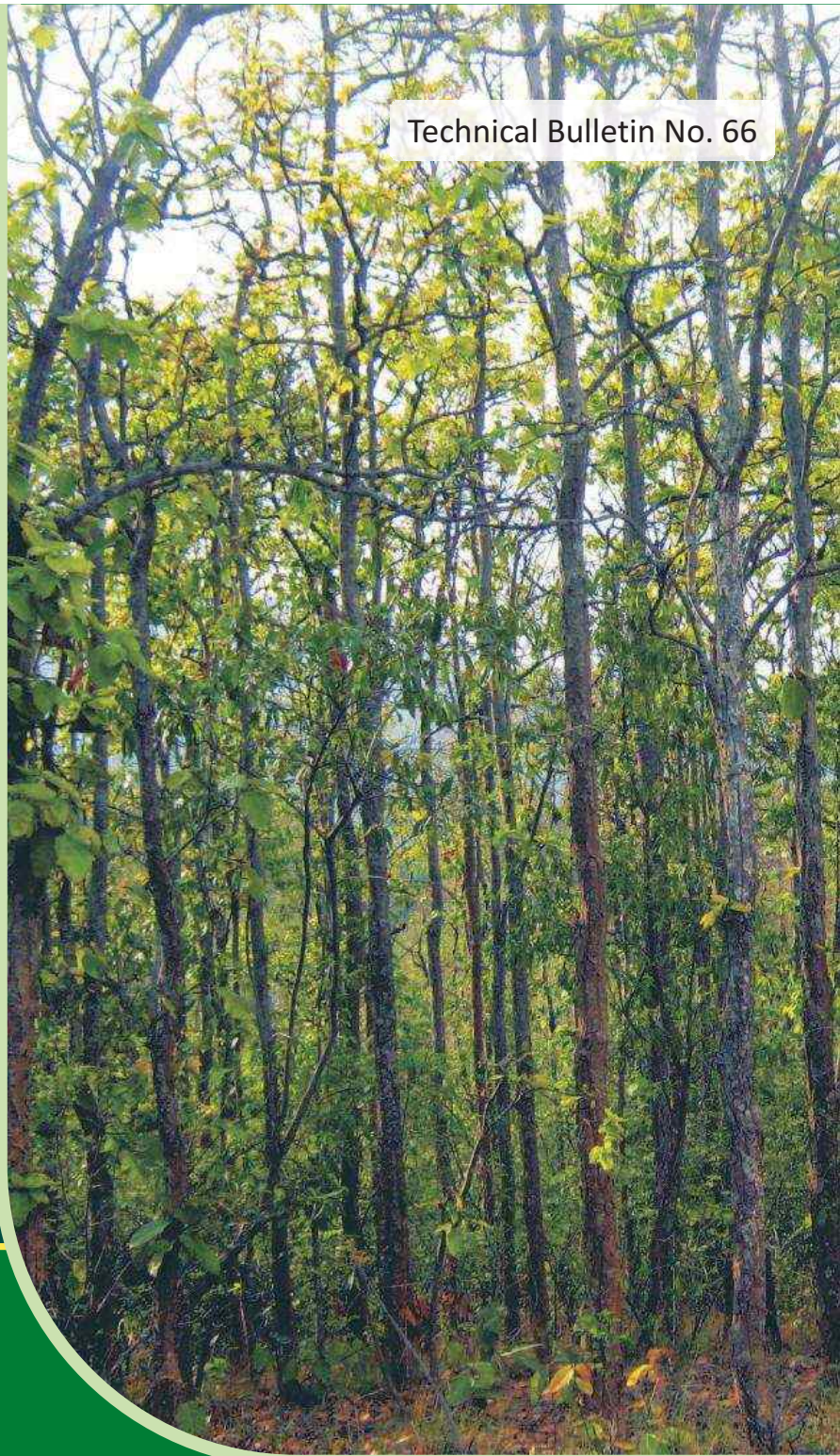


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**VOLUME  
TABLES  
OF SHOREA  
ROBUSTA  
(SAL)  
FOR  
VARIOUS  
DIVISIONS  
OF MADHYA  
PRADESH**

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## ***FOREWORD***

Volume tables for the scientific management of forests are most essential. Although volume tables for sal have earlier been prepared but, of late, it has been felt that at times and at varying places there is larger gap between estimated yield and actual yield. This gap invites audit objection for absolutely no physical loss. To minimize this problem volume tables of *Shorea robusta* (Sal) have been revised by this institute for Anuppur, Balaghat, Dindori, Mandla, North Shahdol, Sidhi and South Shahdol forest divisions.

I hope that these revised volume tables for sal will be useful to forest officers in the management of forests.

Jabalpur, 2016

**Dr. G. Krishnamurthy, IFS**  
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Jabalpur, 2016

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# VOLUME TABLES OF *Shorea robusta* (SAL) FOR VARIOUS DIVISIONS OF MADHYA PRADESH

## 1. Introduction

Sal (*Shorea robusta*) is most important timber species in Madhya Pradesh. It is a large evergreen tree belonging to the family Dipterocarpaceae. Sal forests of Madhya Pradesh are ecologically very important as they mark the termination of the great Sal zone of the Central Indian Peninsula. Sal forests are located in the eastern part of the state while teak forests are localised in the western part. In between, there is a transition belt of mixed miscellaneous forests. There are also areas where Teak and Sal both species occur naturally mixed together forming unique ecosystem. Sal forests occupy an area of 7244 km<sup>2</sup>, which is about 7.6 % of the total forest area of the state. The Sal forests are confined to the eastern part of the state in the districts Rewa, Sidhi, Umaria, Anuppur and southwards in districts Balaghat, Mandla, Dindori, and Jabalpur and occupy all ranges of Maikal and the highlands of Balaghat. Sal forests are also distributed in and around Pachmarhi in Hoshangabad and Chhindwara districts.

In the meeting with the Additional Principal Chief Conservator of Forests (Production) Madhya Pradesh, held on 2.8.2004, it was decided that the form factors of teak species be prepared for various production circles and divisions. For this purpose, the data to be used was that available from the registers of production coupes and that there would not be any necessity for taking measurements of trees separately. The data required for the analysis will be provided to the State Forest Research Institute (SFRI), Jabalpur, by Additional Principal Chief Conservator of Forests (Production). The volume tables will be prepared by SFRI, for various girths and site qualities.

To prepare the local volume tables for different site qualities, the local volume equations based upon only one parameter, i.e. girth at breast height (GBH), has been taken into consideration. These volume tables based on one independent variable i.e. dbh or gbh, are derived from the measurements of trees growing in a restricted geographical area or locality, or more or less uniform crop. These are, therefore, applicable to such restricted range of locality or geographical areas, only where the assumption that the trees of the same diameter will have the same height, holds good.

## 2. Methodology

The different steps for calculating girth class-wise volume table for various divisions are being described as under.

### 2.1. Source of data

The data of Sal species for different divisions for different site qualities were provided by the concerned

divisions. The analysis for volume calculations of timber and fuel content for sound, half sound and unsound trees was carried out on the available data.

## 2.2 Regression equations used:

### a) For estimation of timber content

The following types of regression equations were tried to obtain timber content in sound, half sound and unsound trees. These are local volume equations (Volume equation for forest of India, Nepal and Bhutan. Forest Survey of India, 1996) with only one independent variable, i.e. girth at breast height (G).

- (i)  $V = a + bG^2$
- (ii)  $V = a + bG + cG^2$
- (iii)  $V = a + bG + cG^2 + dG^3$
- (iv)  $V = a + b\sqrt{G} + cG^2$
- (v)  $\sqrt{V} = a + bG$
- (vi)  $\sqrt{V} = a + bG + c\sqrt{G}$
- (vii)  $\text{Log}_e V = a + b\text{Log}_e G$

### Where

**V** = Under-bark volume (cmt) of timber

**G** = Over-bark girth of standing trees at breast height (cm)

And **a**, **b**, **c** and **d** are statistical constants.

The best-fit regression equation was used to estimate the volume.

### b) For estimation of fuel content

The following curve estimation models were tried for estimation of fuel content in sound, half sound and unsound trees on the basis of the curve estimation models given in SPSS software.

- (i)  $F = a + bG$  (Linear)
- (ii)  $F = a + b\text{Log}_e G$  (Logarithmic)
- (iii)  $F = a + b/G$  (Inverse)
- (iv)  $F = a + bG + cG^2$  (Quadratic)
- (v)  $F = a + bG + cG^2 + dG^3$  (Cubic)
- (vi)  $F = \text{EXP}(a + b/G)$  (S-curve)
- (vii)  $F = \text{EXP}(a + bG)$  (Growth)

## Where

**V** = Under-bark volume (cmt) of timber

**G** = Over-bark girth of standing trees at breast height (cm)

And **a**, **b**, **c** and **d** are statistical constants.

The best-fit regression equation was used to estimate the fuel content.

As per the instructions received from the APCCF (Production), mean value for girth classes with class interval of 10cms have been worked out and given in Table 1 to 7(d) . However, it may be noted that the error is likely to increase if these mean values are used instead of the exact girths of the trees. The total volume for a coupe will be correctly calculated only when all the girths are uniformly distributed over the whole girth-class, otherwise with skewed distribution of girths of individual trees in a girth-class, we are likely to underestimate or overestimate the volume. Estimated timber is liable to fall within the range of  $\pm 5\%$  error using these tables. Estimated fuel content is liable to fall within the range of  $\pm 10\%$  error using these tables.

## 3. Results and discussion

1. To estimate timber volume of sound, half sound and unsound trees, it was observed that most of the site qualities follow the same local volume equation  $V = a + bG^2$  where **V** is the Under-bark volume (cmt) of timber, **G** = Over-bark girth of standing trees at breast height (cm) and **a** and **b** are constants. Therefore, only equation  $V = a + bG^2$  was tried to estimate timber volume with the least possible error. While comparing the volume versus girth curves for various site qualities it was found, in some cases that lower site quality shows higher volume content than higher site quality for the same girth. This does not reflect the natural trend of volume variation with site-quality. This type of unnatural behaviour may be due to many reasons such as human error in the assessment of tree condition, mistakes in volume calculation, mixing data of full-sized trees and pollards and erroneous assessment of site -quality. During estimation of timber volume for sound timber, the efforts were made to minimize the error in total estimated volume. However, there still remains some error that has already been described in division wise report. The possible reasons for this difference are listed as below:

- i. The data, from statistical analysis point of view, for many girth classes are insufficient to establish significant correlation between volume and girth for that particular girth class.
- ii. The observed volume content in the field shows significant variations for the same girth and the same site quality of a tree. These variations may occur due to human errors, e.g. measurement error, writing error and volume estimating error etc. in the field.
- iii. In some cases, it was also observed that the trees of higher girth show lesser timber volume content as compared to the timber volume of trees of lower girth within the same site quality, which may be possible due to faulty classification of the condition of the tree. In nature, sometimes it is observed that



the hollowness starts to develop within the tree, as it grows older. If there is hollowness within the trunk of the tree but it appears sound from outside, then its status is liable to wrong classification.

iv. The actual volume of a tree depends upon the girth, height and the tapering of the tree. But in the present case, the volume estimation is based only upon a single parameter, i.e. girth.

2. As per the instructions received from the APCCF (Production), mean values for girth classes with class interval of 10cms have been worked out. However, it may be noted that the error is likely to increase if these mean values are used instead of the exact girths of the trees. The total volume for a coupe can be correctly calculated only when all the girths are uniformly distributed over the whole girth-class, otherwise with skewed distribution of girths of individual trees in a girth-class there is possibility of underestimation or overestimation in the volume.

Table 1: Site quality and girthclass wise volume (cmt ) of timber and fuelwood in Anu ppur division

Girth Class (cm)	Site Quality																				
	IVa						IVb														
	Sound			Halfsound			Unsound			Sound			Halfsound			Unsound					
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.042	0.008	0.050	0.031	0.010	0.041	0.008	0.030	0.038	0.039	0.008	0.047	0.031	0.010	0.041	0.006	0.030	0.036	0.006	0.030	0.036
41-50	0.069	0.024	0.093	0.051	0.029	0.080	0.012	0.067	0.079	0.064	0.025	0.089	0.050	0.029	0.079	0.009	0.067	0.076	0.009	0.067	0.076
51-60	0.101	0.049	0.150	0.075	0.058	0.133	0.018	0.111	0.129	0.094	0.051	0.145	0.074	0.058	0.132	0.013	0.111	0.124	0.013	0.111	0.124
61-70	0.141	0.081	0.222	0.104	0.093	0.197	0.024	0.159	0.183	0.130	0.083	0.213	0.102	0.093	0.195	0.018	0.159	0.177	0.018	0.159	0.177
71-80	0.187	0.117	0.304	0.138	0.133	0.271	0.032	0.207	0.239	0.173	0.120	0.293	0.135	0.132	0.267	0.024	0.208	0.232	0.024	0.208	0.232
81-90	0.239	0.156	0.395	0.177	0.174	0.351	0.041	0.254	0.295	0.221	0.159	0.380	0.173	0.173	0.346	0.030	0.254	0.284	0.030	0.254	0.284
91-100	0.298	0.196	0.494	0.220	0.215	0.435	0.050	0.298	0.348	0.275	0.199	0.474	0.216	0.214	0.430	0.038	0.298	0.336	0.038	0.298	0.336
101-110	0.363	0.235	0.598	0.268	0.256	0.524	0.061	0.339	0.400	0.335	0.239	0.574	0.263	0.255	0.518	0.046	0.340	0.386	0.046	0.340	0.386
111-120	0.435	0.273	0.708	0.321	0.296	0.617	0.073	0.378	0.451	0.402	0.277	0.679	0.315	0.294	0.609	0.054	0.378	0.432	0.054	0.378	0.432
121-130	0.513	0.310	0.823	0.379	0.334	0.713	0.086	0.413	0.499	0.474	0.314	0.788	0.371	0.332	0.703	0.064	0.414	0.478	0.064	0.414	0.478
131-140	0.598	0.346	0.944	0.442	0.370	0.812	0.100	0.446	0.546	0.552	0.350	0.902	0.433	0.368	0.801	0.074	0.447	0.521	0.074	0.447	0.521
141-150	0.689	0.380	1.069	0.509	0.404	0.913	0.115	0.477	0.592	0.637	0.384	1.021	0.499	0.402	0.901	0.086	0.477	0.563	0.086	0.477	0.563
151-160	0.787	0.412	1.199	0.582	0.437	1.019	0.132	0.505	0.637	0.727	0.416	1.143	0.569	0.434	1.003	0.098	0.506	0.604	0.098	0.506	0.604
161-170	0.891	0.442	1.333	0.659	0.468	1.127	0.149	0.532	0.661	0.823	0.446	1.269	0.645	0.464	1.109	0.111	0.532	0.643	0.111	0.532	0.643
171-180	1.002	0.471	1.473	0.740	0.497	1.237	0.167	0.556	0.723	0.926	0.475	1.401	0.725	0.493	1.218	0.124	0.557	0.681	0.124	0.557	0.681
181-190	1.120	0.499	1.619	0.827	0.524	1.351	0.187	0.579	0.766	1.034	0.503	1.537	0.810	0.520	1.330	0.139	0.579	0.718	0.139	0.579	0.718
191-200	1.243	0.525	1.768	0.918	0.550	1.468	0.207	0.600	0.807	1.148	0.529	1.677	0.899	0.546	1.445	0.154	0.601	0.755	0.154	0.601	0.755

Table 2: Site quality and girthclass -wise volume (cmt) of timber and fuelwood in Balaghat division

Girth Class (cm)	Site Quality III								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.0119	0.0012	0.0131	0.0074	0.0015	0.0089	0.0029	0.0031	0.0060
31-40	0.0406	0.0080	0.0486	0.0263	0.0091	0.0354	0.0102	0.0160	0.0262
41-50	0.0787	0.0240	0.1027	0.0514	0.0269	0.0783	0.0199	0.0420	0.0619
51-60	0.1262	0.0493	0.1755	0.0827	0.0543	0.1370	0.0321	0.0787	0.1108
61-70	0.1830	0.0815	0.2645	0.1203	0.0887	0.2090	0.0466	0.1221	0.1687
71-80	0.2493	0.1180	0.3673	0.1640	0.1274	0.2914	0.0635	0.1687	0.2322
81-90	0.3250	0.1569	0.4819	0.2139	0.1683	0.3822	0.0828	0.2162	0.2990
91-100	0.4100	0.1965	0.6065	0.2700	0.2098	0.4798	0.1045	0.2631	0.3676
101-110	0.5045	0.2359	0.7404	0.3323	0.2507	0.5830	*	*	*
111-120	0.6084	0.2744	0.8828	0.4008	0.2906	0.6914	*	*	*
121-130	0.7216	0.3116	1.0332	0.4755	0.3290	0.8045	*	*	*
131-140	0.8443	0.3472	1.1915	0.5564	0.3657	0.9221	*	*	*
141-150	0.9764	0.3812	1.3576	0.6435	0.4007	1.0442	*	*	*
151-160	1.1179	0.4135	1.5314	0.7368	0.4339	1.1707	*	*	*
161-170	1.2687	0.4442	1.7129	0.8364	0.4653	1.3017	*	*	*
171-180	1.4290	0.4732	1.9022	0.9421	0.4950	1.4371	*	*	*
181-190	1.5987	0.5008	2.0994	*	*	*	*	*	*
191-200	1.7777	0.5269	2.3046	*	*	*	*	*	*
201-210	1.9662	0.5516	2.5178	*	*	*	*	*	*
211-220	2.1641	0.5750	2.7391	*	*	*	*	*	*
221-230	2.3713	0.5972	2.9685	*	*	*	*	*	*
231-240	2.5880	0.6183	3.2063	*	*	*	*	*	*
241-250	2.8141	0.6383	3.4524	*	*	*	*	*	*

**Table 3(a): Site quality and girthclass-wise volume (cmt) of timber and fuelwood in Dindori division**

Site Quality III									
Girth Class (cm)	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.018	0.001	0.019	0.013	0.002	0.015	0.003	0.004	0.007
31-40	0.041	0.009	0.050	0.031	0.010	0.041	0.007	0.021	0.028
41-50	0.071	0.026	0.097	0.053	0.030	0.083	0.013	0.052	0.065
51-60	0.108	0.053	0.161	0.081	0.059	0.140	0.020	0.094	0.114
61-70	0.153	0.087	0.240	0.115	0.096	0.211	0.028	0.142	0.170
71-80	0.205	0.124	0.329	0.155	0.136	0.291	0.038	0.193	0.231
81-90	0.265	0.164	0.429	0.200	0.178	0.378	0.049	0.243	0.292
91-100	0.332	0.205	0.537	0.251	0.221	0.472	0.062	0.292	0.354
101-110	0.406	0.245	0.651	0.307	0.263	0.570	*	*	*
111-120	0.488	0.284	0.772	0.369	0.303	0.672	*	*	*
121-130	0.577	0.322	0.899	0.436	0.342	0.778	*	*	*
131-140	0.674	0.358	1.032	0.509	0.379	0.888	*	*	*
141-150	0.778	0.392	1.170	0.588	0.415	1.003	*	*	*
151-160	0.889	0.424	1.313	*	*	*	*	*	*
161-170	1.008	0.455	1.463	*	*	*	*	*	*
171-180	1.134	0.484	1.618	*	*	*	*	*	*
181-190	1.267	0.512	1.779	*	*	*	*	*	*
191-200	1.408	0.538	1.946	*	*	*	*	*	*
201-210	1.557	0.562	2.119	*	*	*	*	*	*
211-220	1.713	0.586	2.299	*	*	*	*	*	*
221-230	1.876	0.608	2.484	*	*	*	*	*	*
231-240	2.046	0.629	2.675	*	*	*	*	*	*
241-250	2.224	0.649	2.873	*	*	*	*	*	*

**Table 3(b): Site quality and girthclass-wise volume (cmt) of timber and fuelwood in Dindori division**

Site Quality IVa									
Girth Class(cm)	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.017	0.002	0.019	0.012	0.002	0.014	0.001	0.005	0.006
31-40	0.038	0.010	0.048	0.028	0.011	0.039	0.004	0.022	0.026
41-50	0.067	0.029	0.096	0.050	0.031	0.081	0.009	0.055	0.064
51-60	0.102	0.058	0.160	0.077	0.061	0.138	0.014	0.098	0.112
61-70	0.144	0.093	0.237	0.110	0.097	0.207	0.020	0.147	0.167
71-80	0.194	0.133	0.327	0.148	0.138	0.286	0.027	0.198	0.225
81-90	0.250	0.174	0.424	0.192	0.181	0.373	0.035	0.249	0.284
91-100	0.313	0.216	0.529	0.240	0.224	0.464	0.045	0.298	0.343
101-110	0.384	0.257	0.641	0.295	0.266	0.561	0.055	0.346	0.401
111-120	0.461	0.297	0.758	0.354	0.307	0.661	0.066	0.390	0.456
121-130	0.546	0.335	0.881	0.419	0.346	0.765	*	*	*
131-140	0.637	0.371	1.008	0.490	0.383	0.873	*	*	*
141-150	0.735	0.405	1.140	0.566	0.418	0.984	*	*	*
151-160	0.841	0.438	1.279	0.647	0.452	1.099	*	*	*
161-170	0.953	0.469	1.422	0.734	0.483	1.217	*	*	*
171-180	1.072	0.498	1.570	0.826	0.513	1.339	*	*	*
181-190	1.199	0.526	1.725	0.923	0.541	1.464	*	*	*
191-200	1.332	0.552	1.884	1.026	0.568	1.594	*	*	*
201-210	1.472	0.576	2.048	1.134	0.593	1.727	*	*	*
211-220	1.620	0.600	2.220	1.248	0.616	1.864	*	*	*
221-230	*	*	*	*	*	*	*	*	*
231-240	*	*	*	*	*	*	*	*	*
241-250	*	*	*	*	*	*	*	*	*

**Table 3(c): Site quality and girthclass-wise volume (cmt) of timber and fuelwood in Dindori division**

Site Quality IVb									
Girth Class (cm)	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.016	0.002	0.018	0.011	0.002	0.013	0.001	0.005	0.006
31-40	0.036	0.010	0.046	0.027	0.011	0.038	0.004	0.023	0.027
41-50	0.063	0.030	0.093	0.048	0.031	0.079	0.007	0.055	0.062
51-60	0.096	0.059	0.155	0.074	0.061	0.135	0.012	0.099	0.111
61-70	0.136	0.095	0.231	0.106	0.098	0.204	0.017	0.148	0.165
71-80	0.182	0.135	0.317	0.142	0.139	0.281	0.024	0.199	0.223
81-90	0.236	0.176	0.412	0.184	0.182	0.366	0.031	0.251	0.282
91-100	0.295	0.218	0.513	0.231	0.225	0.456	0.039	0.300	0.339
101-110	0.362	0.259	0.621	0.284	0.267	0.551	0.048	0.348	0.396
111-120	0.435	0.299	0.734	0.341	0.308	0.649	0.058	0.393	0.451
121-130	0.514	0.337	0.851	0.404	0.347	0.751	0.069	0.435	0.504
131-140	0.600	0.374	0.974	0.472	0.385	0.857	0.081	0.474	0.555
141-150	0.693	0.408	1.101	0.545	0.420	0.965	0.093	0.511	0.604
151-160	0.792	0.441	1.233	*	*	*	*	*	*
161-170	0.898	0.472	1.370	*	*	*	*	*	*
171-180	1.011	0.501	1.512	*	*	*	*	*	*
181-190	1.130	0.529	1.659	*	*	*	*	*	*
191-200	1.256	0.555	1.811	*	*	*	*	*	*
201-210	1.388	0.579	1.967	*	*	*	*	*	*
211-220	1.527	0.602	2.129	*	*	*	*	*	*
221-230	1.635	0.619	2.254	*	*	*	*	*	*
231-240	*	*	*	*	*	*	*	*	*
241-250	*	*	*	*	*	*	*	*	*

Table 4(a) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in Mandla division

Girth Class (cm)	Site Quality								
	III								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
41-50	0.116	0.029	0.145	0.099	0.042	0.141	0.039	0.097	0.136
51-60	0.156	0.051	0.207	0.124	0.070	0.194	0.051	0.146	0.197
61-70	0.214	0.084	0.298	0.160	0.111	0.271	0.069	0.209	0.278
71-80	0.282	0.121	0.403	0.202	0.154	0.356	0.091	0.274	0.365
81-90	0.359	0.161	0.520	0.251	0.200	0.451	0.115	0.336	0.451
91-100	0.446	0.202	0.648	0.305	0.245	0.540	0.142	0.395	0.537
101-110	0.543	0.243	0.786	0.365	0.288	0.653	0.172	0.451	0.623
111-120	0.649	0.282	0.931	0.431	0.330	0.761	0.205	0.503	0.708
121-130	0.764	0.320	1.084	0.504	0.370	0.874	0.241	0.551	0.792
131-140	0.890	0.357	1.247	0.582	0.408	0.990	0.281	0.596	0.877
141-150	1.025	0.392	1.417	0.666	0.444	1.110	0.323	0.637	0.960
151-160	1.169	0.425	1.594	0.757	0.478	1.235	0.368	0.675	1.043
161-170	1.323	0.457	1.780	0.853	0.510	1.363	0.416	0.711	1.127
171-180	1.487	0.487	1.974	0.955	0.540	1.495	0.467	0.744	1.211
181-190	1.660	0.515	2.175	1.064	0.568	1.632	0.521	0.775	1.296
191-200	1.843	0.542	2.385	1.178	0.594	1.772	0.578	0.804	1.382
201-210	2.035	0.567	2.602	1.298	0.619	1.917	0.639	0.831	1.470
211-220	2.237	0.591	2.828	1.424	0.643	2.067	0.702	0.856	1.558
221-230	2.449	0.614	3.063	1.557	0.665	2.222	0.768	0.880	1.648
231-240	2.670	0.636	3.306	1.695	0.687	2.382	0.837	0.902	1.739
241-250	2.901	0.656	3.557	1.839	0.707	2.546	0.909	0.923	1.832
251-260	3.142	0.676	3.818	1.990	0.725	2.715	*	*	*
261-270	3.392	0.694	4.086	2.146	0.743	2.889	*	*	*
271-280	3.652	0.712	4.364	2.308	0.760	3.068	*	*	*
281-290	3.921	0.729	4.650	2.477	0.777	3.254	*	*	*
291-300	4.200	0.745	4.945	2.651	0.792	3.443	*	*	*
301-310	4.488	0.760	5.248	2.831	0.807	3.638	*	*	*
311-320	4.786	0.775	5.561	3.017	0.821	3.838	*	*	*
321-330	5.094	0.789	5.883	3.210	0.834	4.044	*	*	*
331-340	5.411	0.802	6.213	3.408	0.847	4.255	*	*	*
341-350	5.738	0.815	6.553	3.612	0.859	4.471	*	*	*
351-360	6.075	0.828	6.903	3.823	0.871	4.694	*	*	*
361-370	6.421	0.839	7.260	4.039	0.882	4.921	*	*	*
371-380	6.776	0.851	7.627	4.261	0.893	5.154	*	*	*
381-390	7.142	0.862	8.004	4.490	0.903	5.393	*	*	*
391-400	7.517	0.872	8.389	4.724	0.913	5.637	*	*	*
401-410	7.901	0.882	8.783	4.964	0.922	5.886	*	*	*
411-420	8.295	0.892	9.187	5.210	0.931	6.141	*	*	*
421-430	8.699	0.901	9.600	5.463	0.940	6.403	*	*	*
431-440	9.112	0.910	10.022	5.721	0.949	6.670	*	*	*
441-450	9.535	0.919	10.454	5.985	0.957	6.942	*	*	*
451-460	9.967	0.927	10.894	6.256	0.965	7.221	*	*	*
461-470	10.409	0.935	11.344	6.532	0.972	7.504	*	*	*
471-480	10.861	0.943	11.804	6.814	0.980	7.794	*	*	*
481-490	11.322	0.951	12.273	7.103	0.987	8.090	*	*	*
491-500	11.793	0.958	12.751	7.397	0.993	8.390	*	*	*

**Table 4(b): Site quality and girthclass-wise volume (cmt) of timber and fuelwood in Mandla division**

Site Quality IVa									
Girth Class (cm)	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
41-50	0.105	0.032	0.137	0.071	0.054	0.125	0.025	0.095	0.120
51-60	0.139	0.056	0.195	0.095	0.087	0.182	0.036	0.141	0.177
61-70	0.190	0.093	0.283	0.130	0.134	0.264	0.065	0.202	0.267
71-80	0.248	0.135	0.383	0.171	0.184	0.355	0.086	0.263	0.349
81-90	0.315	0.179	0.494	0.217	0.235	0.452	0.110	0.322	0.432
91-100	0.391	0.225	0.616	0.270	0.285	0.555	0.137	0.378	0.515
101-110	0.474	0.270	0.744	0.328	0.334	0.662	0.168	0.431	0.599
111-120	0.566	0.314	0.880	0.392	0.380	0.772	0.201	0.480	0.681
121-130	0.667	0.356	1.023	0.462	0.423	0.885	0.237	0.525	0.762
131-140	0.775	0.397	1.172	0.538	0.465	1.003	0.276	0.567	0.843
141-150	0.892	0.436	1.328	0.619	0.503	1.122	0.318	0.606	0.924
151-160	1.017	0.473	1.490	0.706	0.540	1.246	0.363	0.643	1.006
161-170	1.151	0.508	1.659	0.800	0.574	1.374	0.411	0.676	1.087
171-180	1.293	0.541	1.834	0.898	0.606	1.504	0.463	0.707	1.170
181-190	1.443	0.573	2.016	1.003	0.636	1.639	0.517	0.736	1.253
191-200	1.601	0.603	2.204	1.114	0.665	1.779	0.574	0.763	1.337
201-210	1.768	0.631	2.399	1.230	0.691	1.921	0.634	0.789	1.423
211-220	1.943	0.658	2.601	1.352	0.717	2.069	0.697	0.812	1.509
221-230	2.127	0.684	2.811	1.480	0.740	2.220	0.763	0.835	1.598
231-240	2.318	0.708	3.026	1.614	0.763	2.377	0.829	0.854	1.683
241-250	2.519	0.731	3.250	1.753	0.784	2.537	*	*	*
251-260	2.727	0.752	3.479	1.898	0.804	2.702	*	*	*
261-270	2.944	0.773	3.717	2.049	0.823	2.872	*	*	*
271-280	3.169	0.793	3.962	2.206	0.841	3.047	*	*	*
281-290	3.402	0.812	4.214	2.369	0.858	3.227	*	*	*
291-300	3.644	0.830	4.474	2.538	0.874	3.412	*	*	*
301-310	3.894	0.847	4.741	2.712	0.889	3.601	*	*	*
311-320	4.152	0.863	5.015	2.892	0.904	3.796	*	*	*
321-330	4.419	0.879	5.298	3.078	0.918	3.996	*	*	*
331-340	4.694	0.894	5.588	3.269	0.931	4.200	*	*	*
341-350	4.977	0.908	5.885	3.467	0.944	4.411	*	*	*
351-360	5.269	0.922	6.191	3.670	0.956	4.626	*	*	*
361-370	5.569	0.935	6.504	3.879	0.968	4.847	*	*	*
371-380	5.877	0.948	6.825	4.094	0.979	5.073	*	*	*
381-390	6.194	0.960	7.154	4.315	0.990	5.305	*	*	*
391-400	6.518	0.972	7.490	4.541	1.000	5.541	*	*	*
401-410	6.852	0.983	7.835	4.774	1.010	5.784	*	*	*
411-420	7.193	0.994	8.187	5.012	1.020	6.032	*	*	*
421-430	7.543	1.004	8.547	5.256	1.029	6.285	*	*	*
431-440	7.901	1.014	8.915	5.505	1.038	6.543	*	*	*
441-450	8.268	1.024	9.292	5.761	1.046	6.807	*	*	*
451-460	8.643	1.033	9.676	6.022	1.055	7.077	*	*	*
461-470	9.026	1.042	10.068	6.289	1.062	7.351	*	*	*
471-480	9.417	1.051	10.468	6.562	1.070	7.632	*	*	*
481-490	9.817	1.059	10.876	6.841	1.077	7.918	*	*	*
491-500	10.225	1.067	11.292	7.125	1.084	8.209	*	*	*



Table 4(c) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in Mandla division

Girth Class (cm)	Site Quality								
	IVb								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
41-50	0.101	0.034	0.135	0.066	0.056	0.122	0.024	0.095	0.119
51-60	0.135	0.057	0.192	0.088	0.090	0.178	0.032	0.142	0.174
61-70	0.184	0.091	0.275	0.121	0.138	0.259	0.044	0.204	0.248
71-80	0.241	0.129	0.370	0.159	0.189	0.348	0.059	0.266	0.325
81-90	0.306	0.169	0.475	0.203	0.241	0.444	0.075	0.321	0.396
91-100	0.380	0.209	0.589	0.251	0.291	0.542	0.094	0.375	0.469
101-110	0.461	0.248	0.709	0.306	0.340	0.646	0.114	0.429	0.543
111-120	0.551	0.285	0.836	0.365	0.387	0.752	0.137	0.478	0.615
121-130	0.648	0.321	0.969	0.430	0.431	0.861	0.161	0.525	0.686
131-140	0.754	0.355	1.109	0.501	0.472	0.973	0.188	0.568	0.756
141-150	0.868	0.388	1.256	0.577	0.511	1.088	0.217	0.607	0.824
151-160	0.990	0.419	1.409	0.658	0.548	1.206	0.247	0.644	0.891
161-170	1.120	0.448	1.568	0.745	0.582	1.327	0.280	0.679	0.959
171-180	1.258	0.475	1.733	0.837	0.614	1.451	0.315	0.711	1.026
181-190	1.404	0.501	1.905	0.934	0.644	1.578	0.352	0.741	1.093
191-200	1.558	0.525	2.083	1.037	0.673	1.710	0.391	0.768	1.159
201-210	1.721	0.548	2.269	1.145	0.699	1.844	0.431	0.794	1.225
211-220	1.891	0.570	2.461	1.259	0.724	1.983	0.474	0.819	1.293
221-230	2.070	0.591	2.661	1.378	0.748	2.126	0.519	0.841	1.360
231-240	2.256	0.610	2.866	1.503	0.770	2.273	0.566	0.863	1.429
241-250	2.451	0.628	3.079	1.633	0.791	2.424	0.615	0.883	1.498
251-260	2.654	0.646	3.300	1.768	0.811	2.579	0.667	0.902	1.569
261-270	2.865	0.663	3.528	1.908	0.830	2.738	0.720	0.920	1.640
271-280	3.084	0.678	3.762	2.055	0.848	2.903	0.775	0.937	1.712
281-290	3.311	0.693	4.004	2.206	0.865	3.071	0.832	0.953	1.785
291-300	3.547	0.708	4.255	2.363	0.881	3.244	0.891	0.968	1.859
301-310	3.790	0.721	4.511	2.525	0.897	3.422	0.953	0.983	1.936
311-320	4.042	0.734	4.776	2.693	0.911	3.604	0.987	0.990	1.977
321-330	4.301	0.747	5.048	2.866	0.925	3.791	*	*	*
331-340	4.569	0.759	5.328	3.044	0.939	3.983	*	*	*
341-350	4.845	0.770	5.615	3.228	0.951	4.179	*	*	*
351-360	5.129	0.781	5.910	3.417	0.963	4.380	*	*	*
361-370	5.421	0.791	6.212	3.612	0.975	4.587	*	*	*
371-380	5.721	0.801	6.522	3.812	0.986	4.798	*	*	*
381-390	6.029	0.811	6.840	4.018	0.997	5.015	*	*	*
391-400	6.345	0.820	7.165	4.229	1.007	5.236	*	*	*
401-410	6.670	0.829	7.499	4.445	1.017	5.462	*	*	*
411-420	7.002	0.838	7.840	4.667	1.027	5.694	*	*	*
421-430	7.343	0.846	8.189	4.894	1.036	5.930	*	*	*
431-440	7.692	0.854	8.546	5.126	1.044	6.170	*	*	*
441-450	8.048	0.861	8.909	5.364	1.053	6.417	*	*	*
451-460	8.413	0.869	9.282	5.607	1.061	6.668	*	*	*
461-470	8.786	0.876	9.662	5.856	1.069	6.925	*	*	*
471-480	9.167	0.883	10.050	6.110	1.076	7.186	*	*	*
481-490	9.557	0.889	10.446	6.369	1.084	7.453	*	*	*
491-500	9.954	0.896	10.850	6.634	1.091	7.725	*	*	*

Table5(a) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in North Shahdol division

Girth Class (cm)	Site Quality III								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.038	0.007	0.045	0.034	0.009	0.043	0.015	0.020	0.035
41-50	0.060	0.022	0.082	0.054	0.025	0.079	0.024	0.049	0.073
51-60	0.088	0.045	0.133	0.079	0.051	0.130	0.034	0.088	0.122
61-70	0.122	0.076	0.198	0.109	0.084	0.193	0.047	0.133	0.180
71-80	0.162	0.110	0.272	0.145	0.120	0.265	0.062	0.180	0.242
81-90	0.207	0.147	0.354	0.185	0.159	0.344	0.079	0.227	0.306
91-100	0.258	0.185	0.443	0.230	0.199	0.429	0.098	0.273	0.371
101-110	0.314	0.222	0.536	0.280	0.238	0.518	0.119	0.318	0.437
111-120	0.376	0.259	0.635	0.336	0.275	0.611	0.142	0.359	0.501
121-130	0.443	0.294	0.737	0.396	0.312	0.708	0.167	0.399	0.566
131-140	0.516	0.328	0.844	0.461	0.347	0.808	FALSE	0.436	0.631
141-150	0.595	0.361	0.956	0.531	0.380	0.911	0.224	0.470	0.694
151-160	0.679	0.392	1.071	0.607	0.412	1.019	0.256	0.502	0.758
161-170	0.769	0.422	1.191	0.687	0.442	1.129	0.290	0.533	0.823
171-180	0.865	0.450	1.315	0.772	0.470	1.242	0.325	0.561	0.886
181-190	0.966	0.476	1.442	*	*	*	*	*	*
191-200	1.072	0.501	1.573	*	*	*	*	*	*
201-210	1.185	0.525	1.710	*	*	*	*	*	*
211-220	1.303	0.548	1.851	*	*	*	*	*	*
221-230	1.426	0.569	1.995	*	*	*	*	*	*
231-240	1.555	0.589	2.144	*	*	*	*	*	*
241-250	1.690	0.609	2.299	*	*	*	*	*	*

Table5(b) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in North Shahdol division

Girth Class (cm)	Site Quality IVa								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.036	0.007	0.043	0.030	0.009	0.039	0.009	0.022	0.031
41-50	0.058	0.022	0.080	0.048	0.026	0.074	0.014	0.053	0.067
51-60	0.085	0.045	0.130	0.070	0.052	0.122	0.020	0.095	0.115
61-70	0.118	0.075	0.193	0.097	0.085	0.182	0.027	0.142	0.169
71-80	0.156	0.109	0.265	0.128	0.122	0.250	0.035	0.190	0.225
81-90	0.200	0.146	0.346	0.163	0.161	0.324	0.044	0.239	0.283
91-100	0.248	0.183	0.431	0.203	0.200	0.403	0.055	0.286	0.341
101-110	0.303	0.220	0.523	0.247	0.239	0.486	0.067	0.330	0.397
111-120	0.362	0.256	0.618	0.296	0.277	0.573	0.079	0.372	0.451
121-130	0.427	0.291	0.718	0.349	0.314	0.663	0.093	0.412	0.505
131-140	0.498	0.325	0.823	0.406	0.349	0.755	0.109	0.449	0.558
141-150	0.574	0.357	0.931	0.468	0.382	0.850	0.125	0.484	0.609
151-160	0.655	0.387	1.042	0.534	0.413	0.947	0.142	0.516	0.658
161-170	0.742	0.416	1.158	0.605	0.443	1.048	0.161	0.546	0.707
171-180	0.834	0.444	1.278	0.680	0.472	1.152	0.181	0.575	0.756
181-190	0.931	0.470	1.401	*	*	*	*	*	*
191-200	1.034	0.495	1.529	*	*	*	*	*	*
201-210	1.142	0.518	1.660	*	*	*	*	*	*
211-220	1.256	0.540	1.796	*	*	*	*	*	*
221-230	1.375	0.561	1.936	*	*	*	*	*	*
231-240	1.500	0.581	2.081	*	*	*	*	*	*
241-250	1.630	0.600	2.230	*	*	*	*	*	*

Table 6(a): Site quality and girthclass wise volume (cmt ) of timber and fuelwood in Sidhi division

Girth Class (cm)	Site Quality IVa								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.0195	0.0007	0.0202	0.0152	0.0010	0.0162	0.0040	0.0020	0.0060
31-40	0.0347	0.0053	0.0400	0.0274	0.0065	0.0339	0.0059	0.0110	0.0169
41-50	0.0550	0.0171	0.0721	0.0436	0.0201	0.0637	0.0084	0.0301	0.0385
51-60	0.0802	0.0367	0.1169	0.0638	0.0419	0.1057	0.0116	0.0582	0.0698
61-70	0.1105	0.0626	0.1731	0.0880	0.0700	0.1580	0.0153	0.0921	0.1074
71-80	0.1457	0.0927	0.2384	0.1162	0.1023	0.2185	0.0197	0.1293	0.1490
81-90	0.1860	0.1254	0.3114	0.1484	0.1368	0.2852	0.0247	0.1676	0.1923
91-100	0.2312	0.1593	0.3905	0.1846	0.1721	0.3567	0.0303	0.2059	0.2362
101-110	0.2815	0.1933	0.4748	0.2248	0.2074	0.4322	0.0365	0.2433	0.2798
111-120	0.3367	0.2269	0.5636	0.2690	0.2420	0.5110	0.0434	0.2793	0.3227
121-130	0.3970	0.2597	0.6567	0.3172	0.2755	0.5927	0.0509	0.3136	0.3645
131-140	0.4622	0.2913	0.7535	0.3694	0.3077	0.6771	0.0589	0.3462	0.4051
141-150	0.5325	0.3216	0.8541	0.4256	0.3384	0.7640	0.0677	0.3770	0.4447
151-160	0.6077	0.3506	0.9583	0.4858	0.3677	0.8535	*	*	*
161-170	0.6880	0.3783	1.0663	0.5500	0.3956	0.9456	*	*	*
171-180	0.7732	0.4046	1.1778	*	*	*	*	*	*
181-190	0.8635	0.4296	1.2931	*	*	*	*	*	*
191-200	0.9587	0.4534	1.4121	*	*	*	*	*	*
201-210	1.0590	0.4760	1.5350	*	*	*	*	*	*
211-220	1.1642	0.4975	1.6617	*	*	*	*	*	*
221-230	1.2745	0.5179	1.7924	*	*	*	*	*	*
231-240	1.3897	0.5373	1.9270	*	*	*	*	*	*
241-250	1.5100	0.5558	2.0658	*	*	*	*	*	*
251-260	1.6352	0.5734	2.2086	*	*	*	*	*	*
261-270	1.7655	0.5902	2.3557	*	*	*	*	*	*
271-280	1.9007	0.6061	2.5068	*	*	*	*	*	*

Table 6(b) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in Sidhi division

Girth Class (cm)	Site Quality IVb								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
21-30	0.0162	0.0009	0.0171	0.0145	0.0010	0.0155	0.0036	0.0020	0.0056
31-40	0.0293	0.0061	0.0354	0.0261	0.0067	0.0328	0.0052	0.0113	0.0165
41-50	0.0467	0.0191	0.0658	0.0415	0.0206	0.0621	0.0072	0.0308	0.0380
51-60	0.0684	0.0402	0.1086	0.0607	0.0427	0.1034	0.0097	0.0592	0.0689
61-70	0.0944	0.0675	0.1619	0.0837	0.0711	0.1548	0.0127	0.0935	0.1062
71-80	0.1247	0.0991	0.2238	0.1105	0.1035	0.2140	0.0163	0.1310	0.1473
81-90	0.1593	0.1330	0.2923	0.1411	0.1381	0.2792	0.0203	0.1696	0.1899
91-100	0.1983	0.1678	0.3661	0.1754	0.1735	0.3489	0.0248	0.2081	0.2329
101-110	0.2415	0.2027	0.4442	0.2136	0.2087	0.4223	0.0298	0.2456	0.2754
111-120	0.2890	0.2370	0.5260	0.2556	0.2432	0.4988	0.0354	0.2817	0.3171
121-130	0.3408	0.2702	0.6110	0.3014	0.2767	0.5781	0.0414	0.3161	0.3575
131-140	0.3969	0.3022	0.6991	0.3510	0.3087	0.6597	0.0479	0.3488	0.3967
141-150	0.4573	0.3329	0.7902	0.4044	0.3394	0.7438	0.0549	0.3796	0.4345
151-160	*	*	*	*	*	*	*	*	*
161-170	*	*	*	*	*	*	*	*	*
171-180	*	*	*	*	*	*	*	*	*
181-190	*	*	*	*	*	*	*	*	*
191-200	*	*	*	*	*	*	*	*	*
201-210	*	*	*	*	*	*	*	*	*
211-220	*	*	*	*	*	*	*	*	*
221-230	*	*	*	*	*	*	*	*	*
231-240	*	*	*	*	*	*	*	*	*
241-250	*	*	*	*	*	*	*	*	*
251-260	*	*	*	*	*	*	*	*	*
261-270	*	*	*	*	*	*	*	*	*
271-280	*	*	*	*	*	*	*	*	*

Table 7(a): Site quality and girthclass -wise volume (cmt) of timber and fuelwood in South Shahdol division

Girth Class (cm)	Site Quality III								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.062	0.007	0.069	0.048	0.011	0.059	0.018	0.027	0.045
41-50	0.090	0.022	0.112	0.066	0.031	0.097	0.027	0.062	0.089
51-60	0.123	0.045	0.168	0.088	0.061	0.149	0.037	0.107	0.144
61-70	0.164	0.076	0.240	0.115	0.098	0.213	0.050	0.157	0.207
71-80	0.211	0.110	0.321	0.146	0.138	0.284	0.065	0.208	0.273
81-90	0.265	0.147	0.412	0.181	0.179	0.360	0.082	0.259	0.341
91-100	0.326	0.185	0.511	0.221	0.221	0.442	0.101	0.307	0.408
101-110	0.393	0.222	0.615	0.265	0.261	0.526	0.122	0.352	0.474
111-120	0.467	0.259	0.726	0.314	0.300	0.614	0.145	0.395	0.540
121-130	0.548	0.294	0.842	0.367	0.338	0.705	0.170	0.435	0.605
131-140	0.635	0.328	0.963	0.424	0.374	0.798	0.198	0.472	0.670
141-150	0.729	0.361	1.090	0.486	0.407	0.893	0.227	0.507	0.734
151-160	0.830	0.392	1.222	0.552	0.439	0.991	0.259	0.539	0.798
161-170	0.938	0.422	1.360	0.623	0.469	1.092	0.293	0.569	0.862
171-180	1.052	0.450	1.502	0.698	0.498	1.196	0.328	0.597	0.925
181-190	1.173	0.476	1.649	0.777	0.524	1.301	0.366	0.624	0.990
191-200	1.301	0.501	1.802	0.861	0.550	1.411	0.406	0.648	1.054
201-210	1.435	0.525	1.960	0.949	0.573	1.522	0.449	0.671	1.120
211-220	1.576	0.548	2.124	1.042	0.596	1.638	*	*	*
221-230	1.724	0.569	2.293	1.139	0.617	1.756	*	*	*
231-240	1.878	0.589	2.467	1.240	0.637	1.877	*	*	*
241-250	2.039	0.609	2.648	1.346	0.656	2.002	*	*	*
251-260	2.207	0.627	2.834	1.456	0.675	2.131	*	*	*
261-270	2.382	0.645	3.027	1.571	0.692	2.263	*	*	*
271-280	2.563	0.661	3.224	1.690	0.708	2.398	*	*	*
281-290	2.751	0.677	3.428	1.813	0.724	2.537	*	*	*
291-300	2.946	0.692	3.638	1.941	0.738	2.679	*	*	*

Table 7(b) : Site quality and girthclass wise volume (cmt) of timber and fuel wood in South Shahdol division

Girth Class (cm)	Site Quality IVa								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.059	0.007	0.066	0.044	0.009	0.053	0.011	0.027	0.038
41-50	0.084	0.022	0.106	0.061	0.026	0.087	0.016	0.062	0.078
51-60	0.116	0.045	0.161	0.081	0.052	0.133	0.022	0.107	0.129
61-70	0.153	0.075	0.228	0.105	0.085	0.190	0.029	0.157	0.186
71-80	0.197	0.109	0.306	0.133	0.122	0.255	0.037	0.209	0.246
81-90	0.247	0.146	0.393	0.165	0.161	0.326	0.046	0.259	0.305
91-100	0.303	0.183	0.486	0.202	0.200	0.402	0.057	0.307	0.364
101-110	0.365	0.220	0.585	0.242	0.239	0.481	0.069	0.353	0.422
111-120	0.434	0.256	0.690	0.286	0.277	0.563	0.081	0.396	0.477
121-130	0.509	0.291	0.800	0.334	0.314	0.648	0.095	0.436	0.531
131-140	0.589	0.325	0.914	0.386	0.349	0.735	0.111	0.473	0.584
141-150	0.677	0.357	1.034	0.443	0.382	0.825	0.127	0.508	0.635
151-160	0.770	0.387	1.157	0.503	0.413	0.916	0.144	0.540	0.684
161-170	0.869	0.416	1.285	0.567	0.443	1.010	0.163	0.570	0.733
171-180	0.975	0.444	1.419	0.635	0.472	1.107	0.183	0.598	0.781
181-190	1.087	0.470	1.557	0.707	0.498	1.205	0.204	0.624	0.828
191-200	1.205	0.495	1.700	0.784	0.524	1.308	0.226	0.649	0.875
201-210	1.329	0.518	1.847	0.864	0.548	1.412	0.249	0.672	0.921
211-220	1.460	0.540	2.000	0.948	0.570	1.518	0.273	0.693	0.966
221-230	1.597	0.561	2.158	1.036	0.592	1.628	0.299	0.713	1.012
231-240	1.740	0.581	2.321	1.128	0.612	1.740	0.326	0.732	1.058
241-250	1.889	0.600	2.489	1.225	0.631	1.856	0.354	0.750	1.104
251-260	2.044	0.618	2.662	1.325	0.650	1.975	0.383	0.767	1.150
261-270	2.205	0.636	2.841	1.429	0.667	2.096	0.413	0.783	1.196
271-280	2.373	0.652	3.025	1.537	0.684	2.221	*	*	*
281-290	*	*	*	*	*	*	*	*	*
291-300	*	*	*	*	*	*	*	*	*

Table 7(c) : Site quality and girthclass -wise volume (cmt) of timber and fuelwood in South Shahdol division

Girth Class (cm)	Site Quality IVb								
	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.048	0.007	0.055	0.043	0.009	0.052	0.009	0.023	0.032
41-50	0.066	0.020	0.086	0.059	0.026	0.085	0.014	0.055	0.069
51-60	0.088	0.043	0.131	0.079	0.052	0.131	0.020	0.098	0.118
61-70	0.116	0.072	0.188	0.103	0.085	0.188	0.027	0.146	0.173
71-80	0.147	0.105	0.252	0.131	0.122	0.253	0.035	0.195	0.230
81-90	0.184	0.140	0.324	0.163	0.161	0.324	0.044	0.244	0.288
91-100	0.224	0.177	0.401	0.199	0.199	0.398	0.054	0.292	0.346
101-110	0.270	0.213	0.483	0.239	0.238	0.477	0.065	0.337	0.402
111-120	0.319	0.249	0.568	0.282	0.277	0.559	0.078	0.380	0.458
121-130	0.374	0.284	0.658	0.330	0.314	0.644	0.092	0.420	0.512
131-140	0.432	0.317	0.749	0.382	0.349	0.731	0.107	0.458	0.565
141-150	0.496	0.349	0.845	0.437	0.382	0.819	0.123	0.493	0.616
151-160	0.563	0.379	0.942	0.497	0.414	0.911	0.140	0.525	0.665
161-170	0.635	0.408	1.043	0.560	0.443	1.003	0.158	0.556	0.714
171-180	0.712	0.436	1.148	0.628	0.472	1.100	0.178	0.584	0.762
181-190	0.793	0.462	1.255	0.699	0.498	1.197	0.198	0.611	0.809
191-200	0.879	0.487	1.366	0.775	0.524	1.299	0.220	0.636	0.856
201-210	0.969	0.510	1.479	*	*	*	0.243	0.660	0.903
211-220	1.064	0.532	1.596	*	*	*	0.267	0.682	0.949
221-230	1.163	0.554	1.717	*	*	*	0.292	0.702	0.994
231-240	1.267	0.574	1.841	*	*	*	0.311	0.717	1.028
241-250	1.375	0.593	1.968	*	*	*	*	*	*
251-260	1.488	0.611	2.099	*	*	*	*	*	*
261-270	1.605	0.628	2.233	*	*	*	*	*	*
271-280	1.727	0.645	2.372	*	*	*	*	*	*
281-290	*	*	*	*	*	*	*	*	*
291-300	*	*	*	*	*	*	*	*	*



**Table 7(d): Site quality and girthclass-wise volume (cmt) of timber and fuelwood in South Shahdol division**

Site Quality Va									
Girth Class (cm)	Sound			Halfsound			Unsound		
	Timber	Fuel	Total	Timber	Fuel	Total	Timber	Fuel	Total
31-40	0.036	0.004	0.040	0.031	0.005	0.036	0.009	0.013	0.022
41-50	0.049	0.014	0.063	0.044	0.015	0.059	0.014	0.036	0.050
51-60	0.066	0.032	0.098	0.060	0.034	0.094	0.019	0.068	0.087
61-70	0.086	0.056	0.142	0.079	0.058	0.137	0.026	0.108	0.134
71-80	0.109	0.084	0.193	0.102	0.088	0.190	0.034	0.150	0.184
81-90	0.136	0.115	0.251	0.127	0.120	0.247	0.043	0.194	0.237
91-100	0.166	0.148	0.314	0.156	0.154	0.310	0.053	0.237	0.290
101-110	0.199	0.182	0.381	0.188	0.188	0.376	0.064	0.280	0.344
111-120	0.228	0.209	0.437	0.223	0.221	0.444	0.077	0.320	0.397
121-130	*	*	*	0.258	0.251	0.509	0.090	0.359	0.449
131-140	*	*	*	*	*	*	0.105	0.395	0.500
141-150	*	*	*	*	*	*	0.121	0.430	0.551
151-160	*	*	*	*	*	*	*	*	*
161-170	*	*	*	*	*	*	*	*	*
171-180	*	*	*	*	*	*	*	*	*
181-190	*	*	*	*	*	*	*	*	*
191-200	*	*	*	*	*	*	*	*	*
201-210	*	*	*	*	*	*	*	*	*
211-220	*	*	*	*	*	*	*	*	*
221-230	*	*	*	*	*	*	*	*	*
231-240	*	*	*	*	*	*	*	*	*
241-250	*	*	*	*	*	*	*	*	*
251-260	*	*	*	*	*	*	*	*	*
261-270	*	*	*	*	*	*	*	*	*
271-280	*	*	*	*	*	*	*	*	*
281-290	*	*	*	*	*	*	*	*	*
291-300	*	*	*	*	*	*	*	*	*

Note :- (\*) indicates that data was not available for these girth classes.



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