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No. 4

YIELD TABLES (Provisional)

FOR

SAL (*Shorea robusta*. Gaertn. F.)

FOR

MADHYA PRADESH

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CONTENTS

PAGE
(iii)

DEFINITIONS

FOREWORD

PREFACE

(v)

I	Introduction	...	1
II	Applicability of tables	...	1
III	The basic data —		
	(i) The number of plots and their distribution	...	1
	(ii) Individual plot computations	...	3
IV	Compilation of yield tables —		
	(i) Differentiation of plots into site qualities	...	4
	(ii) Distribution of the data within site qualities	...	5
	(iii) Rejection of abnormal plots	...	6
	(iv) Grouping and averaging of main crop data	...	7
	(v) Plotting of averages and curve construction (main crop).	...	8
	(vi) Tabulation of main crop data	...	8
	(vii) Subsidiary crop data	...	9

TABLES

Table No.

1.	Top height by site quality and top age	..	3
2.	Yield per acre site quality I	...	12
3.	Yield per acre site quality I/II	...	16
4.	Yield per acre site quality II	...	20
5.	Yield per acre site quality II/III	...	24
6.	Yield per acre site quality III	...	28

CURVES

1.	Distribution of sample plots by top height and top age	...	I
2.	Top height and top age by site qualities	...	II
3.	Average main crop diameter by crop age and site qualities	...	III
4.	Number of trees per acre in main crop by site qualities	...	IV
5.	Number of trees per acre in main crop by crop diameter and site qualities	V
6.	Basal area per acre of main crop by crop age and site qualities.	VI
7.	Standard stem timber volume per acre in main crop by crop age and site qualities.	VII

APPENDICES

Appendix No.	Page
1. Basic data by sample plots (main crop)	33
2. Branch small wood percentage.	42

DEFINITIONS

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|---------------------------|--|
| 1. Standard timber bole | The bole from ground level up to a limiting diameter of 8 inches over bark (average). |
| 2. Standard smallwood | Branch or stemwood less than 8 inches mean diameter over bark down to a limiting mean diameter of 2 inches over bark. |
| 3. Standard timber volume | The total volume of the standard timber bole including the stump calculated by full cross sectional areas measured under bark. |
| 4. Total smallwood volume | The total volume of standard smallwood in the main stem and branches. |
| 5. Fractional quality | The site quality defined as a decimal subdivision of the height range of half a quality class, the figures running from 0.0 to 2.0 within the whole quality class (e.g. 1.0 II quality is mean II quality and 2.0 III = 0.0 II is the dividing line between II and III qualities). |
| 6. Crop diameter | Diameter corresponding to average stem basal area obtained by dividing the basal area per acre by the number of stems. |
| 7. Crop height | Height determined by Loreys' formula :—
$H = \frac{s_1 h_1 + s_2 h_2 \dots + s_n h_n}{s_1 + s_2 \dots + s_n}$ where s = basal area of each group, and h = height corresponding to the mean diameter of each group as obtained from the Height/Diameter curve. |
| 8. Top height | Height corresponding to the mean diameter (calculated from basal area) of the 100 biggest diameters per acre for each plot, as read from Height/Diameter curve. |
| 9. Top age | Age corresponding to the mean diameter (calculated from basal area) of the 100 biggest diameters per acre for each plot as read from the Age/Diameter curve. |
| 10. Cumulative frequency | The accumulated values of the frequencies of successive diameters starting with the lowest, expressed as percentages of the total frequency. |

Notes :—(1) Wherever the word "Age" used in the publication is not preceded by the word "Top", it signifies "Crop age" as distinct from "Top age".
 (2) All volumes in these tables are calculated on the basis of full $I\bar{r}^2$ sectional area. For deducing volumes by quarter girth ($\frac{1}{4}$ sectional area multiply the $I\bar{r}^2$ volumes by the factor 0.8181.

FOREWORD

It gives me great pleasure to commend the State Forest Research Institute Bulletin "Yield Tables (Provisional) for Sal in Madhya Pradesh" for general use by the Forest Officers of Madhya Pradesh.

Sal Forests extend over roughly 37,550 Sq. Km. (14,500 Sq. Miles) and constitute roughly 22 per cent of forests in Madhya Pradesh. While All-India Sal Yield Tables are available, the need for compiling yield tables for Madhya Pradesh Sal, which will have more precise local applicability, has been felt since long.

I trust this provisional compilation will be found very useful.

N. K. SHARMA,
*Chief Conservator of Forests,
Madhya Pradesh.*

BHOPAL:
Dated the 1st November 1966.

PREFACE

The present "Yield Tables (Provisional) for Sal (*Shorea robusta*, Gaertn. F.) for Madhya Pradesh" is the first attempt to draw up Yield table purely in respect of High forests of Sal of Madhya Pradesh. It is formulated from data covering 41 sample plots with 231 measurements. So far "Yield and Stand Tables for Sal by Griffith and Sant Ram" were made use of but they only covered 107 measurements from 37 sample plots of Madhya Pradesh, the remaining 435 measurements from 188 sample plots being from divisions of other States.

The table now produced, no doubt, does not fairly represent the full range of quality classes of Sal High forests spread in Madhya Pradesh and are thus "provisional". Most of the sample plots are located in South Raipur division with some in Mandla and Balaghat divisions. There is no representation from Bastar and Bilaspur Circles. As regards Rewa Circle most of the Sal forests have been worked in the past under Coppice or in some cases under Selection Systems. Available data from younger age classes is also scanty and almost a parallel situation exists in higher age classes. Thus the Yield Table produced is although not comprehensive, yet it may prove to be a better standard of reference for Madhya Pradesh Sal High forests. It may be specially helpful in providing more correct height/age trends and number of stems per acre than has hitherto been available.

The greatest part of the labour in compilation of the table has fallen on the junior authors. Mr. N. S. Chandrawat who specially helped in computation work deserves special mention for his arduous and excellent work.

JABALPUR :

Dated the 11th May 1966.

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