

COMMERCIAL VOLUME TABLES

FOR THE

FOREST TREES OF KERALA

(F. D. 1954)

By

N. R. NAIR

Government of Madras

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Data Collection:

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### Abbreviations Used

- B. G. — Breast Height Girth over Bark in Cms.  
C. V. — Volume of Commercial round timber under Bark  
in Cu. ms. ( $G/4$  Volume)  
F. W. — Fuel Wood billets (Stacked Volume in Cu. ms.)

 — Figures within thick lines are extrapolations



## INTRODUCTION

The object of preparation of Volume Tables for the Forest Trees of Kerala has been, to replace the practice of estimation of yield of timber and firewood from coupes by methods based on ocular estimate of timber height, application of arbitrary conversion factors etc, by a more reliable method. The Pre-Investment Survey of Forest Resources, New Delhi, have compiled Volume Tables for this Zone and this can be seen in Technical Report No. 1 of INDIA 23, Project - Preinvestment Study of Forest Resources issued by the F. A. O.

The work on data collection for this project commenced from September 1968 and is still continuing. Data processing is also continuing. However it was felt that as an interim step, Commercial Volume Tables for 31 species, which could be compiled so far, may be released for verification and application in the field. To bring all trees available in a coupe within the ambit of Volume Tables so as to facilitate exhaustive evaluation of a coupe, two collated tables have been prepared meant for 'other' miscellaneous species by forming two groups arbitrarily viz. the Evergreen and the Deciduous Miscellaneous Species.

The Methodology adopted for compilation of these tables has been Regression Analysis. Among several equations tried, the equation chosen for the compilation of these tables is  $V = a + bD + cD^2$  where  $V$  = Volume in Cu. M. and  $D$  = Diameter at breast height in Metres. The Volume of Fuelwood billets noted in these tables has been worked out by taking the difference between the total and the Commercial Volumes and applying a conversion factor of 1.51 for converting the growing

stock volume to stacked volume. Since these are only Provisional Tables, details of Methodology, Results of Analysis Variance etc. are not given. The work is continuing and as soon as it is completed conventional Volume Tables will be compiled and released.

Even at this interim stage I acknowledge the valuable services rendered by Shri A. N. Chaturvedi, I. F. S., Forest Research Institute, Dehra Dun and Shri P. S. Janardanan Nair, Reader, University Centre, Trivandrum in this work. The guidance and patronisation extended to this work by Sarvashree K. Narayana-Pillai, I. F. S. (Retd.), P. T. Devassy, I. F. S., K. K. Nair, I. F. S. and G. Moni, I. F. S., are also gratefully acknowledged.

Trivandrum,  
13-12-1971.

N. R. NAIR,  
Dy. Conservator of Forests.



# INDEX TO SCIENTIFIC AND VERNACULAR NAMES

Sl. No.	Scientific Name	Vernacular Name
1.	<i>Dipterocarpus bourdillonii</i>	Karanjily
2.	<i>Dichopsis ellipticum</i>	Pali
3.	<i>Poyalthia fragrans</i>	Nedunar
4.	<i>Valeria indica</i>	Vellapine
5.	<i>Dysoxylum malabaricum</i>	Vellakil
6.	<i>Machilus macrantha</i>	Kulamavu
7.	<i>Tetrameles nudiflora</i>	Cheeni
8.	<i>Bombax malabaricum.</i>	Elavu
9.	<i>Myristica attenuata</i>	Chora pathri
10.	<i>Dalbergia latifolia</i>	Rosewood
11.	<i>Hopea parviflora</i>	Kambagam
12.	<i>Myristica laurifolia</i>	Chorapine
13.	<i>Terminalia paniculata</i>	Maruthy
14.	<i>Sterculia alata</i>	Pothundy

15. <i>Lagerstroemia lanceolata</i>	Venteak
16. <i>Mesua ferrea</i>	Nangu
17. <i>Schleichera oleosa</i>	Poovam
18. <i>Cullenia excelsa</i>	Vediplavu
19. <i>Elaeocarpus serratus</i>	Kara
20. <i>Lophopetalum wightianum</i>	Venkotta
21. <i>Adina cordifolia</i>	Manjakadambu
22. <i>Lagerstroemia flos-reginae</i>	Manimaruthy
23. <i>Bridelia retusa</i>	Mulluvengai
24. <i>Pterocarpus marsupium</i>	Vengai
25. <i>Dysoxylum purpureum</i>	Karakil
26. <i>Artocarpus hirsuta</i>	Anjily
27. <i>Xylia xylocarpa</i>	Irul
28. <i>Tectona grandis</i>	Teak
29. <i>Dillenia pentagyna</i>	Punna
30. <i>Terminalia tomentosa</i>	Thembavu
31. <i>Grewia tiliaefolia</i>	Unnam



# DISTRIBUTION OF SAMPLE TREES BY 10 cms DIAMETER CLASSES

Species	Diameter classes									Total
	20-30 Λ	30-40 Λ	40-50 Λ	50-60 Λ	60-70 Λ	70-80 Λ	80-90 Λ	90-100 Λ	100 Λ	
<i>Dipterocarpus bourdillonii</i>	14	21	1	3	4	6	6	3	7	65
<i>Dichopsis ellipticum</i>	29	8	2	7	8	6	3	1	-	64
<i>Polyalthia fragrans</i>	10	22	17	12	-	-	-	-	-	61
<i>Vateria indica</i>	21	27	14	19	14	12	8	5	5	125
<i>Dysoxylum malabaricum</i>	7	2	6	2	1	5	6	1	2	32
<i>Machilus macrantha</i>	8	14	19	13	6	2	-	2	1	65
<i>Tetrameles nudiflora</i>	12	7	4	5	-	1	1	3	3	36
<i>Bombax malabarica</i>	4	5	3	4	8	3	5	5	3	40
<i>Myristica attenuata</i>	23	36	26	16	1	-	-	-	-	102
<i>Dalbergia latifolia</i>	14	4	9	5	4	7	1	1	-	45
<i>Hopea parviflora</i>	12	8	6	3	-	4	5	3	3	44
<i>Myristica laurifolia</i>	-	9	8	7	2	1	-	-	-	27
<i>Terminalia paniculata</i>	99	52	90	79	34	19	8	6	3	390
<i>Sterculia alata</i>	4	8	8	5	2	-	2	-	1	30
<i>Lagerstroemia lanceolata</i>	72	72	117	139	85	45	19	10	3	562

Species	Diameter Classes									Total
	20-30 Λ	30-40 Λ	40-50 Λ	50-60 Λ	60-70 Λ	70-80 Λ	80-90 Λ	90-100 Λ	100 Λ	
<i>Mosua ferrea</i>	5	10	6	13	7	3	2	-	-	46
<i>Schleichera trijuga</i>	15	9	13	3	1	1	1	-	-	43
<i>Cullenia excelsa</i>	6	3	6	2	3	1	-	-	-	26
<i>Elaeocarpus serratus</i>	9	12	16	6	4	4	-	-	-	51
<i>Lophopetalum wightianum</i>	11	6	9	2	5	1	4	-	1	39
<i>Adina cordifolia</i>	-	4	4	7	7	3	3	2	1	31
<i>Lagerstroemia flos-reginae</i>	7	4	27	20	20	6	1	1	-	86
<i>Bridelia retusa</i>	5	11	7	3	6	-	-	-	-	32
<i>Pterocarpus marsupium</i>	18	38	44	30	8	4	2	-	-	144
<i>Dysoxylum purpureum</i>	14	18	9	11	7	1	3	-	-	63
<i>Artocarpus hirsuta</i>	16	1	4	5	1	2	-	1	1	31
<i>Xylia xylocarpa</i>	109	91	195	132	37	6	-	-	-	570
<i>Tectona grandis</i>	23	54	58	65	34	11	7	-	3	25
<i>Dillenia pentagyna</i>	46	48	23	7	4	-	-	-	-	128
<i>Terminalia tomentosa</i>	59	34	63	56	40	17	2	3	2	276
<i>Grewia tiliacfolia</i>	14	28	32	13	6	1	2	-	-	196



## Commercial Volume

Values of a, b and c in the equation  $V = a + bd + cd^2$   
(for 31 Species)

Sl. No.	Species	a	b	c	r <sup>2</sup>	*F. ratio
1.	<i>Dipterocarpus-bourdillonii</i>	-1.433022	3.916052	7.775132	0.931	418.6
2.	<i>Dichopsis ellipticum</i>	0.036107	-1.295712	8.033685	0.909	307.2
3.	<i>Vateria indica</i>	0.717601	-4.044415	9.919354	0.867	398.6
4.	<i>Polyalthia fragrans</i>	-0.080422	-1.162418	8.715254	0.816	129.3
5.	<i>Dysoxylum malabaricum</i>	1.342651	-7.834831	13.929670	0.932	199.8
6.	<i>Myristica attenuata</i>	0.451737	-3.804577	10.948502	0.789	185.0
7.	<i>Myristica laurifolia</i>	-0.216087	0.438974	6.301855	0.683	25.9
8.	<i>Sterculia alata</i>	-0.782441	2.896134	3.295556	0.910	137.4
9.	<i>Schleichera oleosa</i>	0.385655	-2.508242	6.639059	0.815	88.4
10.	<i>Mesua ferrea</i>	0.315445	-2.395166	7.699981	0.834	108.1
11.	<i>Elaeocarpus serratus</i>	-0.621973	2.392965	4.081722	0.744	70.1
12.	<i>Cullenia excelsa</i>	0.137388	-1.549067	6.068676	0.929	151.5
13.	<i>Lophopetalum-wightianum</i>	0.870546	-4.882029	9.570694	0.611	23.3
14.	<i>Macaranga pelata</i>	-0.490600	1.701385	3.038716	0.732	69.7

Sl. No	Species	a	b	c	r <sup>2</sup>	*F. ratio
15.	<i>Dysoxylum purpureum</i>	-0.548662	2.177142	2 645064	0.862	188.8
16.	<i>Pterocarpus marsipium</i>	-0.425493	1.243644	3.206652	0.824	331.8
17.	<i>Dillenia pentagyna</i>	-0.791294	3.338083	0.306723	0.829	303.3
18.	<i>Xylia xylocarpa</i>	0.064199	-1.090878	5.502225	0.415	201.7
19.	<i>Terminalia tomentosa</i>	-0.720013	2.808355	1.684682	0.700	319.3
20.	<i>Grewia tiliaefolia</i>	-0.347227	1.655606	1.302804	0.664	92.1
21.	<i>Tectona grandis</i>	0.410739	-2.406221	7.200363	0.949	2383.1
22.	<i>Lagerstromia flos-reginae</i>	-0.287311	0.012274	4.627720	0.661	81.1
23.	<i>Bridelia retusa</i>	0.208106	-1.624825	5.071093	0.801	58.4
24.	<i>Adina cordifolia</i>	-0.508148	1.367714	2.961115	0.880	103.6
25.	<i>Lagerstroemia lanceolata</i>	0.234492	-1.697749	6.570281	0.674	578.2
26.	<i>Terminalia paniculata</i>	0.463284	-3.309048	8.208189	0.826	924.2
27.	<i>Dalbergia latifolia</i>	0.805533	-5.587605	11.152568	0.917	233.9
28.	<i>Hopea parviflora</i>	-1.414983	5.843762	0.380192	0.868	135.1
29.	<i>Bombax malabaricum</i>	-0.727006	2.214744	5.470215	0.899	165.4
30.	<i>Tetrameles nudiflora</i>	0.777642	-4.634133	9.535034	0.851	95.0
31.	<i>Machilus macrantha</i>	-0.514247	1.302517	5.026608	0.853	180.2

\*All r<sup>2</sup> values are highly significant.



## KARANJILY

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	...	...	245	6.350	3.211
85	0.196	...	255	6.868	3.628
95	0.462	...	265	7.402	4.070
105	0.744	0.008	275	7.953	4.536
115	1.042	0.074	285	8.518	5.028
125	1.356	0.165	295	9.100	5.544
135	1.686	0.281	305	9.697	6.086
145	2.031	0.422	315	10.310	6.653
155	2.392	0.589	325	10.939	7.244
165	2.768	0.780	335	11.584	7.862
175	3.161	0.996	345	12.244	8.502
185	3.569	1.237	355	12.920	9.170
195	3.993	1.504	365	13.612	9.861
205	4.433	1.796	375	14.320	10.579
215	4.889	2.112	385	15.043	11.320
225	5.360	2.453	395	15.782	12.088
253	5.847	2.280	405	16.537	12.879

## PALI

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.185	0.076	245	3.912	4.771
85	0.274	0.076	255	4.277	5.483
95	0.379	0.076	265	4.659	6.245
105	0.500	0.068	275	5.058	7.057
115	0.638	0.085	285	5.472	7.919
125	0.792	0.144	295	5.903	8.832
135	0.963	0.254	305	6.350	9.796
145	1.149	0.414	315	6.814	10.808
155	1.352	0.624	325	7.293	11.871
165	1.572	0.883	335	7.789	12.985
175	1.807	1.195	345	8.302	14.148
185	2.059	1.554	355	8.830	15.361
195	2.327	1.966	365	9.375	16.625
205	2.611	2.426	375	9.936	17.940
215	2.912	2.937	385	10.513	19.303
225	3.229	3.499	395	11.107	20.718
235	3.562	4.111	405	11.717	22.183



## NEDUNAR

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.139	—	245	4.314	4.700
85	0.243	—	255	4.718	5.348
95	0.365	0.173	265	5.140	6.039
105	0.505	0.173	275	5.580	6.773
115	0.662	0.216	285	6.038	7.551
125	0.837	0.301	295	6.513	8.372
135	1.029	0.430	305	7.006	9.236
145	1.240	0.601	315	7.516	10.143
155	1.468	0.817	325	8.044	11.094
165	1.713	1.075	335	8.590	12.088
175	1.976	1.377	345	9.153	13.126
185	2.257	1.721	355	9.735	14.205
195	2.556	2.110	365	10.333	15.330
205	2.872	2.541	375	10.950	16.496
215	3.206	3.016	385	11.584	17.707
225	3.557	3.534	395	12.236	18.961
235	3.927	4.096	405	12.905	20.258

## VELLAPINE

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.317	0.121	245	3.596	4.018
85	0.349	0.176	255	3.970	4.443
95	0.402	0.254	265	4.364	4.891
105	0.474	0.351	275	4.778	5.360
115	0.566	0.471	285	5.212	5.852
125	0.679	0.613	295	5.666	6.365
135	0.811	0.777	305	6.140	6.899
145	0.964	0.962	315	6.635	7.456
155	1.137	1.169	325	7.149	8.035
165	1.330	1.398	335	7.684	8.634
175	1.543	1.650	345	8.239	9.257
185	1.776	1.922	355	8.813	9.900
195	2.029	2.216	365	9.408	10.567
205	2.303	2.534	375	10.023	11.254
915	2.596	2.872	385	10.658	11.963
225	2.909	3.232	395	11.314	12.695
235	3.243	3.614	405	11.989	13.448



## VELLAKIL

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.266	.....	245	3.704	3.393
85	0.243	0.115	255	4.161	3.683
95	0.247	0.244	265	4.645	3.982
105	0.280	0.386	275	5.158	4.291
115	0.341	0.534	285	5.699	4.612
125	0.431	0.695	295	6.268	4.941
135	0.548	0.865	305	6.866	5.281
145	0.694	1.044	315	7.491	5.630
155	0.868	1.234	325	8.145	5.990
165	1.070	1.435	335	8.827	6.359
175	1.301	1.644	345	9.538	6.738
185	1.559	1.864	355	10.276	7.129
195	1.846	2.093	365	11.043	7.528
205	2.161	2.333	375	11.838	7.938
215	2.505	2.584	385	12.661	8.357
225	2.876	2.843	395	13.513	8.786
235	3.276	3.113	405	14.392	9.225

## KULAMAVU

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.083	0.181	245	3.559	3.449
85	0.206	0.238	255	3.855	3.792
95	0.339	0.313	265	4.161	4.153
105	0.483	0.404	275	4.478	4.530
115	0.636	0.512	285	4.804	4.924
125	0.800	0.636	295	5.141	5.36
135	0.974	0.779	305	5.488	5.764
145	1.158	0.937	315	5.845	6.209
155	1.352	1.111	325	6.213	6.672
165	1.556	1.304	335	6.590	7.150
175	1.771	1.513	345	6.978	7.645
185	1.996	1.740	355	7.376	8.158
195	2.231	1.983	365	7.784	8.688
205	2.476	2.242	375	8.203	9.232
215	2.731	2.518	385	8.631	9.796
225	2.997	2.811	395	9.070	10.376
235	3.273	3.121	405	9.519	10.972



## CHEENI

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.203	0.144	245	2.924	3.028
85	0.208	0.144	255	3.258	3.393
95	0.233	0.162	265	3.611	3.780
105	0.277	0.202	275	3.984	4.188
115	0.341	0.263	285	4.375	4.618
125	0.423	0.345	295	4.787	5.070
135	0.526	0.449	305	5.217	5.544
145	0.647	0.575	315	5.667	6.039
155	0.788	0.723	325	6.136	6.556
165	0.948	0.891	335	6.625	7.094
175	1.127	1.082	345	7.133	7.655
185	1.326	1.295	355	7.660	8.237
195	1.545	1.530	365	8.206	8.841
205	1.781	1.787	375	8.772	9.466
215	2.038	2.064	385	9.357	10.113
225	2.314	2.364	395	9.962	10.782
235	2.609	2.685	405	10.586	11.473

## ELAVU

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.113	0.164	245	4.327	1.639
85	0.273	0.164	255	4.675	1.844
95	0.443	0.164	265	5.033	2.063
105	0.624	0.170	275	5.403	2.295
115	0.817	0.188	285	5.784	2.540
125	1.020	0.220	295	6.176	2.798
135	1.235	0.264	305	6.579	3.069
145	1.461	0.323	315	6.993	3.355
155	1.697	0.395	325	7.418	3.654
165	1.945	0.480	335	7.855	3.965
175	2.204	0.578	345	8.302	4.290
185	2.474	0.689	355	8.761	4.628
195	2.755	0.814	365	9.230	4.981
205	3.047	0.953	375	9.711	5.345
215	3.351	1.104	385	10.203	5.723
225	3.665	1.269	395	10.705	6.116
235	3.991	1.448	405	11.219	6.520



## CHORAPATHRI

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.167	0.172	245	4.143	1.013
85	0.224	0.226	255	4.577	1.055
95	0.302	0.279	265	5.033	1.099
105	0.403	0.332	275	5.511	1.142
115	0.526	0.386	285	6.011	1.183
125	0.671	0.437	295	6.533	1.224
135	0.839	0.489	305	7.077	1.264
145	1.028	0.539	315	7.644	1.304
155	1.240	0.589	325	8.233	1.143
165	1.474	0.639	335	8.844	1.383
175	1.730	0.688	345	9.477	1.421
185	2.008	0.736	355	10.133	1.459
195	2.308	0.783	365	10.810	1.495
205	2.631	0.830	375	11.510	1.532
215	2.976	0.877	385	12.232	1.567
225	3.343	0.923	395	12.976	1.601
235	3.732	0.967	405	13.743	1.636

## ROSEWOOD

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.107	0.043	245	3.231	3.016
85	0.110	0.270	255	3.613	3.132
95	0.136	0.490	265	4.028	3.241
105	0.184	0.704	275	4.460	3.344
115	0.255	0.912	285	4.915	3.441
125	0.348	1.113	295	5.392	3.532
135	0.464	1.307	305	5.893	3.616
145	0.602	1.495	315	4.415	3.692
155	0.764	1.676	325	6.961	3.763
165	0.947	1.852	335	7.549	3.827
175	1.154	2.019	345	8.119	3.885
185	1.383	2.181	355	8.732	3.936
195	1.634	2.336	365	9.368	3.980
205	1.908	2.485	375	10.026	4.018
215	2.205	2.628	385	10.707	4.050
225	2.524	2.764	395	11.411	4.074
235	2.866	2.893	405	12.137	4.094



## KAMBAGAM

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.002	0.257	245	3.374	3.581
85	0.194	0.293	255	3.579	3.954
95	0.387	0.349	265	3.785	4.351
105	0.581	0.425	275	3.992	4.765
115	0.775	0.521	285	4.199	5.199
125	0.970	0.636	295	4.408	5.653
135	1.166	0.773	305	4.617	6.128
145	1.363	0.927	315	4.827	6.623
155	1.561	1.104	325	5.037	7.136
165	1.759	1.299	335	5.249	7.670
175	1.958	1.515	345	5.461	8.225
185	2.158	1.750	355	5.674	8.798
195	2.359	2.005	365	5.888	9.393
205	2.560	2.280	375	6.102	10.007
215	2.762	2.576	385	6.317	10.641
225	2.965	2.890	395	6.534	11.294
235	3.169	3.246	405	6.750	11.968

## CHORAPINE

B. G	C. V	F. W	B. G	C. V	F. W.
75	0.248	0.153	245	3.959	1.670
85	0.364	0.159	255	4.292	1.852
95	0.493	0.178	265	4.638	2.043
105	0.635	0.205	275	4.997	2.247
115	0.789	0.243	285	5.368	2.459
125	0.956	0.290	295	5.753	2.682
135	1.136	0.348	305	6.150	2.916
145	1.329	0.417	315	6.560	3.159
155	1.535	0.496	325	6.982	3.414
165	1.753	0.584	335	7.418	3.678
175	1.984	0.685	345	7.866	3.953
185	2.228	0.794	355	8.327	4.237
195	2.484	0.914	365	8.801	4.533
205	2.754	1.044	375	9.287	4.838
215	3.036	1.186	385	9.786	5.154
225	3.331	1.336	395	10.298	5.480
235	3.638	1.498	405	10.823	5.817



## MARUTHY

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.141	0.090	245	2.875	3.546
85	0.169	0.247	255	3.185	3.801
95	0.213	0.410	265	3.512	4.062
105	0.274	0.578	275	3.856	4.329
115	0.352	0.753	285	4.217	4.603
125	0.446	0.934	295	4.594	4.880
135	0.557	1.119	305	4.987	5.164
145	0.685	1.312	315	5.398	5.454
155	0.829	1.509	325	5.825	5.750
165	0.990	1.712	335	6.268	6.052
175	1.167	1.920	345	6.728	6.359
185	1.361	2.136	355	7.205	6.673
195	1.572	2.356	365	7.699	6.992
205	1.799	2.582	375	8.209	7.317
215	2.043	2.814	385	8.735	7.646
225	2.304	3.053	395	9.279	7.983
235	2.581	3.297	405	9.839	8.325

## POTHUNDY

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0 097	...	245	3.480	3.195
85	0.242	0.032	255	3.740	3.479
95	0.395	0.155	265	4.005	3.772
105	0.554	0.285	275	4.278	4.077
115	0.719	0.428	285	4.557	4.392
125	0.892	0.580	295	4.843	4.715
135	1.071	0.742	305	5.135	5.049
145	1.256	0.915	315	5.435	5.393
155	1.449	1.098	325	5.741	5.749
165	1.648	1.290	335	6.053	6.113
175	1.853	1.492	345	6.372	6.488
185	2.066	1.705	355	6.698	6.874
195	2.285	1.928	365	7.031	7.268
205	2.511	2.162	375	7.370	7.673
215	2.743	2.405	385	7.716	8.089
225	2.982	2.658	395	8.069	8.514
235	3.228	2.922	405	8.428	8.950



## VENTEAK

B. G	C. V	F. W	B. G	C. V.	F. W.
75	0.204	0.247	245	2.906	3.123
85	0.256	0.291	255	3.185	3.432
95	0.322	0.351	265	3.477	3.759
105	0.401	0.427	275	3.783	4.100
115	0.493	0.516	285	4.102	4.457
125	0.599	0.624	295	4.434	4.830
135	0.718	0.745	305	4.779	5.219
145	0.851	0.883	315	5.138	5.623
155	0.996	1.037	325	5.510	6.042
165	1.115	1.205	335	5.895	6.477
175	1.328	1.390	345	6.294	6.930
185	1.513	1.591	355	6.706	7.396
195	1.712	1.806	365	7.131	6.968
205	1.924	2.039	375	7.569	8.376
215	2.150	2.286	385	8.021	8.891
225	2.389	2.549	395	8.487	9.421
235	2.641	2.828	405	8.965	9.966

## NANGU

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.182	0.036	245	3.131	2.872
85	0.231	0.209	255	3.444	3.031
95	0.295	0.381	265	3.774	3.192
105	0.375	0.551	275	4.119	3.352
115	0.470	0.723	285	4.480	3.510
125	0.581	0.891	295	4.856	3.667
135	0.708	1.060	305	5.248	3.825
145	0.850	1.228	315	5.655	3.982
155	1.008	1.395	325	6.078	4.137
165	1.181	1.562	335	6.517	4.291
175	1.371	1.729	345	6.971	4.446
185	1.575	1.894	355	7.441	4.600
195	1.795	2.058	365	7.927	4.753
205	2.031	2.222	375	8.428	4.905
215	2.283	2.386	385	8.944	5.056
225	2.550	2.549	395	9.477	5.208
235	2.832	2.711	405	10.024	5.359



## POOVAM

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.165	0.147	245	2.467	3.531
85	0.193	0.260	255	2.724	3.827
95	0.234	0.383	265	2.994	4.134
105	0.289	0.516	275	3.277	4.452
115	0.357	0.662	385	3.574	4.782
125	0.439	0.817	295	3.884	5.120
135	0.534	0.984	305	4.208	5.471
145	0.642	1.161	315	4.545	5.832
155	1.764	1.350	325	4.896	6.206
165	0.900	1.548	335	5.260	6.588
175	1.049	1.758	345	5.638	6.981
185	1.211	1.979	355	6.029	7.387
195	1.387	2.210	365	6.433	7.803
205	1.576	2.453	375	6.851	8.229
215	1.779	2.707	385	7.283	8.666
225	1.995	2.969	395	7.727	9.144
235	2.224	3.244	405	8.186	9.573

## VEDIPLAVU

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.113	0.178	245	2.620	3.192
85	0.163	0.229	255	2.878	3.511
95	0.224	0.296	265	3.149	3.847
105	0.298	0.380	275	3.431	4.197
115	0.384	0.477	285	3.727	4.563
125	0.482	0.592	295	4.034	4.946
135	0.592	0.721	305	4.353	5.389
145	0.715	0.867	315	4.685	5.758
155	0.850	1.029	325	5.030	6.187
165	0.998	1.207	335	5.386	6.632
175	1.158	1.400	345	5.755	7.094
185	1.330	1.609	355	6.136	7.570
195	1.514	1.832	365	6.529	8.062
205	1.711	2.074	375	6.935	8.571
215	1.920	2.330	385	7.353	9.094
225	2.141	2.602	395	7.783	9.635
235	2.374	2.889	405	8.226	10.190



## KARA

B. G	C. V	F. W	B. G	C. V	F. W.
75	0.182	0.178	245	3.727	1.658
85	0.324	0.191	255	4.010	1.826
95	0.475	0.216	265	4.301	2.005
105	0.634	0.247	275	4.600	2.192
115	0.801	0.288	285	4.908	2.388
125	0.976	0.339	295	5.224	2.594
135	1.160	0.399	305	5.548	2.808
145	1.352	0.468	315	5.881	3.033
155	1.552	0.545	325	6.222	3.265
165	1.761	0.633	335	6.571	3.508
175	1.978	0.729	345	6.928	3.759
185	2.203	0.833	355	7.294	4.020
195	2.436	0.949	365	7.668	4.288
205	2.678	1.072	375	8.050	4.568
215	2.927	1.205	385	8.441	4.855
225	3.186	1.346	395	8.839	5.152
235	3.452	1.497	405	9.246	5.457

## VENKOTTA

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.250	---	245	2.384	2.503
85	0.250	---	255	3.213	2.616
95	0.269	0.149	265	3.562	2.722
105	0.308	0.345	275	3.931	2.822
115	0.366	0.536	285	4.318	2.918
125	0.443	0.720	295	4.725	3.007
135	0.540	0.899	305	5.152	3.092
145	0.656	1.073	315	5.597	3.171
155	0.792	1.227	325	6.063	3.244
165	0.946	1.404	335	6.547	3.312
175	1.121	1.561	345	7.051	3.373
185	1.314	1.712	355	7.575	3.431
195	1.528	1.858	365	8.117	3.481
205	1.760	1.998	375	8.680	3.526
215	2.012	2.133	385	9.261	3.566
225	2.283	2.262	395	9.862	3.599
235	2.574	2.385	405	10.483	3.628



## MANJAKADAMBU

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	—	0.609	245	2.359	2.968
85	0.079	0.609	255	2.553	3.333
95	0.176	0.609	265	2.752	3.724
105	0.280	0.609	275	2.958	4.143
115	0.389	0.609	285	3.170	4.601
125	0.505	0.631	295	3.387	5.056
135	0.626	0.682	305	3.611	5.553
145	0.754	0.759	315	3.840	6.075
155	0.887	0.862	325	4.076	6.625
165	1.027	0.991	335	4.317	7.200
175	1.173	1.146	345	4.565	7.801
185	1.324	1.327	355	4.818	8.428
195	1.482	1.535	365	5.078	9.082
205	1.645	1.768	375	5.344	9.762
215	1.815	2.030	385	5.615	10.469
225	1.990	2.316	395	5.893	11.201
235	2.172	2.629	405	6.176	11.960

## MANIMARUTHY

B. G	C. V	F. W	B. G	C. V.	F. W.
75	...	0.707	245	2.537	2.502
85	0.505	0.707	255	2.772	2.778
95	0.140	0.707	265	3.016	3.075
105	0.234	0.707	275	3.269	3.391
115	0.337	0.707	285	3.532	3.728
125	0.450	0.727	295	3.805	4.083
135	0.573	0.767	305	4.086	4.460
145	0.704	0.824	315	4.378	4.855
155	0.845	0.903	325	4.678	5.270
165	0.996	1.002	335	4.988	5.706
175	1.155	1.119	345	5.307	6.161
185	1.325	1.257	355	5.636	6.637
195	1.503	1.415	365	5.974	7.132
205	1.691	1.592	375	6.321	7.646
215	1.889	1.790	385	6.678	8.181
225	2.095	2.008	395	7.044	8.735
235	2.311	2.245	405	7.419	9.301



## MULLUVENGAI

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.109	0.126	245	2.025	3.658
85	0.140	0.244	255	2.230	3.967
95	0.180	0.373	265	2.446	4.287
105	0.232	0.515	275	2.671	4.618
115	0.293	0.666	285	2.908	4.959
125	0.364	0.830	295	3.154	5.311
135	0.446	1.003	305	3.410	5.676
145	0.538	1.190	315	3.677	6.051
155	0.641	1.386	325	3.954	6.438
165	0.754	1.594	335	4.242	6.836
175	0.877	1.812	345	4.539	7.244
185	1.010	2.043	355	4.847	7.664
195	1.153	2.285	365	5.166	8.095
205	1.307	2.537	375	5.494	8.537
215	1.471	2.801	385	5.833	8.991
225	1.646	3.075	395	6.182	9.456
235	1.830	3.361	405	6.541	9.932

## VENGAI

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.054	0.080	245	2.495	3.267
85	0.146	0.226	255	2.697	3.504
95	0.244	0.376	265	2.905	3.743
105	0.348	0.531	275	3.120	3.991
115	0.459	0.692	285	3.342	4.241
125	0.577	0.858	995	3.570	4.499
135	0.701	1.029	305	3.804	4.760
145	0.832	1.207	315	4.045	5.029
155	0.969	1.387	325	4.293	5.301
165	1.112	1.576	335	4.547	5.580
175	1.262	1.768	345	4.807	5.864
185	1.419	1.966	355	5.074	6.152
195	1.582	2.169	365	5.348	6.447
205	1.751	2.379	375	5.628	6.746
215	1.927	2.593	385	5.914	7.051
225	2.110	2.813	395	6.207	7.362
235	2.299	3.038	405	6.507	7.678



## KARAKIL

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.122	0.238	245	2.758	2.441
85	0.234	0.902	255	2.961	2.657
95	0.352	0.354	265	3.170	2.883
105	0.474	0.452	275	3.384	3.118
115	0.603	0.507	285	3.603	3.362
125	0.736	0.598	295	3.828	3.617
135	0.875	0.698	305	4.058	3.882
145	1.020	0.809	315	4.294	4.155
155	1.169	0.929	325	4.534	4.437
165	1.324	1.058	335	4.781	4.730
175	1.485	1.198	345	5.032	5.032
185	1.651	1.346	355	5.289	5.325
195	1.822	1.504	365	5.551	5.667
205	1.998	1.672	375	5.819	5.998
215	2.180	1.850	385	6.092	6.338
225	2.367	2.037	395	6.370	6.688
235	2.560	2.234	405	6.654	7.048

## ANJILY

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.117	0.258	245	2.164	2.751
85	0.124	0.431	255	2.413	2.927
95	0.144	0.546	265	2.676	3.107
105	0.180	0.669	275	2.945	3.285
115	0.230	0.795	285	3.237	3.469
125	0.294	0.924	295	3.543	3.660
135	0.372	1.061	305	3.864	3.851
145	0.465	1.196	315	4.198	4.049
155	0.568	1.334	325	4.536	4.243
165	0.689	1.477	335	4.899	4.446
175	0.824	1.626	345	5.276	4.653
185	0.974	1.776	355	5.668	4.864
195	1.137	1.932	365	6.073	5.079
205	1.316	2.087	375	6.494	5.296
215	1.502	2.245	385	6.914	5.512
225	1.708	2.411	395	7.363	5.733
235	1.929	2.579	405	7.825	5.964



## IRUL

B. G	C. V	F. W	B G	C. V	F. W.
75	0.117	0.038	245	2.560	2.055
85	0.172	0.226	255	2.804	2.096
95	0.237	0.407	265	3.059	2.127
105	0.314	0.577	275	3.325	2.149
115	0.402	0.739	285	3.603	2.163
125	0.501	0.894	295	3.891	2.168
135	0.611	1.038	305	4.191	2.168
145	0.733	1.175	315	4.502	2.168
155	0.865	1.302	325	4.824	2.168
165	1.009	1.421	335	5.157	2.168
175	1.164	1.532	345	5.502	2.168
185	1.330	1.632	355	5.857	2.168
195	1.507	1.724	365	6.224	2.168
205	1.695	1.808	375	6.602	2.168
215	1.895	1.884	385	6.991	2.168
225	2.105	1.949	395	7.391	2.168
235	2.327	2.007	405	7.802	2.168

## TEAK

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.247	0.003	245	2.913	1.378
85	0.287	0.118	255	3.202	1.421
95	0.342	0.229	265	3.504	1.459
105	0.411	0.335	275	3.822	1.492
115	0.495	0.439	285	4.154	1.521
125	0.593	0.536	295	4.500	1.547
135	0.706	0.630	305	4.861	1.567
145	0.834	0.720	315	5.237	1.583
155	0.976	0.805	325	5.627	1.595
165	1.133	0.887	335	6.032	1.603
175	1.305	0.962	345	6.452	1.608
185	1.491	1.035	355	6.886	1.608
195	1.691	1.102	365	7.335	1.608
205	1.907	1.166	375	7.798	1.608
215	2.136	1.227	385	8.276	1.608
225	2.381	1.281	395	8.768	1.608
235	2.640	1.331	405	9.275	1.608



## MALAMPUNNA

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.023	0.235	245	1.998	2.786
85	0.134	0.235	255	2.120	3.148
95	0.246	0.235	265	2.243	3.535
105	0.359	0.237	275	2.366	3.945
115	0.472	0.261	285	2.489	4.381
125	0.585	0.311	295	2.614	4.839
135	0.700	0.386	305	2.739	5.322
145	0.815	0.483	315	2.864	5.830
155	0.930	0.604	325	2.990	6.362
165	1.047	0.751	335	3.117	6.916
175	1.163	0.921	345	3.244	7.496
185	1.281	1.114	355	3.372	8.100
195	1.399	1.333	365	3.501	8.727
205	1.518	1.576	375	3.630	9.380
215	1.637	1.841	385	3.760	10.055
225	1.757	2.133	395	3.891	10.755
235	1.877	2.447	405	4.022	11.479

## THEMBAVU

B.G.	C.V.	F.W.	B.G.	C.V.	F.W.
75	0.046	0.200	245	2.495	2.529
85	0.163	0.301	255	2.669	2.707
95	0.283	0.047	265	2.848	2.889
105	0.407	0.516	275	3.029	3.077
115	0.534	0.630	285	3.214	3.268
125	0.664	0.750	295	3.403	3.464
135	0.798	0.873	305	3.594	3.664
145	0.935	1.000	315	3.790	3.869
155	1.076	1.132	325	3.988	4.079
165	1.220	1.271	335	4.190	4.293
175	1.367	1.412	345	4.396	4.511
185	1.518	1.557	355	4.605	4.735
195	1.672	1.708	365	4.817	4.962
205	1.830	1.863	375	5.033	5.195
215	1.991	2.023	385	5.252	5.431
225	2.155	2.187	395	5.474	5.673
235	2.323	2.356	405	5.700	5.919



## UNNAM

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.122	0.102	245	1.736	3.197
85	0.196	0.219	255	1.855	3.453
95	0.273	0.343	265	1.976	3.718
105	0.352	0.477	275	2.100	3.990
115	0.433	0.618	285	2.227	4.269
125	0.518	0.767	295	2.356	4.557
135	0.605	0.924	305	2.488	4.853
145	0.694	1.090	315	2.623	5.158
155	0.787	1.264	325	2.760	5.471
165	0.882	1.447	335	2.900	5.793
175	0.979	1.636	345	3.042	6.121
185	1.079	1.835	355	3.187	6.458
195	1.182	2.042	365	3.335	6.804
205	1.288	2.257	375	3.485	7.157
215	1.396	2.480	385	3.638	7.519
225	1.507	2.711	395	3.794	7.889
235	1.620	2.949	405	3.952	8.267

## COLLATED MISC: EVERGREEN SPECIES

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.010	—	245	3.427	3.104
85	0.130	—	255	3.721	3.432
95	0.257	0.071	265	4.026	3.759
105	0.396	0.170	275	4.331	4.118
115	0.547	0.279	285	4.656	4.490
125	0.708	0.329	295	4.992	4.877
135	0.879	0.548	305	5.338	5.280
145	1.061	0.704	315	5.694	5.699
155	1.247	0.870	325	6.049	6.118
165	1.449	1.058	335	6.425	6.568
175	1.661	1.261	345	6.812	7.031
185	1.889	1.469	355	7.209	7.511
195	2.116	1.715	365	7.616	8.007
205	2.360	1.963	375	8.034	8.517
215	2.605	2.219	385	8.449	9.026
225	2.869	2.499	395	8.887	9.568
235	3.143	2.793	405	9.335	10.124



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## COLLATED MISC. DECIDUOUS SPECIES

B. G.	C. V.	F. W.	B. G.	C. V.	F. W.
75	0.115	0.389	245	2.505	3.637
85	0.218	0.389	255	2.690	4.094
95	0.322	0.389	265	2.880	4.568
105	0.434	0.401	275	3.068	5.070
115	0.552	0.443	285	3.268	5.598
125	0.674	0.515	295	3.472	6.165
135	0.800	0.618	305	3.681	6.761
145	0.932	0.747	315	3.895	7.390
155	1.065	0.902	325	4.106	8.021
165	1.062	1.090	335	4.330	8.703
175	1.352	1.309	345	4.557	9.416
185	1.503	1.554	355	4.791	10.250
195	1.659	1.831	365	5.029	10.928
205	1.820	2.136	375	5.272	11.730
215	1.980	2.459	385	5.512	12.531
225	2.150	2.823	395	5.764	13.390
235	2.325	3.215	405	6.021	14.278