEA	PORT MORESBY	FAST	ACID	
1155	CC101.9	LATHYRUS	MAGELLANICUS	CHILE	NAVIDAD	FAST	ACID	
1157	CC1009	LOTUS	(SP.)	CHILE	SANTIAGO	SLOW	ALKALINE	
1158	CC1022	PSORALEA	GLANDULOSA	CHILE		SLOW	NEUTRAL	
1164	HDLC362A	GLYCINE	MAX	SWEDEN	COPENHAGEN	SLOW	ALKALINE	
1165	TA1	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA		FAST	ACID	EX SU329
1166	TA2	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA		FAST	ACID	EX SU410
1170	G'LANDS308	MEDICAGO	SATIVA	USA		SLOW	NEUTRAL	FROM NODOGEN PEAT CULTURE
1171	LYNGBY R58	MEDICAGO	SATIVA	SWEDEN	COPENHAGEN	FAST	ACID	VIA GRASSLANDS 325
1173	USDA42	MACROPTILIUM	ATROPURPUREUM	USA	BELTSVILLE	SLOW	NEUTRAL	VIA GRASSLANDS 493
1189	USDA3228	CICER	ARIETINUM	USA		INT'MED	NEUTRAL	
1199	27A1	CICER	ARIETINUM	USA	MILWAUKEE	FAST	ACID	
1200	27A2	CICER	ARIETINUM	USA	MILWAUKEE	FAST	ACID	
1203	95A2	LOTUS	AMERICANUS	USA	MILWAUKEE	SLOW	ALKALINE	
1205	95C4	LOTUS	CORNICULATUS	USA	MILWAUKEE	FAST	ACID	
1209	95E3	LOTUS	ULIGINOSUS	USA	MILWAUKEE	SLOW	ALKALINE	
1220	NOD	PHASEOLUS	VULGARIS	AUSTRALIA	CHARLTON	FAST	ACID	
1224	NOD	PHASEOLUS	VULGARIS	AUSTRALIA	CHARLTON	FAST	ACID	
1235	NOD	AERUS	PRECATORIUS	AUSTRALIA	KIN KIN	SLOW	ALKALINE	
1236	NOD	ABRUS	PRECATORIUS	AUSTRALIA	BROOKFIELD	SLOW	ALKALINE	
1241	NOD	AERUS	PRECATORIUS	AUSTRALIA	CORINDA	SLOW	ALKALINE	
1243	NOD	VIGNA	MUNGO	AUSTRALIA	HUMPTY DOO	SLOW	ALKALINE	
1247	NOD	VIGNA	MUNGO	AUSTRALIA	KUNUNURRA	SLOW	ALKALINE	
1248	NOD	VIGNA	(SP.)	AUSTRALIA	KUNUNURRA	SLOW	ALKALINE	
1253	NOD	DESMODIUM	UNCINATUM	AUSTRALIA	KUNUNURRA	SLOW	ALKALINE	BLACK SOIL KRS
1263	NOD	DESMODIUM	(SP.)	SARAWAK	KUCHING	SLOW	ALKALINE	
1267	NOD	NEONOTONIA	WIGHTII	SARAWAK	KUCHING	SLOW	ALKALINE	
1272	NOD	STYLOSANTHES	(SP.)	SARAWAK	KUCHING	SLOW	ALKALINE	
1297	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FT JAMESON	SLOW	NEUTRAL	
1298	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FT JAMESON	SLOW	ALKALINE	
1299	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FT JAMESON	SLOW	ALKALINE	

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
1300	CC?	LOTUS	MAROCCANUS	AUSTRALIA	CANBERRA	FAST	ACID	
1303	NOD	PHASEOLUS	(SP.)	AUSTRALIA	GYMPIE	FAST	NEUTRAL	
1311	NOD	GLYCINE	TABACINA	AUSTRALIA	GYMPIE	SLOW	ALKALINE	
1314	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	ESPARTE	SLOW	ALKALINE	
1318	NOD	DOLICHOS	(SP.)	S RHODESIA	MPARAGI FALL	SLOW	ALKALINE	
1319	NOD	LOTONONIS	ANGOLENSIS	S RHODESIA	MARANDELLAS	INT'MED	ALKALINE	
1321	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FORT JAMESON	INT'MED	ALKALINE	
1322	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FORT JAMESON	INT'MED	ALKALINE	
1323	NOD	LOTONONIS	ANGOLENSIS	N RHODESIA	FORT JAMESON	INT'MED	ALKALINE	
1353	NOD	LEUCAENA	LEUCOCEPHALA	COLUMBIA		FAST	NEUTRAL	
1368	NOD	MEDICAGO	SATIVA	NEW GUINEA	LAE	FAST	ACID	
1394	203A	LOTONONIS	STIPULOZA	S RHODESIA		SLOW	ALKALINE	
1397	NOD	NEPTUNIA	PLENA	BR.GUIANA	MON REPOS	FAST	ACID	GROWING ON HEAVY CLAY
1408	NOD	STYLOSANTHES	GUIANENSIS	FR.GUIANA		SLOW	ALKALINE	
1422	NOD	DESMODIUM	AXILLARE	WEST INDIES		SLOW	ALKALINE	
1424	NOD	DESMODIUM	TORTUOSUM	WEST INDIES		SLOW	ALKALINE	
1444	UNZ29	TRIFOLIUM	REPENS	AUSTRALIA	SYDNEY	FAST	ACID	
1445	U45	MEDICAGO	SATIVA	AUSTRALIA	SYDNEY	FAST	ACID	
1446	SU47	MEDICAGO	SATIVA	AUSTRALIA	SYDNEY	FAST	ACID	
1447	SU391	PISUM	SATIVUM	AUSTRALIA	SYDNEY	FAST	ACID	EX NITRAGIN 175G11
1455	NOD	GLYCINE	MAX	AUSTRALIA	BROOKSTEAD	SLOW	ALKALINE	
1467	NOD	DESMODIUM	INTORTUM	AUSTRALIA	BEERWAH	SLOW	ALKALINE	
1491	NOD	CENTROSEMA	PUBESCENS	BRASIL	MATAO	SLOW	ALKALINE	
1494	NOD	CENTROSEMA	PUBESCENS	BRASIL	KM47	SLOW	ALKALINE	
1495	NOD	CENTROSEMA	SAGITTATUM	BRASIL	MATAO	SLOW	ALKALINE	
1508	SFS29	DESMODIUM	BARBATUM	BRASIL	MATAO	SLOW	ALKALINE	
1511	SFS32	DESMODIUM	CUNEATUM	BRASIL	GUATAPARA	SLOW	ALKALINE	
1512	NOD	DESMODIUM	DISCOLOR	BRASIL	MATAO	SLOW	ALKALINE	
1514	NOD	DESMODIUM	CANUM	BRASIL	ARARAQUARA	SLOW	ALKALINE	
1517	NOD	DESMODIUM	PABULARE	BRASIL	ARARAQUARA	SLOW	ALKALINE	
1518	NOD	DESMODIUM	PABULARE	BRASIL	MATAO	SLOW	ALKALINE	
1521	NOD	DESMODIUM	UNCINATUM	BRASIL	MATAO	SLOW	ALKALINE	
1522	NOD	DESMODIUM	INTORTUM	BRASIL	MATAO	SLOW	ALKALINE	
1524	NOD	MACROPTILIUM	LATHYROIDES	BRASIL	MATAO	SLOW	ALKALINE	
1525	NOD	DESMODIUM	(SP.)	BRASIL	GUATAPARA	SLOW	ALKALINE	
1532	SFS8	MACROPTILIUM	ERYTHROLOMA	BRASIL	MATAO	SLOW	ALKALINE	
1546	NOD	ZORNIA	DIPHYLLA	BRASIL	MATAO	SLOW	ALKALINE	
1552	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	MATAO	SLOW	ALKALINE	FROM S GUI IRI1022
1564	NOD	DESMODIUM	CANUM	BRASIL	TRES CORACOESSLOW		ALKALINE	
1571	NOD	MACROPTILIUM	ERYTHROLOMA	BRASIL	CAMPINAS	SLOW	ALKALINE	
1573	NOD	DESMODIUM	DISCOLOR	BRASIL	CAMPINAS	SLOW	ALKALINE	
1580	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	CAMPINAS	SLOW	ALKALINE	
1584	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	CAMPINAS	SLOW	ALKALINE	

CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
1622	NOD	DESMODIUM	TORTUOSUM	BRASIL	CAMPINAS	SLOW	ALKALINE	
1623	NOD	DESMODIUM	TORTUOSUM	BRASIL	CAMPINAS	SLOW	ALKALINE	
1627	NOD	DESMODIUM	BARBATUM	BRASIL	VALINHOS	SLOW	ALKALINE	
1628	NOD	DESMODIUM	ADSCENDENS	BRASIL	VALINHOS	SLOW	ALKALINE	
1632	SFS97	DESMODIUM	ADSCENDENS	BRASIL	VALINHOS	SLOW	ALKALINE	
1633	NOD	PHASEOLUS	(SP.)	BRASIL	CAMPINAS	SLOW	ALKALINE	
1650	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	MATAO	SLOW	ALKALINE	
1668	NOD	GLYCINE	MAX	BRASIL	MATAO	SLOW	ALKALINE	
1670	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	MATAO	SLOW	ALKALINE	
1675	NOD	STYLOSANTHES	HUMILIS	BRASIL	MATAO	SLOW	ALKALINE	
1689	NOD	STYLOSANTHES	HUMILIS	BRASIL	MATAO	SLOW	ALKALINE	
1692	NOD	AESCHYNOMENE	(SP.)	BRASIL	RIO MOGI GUA	SLOW	ALKALINE	
1698	SFS79	CENTROSEMA	PLUMIERI	BRASIL	MATAO	SLOW	ALKALINE	
1701	NOD	CENTROSEMA	(SP.)	BRASIL	MATAO	SLOW	ALKALINE	
1704	SFS80	MACROPTILIUM	ATROPURPUREUM	BRASIL	MATAO	SLOW	ALKALINE	
1717	NOD	MACROPTILIUM	ERYTHROLOMA	BRASIL	PIRASSUNUNGA	SLOW	ALKALINE	
1718	SFS64	MACROPTILIUM	LONGIPEDUNCULATUM	BRASIL	RIO MOGI GUA	SLOW	ALKALINE	
1720	NOD	VIGNA	(SP.)	BRASIL	GUIABA	SLOW	ALKALINE	
1727	NOD	STYLOSANTHES	HUMILIS	BRASIL	CAMPINAS	SLOW	ALKALINE	
1750	GP20-A1	GLYCINE	MAX	TAIWAN		SLOW	ALKALINE	
1752	NITRAGIN	GLYCINE	MAX	USA	MILWAUKEE	SLOW	ALKALINE	FROM PEAT CULTURE
1753	NODOGEN	GLYCINE	MAX	USA	PRINCETON	SLOW	ALKALINE	FROM PEAT CULTURE
1772	NOD	DESMODIUM	CANUM	BRASIL	MONTE MOR	SLOW	ALKALINE	
1775	969BA	LOTONONIS	BAINESII	S RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1776	970AA	LOTONONIS	BAINESII	S RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1777	968AA	LOTONONIS	BAINESII	S RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1778	971AA	LOTONONIS	BAINESII	S RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1779	932A	LOTONONIS	BAINESII	S RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1780	606B	DOLICHOS	KILIMANDSCHARICUSS	RHODESIA	MARANDELLAS	SLOW	ALKALINE	
1782	NOD	STYLOSANTHES	HUMILIS	USA	CHAPEL HILL	SLOW	ALKALINE	
1786	NOD	GLYCINE	MAX	THAILAND	LAMPOON	SLOW	ALKALINE	
1789	NOD	DESMODIUM	SANDWICENSE	SOUTH AFRICA		SLOW	ALKALINE	
1791	B6	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	E ISOL FR IOWA, ORIG JAPAN
1792	B24	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	PARASITIC HOST HOSTS
1793	B40	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	ORIG FROM N. JERSEY
1794	B44	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	ORIG FR USDA
1795	B46	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	HEAT STABLE AG. ORIG ALABAMA
1797	B62	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	ORIG FR N. CAROLINA
1799	B110	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	H COMPET B'VILLE SOIL. FR FL
1802	B122	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	DOM TYPE SEV. SOILS. FR MISS.
1803	B121	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	ORIG FR COMMERCIAL PEAT
1805	B125	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	DOM TYPE B'VILLE
1808	B135	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	FR HIGH PH SOILS IOWA

CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
1809	B136	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	DOM B'VILLE SOIL
1810	JAP36-2	GLYCINE	MAX	USA	BELTSVILLE	SLOW	ALKALINE	SERO110
1811	NOD	DESMODIUM	BARBATUM	BRASIL	BELEM	SLOW	ALKALINE	INPA STATION BELEM
1892	NOD	TERAMNUS	UNCINATUS	DOM REPUB	SANTIAGO	SLOW	ALKALINE	RIVER BANK
1893	NOD	TERAMNUS	UNCINATUS	DOMINICAN	SANTIAGO	FAST	ACID	RIVER BANK-HAIRY 8CM PODS
1895	NOD	TERAMNUS	UNCINATUS	DOM REPUB	SANTIAGO	SLOW	ALKALINE	
1908	NOD	GLYCINE	TOMENTELLA	AUSTRALIA	GIN GIN	SLOW	ALKALINE	
1911	QA981	GLYCINE	MAX	AUSTRALIA	WARWICK	SLOW	ALKALINE	
1913	SFS1	NEONOTONIA	WIGHTII	BRASIL	MATAO	SLOW	ALKALINE	
1914	SFS13	NEONOTONIA	WIGHTII	BRASIL	KM 47	SLOW	ALKALINE	
1915	SFS14	NEONOTONIA	WIGHTII	BRASIL	KM 47	SLOW	ALKALINE	
1916	SFS19	NEONOTONIA	WIGHTII	BRASIL	MATAO	SLOW	ALKALINE	
1918	SFS31	NEONOTONIA	WIGHTII	BRASIL	KM 47	SLOW	ALKALINE	
1922	SFS237	CENTROSEMA	PUBESCENS	BRASIL	CAMPINAS	SLOW	ALKALINE	
1923	SFS261	CENTROSEMA	PUBESCENS	BRASIL	CAMPINAS	SLOW	ALKALINE	BLACK NOD STRAIN. EX C101A
1924	SFS84	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG USDA 11 EX IAC328
1925	SFS85	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	EX IAC331
1926	SFS86	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	EX IAC334
1927	SFS87	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	EX IAC335
1928	SFS88	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	EX IAC337
1929	SFS89	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	EX IAC338
1930	SFS112	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG JJF504C=WISC504
1931	SFS113	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG JJF510 =WIS510=USDA492
1932	SFS114	GLYCINE	MAX	BRASIL	CAMPINAS	INT' MED	ACID	ORIG JJF513RE= USDA6
1933	SFS115	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG JJF519RE
1934	SFS116	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG JJF527 LOCAL ISOL
1935	SFS117	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG JJF531 LOCAL ISOL
1936	SFS120	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG WIS 501
1938	SFS122	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG EX MEXICO
1939	SFS123	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	LOCAL ISOLATE
1940	SFS124	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	LOCAL ISOLATE
1941	SFS125	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	LOCAL ISOLATE
1942	SFS126	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	LOCAL ISOLATE
1943	SFS127	GLYCINE	MAX	BRASIL	CAMPINAS	SLOW	ALKALINE	ORIG WIS 505
1958	NOD	PHASEOLUS	VULGARIS	MEXICO	CHAPINGO	FAST	ACID	
1964	NOD	PHASEOLUS	VULGARIS	MEXICO	CUERNAVACA	FAST	ACID	MEXICO TO CUERNAVACA KM67
1984	NOD	STYLOSANTHES	FRUTICOSA	SUDAN		SLOW	ALKALINE	
1987	1085BA	LOTONONIS	LAXA	S RHODESIA	MARANDELLAS	INT' MED	ACID	
1990	TA1	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	SYDNEY	FAST	ACID	
1991	WA67	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA	SYDNEY	FAST	ACID	
1992	TA101	PISUM	SATIVUM	AUSTRALIA	SYDNEY	FAST	ACID	
2000	116A5	ONOBRYCHIS	VICIFOLIA	USA	MILWAUKEE	FAST	ACID	FROM NITRAGIN PEAT
2001	NOD	NEPTUNIA	GRACILIS	AUSTRALIA	BRIAN PAST	FAST	ACID	

CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
2002	NOD	NEPTUNIA	GRACILIS	AUSTRALIA	BRIAN PAST	FAST	ACID	
2003	NOD	NEPTUNIA	GRACILIS	AUSTRALIA	BRIAN PAST	FAST	ACID	
2004	NOD	NEPTUNIA	GRACILIS	AUSTRALIA	BRIAN PAST	FAST	ACID	
2005	NOD	PHASEOLUS	ACUTIFOLIUS	MEXICO	IGUALA	SLOW	ALKALINE	
2012	CC401	CORONILLA	VARIA	USA		FAST	ACID	FROM NITRAGIN BEAF
2019	LOFON1068	LOTONONIS	LAXA	ZIMBABWE	GRASSLANDS	FAST	ACID	
2020	LOFON1060	LOTONONIS	LAXA	ZIMBABWE	GRASSLANDS	SLOW	ALKALINE	
2026	WU425	ORNITHOPUS	COMPRESSUS	AUSTRALIA		SLOW	ALKALINE	
2031	NO 409	TRIFOLIUM	SEMIPILOSUM	ZIMBABWE	GRASSLANDS	FAST	ACID	
2032	NO 862	TRIFOLIUM	SEMIPILOSUM	ZIMBABWE	GRASSLANDS	FAST	ACID	
2033	NOD	STYLOSANTHES	GUYANENSIS	AUSTRALIA	KUNGURRABAR	SLOW	ALKALINE	
2085	NOD	DESMODIUM	HETEROPHYLLUM	AUSTRALIA	STJOHNSTONE	SLOW	NEUTRAL	
2102	NOD	TRIFOLIUM	SEMIPILOSUM		GYMPIE	FAST	ACID	
2109	NOD	MACROPTILIUM	ATROPURPUREUM	PANAMA	CHITRE	SLOW	ALKALINE	
2116	NOD	TRIFOLIUM	SEMIPILOSUM	AUSTRALIA	MILLAMILLA	SLOW	ACID	
2117	NOD	TRIFOLIUM	SEMIPILOSUM	AUSTRALIA	GYMPIE	FAST	ACID	
2120	NOD	DESMODIUM	CANUM	FIJI	SUVA SUVA	SLOW	ALKALINE	
2121	NOD	CODARIOCALYX	CAIKOIDES	FIJI		SLOW	ALKALINE	
2123	NOD	DESMODIUM	HETEROPHYLLUM	FIJI		SLOW	ALKALINE	
2125	NOD	STYLOSANTHES	HAMATA	WEST INDIES	KINGSTON	SLOW	ALKALINE	
2134	NOD	STYLOSANTHES	HAMATA	WEST INDIES	KINGSTON	SLOW	ALKALINE	
2135	NOD	STYLOSANTHES	HAMATA	WEST INDIES	KINGSTON	SLOW	ALKALINE	
2136	NOD	STYLOSANTHES	HAMATA	WEST INDIES	KINGSTON	SLOW	ALKALINE	
2137	NOD	STYLOSANTHES	HAMATA	WEST INDIES	KINGSTON	SLOW	ALKALINE	
2144	NOD	STYLOSANTHES	SUNDALTA	INDONESIA	GELIMANUK	SLOW	ALKALINE	
2150	NOD	STYLOSANTHES	GUYANENSIS	PANAMA	DAVID	SLOW	ALKALINE	
2152	NOD	STYLOSANTHES	HAMATA	U.S.A.	MIAMI	SLOW	ALKALINE	
2154	EK CB952	LEUCAENA	LEUCOCORPHALA			FAST	ACID	SMALL COLONY VARIANT
2155	WAL6/1	MEDICAGO	RUGOSA			FAST	ACID	
2163	NOD	DESMODIUM	HETEROPHYLLUM	AUSTRALIA	STJOHNSTONE	SLOW	NEUTRAL	
2164	NOD	DESMODIUM	HETEROPHYLLUM	AUSTRALIA	STJOHNSTONE	SLOW	NEUTRAL	
2168	NOD	STYLOSANTHES	FRUTICOSA	TANZANIA	MSALYO	SLOW	ALKALINE	
2171	NOD	TRIFOLIUM	RUEPPELLIANUM	ETHIOPIA		FAST	ACID	
2172	NOD	TRIFOLIUM	SEMIPILOSUM	ETHIOPIA		FAST	ACID	
2173	NOD	TRIFOLIUM	SIMENSE	ETHIOPIA		FAST	ACID	
2174	NOD	TRIFOLIUM	(SP.)	ETHIOPIA		FAST	ACID	
2175	NOD	TRIFOLIUM	(SP.)	ETHIOPIA		FAST	ACID	
2176	NOD	TRIFOLIUM	(SP.)	ETHIOPIA		FAST	ACID	
2177	NOD	TRIFOLIUM	(SP.)	ETHIOPIA		FAST	ACID	
2178	TAI	TRIFOLIUM	(SP.)	AUSTRALIA		FAST	ACID	E WIDE RANGE EUROPEAN CLOV
2179	WU290	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA		FAST	ACID	SURVIVAL IN DRY SOIL
2184	NOD	ZORNIA	DIPHYLLA	BRASIL		SLOW	ALKALINE	
2185	NOD	ZORNIA	DIPHYLLA	BRASIL		SLOW	ALKALINE	



CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
2186	NOD	ZORNIA	DIPHYLLA	BRASIL		SLOW	ALKALINE	
2187	NOD	ZORNIA	DIPHYLLA	BRASIL		SLOW	NEUTRAL	
2189	NOD	ZORNIA	BRASILIENSIS	BRASIL		SLOW	ALKALINE	
2190	NOD	ZORNIA	BRASILIENSIS	BRASIL		SLOW	ALKALINE	
2191	NOD	ZORNIA	BRASILIENSIS	BRASIL		SLOW	ALKALINE	
2195	NOD	NEONOTONIA	WIGHTII	UGANDA		SLOW	ALKALINE	
2212	NOD	STYLOSANTHES	(SP.)	PANAMA	BOQUETE	SLOW	ALKALINE	
2216	NOD	STYLOSANTHES	(SP.)	PANAMA	PEDASI	SLOW	ALKALINE	
2227	NOD	STYLOSANTHES	HUMILIS	COSTA RICA	TOBOGA	SLOW	ALKALINE	TOBOGA EXP STATION
2229	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	TOBOGA	SLOW	ALKALINE	TOBOGA EXP STATION
2248	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	FINCA VOLCAN	SLOW	ALKALINE	FINCA VOLCAN AIRPORT
2257	NOD	MACROPTILIUM	ATROPURPUREUM	COSTA RICA	FILADELPHIA	SLOW	ALKALINE	FINCA LOS DIAMANTES
2271	W72	LUPINUS	ANGUSTIFOLIUS			SLOW	ALKALINE	
2277	NOD	ZORNIA	BRASILIENSIS	ETHIOPIA		SLOW	ALKALINE	
2284	NOD	STYLOSANTHES	(SP.)	PANAMA	PEDASI	SLOW	NEUTRAL	
2286	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	GUANACASTE	SLOW	ALKALINE	
2296	NOD	STYLOSANTHES	HUMILIS	COSTA RICA	PUNTARENAS	SLOW	ALKALINE	SALTY-ALKALINE SOIL
2297	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	TARBACA	SLOW	ALKALINE	
2298	NOD	AESCHYNOMENE	(SP.)	COSTA RICA	PUNTARENAS	SLOW	ALKALINE	
2299	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	ATENAS	SLOW	ALKALINE	9.6KM ATENAS TO SAN MATEO
2303	NOD	ZORNIA	(SP.)	COSTA RICA	ATENAS	SLOW	ALKALINE	15.4KM ATENAS TO SAN MATEO
2305	NOD	MACROPTILIUM	ATROPURPUREUM	COSTA RICA	SANTA CRUZ	SLOW	ALKALINE	SANTA CRUZ
2312	NOD	AESCHYNOMENE	FALCATA	AUSTRALIA	GRAFTON	SLOW	ALKALINE	GRAFTON EXP STN POOR SOIL
2313	LP4	LOTONONIS	PLATYCARPA	S AFRICA	WINDHOEK	SLOW	ALKALINE	W.GEISS HERBARIM
2314	LP5	LOTONONIS	PLATYCARPA	S AFRICA	WINDHOEK	SLOW	ALKALINE	W.GEISS HERBARIM
2317	NOD	MACROPTILIUM	(SP.)	COSTA RICA	SAN CARLOS	SLOW	ALKALINE	MOUTH SAN CARLOS
2325	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	SAN RAMON	SLOW	ALKALINE	17KM SAN RAMON-PUNTARENAS
2343	R700	LOTONONIS	BAINESII	ZIMBABWE		SLOW	ALKALINE	
2344	R933	LOTONONIS	BAINESII	ZIMBABWE		SLOW	ALKALINE	
2345	NOD	STYLOSANTHES	HUMILIS	COSTA RICA	PUNTARENAS	SLOW	ALKALINE	SALTY SALTINE SOIL
2346	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	TARBACA	SLOW	ALKALINE	
2347	NOD	STYLOSANTHES	(SP.)	PANAMA	BOQUETE	SLOW	ALKALINE	
2348	NOD	STYLOSANTHES	HUMILIS	COSTA RICA	TOBOGA	SLOW	ALKALINE	
2350	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	FINCA VOLCAN	SLOW	ALKALINE	FINCA VOLCAN AIRPORT
2352	NOD	STYLOSANTHES	HUMILIS	COSTA RICA	SANTA CRUZ	SLOW	ALKALINE	
2353	NOD	MACROPTILIUM	ATROPURPUREUM	COSTA RICA	VILLA COLON	SLOW	ALKALINE	5KM SW COLON
2354	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	VILLA COLON	SLOW	ALKALINE	5KM SW COLON
2364	NOD	STYLOSANTHES	GUIANENSIS	COSTA RICA	ATENAS	SLOW	ALKALINE	9KM ATENAS TO MATEO
2370	NOD	PHASEOLUS	(SP.)	COSTA RICA	SAN MATEO	SLOW	ALKALINE	17KM SAN MATEO TO ESPARTA
2382	NOD	MACROPTILIUM	(SP.)	COSTA RICA	LIBERIA	SLOW	ALKALINE	28KM EAST OF LIBERIA
2388	CB2312	AESCHYNOMENE	FALCATA	AUSTRALIA	GRAFTON	SLOW	ALKALINE	ISOLATE PLUM 1A EX CB2312
2390	CB2312	AESCHYNOMENE	FALCATA	AUSTRALIA	GRAFTON	SLOW	ALKALINE	ISOLATE YELLOW 1A EX CB2312
2391	CB2312	AESCHYNOMENE	FALCATA	AUSTRALIA	GRAFTON	SLOW	ALKALINE	ISOLATE YELLOW 6B EX CB2312

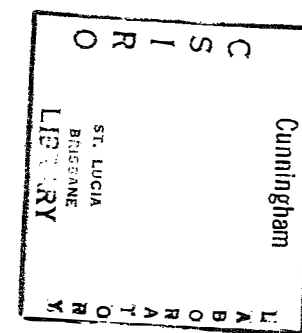
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CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
2392	CC2480A	TRIFOLIUM	(SP.)			FAST	ACID	
2406	QA9887	LOTONONIS	ANGOLENSIS	ZAMBIA	MBALE	SLOW		GUMMY GROWTH PALE PINK
2410	NOD	MACROPTILIUM	ATROPURPUREUM	COSTA RICA	FILADELFIA	SLOW	ALKALINE	
2419	NOD	STYLOSANTHES	HAMATA	AUSTRALIA	TOWNSVILLE	SLOW	ALKALINE	2ND ISOLATE FROM CB2119
2425	NOD	LOTONONIS	ANGOLENSIS	KENYA	KITALE	VARIABLE	ALKALINE	
2463	NOD	STYLOSANTHES	HAMATA	GUARDALOUPE	PETIT BOURG	SLOW	ALKALINE	
2464	NOD	STYLOSANTHES	GUIANENSIS	BRASIL	UBERLANDIA	SLOW	ALKALINE	ISO.FR SCHOFIELD OR F'STEM
2496	CC709	GLYCINE	MAX			SLOW	ALKALINE	
2534	NOD	STYLOSANTHES	GUIANENSIS	AUSTRALIA	REDLAND BAY	SLOW	ALKALINE	
2645	NOD	LOTONONIS	ANGOLENSIS	TANZANIA	MBEYA	SLOW	ACID	45KM W MBEYA TUNDUMA RD
2648	NOD	LOTONONIS	PLATYCARPA	S AFRICA	L TRICHARDT	SLOW	ALKALINE	54KM W LOUIS TRICHARDT
2649	NOD	LOTONONIS	PLATYCARPA	S AFRICA	TZANEEN	SLOW	ALKALINE	96KM E TSANEEN
2674	NOD	LOTONONIS	LAXA	S AFRICA	PRETORIA	SLOW	ALKALINE	42KM E PRETORIA ON N4
2676	NOD	MACROPTILIUM	ATROPURPUREUM	S AFRICA	PRETORIA	SLOW	ALKALINE	12KM E PRETORIA ON N4
2695	NOD	MACROPTILIUM	ATROPURPUREUM	S AFRICA	KOMGA	SLOW	ALKALINE	I 60288 E 60286 60K N P.ELI
2705	NOD	LOTONONIS	MUCRONATA	S AFRICA	PEARSTON	SLOW	ALKALINE	
2743	ST78/1/1	SESBANIA	ERUBESCENS	AUSTRALIA	KUNUNURRA	FAST	ACID	STEM NODULES
2793	DII/13	STYLOSANTHES	GUIANENSIS	AUSTRALIA	TUMBULGUM	SLOW	ALKALINE	
2794	FI/9	MACROPTILIUM	ATROPURPUREUM	AUSTRALIA	TUMBULGUM	SLOW	NEUTRAL	
2795	DR1/5	GLYCINE	CLANDESTINA	AUSTRALIA	PIGABEEN	SLOW	ALKALINE	
2796	ST6/C1	GLYCINE	CLANDESTINA	AUSTRALIA	TUMBULGUM	SLOW	ALKALINE	
2797	BR-1CA(S5)	MACROPTILIUM	ATROPURPUREUM	BRASIL		SLOW	ALKALINE	
2802	NOD	ARACHIS	MONTICOLA	AUSTRALIA	SAMFORD	SLOW	ALKALINE	
2803	BR-1AE	MACROPTILIUM	ATROPURPUREUM	BRASIL		SLOW	NEUTRAL	STREP RESIS, TETRACYC SENS
2833	NOD	LOTONONIS	ANGOLENSIS	ZAMBIA	TUNDUMA	SLOW	ALKALINE	
2837	ST17/27/2	STYLOSANTHES	HAMATA	AUSTRALIA	FANNING RIV	SLOW	ALKALINE	SANDY SOIL
2838	ST26/15	STYLOSANTHES	GUIANENSIS	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	PREVIOUSLY INOC CB1552
2839	ST17/29/1	STYLOSANTHES	HAMATA	AUSTRALIA	FANNING RIV	SLOW	ALKALINE	SANDY SOIL
2840	ST39/1	STYLOSANTHES	CAPITATA	AUSTRALIA	TOWNSVILLE	VARIABLE	ALKALINE	
2841	ST17/19/1	STYLOSANTHES	HAMATA	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	
2842	ST17/15/1	STYLOSANTHES	HAMATA	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	
2843	ST30/2/2	STYLOSANTHES	GUIANENSIS	AUSTRALIA	TECOMA	SLOW	ALKALINE	
2844	ST27/1	STYLOSANTHES	GUIANENSIS	AUSTRALIA	BOOMERANG	SLOW	ALKALINE	
2851	ST19/1/1/1	STYLOSANTHES	GUIANENSIS	AUSTRALIA	KATHERINE	SLOW	ALKALINE	8KM N KATHERINE
2852	ST19/1/3/3	STYLOSANTHES	GUIANENSIS	AUSTRALIA	KATHERINE	SLOW	ALKALINE	8KM N KATHERINE
2854	CC1190	CICER	ARIETINUM			INT'MED	NEUTRAL	
2855	CC1192	CICER	ARIETINUM			INT'MED	NEUTRAL	
2885	CC709	GLYCINE	MAX	AUSTRALIA	CANBERRA	SLOW	ALKALINE	FOR CV HARDEE
2887	A1	GLYCINE	MAX	INDIA		SLOW	ALKALINE	
2888	A2	GLYCINE	MAX	INDIA		SLOW	ALKALINE	
2889	A3	GLYCINE	MAX	INDIA		SLOW	ALKALINE	
2890	B1	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	
2891	B5	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	

CB NO.	ORIG.NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
2892	B6	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	
2893	B7	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	
2894	B8	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	
2895	B9	VIGNA	UNGUICULATA	INDIA		SLOW	ALKALINE	
2896	NA712	VIGNA	UNGUICULATA			FAST	ACID	FR V.UNGUICUL OR A.HYPOGEA
2897	ST39/12	STYLOSANTHES	CAPITATA	AUSTRALIA	TOWNSVILLE	VARIABLE	ALKALINE	
2898	ST45/4	STYLOSANTHES	CAPITATA	AUSTRALIA	TOWNSVILLE	VARIABLE	ALKALINE	
2899	CC511	PHASEOLUS	VULGARIS			INT'MED	ACID	
2902	NA449-3	ORNITHOPUS	SATIVUS	AUSTRALIA		SLOW	ALKALINE	REISOL FR WU425/72 (=SU739)
2908	CB376-1	LOTOMONIS	BAINESII	S AFRICA	PRETORIA	SLOW	ALKALINE	ISOLATE CB376-1
2909	CB376-3	LOTOMONIS	BAINESII	S AFRICA	PRETORIA	SLOW	ALKALINE	ISOLATE CB376-3
2910	CB376-4	LOTOMONIS	BAINESII	S AFRICA	PRETORIA	SLOW	ALKALINE	ISOLATE CB376-4
2914	NZP5435	LEUCAENA	LEUCOCEPHALA	INDONESIA		FAST	ACID EX	101
2915	NZP5258	LEUCAENA	LEUCOCEPHALA	NEW GUINEA		INT'MED	ALKALINE	NON ACID REISOLATE OF NGR6
2919	ST54/2/1/	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	HUGHENDEN	FAST	ACID	
2920	ST54/3/2	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	BALFS CK	FAST	ACID	
2921	ST60/6	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	KOBELE CK	FAST	ACID	
2922	ST62/1	LEUCAENA	LEUCOCEPHALA	AUSTRALIA	SAMFORD	FAST	ACID	ST62/1 NR ORIG REP BOWING
2923	TAL82	LEUCAENA	LEUCOCEPHALA	USA	PAIA	FAST	ACID	
2927	NOD	ARACHIS	PINTOI	AUSTRALIA	SAMFORD			
2928	CC709	GLYCINE	MAX	AUSTRALIA				
2929	NZP5460/1	SCHLEINITZIA	INSULARUM	COOK IS	AITUTAKI			
2930	NZP5463	LEUCAENA	LEUCOCEPHALA	COOK IS	KAROTONGA			
2937	WU95	TRIFOLIUM	SUBTERRANEUM	AUSTRALIA		FAST	ACID	
2938	SU343	LOTUS	CORNICULATUS	AUSTRALIA		FAST	ACID	
2939	CB786ST+SP	MACROTYLOMA	AFRICANUM	KENYA		SLOW	ALKALINE	STREP+SPEC RESIS EX NITRAL
2940	CB1809ST+SP	GLYCINE	MAX	USA		SLOW	ALKALINE	STREP+SPEC RESIS EX NITRAL
2944	NOD	CENTROSEMA	SCHOTTII	AUSTRALIA	KATHERINE	INT'MED	ACID	SMILE FARM
2945	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	SMILE FARM
2947	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	NEUTRAL	SMILE FARM BLACK NODS
2948	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	SMILE FARM BLACK NODS
2949	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	SMILE FARM RED NODS
2950	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	SMILE FARM BLACK NODS
2951	NOD	CENTROSEMA	BRASILIANUM	AUSTRALIA	KATHERINE	SLOW	ALKALINE	SMILE FARM BLACK NODS
3022	ST78/2/1/	SESBANIA	ERUBESCENS	AUSTRALIA	KUMUMURRA	INT'MED	ACID	STEM NODULES
3026	CC511ST+SP	PHASEOLUS	VULGARIS			FAST	NEUTRAL	FROM NITRAGEN FARM
3034	RAD552/1	CANAVALIA	ENSIFORMIS	AUSTRALIA	MOGGILL			NODS FROM U OF QLD
3035	QA1083	MACROTYLOMA	AXILLARE	AUSTRALIA	GATTON			FOR CYAMOPSIS DETRAGONOLOBA
3039	ST17/10/1	STYLOSANTHES	GUIANENSIS	AUSTRALIA	KANGAROO H	SLOW	ALKALINE	E ON OXLEY, I ON 40257
3040	ST17/11/3	STYLOSANTHES	HAMATA	AUSTRALIA	KANGAROO H	SLOW	ALKALINE	E ON OXLEY, I ON 40257
3041	ST26/1	STYLOSANTHES	GUIANENSIS	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	E ON OXLEY, I ON 40257
3042	ST17/14/1	STYLOSANTHES	HAMATA	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	E ON 38842, I ON 40264A
3043	ST17/14/5	STYLOSANTHES	HAMATA	AUSTRALIA	LANSDOWN	SLOW	ALKALINE	E ON 38842, I ON 40264A

CB NO.	ORIG. NO.	GENUS	SPECIES	COUNTRY	TOWN	GROWTH	REACTION	COMMENT
3044	ST17/21/1	STYLOSANTHES	HAMATA	AUSTRALIA	FANNING R	SLOW	ALKALINE	E ON 38842, I ON 40264A
3045	ST17/22/1	STYLOSANTHES	HAMATA	AUSTRALIA	FANNING R	SLOW	ALKALINE	
3046	ST17/23/1	STYLOSANTHES	HAMATA	AUSTRALIA	FANNING R	SLOW	ALKALINE	
3048	RAD446/1	STYLOSANTHES	CAPITATA	VENEZUELA	PARIAGUAN	V.SLOW	ALKALINE	GROWS AT PH 4.5
3049	RAD446/4	STYLOSANTHES	CAPITATA	VENEZUELA	PARIAGUAN	V.SLOW	ALKALINE	GROWS AT PH 4.5
3050	RAD261/7	STYLOSANTHES	GUIANENSIS	COLOMBIA	PTO LOPEZ	SLOW	ALKALINE	CIAT1460 GROWS AT PH4.5
3051	RAD261/12	STYLOSANTHES	GUIANENSIS	COLOMBIA	PTO LOPEZ	SLOW	ALKALINE	GROWS AT PH 4.5
3052	RAD261/17	STYLOSANTHES	GUIANENSIS	COLOMBIA	PTO LOPEZ	SLOW	ALKALINE	GROWS AT PH 4.5
3053	RAD105/3	STYLOSANTHES	HAMATA	WEST INDIES	SHELL BEACH	SLOW	ALKALINE	GROWS BEST AT PH GT 6.5
3054	RAD107/3	STYLOSANTHES	HAMATA	WEST INDIES	THIBOUS MILL	SLOW	ALKALINE	GROWS BEST AT PH GT 6.5
3055	CIAT170	STYLOSANTHES	(SP.)	BRASIL		SLOW	ALKALINE	GROWS AT PH 4.5

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LIST OF HOST SPECIES

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GENUS	SPECIES	CB STRAINS ISOLATED FROM LISTED HOST											
ABRUS	PRECAFORIUS	652	953	1235	1236	1241							
ACACIA	ANEURA	796											
ACACIA	CONCURRENS	402											
ACACIA	SOPHORA	675											
AESCHYNOMENE	(SP.)	1692	2298										
AESCHYNOMENE	FALCATA	464	2312	2386	2390	2391							
ALYSICARPUS	BUPLEURIFOLIUS	322											
ALYSICARPUS	GLUMACEUS	448											
ALYSICARPUS	RUGOSUS	289											
ALYSICARPUS	VAGINÆLIS	278	1002	1029									
ARACHIS	DIOGOI	31											
ARACHIS	HYPOGAEA	741	742	744	745	748	751	887	935				
ARACHIS	MONTICOLA	2802											
ARACHIS	PINTOI	2927											
ARACHIS	PROSTRATA	446	530										
CAJANUS	CAJAN	136	479	483	987								
CALOPOGONIUM	CAERULEUM	979											
CANAVALIA	ENSIFORMIS	3034											
CENTROSEMA	(SP.)	1701											
CENTROSEMA	BRASILIANUM	2945	2947	2948	2949	2950	2951						
CENTROSEMA	FLUMIERI	1698											
CENTROSEMA	PUBESCENS	323	421	476	797	959	1043	1103	1491	1494	1922	1923	
CENTROSEMA	SAGITTATUM	1495											
CENTROSEMA	SCHOTTII	2944											
CICER	ARIETINUM	1189	1199	1200	2854	2855							
CLITORIA	TERNATEA	279											
CODARIOCALYX	GYROIDES	449	2121										
CORONILLA	VARIA	2012											
CROTALARIA	ANTHYLLOPSIS	755											
CROTALARIA	BREVIDENS	188											
CROTALARIA	DISSITIFLORA	830											
CROTALARIA	LANCEOLATA	208	210										
CROTALARIA	SAGITTALIS	895											
CYAMOPSIS	TETRAGONOLOBA	532											
CYTISUS	MULTIFLORUS	969	970	1054									
DALBERGIA	CANDENATENSIS	647											
DENDROLOBIUM	UMBELLATUM	579	916										
DESMODIUM	(SP.)	792	794	1263	1525								
DESMODIUM	ADSCENDENS	1628	1632										
DESMODIUM	AXILLARE	1422											
DESMODIUM	BARBATUM	1508	1627	1811									
DESMODIUM	CAMPYLOCAULON	831											
DESMODIUM	CANUM	207	1514	1564	1772	2120							

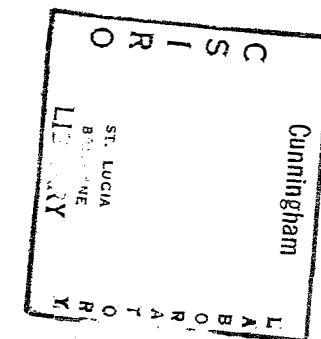
GENUS	SPECIES	CB STRAINS ISOLATED FROM LISTED HOST											
DESMODIUM	CUNEATUM	1511											
DESMODIUM	DIFFUSUM	1031											
DESMODIUM	DISCOLOR	455	1512	1573									
DESMODIUM	DISTORTUM	457	461										
DESMODIUM	FILIFORME	934											
DESMODIUM	HETEROCARPON	962											
DESMODIUM	HETEROPHYLLUM	2085	2123	2163	2164								
DESMODIUM	INTORTUM	185	456	627	978	1027	1467	1522					
DESMODIUM	MUELLERI	1047	1053										
DESMODIUM	PABULARE	1517	1518										
DESMODIUM	PURPUREUM	902	903										
DESMODIUM	RENSONII	460											
DESMODIUM	SANDWICENSE	1789											
DESMODIUM	TORTUOSUM	1424	1622	1623									
DESMODIUM	TRICHOCAULON	190	502										
DESMODIUM	TRIFLORUM	46	192	203	1004								
DESMODIUM	UNCINATUM	28	35	128	187	290	1253	1521					
DESMODIUM	VARIANS	817											
DOLICHOS	(SP.)	1318											
DOLICHOS	KILIMANDSCHARICUS	1780											
DOLICHOS	SERICEUS	769											
DOLICHOS	TRILOBUS	159											
GLYCINE	(SP.)	428											
GLYCINE	CLANDESTINA	327	2795	2796									
GLYCINE	MAX	1003	1164	1455	1668	1750	1752	1753	1786	1791	1792	1793	1794
GLYCINE	MAX	1795	1797	1799	1802	1803	1805	1808	1809	1810	1911	1924	1925
GLYCINE	MAX	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1938
GLYCINE	MAX	1939	1940	1941	1942	1943	2496	2885	2887	2888	2889	2928	2940
GLYCINE	TABACINA	40	291	1311									
GLYCINE	TOMENTELLA	232	283	827	1908								
INDIGOFERA	(SP.)	332	352	356	359								
INDIGOFERA	ARRECTA	345	349										
INDIGOFERA	AUSTRALIS	334											
INDIGOFERA	COLUTEA	163	184	498									
INDIGOFERA	HIRSUTA	29	158	165	350	1012							
INDIGOFERA	LINNAEI	509											
INDIGOFERA	MUCRONATA	344	354										
INDIGOFERA	SPICATA	33											
INDIGOFERA	SUFFRUTICOSA	331	333	341	348								
INDIGOFERA	TRIFOLIATA	152											
INDIGOFERA	TRITA	336	337	338	340	358							
INDIGOFERA	ZOLLINGERIANA	346											
LABLAB	PURPUREUS	463	1091										

GENUS	SPECIES	CB STRAINS ISOLATED FROM LISTED HOST												
LATHYRUS	MAGELLANICUS	1155												
LATHYRUS	SYLVESTRIS	472												
LEPEDEZA	STR IATA	241	450											
LEUCAENA	LEUCOCEPHALA	81	259	424	430	673	946	947	948	952	1149	1150	1151	
LEUCAENA	LEUCOCEPHALA	1353	2154	2914	2915	2919	2920	2921	2922	2923	2930			
LISTIA	HETEROPHYLLA	768												
LOTONONIS	ANGOLENSIS	1101	1297	1298	1299	1319	1321	1322	1323	2406	2425	2645	2833	
LOTONONIS	BAINESII	360	376	730	1775	1776	1777	1778	1779	2343	2344	2908	2909	
LOTONONIS	BAINESII	2910												
LOTONONIS	LAXA	1987	2019	2020	2674									
LOTONONIS	MUCRONATA	2705												
LOTONONIS	PLATYCARPA	2313	2314	2648	2649									
LOTONONIS	STIPULOSA	1394												
LOTUS	(SP .)	1157												
LOTUS	AMERICANUS	1203												
LOTUS	CORNICULATUS	668	670	1205	2938									
LOTUS	MAROCCANUS	1300												
LOTUS	ULIGINOSUS	251	440	1075	1076	1209								
LUPINUS	ANGUSTIFOLIUS	2271												
MACROPTILIUM	(SP .)	790	2317	2382										
MACROPTILIUM	ATROPURPUREUM	671	898	1173	1704	2109	2257	2305	2353	2410	2675	2695	2794	
MACROPTILIUM	ATROPURPUREUM	2797	2803											
MACROPTILIUM	BRACTEATUM	480												
MACROPTILIUM	ERYTHROLOMA	1532	1571	1717										
MACROPTILIUM	LATHYROIDES	26	27	42	53	54	57	59	121	170	289	311	319	
MACROPTILIUM	LATHYROIDES	326	482	828	904	913	975	1524						
MACROPTILIUM	LONGIPEDUNCULATUM	1718												
MACROTYLOMA	AFRICANUM	756	2939											
MACROTYLOMA	AXILLARE	3035												
MACROTYLOMA	UNIFLORUM	454	1024											
MEDICAGO	(SP .)	112	214											
MEDICAGO	MINIMA	231												
MEDICAGO	RUGOSA	2155												
MEDICAGO	SATIVA	61	96	97	113	115	116	117	118	119	217	227	257	
MEDICAGO	SATIVA	813	967	1035	1170	1171	1368	1445	1446					
MEDICAGO	TRUNCATULA	64	98	110										
NEONOTONIA	WIGHTII	439	452	453	466	1013	1057	1066	1267	1913	1914	1915	1916	
NEONOTONIA	WIGHTII	1918	2195											
NEPTUNIA	(SP .)	924												
NEPTUNIA	GRACILIS	2001	2002	2003	2004									
NEPTUNIA	PLENA	1397												
ONOBRYCHIS	VICIFOLIA	2000												
ORNITHOPUS	COMPRESSUS	2026												

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GENUS	SPECIES	CB STRAINS ISOLATED FROM LISTED HOST											
ORNITHOPUS	SATIVUS	964	2902										
PHASEOLUS	(SP.)	1303	1633	2370									
PHASEOLUS	ACUTIFOLIUS	2005											
PHASEOLUS	LUNATUS	909											
PHASEOLUS	VULGARIS	971	1071	1114	1127	1133	1220	1224	1958	1964	2899	3026	
PISUM	SATIVUM	596	1447	1992									
PITHECELLOBIUM	MONILIFORME	654											
PSORALEA	CINEREA	834	838										
PSORALEA	ERIANTHA	712											
PSORALEA	ERIANTHOIDES	362											
PSORALEA	GLANDULOSA	1158											
PSORALEA	PATENS	541											
PUERARIA	PHASEOLOIDES	465	955	958	984								
PULTENAEA	VILLOSA	368	885										
SCHLEINITZIA	INSULARUM	2929											
SESBANIA	(SP.)	1030											
SESBANIA	CANNABINA	295	1045										
SESBANIA	ERUBESCENS	2743	3023										
SESBANIA	MACROCARPA	905											
STYLOSANTHES	(SP.)	65	1272	2212	2216	2284	2347	3055					
STYLOSANTHES	CAPITATA	2840	2897	2898	3048	3049							
STYLOSANTHES	FRUTICOSA	273	1984	2168									
STYLOSANTHES	GUIANENSIS	44	52	82	261	576	635	1314	1408	1552	1580	1584	1650
STYLOSANTHES	GUIANENSIS	1670	2033	2150	2229	2248	2286	2297	2299	2325	2346	2350	2354
STYLOSANTHES	GUIANENSIS	2364	2464	2534	2793	2838	2843	2844	2851	2852	3039	3041	3050
STYLOSANTHES	GUIANENSIS	3051	3052										
STYLOSANTHES	HAMATA	2126	2134	2135	2136	2137	2152	2419	2463	2837	2839	2841	2842
STYLOSANTHES	HAMATA	3040	3042	3043	3044	3045	3046	3053	3054				
STYLOSANTHES	HUMILIS	76	103	105	252	308	315	516	919	1675	1689	1727	2227
STYLOSANTHES	HUMILIS	2296	2345	2348	2352								
STYLOSANTHES	SUNDAICA	2144											
TADRHAGE	TRIQUETRUM	462											
TEPHROSIA	CANDIDA	209											
TEPHROSIA	JUNCEA	503											
TERAMNUS	UNCINATUS	484	1892	1893	1895								
TRIFOLIUM	(SP.)	764	2174	2175	2176	2177	2178	2392					
TRIFOLIUM	BURCHELLIANUM	727											
TRIFOLIUM	CHERANGANIENSE	938											
TRIFOLIUM	FRAGIFERUM	420											
TRIFOLIUM	INCARNATUM	371											
TRIFOLIUM	ISTHMOCARPUM	806											
TRIFOLIUM	POLYMORPHUM	721											
TRIFOLIUM	REPENS	1	147	151	737	860	1444						



GENUS	SPECIES	CB STRAINS ISOLATED FROM LISTED HOST												
TRIFOLIUM	RUEPPELLIANUM	527	714	766	772	774	2171							
TRIFOLIUM	SEMPILOSUM	526	763	778	782	788	2031	2032	2102	2116	2117	2172		
TRIFOLIUM	SIMENSE	2173												
TRIFOLIUM	SUBTERRANEUM	3	859	865	867	870	873	875	876	877	879	1165	1166	
TRIFOLIUM	SUBTERRANEUM	1990	1991	2179	2937									
TRIFOLIUM	TEMBENSE	758	773											
TRIFOLIUM	USAMBARENSE	771	775											
TRIGONELLA	SUAVISSIMA	548												
VICIA	SATIVA	134	735											
VIGNA	(SP.)	1248	1720											
VIGNA	LANCEOLATA	174	500											
VIGNA	MARINA	699	915											
VIGNA	MUNGO	284	491	985	1011	1243	1247							
VIGNA	OBLONGIFOLIA	786												
VIGNA	RADIATA	451	512	661	890	1009	1015	1017	1042	1055				
VIGNA	TRILOBA	1008												
VIGNA	UMBELLATA	477	1001											
VIGNA	UNGUICULATA	45	164	233	625	2890	2891	2892	2893	2894	2895	2896		
VIGNA	VEXILLATA	499												
ZORNIA	(SP.)	2303												
ZORNIA	BRASILIENSIS	2189	2190	2191	2277									
ZORNIA	DIPHYLLA	328	1546	2184	2185	2186	2187							

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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 tetragonolobus (Guar)	CB3035 (=QA1033)
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	CB2938 * (=SU343)
Lotus pedunculatus	CB2270 * (=CC829)
Lupinus spp.(including Serradella-Ornithopus spp.)	CB2026 * (=WU425)
Macroptilium martii	CB1717
Macrotyloma spp.	CB1024 *
Stylosanthes capitata	CB2898
Stylosanthes guianensis(fine stem types)	CB82 * or CB1650
Stylosanthes guianensis(Cultivars Cook, Endeavour, Graham, Schofield)	CB756 *
Stylosanthes hamata(alkaline soil types)	CB2126
Stylosanthes hamata (Verano and Verano types)	CB756 * or CB1650
Stylosanthes humilis(all Cultivars)	CB756
Stylosanthes scabra (Cultivars Fitzroy and Seca)	CB756
Stylosanthes spp.	CB756 *
Stylosanthes spp.(untested lines)	CB756 * or CB82 * (or CB328 or CB2229)
Vigna mungo, V. radiata (Mungbeans)	CB1015 *

Temperate legumes:

Clovers

Trifolium fragiferum, T. pratense, T. repens	CB1990 * (=TA1)
Trifolium cherleri, T. hirtum, T. incarnatum, T. subterraneum	CB2937 * (=WU95)
Trifolium semipilosum	CB782 *

Medics

Medicago spp. (all medics and Melilotus)	CB3061 * (=CC169)
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Other species

Coronilla varia (Crown vetch)	CB2012 (=CC401)
Onobrychis sativa (Sainfoin)	CB2000 (=NITRAGIN116A5)
Phaseolus vulgaris	CB2899 * (=CC511)
Pisum sativum, Vicia faba, V. sativa	CB1447 * (=SU391)