Author: Jelena M. Aleksić

Article: Family-specific vs. universal PCR primers for the study of mitochondrial DNA in plants

Supplementary Material Table S1. The outcomes of *in silico* PCR amplification of various mitochondrial loci in six *Fabaceae* species with 39 published mitochondrial primer pairs

Lokus 1: *atp*6-2 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length
Vicia faba	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		2185 –> 2204	100	45.3					No product
		454990 –> 455009	100	45.3					
		242392 –> 242411	75	12.0					
		478894 –> 478913	75	12.0					
						381153 –> 381170	78	43.3	
Vigna angularis	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		288364 –> 288383	100	45.3					No product
		18896 –> 18915	65	19.3					
						16956 –> 16973	78	38.3	
Vigna radiata	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		231401 –> 231420	100	45.3					No product
		216559 –> 216578	65	19.3					
		230069 –> 230088	75	18.1					
						161917 –> 161934	78	38.3	
						214619 –> 214636	78	38.3	
Millettia pinnata	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		335457 –> 335476	100	46.6					No product
						361790 <– 361809	65	4.0	
Lotus japonicus	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		121207 <– 121226	100	45.3					No product
						346527 –> 346546	70	4.0	
Glycine max	atp6–2	GCATCATTCAAGTAAATACA			atp6–2	GTGAAGCTGTCTGGAGGG			
		361751 –> 361770	95	41.3					No product
		63867 <– 63886	95	41.3					
		399791 <– 399810	65	8.2					
						159839 <– 159856	78	38.3	

Locus 2: *atp*9 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		128978 –> 128997	85	42.6		129228 <– 129246	95	51.2	269	58
		253103 –> 253122	85	42.6		253353 <– 253371	95	51.2	269	58
						427899 –> 427917	68	33.3		
						385964 <– 385982	68	33.3		
Vigna angularis	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		114172 <– 114191	85	42.6		113923 –> 113941	95	51.2	269	58
		377165 <– 377184	75	24.2						
		402478 –> 402497	90	45.6						
		262835 –> 262854	70	31.3						
						355936 <– 355954	95	51.2		
						151952 <– 151970	74	21.1		
						41243 –> 41261	68	33.3		
Vigna radiata	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		111647 <– 111666	85	42.6		111398 –> 111416	95	51.2	269	58
		368289 –> 368308	75	24.2						
		293856 –> 293875	90	45.6						
		144529 <– 144548	70	31.3						
						343310 <– 343328	95	51.2		
						189591 –> 189609	74	21.1		
						185461 –> 185479	68	33.3		
Millettia pinnata	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		248352 <– 248371	85	40.7		248103 –> 248121	95	51.2	269	58
		105713 –> 105732	75	24.2						
						393622 <– 393640	68	33.3		
						205494 <– 205512	68	33.3		
Lotus japonicus	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		229514 <– 229533	85	40.7		228934 –> 228952	95	51.2	600	58
		299144 –> 299163	75	24.2						
						262677 <– 262695	68	33.3		
						219243 –> 219261	89	35.6		
Glycine max	atp9	CCAAGTGAGATGTCCAAGAT			atp9	CTTCGGTTAGAGCAAAGCC				
		11583 <– 11602	75	24.2		3906 –> 3924	68	33.3	7697	61
		200860 –> 200879	90	45.6						
						328811 <– 328829	95	51.2		
						383196 <– 383214	79	33.0		
						44338 <– 44356	74	17.0		

Locus 3: *ccb*203 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		78225 –> 78244	95	56.9		78717 <– 78736	98	64.0	512	65
Vigna angularis	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		194984 –> 195003	95	58.0		195476 <– 195495	92	60.1	512	65
						384170 <– 384189	72	20.3		
Vigna radiata	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		313752 <– 313771	95	58.0		313260 –> 313279	92	60.1	512	65
						361296 –> 361315	72	20.3		
Millettia pinnata	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		46211 –> 46230	95	56.9		46703 <– 46722	92	60.1	512	65
Lotus japonicus	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		288028 <– 288047	95	56.9		287536 –> 287555	98	64.0	512	65
		88834 <– 88853	95	56.9		88342 –> 88361	98	64.0	512	65
						162916 –> 162935	82	57.1		
						105732 <– 105751	72	20.3		
						308693 <– 308712	72	34.8		
Glycine max	ccb203	ASGTTCTACGGACCGATGCC			ccb203	CACGGGGAGGGAGCRGGCGA				
		244563 –> 244582	95	58.0		245055 <– 245074	92	60.1	512	65
		394154 <– 394173	95	58.0						
						385278 <– 385297	72	35.8		

Locus 4: *ccb*206 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		402031 –> 402050	68	19.7					No product	
						155816 <– 155835	95	52.6		
						88577 <– 88596	70	34.4		
						26398 –> 26417	70	21.2		
Vigna angularis	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		–				12011 –> 12030	95	52.6	No product	
Vigna radiata	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		–				209669 –> 209688	95	52.6	No product	
Millettia pinnata	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		–				7188 –> 7207	95	52.6	No product	
Lotus japonicus	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		–				292768 –> 292787	95	52.6	No product	
Glycine max	ccb206	TCAATCTTGTRAACTAATCG			ccb206	CYYCTCCACACCAATCACGA				
		301796 –> 301815	72	4.0					No product	
						164805 <– 164824	95	52.6		

Locus 5: *ccb*256 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		287580 <– 287599	100	49.0		287071 –> 287090	100	54.4	529	55
		556026 –> 556045	100	49.0		556535 <– 556554	100	54.0	529	55
						52782 <– 52801	65	31.8		
Vigna angularis	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		396898 <– 396917	100	49.0		396389 –> 396408	100	54.4	529	55
Vigna radiata	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		288274 <– 288293	100	49.0		287765 –> 287784	100	54.4	529	55
		353935 –> 353954	75	30.8						
Millettia pinnata	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		264194 –> 264213	100	49.0		264703 <– 264722	100	54.4	529	55
Lotus japonicus	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		342808 <– 342827	100	49.0		342299 –> 342318	100	54.4	529	55
Glycine max	ccb256	GGAAGTTAGCAAAGTTAGAC			ccb256	TTGTTCTTAACAGCGATGGC				
		2240 <– 2259	100	49.0		1731 –> 1750	100	54.4	529	55

Locus 6: *ccb*452 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG				
		446364 <– 446383	100	46.4		444877 –> 444896	100	48.8	1507	54
		376579 <– 376598	100	46.4		375092 –> 375111	100	48.8	1507	54
Vigna angularis	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG				
		365258 –> 365277	100	46.4		369875 <– 369894	100	48.8	4637	55
						60297 <– 60316	70	25.1		
						382707 <– 382726	70	21.6		
Vigna radiata	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG				
		32943 –> 32962	100	46.4		37560 <– 37579	100	48.8	4637	55
						57841 <– 57860	70	23.2		
Millettia pinnata	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG				
		326571 –> 326590	100	46.4		331182 <– 331201	100	48.8	4631	55
						53769 –> 53788	75	28.0		
						302057 <– 302076	65	24.6		
						31249 <– 31268	75	28.0		
Lotus japonicus	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG				
		227648 <– 227667	100	46.4		226323 –> 226342	100	48.8	1345	54
						205032 <– 205051	65	24.6		
						341645 <– 341664	75	26.9		

Glycine max	ccb452	TATTACCAGACATAATTGGG			ccb452	TGAACTGTATCTTCTTTGTG					
		57609 –> 57628	100	45.4		62241 <– 62260	100	48.8	4652	55	

Locus 7: *cox*1 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)	
Vicia faba	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		381799 –> 381816	100	49.4		383140 <– 383157	100	58.8	1359	58	
Vigna angularis	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		221237 <– 221254	100	49.4		219896 –> 219913	100	58.8	1359	58	F primers give 4804 bp product
		216451 –> 216468	78	34.4							
Vigna radiata	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		1409 <– 1426	100	49.4		68 –> 85	100	58.8	1359	58	
		397899 –> 397916	78	34.4							
Millettia pinnata	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		1409 <– 1426	100	49.4		68 –> 85	100	58.8	1359	58	
		83194 –> 83211	78	34.4							
Lotus japonicus	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		1409 <– 1426	94	44.5		68 –> 85	100	58.8	1359	58	
		379322 –> 379339	78	34.4							
Glycine max	cox1	TTGTTACGACCACGAAGA			cox1	TCGGTGCCATTGCTGGAG					
		52052 <– 52069	100	49.4		50711 –> 50728	100	58.8	1359	58	F primers give 4822 bp product
		47248 –> 47265	78	34.4							

Locus 8: *cox*2/1–2 (reference: 2, 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)	
Vicia faba	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA					
		17145 –> 17165	98	45.8		17502 <– 17522	100	50.6	378	56	F primers give 6006 bp product
		67233 –> 67253	98	45.8		67590 <– 67610	100	50.6	378	56	
		124264 –> 124284	64	4.0							
		430100 –> 430120	69	12.0							
		88385 –> 88405	74	12.8							
		254374 <– 254394	74	4.0							
		130249 <– 130269	74	4.0							
						21072 –> 21092	67	20.9			
Vigna angularis	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA					
		18175 <– 18195	76	31.7		–			No product		
		376794 –> 376814	64	4.0							
Vigna radiata	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA					
		215833 <– 215853	76	31.7		–			No product		
		368659 <– 368679	64	4.0							
		201053 –> 201073	74	23.6							

Millettia pinnata	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA				
		96231 –> 96251	97	45.8		96588 <– 96608	100	50.6	378	53
		106083 <– 106103	64	4.0						
		33934 –> 33954	69	12.0						
		51083 <– 51103	69	12.0						
		28130 –> 28150	60	15.5						
		189247 <– 189267	64	4.0						
						297776 –> 297796	67	12.0		
Lotus japonicus	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA				
		371365 <– 371385	98	45.8		371008 –> 371028	95	43.1	378	53
		299514 <– 299534	64	4.0						
		307521 –> 307541	64	4.0						
		334641 <– 334661	64	4.0						
Glycine max	cox2/1	TTTTCTTCCTCATTCTKATTT			cox2/2	CCACTCTATTGTCCACTTCTA				
		353032 <– 353052	98	45.8		352675 –> 352695	100	50.6	378	53
		144072 <– 144092	83	21.8						
		207872 –> 207892	83	21.8						
		11212 –> 11232	64	4.0						
		126159 <– 126179	74	23.8						
		292075 <– 292095	69	9.6						
		373153 <– 373173	64	4.0						
						193695 <– 193715	71	22.0		
						224549 –> 224569	67	23.6		

Locus 9: *cox*2/2–3 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC				
		67810 <– 67829	98	49.3		67752 –> 67771	98	48.3	78	56
		17722 <– 17741	98	49.3		17664 –> 17683	98	48.3	78	56
		418505 –> 418524	72	28.8						
						38364 <– 38383	88	42.1		
						38424 <– 38443	72	33.1		
Vigna angularis	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC			No product	
		141471 –> 141490	72	28.8						
						301072 –> 301091	65	31.9		
Vigna radiata	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC				
		164512 <– 164531	72	28.8					No product	
						244084 –> 244103	65	31.9		
Millettia pinnata	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC				
		96808 <– 96827	98	49.3		96750 –> 96769	98	48.3	78	56
		234363 –> 234382	72	28.8						
		126335 –> 126354	82	30.8						

Lotus japonicus	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC					
		370789 –> 370808	98	49.3		370847 <– 370866	98	48.3	78	56	
		104259 –> 104278	72	28.8							
		182985 <– 183004	82	30.8							
Glycine max	cox2/2	TAGRAACAGCTTCTACGACG			cox2/3	GRGTTTACTATGGTCAGTGC					
		352456 –> 352475	92	43.5		352514 <– 352533	98	48.3	78	56	
		42080 <– 42099	72	28.8							

Locus 10: *cox*3 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**	
Vicia faba	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		124044 –> 124061	100	53.0		124729 <– 124748	100	51.9	705	58	
Vigna angularis	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		376574 –> 376591	100	53.0		377259 <– 377278	100	51.9	705	58	F primers give 2839 bp product
		379395 <– 379412	78	33.2							
						9049 <– 9068	75	12.5			
						73157 –> 73176	70	10.5			
Vigna radiata	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		368882 <– 368899	100	53.0		368195 –> 368214	100	51.9	705	58	F primers give 2840 bp product
		366060 –> 366077	78	33.2							
						206713 <– 206732	75	12.5			
						70682 –> 70701	70	10.5			
Millettia pinnata	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		106306 <– 106323	100	53.0		105619 –> 105638	100	51.9	705	58	F primers give 7298 bp product
		99026 –> 99043	78	33.2							
						193923 <– 193942	70	16.6			
Lotus japonicus	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		299737 <– 299754	100	53.0		299050 –> 299069	100	51.9	705	58	
Glycine max	cox3	CCGTAGGAGGTGTGATGT			cox3	CTCCCCACCAATAGATAGAG					
		10992 –> 11009	100	53.0		11677 <– 11696	100	51.9	705	58	R primers give 7049 bp product
		350213 <– 350230	78	33.2							
						4648 –> 4667	75	30.2			
						15187 –> 15206	75	12.5			

Locus 11: *nad*1 intron 2/3 (reference: 1, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		380141 <– 380160	100	55.0		378525 –> 378544	100	52.9	1636	60
		449926 <– 449945	100	55.0		448310 –> 448329	100	52.9	1636	60
						178244 <– 178263	65	9.2		
						493293 <– 493312	65	9.2		

Vigna angularis	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		222894 –> 222913	100	55.0		224527 <– 224546	100	52.9	1653	60
		35027 <– 35046	65	40.6						
Vigna radiata	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		3065 –> 3084	100	55.0		4698 <– 4717	100	52.9	1653	60
		179257 <– 179276	65	40.6						
						202612 –> 202631	75	34.1		
Millettia pinnata	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		3032 –> 3051	100	55.0		4647 <– 4666	100	52.9	1635	60
Lotus japonicus	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		3086 –> 3105	100	55.0		4697 <– 4716	100	52.9	1631	60
		93352 –> 93371	65	30.6						
		292546 –> 292565	65	30.6						
Glycine max	nad1 exon B	GCATTACGATCTGCAGCTCA			nad1 exon C	GGAGCTCGATTAGTTTCTGC				
		53727 –> 53746	100	55.0		55346 <– 55365	100	52.9	1639	60

Locus 12: *nad*1 intron 4/5 (reference: 2, 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)	
Vicia faba	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		89487 –> 89506	100	46.8		92731 <– 92750	100	48.4	3264	54	Contains matR gene
						4953 –> 4972	70	22.1			
						457758 –> 457777	70	22.1			
Vigna angularis	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		67987 <– 68006	100	46.8		64738 –> 64757	100	48.4	3269	54	Contains matR gene
Vigna radiata	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		65531 <– 65550	100	46.8		62282 –> 62301	100	48.8	3269	54	Contains matR gene
Millettia pinnata	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		370508 –> 370527	100	46.8		373724 <– 373743	100	48.8	3236	54	Contains matR gene
Lotus japonicus	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		43089 –> 43108	100	46.8		46333 <– 46352	100	48.8	3264	54	Contains matR gene
Glycine max	nad1/4	GCCAATATGATCTTAATGAG			nad1/5r	TCACCTTGATACTAAACCAG					
		340687 <– 340706	100	46.8		337437 –> 337456	100	48.8	3270	54	Contains matR gene
						32482 <– 32501	70	22.1			

Locus 13: *nad*2 intron 1/2 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		27785 –> 27804	98	54.6		29101 <– 29120	100	47.1	1336	53
		2331 <– 2350	78	34.7						
		99499 –> 99518	62	41.6						
		455136 <– 455155	78	34.7						

Vigna angularis	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		147624 –> 147643	98	54.6		148978 <– 148997	100	47.1	1374	53
		142527 –> 142546	78	37.9						
		402176 –> 402195	68	17.5						
Vigna radiata	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		193922 <– 193941	98	54.6		192568 –> 192587	100	47.1	1374	53
		163456 <– 163475	78	37.9						
Millettia pinnata	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		194706 –> 194725	98	54.6		196058 <– 196077	100	47.1	1372	53
		351448 –> 351467	68	28.0						
Lotus japonicus	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		60253 –> 60272	98	54.6		61603 <– 61622	100	47.1	1370	53
		186976 <– 186995	62	35.2						
		125385 –> 125404	62	37.2						
Glycine max	nad 2/1	AATGTGGGTTGGCTTGGWTT			nad 2/2	AATATGTAAAATTGTCCCTC				
		134827 <– 134846	98	54.6		133475 –> 133494	100	47.1	1372	53

Locus 14: *nad*2 intron 3/4 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		415414 –> 415433	98	50.0					No product	
		332368 <– 332387	70	40.7						
						152757 <– 152776	58	4.0		
Vigna angularis	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		99140 <– 99159	98	50.0					No product	
						324667 <– 324686	62	23.8		
Vigna radiata	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		96655 <– 96674	98	50.0					No product	
						267633 <– 267652	62	23.8		
Millettia pinnata	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		134762 <– 134781	98	50.0					No product	
						21179 <– 21198	58	4.0		
Lotus japonicus	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		101591 –> 101610	98	50.0					No product	
		152048 <– 152067	70	40.7						
						37094 <– 37113	62	23.8		
						377333 –> 377352	62	4.0		
Glycine max	nad 2/3	AGAAARGAATGCTGTAACCG			nad 2/4	ATGGGGATTKTYARTATCGC				
		320446 –> 320465	98	50.0		–			No product	
		382533 –> 382552	70	35.4						
		233979 <– 233998	78	28.6						

Locus 15: *nad*2 intron 4/5 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		413337 –> 413356	95	41.2		414960 <– 414979	100	56.3	1643	54
		139973 <– 139992	70	22.2						
						356348 –> 356367	70	28.6		
Vigna angularis	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		101195 <– 101214	95	41.2		99594 –> 99613	100	56.3	1612	54
						89580 –> 89599	75	29.3		
Vigna radiata	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		98711 <– 98730	95	41.2		97109 –> 97128	100	56.3	1622	54
						87090 –> 87109	75	29.3		
Millettia pinnata	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		136816 <– 136835	95	41.2		135216 –> 135235	100	56.3	1620	54
		168261 <– 168280	70	26.3						
		25450 –> 25469	70	22.2						
						353013 <– 353032	80	40.4		
Lotus japonicus	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		99499 –> 99518	95	41.2		101137 <– 101156	100	56.3	1658	54
		317477 –> 317496	70	19.8						
						134794 <– 134813	75	29.3		
Glycine max	nad 2/4	TTCATATAGAATCCATGTCC			nad 2/5	CTATTTGTTCTTCGCCGCTT				
		318390 –> 318409	95	41.2		319992 <– 320011	100	56.3	1622	54
						99708 <– 99727	75	29.3		

Locus 16: *nad*4 intron 1/2 (reference: 1, 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		353611 –> 353630	95	53.1		355634 <–355653	100	53.9	2043	61
						418785 –> 418804	70	33.1		
Vigna angularis	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		86853 –> 86872	95	53.1		88877 <– 88896	100	53.9	2044	61
		13644 –> 13663	80	41.8						
						141750 –> 141769	70	33.1		
Vigna radiata	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		84363 –> 84382	95	53.1		86387 <– 86406	100	53.9	2044	61
		211303 –> 211322	80	41.8						
						164233 <– 164252	70	33.1		
Millettia pinnata	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		355750 <– 355769	95	53.1		353734 –> 353753	100	53.9	2036	61
		8323 –> 8342	80	41.8						

						235175 –> 235194	70	33.1		
Lotus japonicus	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		137536 <– 137555	95	53.1		135502 –> 135521	100	53.9	2054	61
		232982 <– 233001	80	31.7						
						104535 –> 104554	70	33.1		
Glycine max	nad4 exon 1	CAGTGGGTTGGTCTGGTATG			nad4 exon 2	TCATATGGGCTACTGAGGAG				
		102458 <– 102477	95	53.1		100437 –> 100456	100	53.9	2041	61
		157527 <– 157546	80	31.7						
						238484 –> 238503	85	33.5		
						41801 <– 41820	70	33.1		

Locus 17: *nad*4 intron 2/3 (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		355634 –>355653	100	52.5		358879 <– 358898	100	53.4	3265	60
		82203 <– 82222	70	21.7						
Vigna angularis	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		88877 –> 88896	100	52.5		92197 <– 92216	100	53.4	3340	60
		206274 –> 206293	75	22.7						
		134816 <– 134835	70	21.7						
Vigna radiata	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		86387 –> 86406	100	52.5		89708 <– 89727	100	53.4	3341	60
		132278 <– 132297	70	21.7						
Millettia pinnata	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		353734 <– 353753	100	52.5		350358 –> 350377	100	53.4	3396	60
		12541 <– 12560	70	21.7						
Lotus japonicus	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		135502 <– 135521	100	52.5		132161 –> 132180	100	53.4	3361	60
Glycine max	nad4/2	CTCCTCAGTAGCCCATATGA			nad4/3r	AACCAGTCCATGACTTAACA				
		100437 <– 100456	100	52.5		97064 –> 97083	100	53.4	3393	60
		304256 <– 304275	70	21.7						

Locus 18: *nad*4 intron 3/4 (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		359082 –> 359101	100	49.7		362092 <– 362111	100	52.8	3030	57
		319535 –> 319554	65	16.3						
						38312 –> 38331	70	34.5		
Vigna angularis	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		92400 –> 92419	100	49.7		95180 <– 95199	95	50.6	2800	57
		125508 –> 125527	75	34.9						

Vigna radiata	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		89911 –> 89930	100	49.7		92694 <– 92713	95	50.6	2803	57
						122970 –> 122989	75	35.6		
Millettia pinnata	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		350155 <– 350174	100	49.7		347872 –> 347891	95	50.6	2303	57
Lotus japonicus	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		131958 <– 131977	100	49.7		129148 –> 129167	100	52.8	2830	57
		332014 <– 332033	65	16.3						
						235247 –> 235266	65	32.5		
Glycine max	nad4 exon 3	GGAGCTTTCCAAAGAAATAG			nad4 exon 4	GCCATGTTGCACTAAGTTAC				
		96861 <– 96880	100	49.7		94051 –> 94070	95	50.6	2830	57
		148855 –> 148874	75	24.9						

Locus 19: *nad*4 (reference: 1)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		355516 –> 355535	95	52.0		362048 <– 362067	100	53.2	6552	64
Vigna angularis	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		88759 –> 88778	95	52.0		95136 <– 95155	100	53.2	6397	64
Vigna radiata	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		86269 –> 86288	95	52.0		92650 <– 92669	100	53.2	6401	64
Millettia pinnata	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		353852 <– 353871	95	52.0		347916 –> 347935	100	53.2	5956	64
Lotus japonicus	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		135620 <– 135639	95	52.0		129192 –> 129211	100	53.2	6448	64
Glycine max	nad4 exon 2*	TGTTTCCCGAAGCGACACTT			nad4 exon 4	GGAACACTTTGGGGTGAACA				
		100555 <– 100574	95	52.0		94095 –> 94114	100	53.2	6480	64

Locus 20: *nad*4 intron 1/2 (reference: 4)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		354078 –> 354101	100	58.5		355282 <– 355305	100	61.7	1228	65
Vigna angularis	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		87316 –> 87339	100	58.5		88526 <– 88549	100	61.7	1234	65
		46659 –> 46682	67	27.9						
		222526 –> 222549	62	23.3						
Vigna radiata	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		84826 –> 84849	100	58.5		86036 <– 86059	100	61.7	1234	65
		225920 <– 225943	67	27.9						
		2697 –> 2720	62	23.3						

Millettia pinnata	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		355283 <– 355306	100	58.5		354081 –> 354104	100	61.7	1226	65
Lotus japonicus	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		137065 <– 137088	100	58.5		135849 –> 135872	100	61.7	1240	**65**
		319796 <– 319819	67	28.5						
Glycine max	nad4 innerF	TGTTTGTTCGCGAGAATGGATTCC			nad4 innerR	TGTAAATCGGCGGTCCCTGTTTGG				
		101991 <– 102014	100	58.5		100784 –> 100807	100	61.7	1231	**65**
		291305 <– 291328	71	25.0						
		53355 –> 53378	62	23.3						

Locus 21: *nad*4L/orf25 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		69443 <– 69462	98	51.1		68857 –> 68876	92	46.2	606	59
Vigna angularis	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		215024 <– 215043	98	51.1		214446 –> 214465	92	46.2	598	59
Vigna radiata	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		396472 <– 396491	98	51.1		395894 –> 395913	92	46.2	598	59
Millettia pinnata	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		81807 <– 81826	98	51.1		81218 –> 81237	92	46.2	609	59
		385021 –> 385040	70	28.5						
						131590 <– 131609	65	31.3		
Lotus japonicus	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		97776 –> 97795	98	51.1		98353 <– 98372	92	46.2	597	59
						312930 –> 312949	62	19.3		
Glycine max	orf25	CTGTYTTTTCGCACTTAGGC			nad4L	GTCCGRGGTACTATTGCTGT				
		45825 <– 45844	98	51.1		45260 –> 45279	92	46.2	585	59
						146031 –> 146050	92	46.2		
						205914 <– 205933	92	46.2		
						323611 –> 323630	70	28.8		

Locus 22: *nad*5 intron a/b (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2r	TTTGGCCAAGTATCCTACAA				
		71584 –> 71603	100	49.1		73834 <– 73853	100	50.3	2270	57
Vigna angularis	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2r	TTTGGCCAAGTATCCTACAA				
		120992 –> 121011	100	49.1		118744 <– 118763	100	50.3	2268	57
Vigna radiata	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2r	TTTGGCCAAGTATCCTACAA				
		118473 <– 118492	100	49.1		116224 –> 116243	100	50.3	2269	57
Millettia pinnata	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2	TTTGGCCAAGTATCCTACAA				
		116985 –> 117004	100	49.1		119220 <– 119239	100	50.3	2255	57

Lotus japonicus	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2r	TTTGGCCAAGTATCCTACAA				
		73532 <– 73551	100	49.1		71281 –> 71300	100	50.3	2271	57
		92539 –> 92558	85	29.0						
		291733 –> 291752	85	29.0						
Glycine max	nad5/1	TTTTTTCGGACGTTTTCTAG			nad5/2r	TTTGGCCAAGTATCCTACAA				
		252085 –> 252104	100	49.1		254320 <– 254339	100	50.3	2255	57

Locus 23: *nad*5 intron d/e (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		279736 –> 279755	100	55.4		281047 <– 281066	100	49.2	1331	57
		563870 <– 563889	100	55.4		562559 –> 562578	100	49.2	1331	57
		309974 <– 309993	70	29.4						
		367879 <– 367898	70	29.4						
		437664 <– 437683	70	29.4						
Vigna angularis	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		183939 –> 183958	100	55.4		185255 <– 185274	100	49.2	1336	57
						367370 –> 367389	70	26.4		
						401251 –> 401270	70	20.2		
Vigna radiata	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		324793 <– 324812	100	55.4		323477 –> 323496	100	49.2	1336	57
						35055 –> 35074	70	26.1		
						292633 –> 292652	70	20.2		
Millettia pinnata	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		241833 –> 241852	100	55.4		243149 <– 243168	100	49.2	1336	57
		29337 –> 29356	70	29.4						
		55681 <– 55700	70	29.4						
						31269 –> 31288	75	19.0		
						115933 <– 115952	75	19.0		
						53749 <– 53768	75	19.0		
						328691 –> 328710	70	26.1		
Lotus japonicus	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		222134 –> 222153	100	55.4		223462 <– 223481	100	49.2	1348	57
		196964 <– 196983	65	33.0						
						143573 –> 143592	75	19.0		
Glycine max	nad5/4	CCAATTTTTGGGCCAATTCC			nad5/5r	CATTGCAAAGGCATAATGAT				
		267594 –> 267613	100	55.4		268910 <– 268929	100	49.2	1336	57
						353319 <– 353338	75	19.0		
						59715 –> 59734	70	26.1		

Locus 24: *nad*6 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		100860 –> 100879	98	56.7		101446 <– 101465	100	47.5	606	54
						38170 <– 38189	100	47.5		
Vigna angularis	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		17581 <– 17600	98	56.7		16995 –> 17014	100	47.5	606	54
						134218 –> 134237	65	32.9		
Vigna radiata	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		215244 <– 215263	98	56.7		214658 –> 214677	100	47.5	606	54
						131680 –> 131699	65	32.9		
Millettia pinnata	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		127469 <– 127488	92	51.5		126883 –> 126902	100	47.5	606	54
						155287 –> 155306	90	39.8		
						316209 –> 316228	90	39.8		
						11951 –> 11970	70	39.6		
						260274 –> 260293	70	17.8		
Lotus japonicus	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		234514 –> 234533	92	51.5		235100 <– 235119	100	47.5	606	54
		323310 –> 323329	72	37.9						
		126706 <– 126725	88	49.2						
						305332 –> 305351	90	39.8		
Glycine max	nad6	TGAGTGGGTCWGTCGTCCTC			nad6	TGATACTTTCTGTTTTGTCG				
		159212 –> 159231	68	43.5		159798 <– 159817	100	47.5	606	54
		223637 <– 223656	72	27.2						
						68845 <– 68865	90	39.8		
						303653 –> 303672	70	39.6		
						88148 <– 88167	75	24.3		
						74534 <– 74553	80	23.8		

Locus 25: *nad*7 intron 1/2 (reference: 2, 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)	
Vicia faba	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC					
		226324 <– 226343	100	59.2		225275 –> 225294	100	48.8	1069	55	
		302233 –> 302252	100	59.2		303282 <– 303301	100	48.8	1069	55	
		541373 <–541392	100	59.2		540324 –> 540343	100	48.8	1069	55	
						34233 –> 34252	75	11.3			
						94184 –> 94203	70	27.9			
Vigna angularis	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC					
		356308 –> 356327	100	59.2		357341 <– 357360	100	48.8	1053	55	R primers give 3244 bp product

						354117 –> 354136	75	27.9		
						199933 <– 199952	70	13.5		
						115191 –> 115210	65	22.8		
						266002 <– 266021	75	11.3		
Vigna radiata	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC				
		343682 –> 343701	100	59.2		344715 <– 344734	100	48.8	1035	48.8
						308812 –> 308831	70	13.5		
						284540 –> 284559	75	24.9		
						112666 –> 112685	65	22.8		
						141365 –> 141384	75	11.3		
						126095 <– 126114	65	16.5		
Millettia pinnata	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC				
		410243 –> 410262	100	59.2		411286 <– 411305	100	48.8	1063	55
						345772 –> 345791	80	34.3		
						380632 <– 380651	75	11.3		
						402305 <– 402324	70	12.0		
Lotus japonicus	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC				
		25022 –> 25041	100	59.2		26074 <–26093	100	48.8	1072	55
						6790 –> 6809	75	21.1		
						236621 <– 236640	70	21.1		
						74538 –> 74557	75	11.3		
						273732 –> 273751	75	11.3		
Glycine max	nad7/1	ACCTCAACATCCTGCTGCTC			nad7/2r	CGATCAGAATAAGGTAAAGC				
		170054 –> 170073	100	59.2		171093 <– 171112	100	48.8	1059	55
						180479 –> 180498	75	26.8		
						260412 –> 260431	75	26.8		
						359133 –> 359152	75	26.8		
						237791 <– 237810	75	26.8		
						66485 <– 66504	75	26.8		
						21825 <– 21844	75	11.3		
						289054 <– 298073	70	12.0		

Locus 26: *nad*7 intron 2/3 (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**	
Vicia faba	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		225275 <– 225294	100	49.3		223919 –> 223938	95	49.8	1376	55	F primers give 3990 bp product
		303282 –> 303301	100	49.3		304638 <– 304657	95	49.8	1376	55	
		540324 <– 540343	100	49.3		538968 –> 538987	95	49.8	1376	55	
		221305 –> 221324	70	17.9							
		307252 <– 307271	70	17.9							
		536354 –> 536373	70	17.9							
Vigna angularis	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		357341 –>357360	100	49.3		358711 <– 358730	95	49.8	1390	55	

		344425 –> 344444	75	12.3							
		324826 –> 324845	70	23.3							
Vigna radiata	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		344715 –> 344734	100	49.3		346086 <– 346105	95	49.8	1391	55	
		231076 –> 231095	75	12.3							
		267792 –> 267811	70	23.3							
Millettia pinnata	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		411286 –> 411305	100	49.3		412653 <– 412672	95	49.8	1387	55	
Lotus japonicus	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		26074 –> 26093	100	49.3		27439 <– 27458	95	49.8	1385	55	F primers give 7972 bp product
		34026 <– 34045	70	11.8							
Glycine max	nad7/2	GCTTTACCTTATTCTGATCG			nad7/3r	TGTTCTTGGGCCATCATAGA					
		171093 –> 171112	100	49.3		172457 <– 172476	95	49.8	1384	55	

Locus 27: *nad*7 intron 3/4 (reference: 2, 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		223919 <– 223938	95	48.7		220057 –> 220076	100	52.5	3882	58
		304638 –> 304657	95	48.7		308500 <– 308519	100	52.5	3882	58
		538968 <– 538987	95	48.7		535106 –> 535125	100	52.5	3882	58
						436190 <– 436209	100	52.5		
						366405 <– 366424	100	52.5		
Vigna angularis	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		358711 –> 358730	95	48.7		362576 <– 362595	100	52.5	3885	58
		266477 <– 266496	65	35.9						
						214018 <– 214037	80	16.4		
Vigna radiata	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		346086 –> 346105	95	48.7		349940 <– 349959	100	52.5	3874	58
		140890 –> 140909	65	35.9						
						395462 <– 395481	75	7.4		
Millettia pinnata	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		412653 –> 412672	95	48.7		416523 <– 416542	100	52.5	3890	58
		381115 <– 381134	65	35.9						
		94661 –> 94680	70	13.0						
						200486 <– 200505	70	16.4		
Lotus japonicus	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		27439 –> 27458	95	48.7		31336 <– 31355	100	52.5	3917	58
		203103 –> 203122	65	28.0						
Glycine max	nad7/3	TCTATGATGGCCCAAGAACA			nad7/4r	ACACCAAATTCTCCTTTAGG				
		172457 –> 172476	95	48.7		176325 <– 176344	100	52.5	3888	58
						354979 <– 354998	100	52.5		
						256258 <– 256277	100	52.5		
						280076 <– 280095	65	17.7		

						36516 <– 36535	65	17.7			

Locus 28: *nad*7 intron 4/5 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		222223 <– 222242	97	52.8		220060 –> 220079	100	51.8	2183	60
		306334 –> 306353	97	52.8		308497 <– 308516	100	51.8	2183	60
		537272 <– 537291	97	52.8		535109 –> 535128	100	51.8	2183	60
		17125 –> 17144	72	13.3						
		67213 –> 67232	72	13.3						
						366402 <– 366421	100	51.8		
						436187 <– 436206	100	51.8		
Vigna angularis	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		360433 –> 360452	97	52.8		362573 <– 362592	100	51.8	2160	60
						59241 <– 59260	70	25.3		
Vigna radiata	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		347810 –> 347829	97	52.8		349937 <– 349956	100	51.8	2147	60
						56773 <– 56792	70	25.3		
Millettia pinnata	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		414364 –> 414383	97	52.8		416520 <– 416539	100	51.8	2176	60
		96211 –> 96230	72	13.3						
						332142 –> 332161	65	28.5		
Lotus japonicus	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		29157 –> 29176	97	52.8		31333 <– 31352	100	51.8	2196	60
		371386 <– 371405	72	13.3						
Glycine max	nad5/4	TGTCCTCCATCACGATVTCG			nad5/5	CCAAATTCTCCTTTAGGTGC				
		174175 –> 174194	97	52.8		176322 <– 176341	100	51.8	2167	60
		232196 –> 232215	72	12.3						
		353053 <– 353072	72	13.3						
						354976 <– 354995	100	51.8		
						256255 <– 256274	100	51.8		

Locus 29: *nad*7 intron 4/5 (reference: 4)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC				
		306934 –> 306955	100	63.1		307973 <– 307994	100	64.9	1061	70
		536670 <– 536691	100	63.1		535631 –> 535652	100	64.9	1061	70
		221621 <– 221642	100	63.1		220582 –> 220603	100	64.9	1061	70
Vigna angularis	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC				
		361033 –> 361054	100	63.1		362060 <– 362081	100	64.9	1049	70

Vigna radiata	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC					
		348410 –> 348431	100	63.1		349424 <– 349445	100	64.9	1036	70	
Millettia pinnata	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC					
		414964 –> 414985	100	63.1		415994 <– 416015	100	64.9	1052	70	
Lotus japonicus	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC					
		29757 –> 29778	100	63.1		30820 <– 30841	95	58.5	1085	70	
Glycine max	nad7 innerF1	GAAACGCGGCGGCATAGGAACC			nad7 innerR1	TCCCGCTTCCTCGCATCTGCGC					
		174775 –> 174796	100	63.1		175805 <– 175826	100	64.9	1052	70	

Locus 30: *nad*7 intron 4/5 (reference: 4)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		307486 –> 307509	100	55.9		307400 <– 307422	100	57.8	No product	
		536116 <– 536139	100	55.9		536203 –> 536225	100	57.8	No product	
		221067 <– 221090	100	55.9		221154 –> 221176	100	57.8	No product	
						438673 <– 438695	61	34.3		
						368888 <– 368910	61	34.3		
Vigna angularis	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		361582 –> 361605	96	52.0		361494 <– 361516	100	57.8	No product	
						168560 –> 168582	57	30.7		
						42177 <– 42199	65	26.9		
						178496 –> 178581	65	31.4		
Vigna radiata	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		348946 –> 348969	96	52.0		348858 <– 348880	100	57.8	No product	
						186387 <– 186409	65	26.9		
						330238 <– 330260	65	31.4		
Millettia pinnata	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		415518 –> 415541	96	52.0		415430 <– 415452	100	57.8	No product	
		61674 <– 61697	62	26.5						
Lotus japonicus	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		30338 –> 30361	96	52.0		30250 <– 30272	100	57.8	No product	
						361811 –> 361833	61	19.0		
Glycine max	nad7 innerF2	CCCAATGATAAACCACTAACACCC			nad7 innerR2	GCGAAGCGTTCTATTGGTTTCCC				
		175323 –> 175346	96	52.0		175235 <– 175257	100	57.8	No product	
						88309 <– 88331	57	30.7		
						382385 –> 382407	57	25.1		

Locus 31: *nad*9 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		262573 –> 262592	98	51.9					No product	

		581033 <– 581052	98	51.9						
		110991 –> 111010	78	9.6						
						559153 –> 559172	70	35.5		
						284453 <– 284472	70	35.5		
Vigna angularis	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		291217 –> 291236	98	51.9		291689 <– 291708	100	47.3	492	54
						49189 –> 49208	75	24.4		
Vigna radiata	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		234230 –> 234249	98	51.9		234702 <– 234721	100	47.3	492	54
Millettia pinnata	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		147747 –> 147766	98	51.9		148219 <– 148238	95	41.3	492	54
		308669 –> 308688	98	51.9		309141 <– 309160	95	41.3	492	54
Lotus japonicus	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		256869 –> 256888	98	51.9		257341 <– 257360	100	47.3	492	54
		201634 –> 201653	78	9.6						
Glycine max	nad9	GGTCATCTCAATGGGYTCAG			nad9	TATAGTTGGGAGACTTTACC				
		289644 <– 289663	98	51.9		289172 –> 289191	100	47.3	492	54

Locus 32: *orf*25 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		69633 <– 69652	92	51.5		69148 –> 69167	95	44.9	505	52
		152094 –> 152113	65	36.8						
		166697 –> 1667716	62	6.2						
		146862 <– 146881	72	16.9						
		87214 –> 87233	68	21.9						
						74728 –> 74747	80	15.3		
						525810 <– 525829	75	16.5		
						210761 <– 210780	75	16.5		
Vigna angularis	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		215214 <– 215233	92	51.5		214729 –> 214748	95	44.9	505	52
		296378 <– 296397	60	23.5						
		192210 –> 192229	68	28.6						
		254100 –> 154119	62	6.2						
		106592 –> 106611	72	23.4						
		16874 –> 16893	62	4.0						
						129843 <– 129862	70	20.9		
						250756 <– 250775	75	16.5		
Vigna radiata	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		396662 <– 396681	92	51.5		396177 –> 396196	95	44.9	505	52
		239395 <– 239414	60	23.5						
		316527 <– 316546	68	28.6						
		153509 <– 153528	62	6.2						

		104081 –> 104100	72	23.4						
		214537 –> 214556	62	4.0						
						228290 –> 228309	65	19.2		
						127301 <– 127320	70	20.9		
						387948 <– 387967	70	7.7		
						156851 –> 156870	75	16.5		
Millettia pinnata	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		81997 <– 82016	92	51.5		81512 –> 81531	95	44.9	505	52
		313048 <– 313067	60	23.5						
		152126 <– 152145	60	23.5						
		38926 –> 38945	68	28.6						
		216496 <– 216515	62	6.2						
		383898 <– 383917	72	36.0						
						256570 <– 256589	80	23.9		
						43137 –> 43156	75	21.7		
Lotus japonicus	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		97586 –> 97605	92	51.5		98071 <– 98090	95	44.9	505	52
		21014 –> 21033	68	28.6						
		207945 –> 207964	62	6.2						
		196432 –> 196451	72	23.4						
						70389 <– 70408	85	22.9		
						21576 –> 21595	80	19.9		
						21641 –> 21660	70	25.9		
						147833 <– 147852	65	22.5		
Glycine max	orf25	AAGACCRCCAAGCYYTCTCG			orf25	TTGCTGCTATTCTATCTATT				
		46015 <– 46034	92	51.5		45530 –> 45549	95	44.9	505	52
		25596 <– 25615	65	36.0						
		190673 <– 190692	62	6.2						
		391061 –> 391080	72	23.4						
		159922 <– 159941	62	4.0						
						146289 –> 146308	95	44.9		
						205656 <– 205675	95	44.9		
						194033 –> 194052	75	16.5		

Locus 33: *rpl*5 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		36761 –> 36778	94	44.5		37167 <– 37186	92	40.0	426	52
		435202 <– 435219	94	44.5						
		365417 <– 365434	94	44.5						
		476674 <– 476691	78	19.5						
		240172 <– 240189	78	19.5						

Vigna angularis	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		263811 <– 263828	94	44.5		263403 –> 263422	98	44.8	426	52
		29136 <– 29153	78	19.5						
		399441 –> 399458	72	33.6						
Vigna radiata	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		143555 –> 143572	94	44.5		143961 <– 143980	98	44.8	426	52
		43886 –> 43903	78	19.5						
		290823 –> 290840	72	33.6						
Millettia pinnata	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		378475 <– 378492	94	44.5		378064 –> 378083	98	44.8	429	52
		346441 –> 346458	78	22.8						
						363101 –> 363120	72	19.8		
Lotus japonicus	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		77154 –> 77171	94	44.5		77560 <– 77579	98	44.8	426	52
		276348 –> 276365	94	44.5		276754 <– 276773	98	44.8	426	52
		217745 –> 217762	78	25.1						
						228814 <– 228833	80	11.8		
Glycine max	rpl5	AGTGGTAAAGTCTCATCT			rpl5	ATYGTGTGAAATAAGAGTAG				
		19617 <– 19634	94	44.5		19209 –> 19228	98	44.8	426	52
		92546 –> 92563	78	22.8						

Locus 34: *rps*3 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		502869 <– 502886	100	53.3		500601 –> 500618	97	47.3	2286	59
		187820 <– 187837	100	53.3		185552 –> 185569	97	47.3	2286	59
		552735 –> 552752	78	41.4						
		290873 <– 290890	78	41.4						
Vigna angularis	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		228061 <– 228078	100	53.3		226195 –> 226212	97	47.3	1884	59
		103274 <– 103291	78	28.4						
		117745 –> 117762	78	39.6						
Vigna radiata	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		8228 <– 8245	100	53.3		6366 –> 6383	97	47.3	1880	59
		100763 <– 100780	78	28.4						
		115225 –> 115242	78	39.6						
						9769 –> 9786	75	33.6		
Millettia pinnata	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		293770 <– 293787	100	53.3		291787 –> 291804	97	47.3	2001	59
		91804 <– 91821	72	26.1		91321 –> 91338	69	14.5	501	57
						295317 –> 295334	75	33.6		
						245396 <– 245413	69	26.1		

Lotus japonicus	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		54419 –> 54436	100	53.3		56564 <– 56581	97	47.3	2163	59
		118637 –> 118654	78	41.1						
		252570 <– 252587	78	41.1						
						52878 <– 52895	75	33.6		
Glycine max	rps3	GGCGTATTTCGGATGCTT			rps3	TCAAGTYGGTTCAGTGAG				
		309653 –> 309670	100	53.3		311506 <– 311523	97	47.3	1871	59
						272131 –> 272148	75	24.0		
						308115 <– 308132	75	33.6		

Locus 35: *rps*4 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		400362 –> 400379	94	44.9		401293 <– 401308	100	48.8	947	55
Vigna angularis	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		314583 –> 314600	94	44.9		315514 <– 315529	100	48.4	947	55
		282148 <– 282165	75	27.0						
						109815 <– 109830	88	32.5		
Vigna radiata	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		257574 –> 257591	94	44.9		258505 <– 258520	100	48.4	947	55
						107304 <– 107319	88	32.5		
Millettia pinnata	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		146071 –> 146088	94	44.9		147002 <– 147017	100	48.4	947	55
		306993 –> 307010	94	44.9		307924 <– 307939	100	48.4	947	55
		161021 –> 161038	78	24.9						
						251095 –> 251110	88	32.5		
						49296 <– 49311	81	32.1		
Lotus japonicus	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		180836 –> 180853	94	44.9		181767 <– 181782	100	48.4	947	55
						85732 –> 85747	81	32.1		
						284926 –> 284941	81	32.1		
						49607 <– 49622	88	32.5		
Glycine max	rps4	CSTTTCYGCTCCGAAGAG			rps4	TCTCCGAAGATTGAGG				
		250451 <– 250468	94	44.9		249522 –> 249537	100	48.4	947	55
		224377 <– 224394	75	25.4						
						247664 <– 247679	81	32.1		

Locus 36: *rps*12-1/*nad*3-2 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		364685 <– 364704	100	50.4		364312 –> 364331	90	46.9	393	56

						25644 –> 25663	90	46.8		
						521806 <– 521825	90	48.1		
						206757 <– 206776	90	48.1		
Vigna angularis	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		171122 <– 171141	100	50.4		170753 –> 170772	90	46.9	389	56
						54556 –> 54575	60	34.3		
						135943 <– 135962	65	20.7		
Vigna radiata	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		335961 –> 335980	100	50.4		336330 <– 336349	90	46.9	389	56
						52084 –> 52103	60	34.3		
						133405 <– 133414	65	20.7		
Millettia pinnata	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		342441 <– 342460	100	50.4		342068 –> 342087	95	52.5	393	56
						185511 –> 185530	68	13.2		
						13650 <– 13669	65	20.7		
Lotus japonicus	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		333314 <– 333333	100	50.4		332941 –> 332960	95	52.5	393	56
Glycine max	rps12	TTTCTTCTCTACCATGACGA			nad3	TGATCCYACTCGGTSTTCCT				
		43355 <– 43374	100	50.4		42982 –> 43001	90	46.9	393	56
						73302 –> 73321	68	13.2		
						305360 <– 305379	65	20.7		
						29677 <– 29696	65	24.6		

Locus 37: *rps*12-2/*nad*3-1 (reference: 3)

Species	**F primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**R primer**	**5'-3' position and orientation**	**Com (%)**	***Tm* (°C)**	**Fragm length**	***Ta* (°C)**
Vicia faba	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		364996 <– 365015	93	46.2		364562 –> 364581	84	34.0	454	52
		227862 –> 227881	68	27.3		230717 <– 230736	64	10.5	2875	54
		300695 <– 300714	68	27.3		297840 –> 297859	64	10.5	2875	54
		542911 –> 542930	68	27.3		545766 <– 545785	64	10.5	2875	54
		71337 <– 71356	68	21.7						
		237146 –>237168	63	4.0						
		473651 –> 473670	63	4.0						
		180810 –> 180829	58	4.0						
		495859 –> 495878	58	4.0						
		109030 <– 109049	68	4.0						
		108927 <– 108946	63	26.4						
						194772 –> 194791	59	14.2		
						509821 –> 509840	59	14.2		
						138565 –> 138584	67	10.6		
						19583 –> 19602	69	9.7		
						325544 –> 325563	62	4.0		

						429479 –> 429498	64	4.0		
Vigna angularis	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		252416 <– 252435	63	4.0		249094 –> 249113	64	6.8	3342	54
		171433 <– 171452	93	46.2		171003 –> 171022	84	34.0	450	52
		121239 –> 121258	63	22.1						
		28222 <– 28241	63	10.9						
		349344 <– 349363	68	27.3						
						240794 –> 240813	59	23.3		
						271471 <– 271490	74	13.8		
Vigna radiata	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		335650 –> 335669	93	46.2		336080 <– 336099	84	34.0	450	52
		155187 –> 155206	63	4.0						
		118720 –> 118739	68	21.7						
		44798 –> 44817	63	10.9						
		279776 <– 279795	68	27.3						
						29230 –> 29249	64	6.8		
Millettia pinnata	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		342752 <– 342771	93	46.2		342318 –> 342337	84	34.0	454	52
		116754 <– 116773	63	22.1						
		22755 <– 22774	73	4.0						
		408687 <– 408706	68	27.3						
		166630 –> 166649	58	4.0						
		360939 –> 360958	68	4.0						
		6749 –> 6768	58	9.4						
						394995 <– 395014	64	11.1		
						26833 <– 26852	67	10.6		
Lotus japonicus	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		333625 <– 333644	93	46.2		333191 –> 333210	84	34.0	454	52
		341509 <– 341528	58	4.4						
		23477 <– 23496	68	27.3						
		347382 <– 347401	68	4.0						
		347279 <– 347298	63	26.4						
						230822 <– 230841	69	9.5		
Glycine max	rps12	ACCATATTTDGATCTGCCDC			nad3	YACGATHGGATTTCTMTATG				
		43666 <– 43685	93	46.2		43232 –> 43251	84	34.0	454	52
		251840 <– 251859	68	21.7						
		400239 –> 400258	73	4.0						
		168511 <– 168530	68	27.3						
		1048 –> 1067	63	4.3						
						199839 <– 199858	59	12.7		
						399231 <– 399250	69	11.6		
						347396 –> 347415	67	14.6		

Locus 38: *rps*14-cob (reference: 1)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		36501 <– 36520	100	52.0		35125 –> 35144	100	52.0	1396	58
Vigna angularis	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		264069 –> 264088	100	65.0		265110 <– 265129	95	48.0	1061	58
Vigna radiata	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		143295 <– 143314	100	65.0		142257 –> 142276	95	48.0	1058	58
						188424 –> 188443	70	36.2		
Millettia pinnata	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		378733 –> 378752	100	65.0		379740 <– 379759	100	52.4	1027	58
Lotus japonicus	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		276088 <– 276107	100	65.0		274624 –> 274643	100	52.4	1484	58
		76894 <– 76913	100	65.0		75430 –> 75449	100	52.4	1484	58
Glycine max	rps14	CACGGGTCGCCCTCGTTCCG			cob	GTGTGGAGGATATAGGTTGT				
		19879 –> 19898	100	65.0		20933 <– 20952	95	48.0	1074	58

Locus 39: *rrn*5/*rrn*18-1 (reference: 3)

Species	F primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	R primer	5'-3' position and orientation	Com (%)	*Tm* (°C)	Fragm length	*Ta* (°C)
Vicia faba	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		320283 –> 320302	100	59.2		320541 <– 320560	100	54.4	278	61
		53713 –> 53732	80	43.5						
Vigna angularis	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		125741 –> 125760	100	59.2		125991 <– 126010	100	54.4	270	61
		203511 <– 203530	75	38.2						
Vigna radiata	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		123199 –> 123218	100	59.2		123449 <– 123468	100	54.4	270	61
		305238 –> 305257	75	38.2						
Millettia pinnata	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		399440 –> 399459	100	59.2		399690 <– 399709	100	54.4	270	61
Lotus japonicus	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		176770 <– 176789	100	59.2		176512 –> 176531	100	54.4	278	61
		10416 –> 10435	75	46.2						
Glycine max	rrn5	GAGGTCGGAATGGGATCGGG			rrn18-1	GGGTGAAGTCGTAACAAGGT				
		295167 –> 295186	100	59.2		295411 <– 295430	100	54.4	264	61
		87770 –> 87789	75	38.2						
		153537 –> 153556	75	46.2						
						243391 –> 243410	80	34.2		
						395326 <– 395345	80	34.2		
						5573 <– 5592	95	50.9		
						202913 –> 202932	85	45.6		

Position and orientation of primers in mtDNA genomes; Com - complementarity of a primer and template DNA expressed through the percentage of binding nucleotides; *Tm* – melting temperature of a primer in °C; Fragm length – the length of the PCR products obtained via *in silico* PCR method; *Ta* – annealing temperature of a primer pair in °C; * - primer *nad*4 exon2 is not located within exon2 but within exon1.

References:

1 – DEMESURE, B., N. SODZI and R.J. PETIT (1995): A set of universal primers for amplification of polymorphic non-coding regions of mitochondrial and chloroplast DNA in plants. Mol. Ecol. *4*: 129-134.

3 - DUMINIL, J., M.H. PEMONGE and R.J. PETIT (2002): A set of 35 consensus primer pairs amplifying genes and introns of plant mitochondrial DNA. Mol. Ecol. Notes *2*: 428-430.

2 – DUMOLIN-LAPEGUE, S., M.H. PEMONGE and R.J. PETIT (1997): An enlarged set of consensus primers for the study of organelle DNA in plants. Mol. Ecol. *6*: 393-397.

4 – HAVANANDA, T., E.C. BRUMMER, I.J. MAUREIRA-BUTLER and J.J. DOYLE (2010): Relationships among diploid members of the *Medicago sativa* (Fabaceae) species complex based on chloroplast and mitochondrial DNA sequences. Syst. Bot. *35*: 140-150.