

# FOREST RESEARCH REPORT

**NOVA SCOTIA DEPARTMENT  
OF LANDS AND FORESTS  
P.O. BOX 68, TRURO, N.S. B2N 5B8**

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## REVISED NORMAL YIELD TABLES FOR NOVA SCOTIA SOFTWOODS

### INTRODUCTION

Under the Canada Land Inventory Program (CLI), all land in Nova Scotia was classified and mapped into 1 of 7 capability classes for forestry, wildlife, recreation and agriculture. Assignment of forest capability CLI ratings in the Maritime Region (Bailey and Mailman, 1972) was based on the interrelationship between top height, age and peak mean annual increment<sup>1</sup> (Figure 1) as interpreted from the Nova Scotia Site Quality Normal Yield Tables for Softwoods (SQNYT) (Hawboldt and Kostjukovits, 1961). A subsequent reconnais-

sance survey, prompted by disagreement on the accuracy of the CLI classification, indicated that land capability for forestry had been consistently underestimated. A study was therefore initiated by the Nova Scotia Department of Lands and Forests to develop a revised set of normal yield tables for softwoods which would in turn provide the basis for correcting the Canada Land Inventory Forest Capability maps.

- 1 Mean annual increment (MAI) was expressed in terms of gross merchantable volume and did not include additional volumes which could be obtained from thinnings, fertilization, branch wood, bark, tops, stumps, matching species to site, drainage, or other factors.

### METHODS

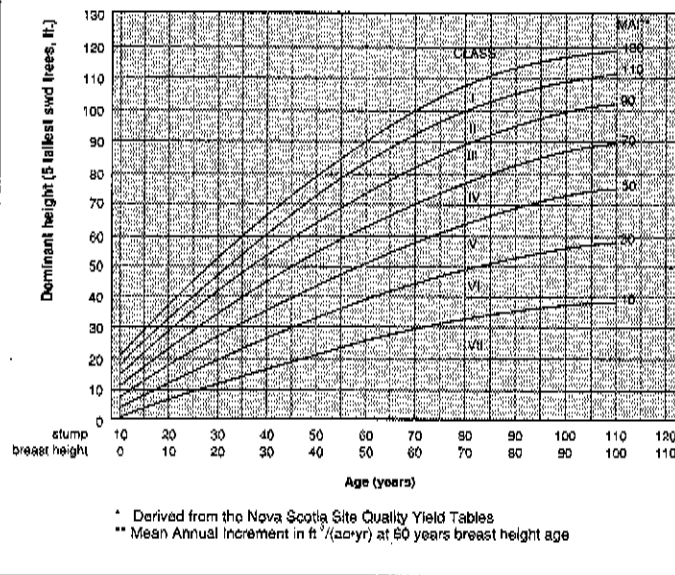
#### PLOT LOCATION

Two hundred and twenty-two fully stocked, even aged, free growing, disease free, softwood stands, composed primarily of 1 species, were located on a variety of sites throughout Nova

Scotia. The stands were chosen to include the major commercial softwood species, over a range of site qualities and stand ages (Tables 1 and 2). A circular temporary sample plot, large enough to include a minimum of 35 trees, was

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**Figure 1. Land Capability rating system\* used to classify all lands in Nova Scotia for forest capability under the Canada Land Inventory.**



established in each stand. Approximately 75% of the plots were 1/10 acre in size with the remainder being 1/20th and 1/40th acre in size (Table 3). The plots were carefully located in a fully stocked (100% crown cover) portion of each stand. Each plot was surrounded by a fully stocked buffer zone at least equal in radius to the average tree height.

### PLOT MEASUREMENTS

In each plot:

- (i) All trees exceeding 0.5 inches (") in diameter (outside bark) at breast height (Dbhob) were measured for diameter.
- (ii) Fifteen trees representing a range of diameters but weighted towards the larger diameters were selected and measured for diameter and height.

**Table 1. Number of plots established by species and land capability class.**

Species <sup>1</sup>	Land Capability Class						
	1	2	3	4	5	6	7
Red Spruce	0	0	2	28	27	5	0
White Spruce	0	0	21	53	22	0	0
White Pine	0	2	16	8	0	0	0
Red Pine	0	0	3	8	11	0	0
Balsam Fir	0	0	0	1	11	4	0
Totals	0	2	42	98	71	9	0

<sup>1</sup>Red Spruce = *Picea rubens* Sarg. = rS  
 White Spruce = *Picea glauca* (Moench) Voss. = wS  
 White Pine = *Pinus strobus* L. = wP  
 Red Pine = *Pinus resinosa* Ait. = rP  
 Balsam Fir = *Abies balsamea* (L.) Mill. = bF

**Table 2. Number of plots established by species and age class.**

Species	Age Class (yrs)								
	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
Red Spruce	0	0	0	1	1	20	20	8	12
White Spruce	0	0	2	32	12	43	6	1	0
White Pine	0	0	3	4	10	3	6	0	0
Red Pine	0	0	0	0	3	8	7	1	3
Balsam Fir	0	0	1	1	7	3	4	0	0
Totals	0	0	6	38	33	77	43	10	15

**Table 3. Number of plots established by species and plot size.**

Species	Plot Size (acre)			Totals
	0.1	0.05	0.025	
Red Spruce	56	6	0	62
White Spruce	68	22	6	96
White Pine	21	2	3	26
Red Pine	20	1	1	22
Balsam Fir	4	5	7	16
Totals	169	36	17	222

- (iii) Stump age, breast height age, and height of the 5 tallest trees were measured in order to provide an estimate of the capability of the site (LC).
- (iv) A soil pit was dug and the following physical characteristics of the site described including: rooting depth, soil texture, moisture quality and regime, consistence, rock type, mode of origin, climatic exposure, local relief, slope, aspect.
- (v) The species of lesser vegetation, including their importance (% cover) and the type and amount of natural tree regeneration were recorded.

### CALCULATION OF STAND PARAMETERS

A computer program was written to calculate and/or output the following stand values:

- (i) Top Height (TH) = the average height of the 5 tallest trees in the plot
- (ii) Stump Age (SA) = the average age of the 5 tallest trees measured at a height of 1 foot above the ground
- (iii) Breast Height Age (BHA) = the average age of the 5 tallest trees measured at 4.5 feet above the ground surface
- (iv) Site Index (SI (50)) = the projected average height of the tallest 5 trees at age 50 (as determined from Figure 1)

- (v) Total Frequency (TF) = the number of trees per acre 0.6" outside bark diameter (Dbhob) and greater
- (vi) Merchantable Frequency (MF) = the number of trees per acre 3.6" (Dbhob) and greater
- (vii) Sawlog Frequency (SF) = the number of trees per acre 5.6" (Dbhob) and greater
- (viii) Total Basal Area (TBA) = the cross-sectional area, measured at 4.5 feet above ground level of all trees 0.6" (Dbhob) and greater, expressed in square feet per acre
- (ix) Merchantable Basal Area (MBA) = the cross-sectional area, measured at 4.5 feet above ground level, of all trees 3.6" (Dbhob) and greater, expressed in square feet per acre
- (x) Sawlog Basal Area (SBA) = the cross-sectional area, measured at 4.5 feet above ground level, of all trees 5.6" (Dbhob) and greater, expressed in square feet per acre
- (xi) Total Diameter (TD) = 
$$\sqrt{\left(\frac{TBA}{TF}\right) \div .005454}$$
- (xii) Merchantable Diameter (MD) = 
$$\sqrt{\left(\frac{MBA}{MF}\right) \div .005454}$$
- (xiii) Sawlog Diameter (SD) = 
$$\sqrt{\left(\frac{SBA}{SF}\right) \div .005454}$$
- (xiv) Total Volume (TV) = the volume inside bark of all tree boles, including the stump and top, 0.6" Dbhob and greater as determined from volume equations derived by Honer (1967), expressed in cubic feet per acre
- (xv) Merchantable Volume (MV) = the volume inside bark of all tree boles 3.6" (Dbhob) and greater as determined from Honer's volume equations expressed in cubic feet per acre. The merchantable bole excludes the stump (6.0") and the top (3.0" inside bark diameter (Dib))
- (xvi) Sawlog Volume (SV) = the volume inside bark of all tree boles 5.6" in diameter (Dbhob) and greater as determined from Honer's volume equations expressed in board feet per acre. Sawlog volume is based on the New Brunswick Log Rule. Stumps (6.0" height) and tops (4.0" Dib) are excluded
- (xvii) Total Lorey's Height (TLH) = the sum of the products of the average height and basal area for each diameter class divided by the Total Basal Area (Evert, 1964)
- (xviii) Merchantable Lorey's Height (MLH) = the sum of the products of the average height and basal area for each diameter class 4" and greater divided by the Merchantable Basal Area
- (xix) Sawlog Lorey's Height (SLH) = the sum of the products of the average height and basal area for each diameter class 6" and greater divided by the Sawlog Basal Area.

## DERIVATION OF PREDICTION EQUATIONS

The prediction equations required to derive the Revised Normal Yield Tables (RNYT) for softwood were formulated using stepwise regression procedures on various combinations of the variables stated above. Initially equations were developed for individual species and individual capability classes. Graphical comparisons of these curves indicated that the differences among the relationships for individual softwood species (rP, wP, rS, wS, bF) were either minor and/or inconsistent. Given:

- (i) the inadequate sample intensity to derive equations at the individual species or capability class level,
- (ii) the inherent shortcomings of a "single examination yield survey",
- (iii) the use of standard volume tables versus detailed stem analyses to determine volume,
- (iv) the underlying assumption that the

stands measured had been fully stocked for their entire life, and

- (v) the use of one set of Height-Age-MAI curves (Figure 1) for all species and eco-regions in the Province;

a decision was made to derive the RNYT from equations for combined softwood species. The regression equations, including parameter coefficients and statistics (based on the original plot data) are summarized in Appendices 1 and 2.

## DERIVATION OF REVISED NORMAL YIELD TABLES

In order to derive the revised set of Normal Yield Tables, a computer model was developed utilizing the prediction equations and other known interrelationships. The ordering of the prediction equations in the model and the interrelationships used to compute the normal yield parameters were as follows:

- (i) Total Lorey's Height (TLH) for stand ages ranging from 5 to 100 years was estimated based on site index (SI (50)) and stump age (SA) (Appendix 1, Equation #1)
- (ii) Top Height (TH) for stand ages ranging from 5 to 100 years was derived from TLH (Appendix 1, Equation #2)
- (iii) Total Diameter (TD) was derived from TLH (Appendix 1, Equation #3)
- (iv) Total Frequency (TF) was derived from TD (Appendix 1, Equation #4)
- (v) Total Basal Area (TBA) was determined by converting TD to BA (ft<sup>2</sup>) and multiplying by the Total Frequency (TF)
- (vi) Merchantable Basal Area (MBA) was derived from TBA and TD (Appendix 1, Equation #5)
- (vii) Merchantable Diameter (MD) was derived from TD (Appendix 1, Equation #6)
- (viii) Sawlog Diameter (SD) was derived from MD (Appendix 1, Equation #7)
- (ix) Sawlog Basal Area (SBA) was derived from MBA and MD (Appendix 1, Equation #8)
- (x) Merchantable Frequency (MF) was de-

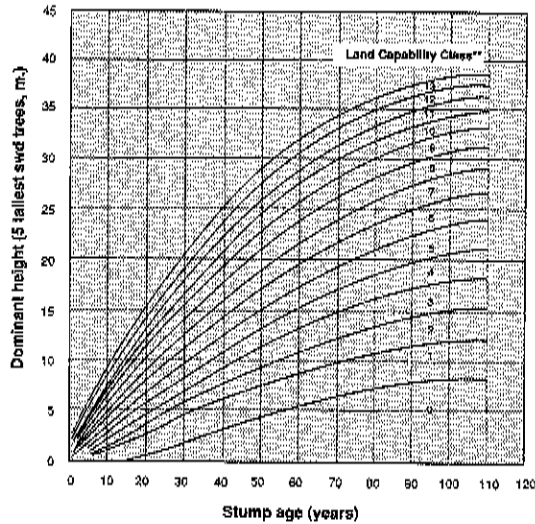
- termined by dividing Merchantable Basal Area (MBA) by Merchantable Diameter (MD) converted to basal area
- (xi) Sawlog Frequency (SF) was determined by dividing Sawlog Basal Area (SBA) by Sawlog Diameter (SD) converted to basal area
- (xii) Merchantable Lorey's Height (MLH) was derived from TLH and TD (Appendix 1, Equation #9)
- (xiii) Total Volume (TV) was derived from TBA and TLH (Appendix 1, Equation #10)
- (xiv) Sawlog Lorey's Height (SLH) was derived from MLH and MD (Appendix 1, Equation #11)
- (xv) Merchantable Volume (MV) was derived from MLH and MBA (Appendix 1, Equation #12)
- (xvi) Sawlog Volume (SV) was derived from SBA and SLH (Appendix 1, Equation #13)

Conversion to metric was accomplished by adding the appropriate metric conversion factors to the computer model. No attempt was made to develop metric equations.

Since normal yield tables are, for the most part, best utilized for rating potential forest production, it was decided to develop a set of tables that could be easily used for this purpose. Proceeding on this basis, the number of forest capability classes was increased from 7 under the CLI system to 13 (Appendix 3 and Figures 2 and 3). Class 0 is the lowest of the metric classes and ranges in productivity<sup>1</sup> from 0.0 cubic metres per hectare per year (m<sup>3</sup>/(ha • a)) to 0.5 m<sup>3</sup>/(ha • a). Class 8 normally represents the maximum capability found in the Province (Table 4) and ranges from 7.6 m<sup>3</sup>/(ha • a) to 8.5 m<sup>3</sup>/(ha • a). Classes 9 to 13 were extrapolated, in order to permit rating of sites, especially those planted to high yield exotic species (e.g. Norway spruce *Picea abies* (L.) Karst.) which are capable of producing up to 13 m<sup>3</sup>/(ha • a) or 2.5 cords per acre per year (cd/(ac • yr)).

<sup>1</sup> productivity - expressed in terms of solid m<sup>3</sup>/(ha • a) at a rotation age defined as peak MAI in MV.

**Figure 2. Metric Height-Age-MAI curves for softwoods\*.**



\* Derived from the Revised Normal Yield Tables  
 \*\* Peak Mean Annual Increment in  $m^3/(ha \cdot a)$

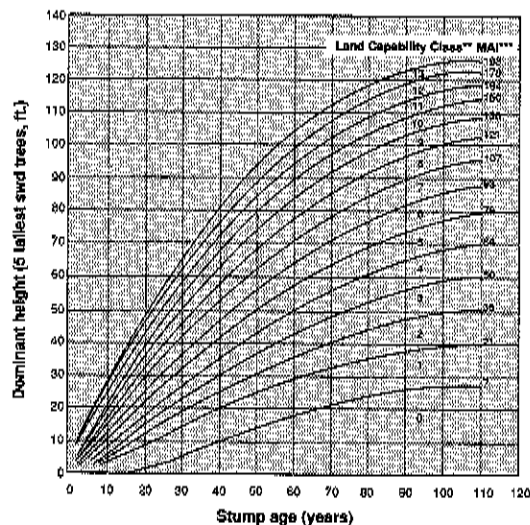
This system of rating capability has several advantages over the older CLI Imperial rating system. They are:

(i) The class number, with the exception of class 0, is numerically equivalent to the mean annual increment of the mid-point of

that class. For example, a site rated as LC 6 is potentially capable of producing an average of  $6 m^3/(ha \cdot a)$ .

(ii) The system is open ended to allow classification of sites capable of producing in excess of  $13 m^3/(ha \cdot a)$ .

**Figure 3. Imperial Height-Age-MAI curves for softwoods\*.**



\* Derived from the Revised Normal Yield Tables  
 \*\* Peak Mean Annual Increment in  $m^3/(ha \cdot a)$   
 \*\*\* Peak Mean Annual Increment in  $ft^3/(ac \cdot yr)$

**Table 4. The productivity ranges associated with the metric capability classes.**

Metric Capability Class	Productivity Range m <sup>3</sup> / (ha•a)	Approximate % of Province in Each Class
0	0 - .5	8
1	.6 - 1.5	15
2	1.6 - 2.5	
3	2.6 - 3.5	
4	3.6 - 4.5	39
5	4.6 - 5.5	
6	5.6 - 6.5	35
7	6.6 - 7.5	
8	7.6 - 8.5	3
9	8.6 - 9.5	
10	9.6 - 10.5	< 1
11	10.6 - 11.5	
12	11.6 - 12.5	
13	12.6 - 13.5	

(iii) The class interval is equal to unity (i.e. 1 m<sup>3</sup>/(ha •a)).

(iv) The class interval is smaller in value than the CLI class interval, thereby resulting in a finer system of classification.

## COMPARISON OF YIELD TABLES

### MEAN ANNUAL INCREMENT (MAI)

Figure 4 indicates that the original "Site Quality Normal Yield Tables" consistently underestimated potential site productivity. The best sites, at rotation age<sup>1</sup>, were underestimated by approximately 40 ft<sup>3</sup>/(ac•yr) while the poorest sites were underestimated by approximately 10 ft<sup>3</sup>/(ac•yr). *This means that the CLI Forest Capability Maps produced for Nova Scotia and in all probability the Maritimes, underrate potential forest production by 1/2 to 2 CLI classes.*

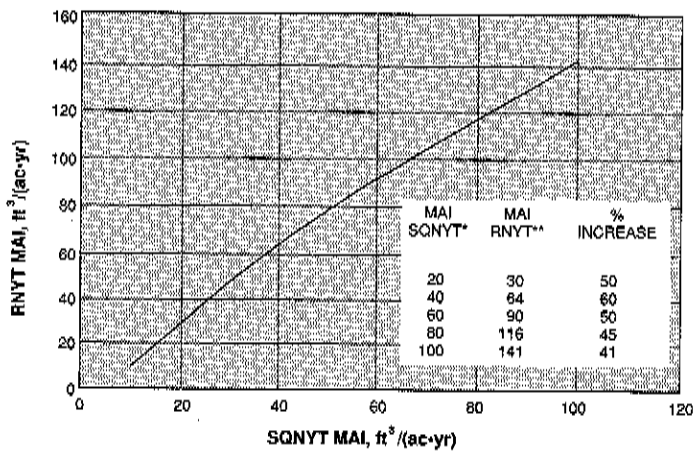
The reasons for the underestimation are two fold. On the one hand, it was erroneously

assumed that 10 years were required for dominant trees to grow from stump height (1') to breast height (4.5') on all sites (Figure 1). Analysis of the data collected in this study indicates that the number of years varies from 2 years on the best sites in Nova Scotia to 25 years on the poorest sites (Table 5). Note that for CLI classes 2 to 5, the number of years required to grow to breast height is equal to the class number<sup>2</sup>.

<sup>1</sup> rotation age - based on peak mean annual increment (merchantable volume divided by stump age)

<sup>2</sup> analysis of the raw data indicates that for classes 2 to 5, 83% of the plots were within ± 1 year of the CLI class number.

**Figure 4. Comparison of normal mean annual increments.**



\* Mean Annual Increment in  $\text{ft}^3/\text{ac}\cdot\text{yr}$  at 60 years breast height age  
 \*\* Peak Mean Annual Increment in  $\text{m}^3/\text{ac}\cdot\text{yr}$   
 RNYT = Revised normal yield tables  
 SQNYT = Site quality normal yield tables

**Table 5. Number of years required for dominant seedlings to grow from stump height to breast height.**

CLI Class	Number of Years
2	2
3	3
4	4
5	5
6	10
7	25

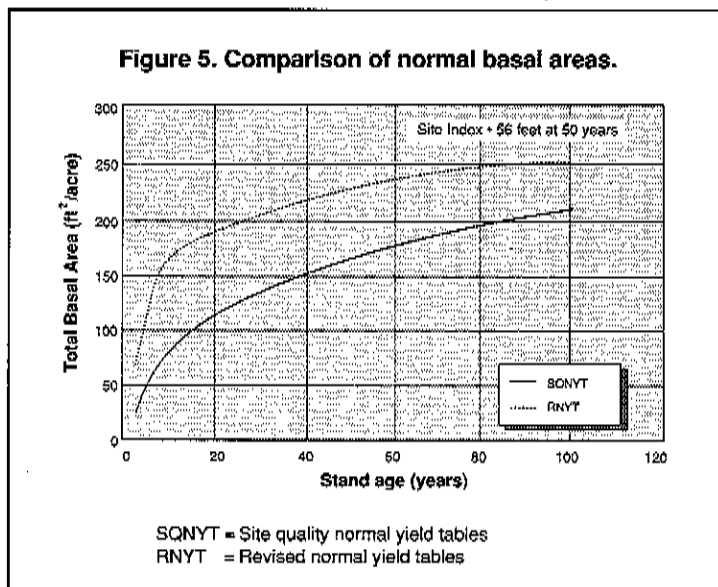
The second reason for the underestimation is a direct result of the difference in criteria used for the selection of eligible stands. Hawboldt and Kostjukovits (1961) defined a "Normal Stand" as one in which each tree had sufficient space to develop but where no space was wasted. The stands which they selected to provide the data for the derivation of the SQNYT were therefore less than fully stocked. In contrast, the Revised Normal Yield Tables are based on plot data collected from stands which had 100% crown cover, that is, where the density of stems was such that the crowns of the individual trees were

touching. Such stands can be considered to be at maximum or full stocking and hence according to Spurr (1952) are normally stocked.

The difference in the types of stands selected for measurement is reflected in Figure 5. Note that for the same site (SI (50)= 56), the RNYT estimate of basal area per acre exceeds the SQNYT estimate by 60% at age 20 and 28% at age 80. The range in the percent differences indicates that the older stands chosen to derive SQNYT were much closer to being fully stocked than the younger stands.



**Figure 5. Comparison of normal basal areas.**



**ROTATION AGE**

Rotation age in this section is based on peak mean annual volume increment. The rotation age for merchantable volume, as indicated by the SQNYT, varies little between sites and ranges from 70 (SI (50)=28) to 90 (SI (50)=60) years (Table 6).

Whereas, the corresponding rotation ages based on the RNYT are more variable. They range from 90 years for SI (50)=28 (LC 2) to 60 years for SI (50)=59 (LC 7) (Table 7). RNYT rotation ages for sawlogs are approximately 5-15 years longer and for total volume approximately 15-25 years shorter than for pulpwood (Table 7).

**Table 6. Summary of rotation ages based on the Site Quality Normal Yield Tables.**

Site Quality Class	SI (50) ft	Rotation Age (yrs)	
		Merchantable (MV)	Total (TV)
1	60	70	60
2	52	80	60
3	44	80	60
4	36	80	60
5	28	90	60

MV = Rotation age based on merchantable volume.  
TV = Rotation age based on total volume.  
SI (50) = Site index in feet at age 50.

**Table 7. Summary of rotation ages based on the Revised Normal Yield Tables.\***

Land Capability Class	SI (50) ft	Rotation Age (yrs)		
		Merchantable (MV)	Total (TV)	Sawlog (SV)
0		-	-	-
1	15	100	75	100+
2	28	90	65	100+
3	34	85	60	100
4	40	75	55	95
5	46	70	50	85
6	53	65	50	75
7	59	60	45	65
8	65	50	35	60
9	71	50	35	55
10	76	45	30	50

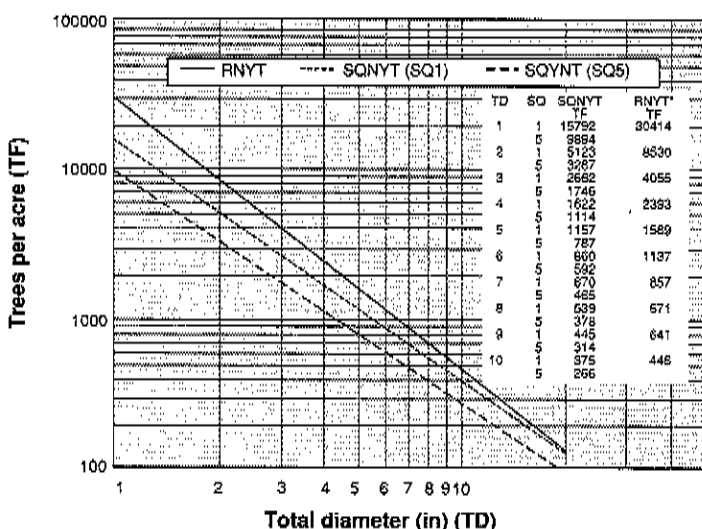
\* Metric Equivalent (Appendix 3)  
 MV = Rotation age based on merchantable volume  
 TV = Rotation age based on total volume  
 SV = Rotation age based on sawlog volume  
 SI (50) = Site index in feet at age 50

**NUMBER OF TREES PER ACRE**

The higher MAI's and basal areas per acre in the RNYT are a direct result of the greater

number of trees per acre at any given age or diameter (Figure 6). This results from the differing types of stands selected for measure-

**Figure 6. Comparison of stand density index (SDI) curves.**



SQ# = Site quality rating under SQNYT  
 RNYT = Revised normal yield tables  
 SQNYT = Site quality normal yield tables  
 \* = TF independent of Site Quality

ment during the field sampling phase.

There are several interesting facts and/or rules of thumb which can be interpreted from Figure 6.

- (i) The relationship between number of trees per acre and average stand diameter when plotted on double log paper is linear (Reineke, 1933).
- (ii) *The number of trees per acre at any given diameter (RNYT) is independent of stand age and site.* For example, a fully stocked softwood stand with a 6" average diameter (TD) will have approximately 1100 stems per acre, no matter what the age of the stand or the capability of the site on which it is located. This was not the case for stands described in the SQNYT. The number of trees varied both with site and diameter.
- (iii) The number of trees per acre in fully stocked softwood stands (RNYT) ranges from approximately 30,400 for stands averaging 1.0" in diameter to 450 for 10.0" stands.
- (iv) *In fully stocked softwood stands, the approximate average total diameter (inches) of the stand is numerically equal to the average spacing (feet) between trees in the stand.* For example, the spacing between trees in a stand having an average diameter of 8" = 8 feet ('); obtained by dividing the number of square feet in an acre by the maximum number of trees in an 8"

stand and taking the square root of the quotient.

$$\sqrt{\frac{43560}{680}} = 8$$

- (v) The converse is also true. The approximate maximum number of live softwood trees per acre in a stand of any given average diameter can be obtained by dividing the number of square feet per acre by the square of the average stand diameter (TD). For example, the number of trees in a fully stocked stand having an average diameter of 8" is  $\frac{43560}{8 \times 8} = 680$ .
- (vi) The approximate Stand Density Index (SDI) or the number of stems per acre in a stand having a given average diameter is higher for the RNYT. For example, a 10" Dbhob stand has a SDI of 450 based on the RNYT as compared to 270-370 based on the SQNYT.
- (vii) The total basal area per acre increases with increasing stand diameter. Basal area per acre is simply the number of trees per acre multiplied by the basal area of the tree of average diameter. The total basal area of fully stocked stands, therefore ranges from 178 ft<sup>2</sup>/acre for 1" stands to 245 ft<sup>2</sup>/acre for 10" stands. By the time the stand has reached 20" in average diameter, the number of trees has dropped to approximately 125 per acre but the basal area has increased to 273 ft<sup>2</sup>/acre.

## BASIS FOR CONVERTING AND CORRECTING IMPERIAL CLI RATINGS

The basis for converting and correcting the Canada Land Inventory Forest Capability maps and tables from Imperial to Metric is outlined in Table 8. These revised ratings correct for underestimates in capability described in the previous sections.

For example areas classified as LC 5 on CLI maps were originally rated as capable of pro-

ducing an *average* of 40 ft<sup>3</sup>/(ac•yr). The revised yield tables indicate the same areas are actually capable of yielding 64 ft<sup>3</sup>/(ac•yr) or 4.5 m<sup>3</sup>/(ha•a). Similarly areas previously classified as capable of producing 80 ft<sup>3</sup>/(ac•yr) (LC 3) are actually capable of producing 116 ft<sup>3</sup>/(ac•yr) or 8.1 m<sup>3</sup>/(ha•a).

**Table 8. Basis for converting and correcting CLI maps and tables.**

Imperial CLI Class	Uncorrected	Corrected	
	MAI (Mid Point) ft <sup>3</sup> / (ac•yr)	MAI (Mid Point) ft <sup>3</sup> / (ac•yr)	m <sup>3</sup> / (ha•a)
1	120	164	11.8
2	100	141	9.8
3	80	116	8.1
4	60	90	6.4
5	40	64	4.5
6	20	34	2.4
7	5	5	0.3

## USER INSTRUCTIONS FOR REVISED YIELD TABLES

(i) The tables and Height-Age-MAI graphs are accurate for the following species only:

- red spruce
- white spruce
- red pine
- white pine
- balsam fir

In the case of balsam fir and white spruce, the tables are for the most part accurate only up to age 70. Beyond this age, stands of these species, in many parts of the province, suffer high mortality due to damage caused by insects, diseases and/or strong winds. The use of these tables and graphs for species other than those listed above is, at the present time, of unknown validity. However, preliminary results indicate these tables considerably overestimate potential productivity for species having higher specific gravities, such as eastern larch (*Larix laricina* (DuRoi) K. Koch), jack pine (*Pinus banksiana* Lamb.), and to a much lesser extent, black spruce (*Picea mariana* (Mill.) B.S.P.). For example, the 16 plots established in black spruce indicate that the tables would overestimate potential volume yield by 20%.

(ii) Land capability for forestry is determined by measuring and averaging the heights and ages of the five tallest free growing trees on the site. The averages so obtained are entered on the X and Y axis of the Height-Age-MAI curves to determine the maximum production that can be expected from unmanaged fully stocked stands. Age is determined at stump height (30 cm or 1 foot above ground level). If periods of suppression caused by past overtopping or insect and disease attack are visible in the ring pattern, another sample tree must be chosen. A free age must not be projected.

For example, if the average age of the five tallest free-growing trees in a white spruce stand is 60 and the top height is 21 metres; the LC class is 7 (Figure 2) and the potential mean annual increment is approximately 7 cubic metres per hectare per year. The potential yield in 60 years is, therefore, 420 (60 x 7) cubic metres per hectare (75 cords/acre).

(iii) The mean annual increment figures listed on the right hand margin of the Height-Age-MAI curves are based on the maximum gross merchantable volume (GMV) which could be harvested at rotation from normally stocked unmanaged stands.

Additional volumes that could be obtained from thinnings, branch wood, bark, tops, and/or stumps are not included in the MAI

rating. Also excluded from the MAI rating are increases due to fertilization, drainage and matching species to site, etc.

## SUMMARY

Site productivity estimates for the Nova Scotia portion of the Canada Land Forest Capability Survey were based on the Nova Scotia Site Quality Yield Tables. Subsequent study found that softwood productivity was consistently underestimated. Therefore, a revised set of normal yield tables was developed (Appendix 3). These revised tables provide the basis for correcting the Canada Land Forest Capability Inventory Maps. The revised tables indicate that

the potential productivity for softwoods (based on peak mean annual increment) on Nova Scotia's best sites was underestimated by 40 ft<sup>3</sup>/(ac•yr) or 2.8 m<sup>3</sup>/(ha•a). On the poorest sites, the corresponding figures were 10 ft<sup>3</sup>/(ac•yr) or 0.70 m<sup>3</sup>/(ha•a). This means that the original CLI Forest Capability Maps for Nova Scotia (and possibly for all the Maritimes) under-rate potential softwood production by 1/2 to 2 CLI classes.

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## Summary of prediction equations

### Total Lorey's Height

$$TLH = 11.511093 + 5.4101776 * X1 - 2.2621018 * X2 + 62.20992 * X3 + 0.024590146 * X4 + 3.0198394 * X5 + 0.003423217 * X6 - 0.099255 * X7 - 0.12329242 * X8 - 0.21009457 * X9 - 0.093348407 * X10 \quad [1]$$

X1 = SA ** (-.25)	X6 = SI 50 **2
X2 = 1. / SA	X7 = (SA **2 * SI (50) **2) / 100000
X3 = 1. / SI (50)	X8 = SA **3 / 10000
X4 = SA * SI (50)	X9 = SI (50) ** 3 / 10000
X5 = SA / SI (50)	X10 = SA

### Top Height

$$TH = 1.6978566 + 1.1561631 * TLH - 0.16996457E - 02 * TLH ** 2 + 0.43928126 E - 05 * TLH ** 3 - 0.65494327 E - 10 * TLH ** 5 \quad [2]$$

### Total Diameter

$$TD = 0.12873349 + 0.090746462 * TLH + 0.00067277772 * TLH ** 2 \quad [3]$$

### Total Number of Trees Per Acre

$$TF = 10 ** (4.48307261 - 1.8340673 * LOG_{10}(TD)) \quad [4]$$

### Merchantable Basal Area

$$MBA = TBA * (-0.82932659 + 0.71839461 * TD - 0.10184704 * TD ** 2 + 0.0054868242 * TD ** 3 - 0.66210904 E - 05 * TD ** 5) \quad [5]$$

### Merchantable Diameter

$$MD = 3.0746534 + 0.30615578 * TD + 0.040103103 * TD ** 2 \quad [6]$$

### Sawlog Diameter

$$SD = MD (-8.5204673 + 7.0903534 * X1 - 0.12249943 E - 19 * X2 + 7.6542127 * X3 - 0.2563372 * X4 - 493.03614 * X5 + 55803.496 * X6) \quad [7]$$

X1 = 1. / MD	X4 = MD ** .5
X2 = MD ** 10	X5 = 1. / MD ** 6
X3 = MD ** .1	X6 = 1. / MD ** 10

\* = multiplication sign

\*\* 2, \*\* 3, \*\* 4, etc. = raised to the power 2, 3, 4, etc.

E - 05, E - 02, etc. = 10<sup>-5</sup>, 10<sup>-2</sup>, etc.

/ = division sign

SI(50) = Site Index in feet at 50 years of age

SA = Stump Age

Sawlog Basal Area

$$\text{SBA} = \text{MBA} * (1.0794209 + 21281.691 * \text{X1} - 0.88421416 \text{ E} - 12 * \text{X2} - 6064.0629 * \text{X3} + 0.11016046 \text{ E} - 10 * \text{X4} - 0.50860475 \text{ E} - 03 * \text{X5} - 394808.99 * \text{X6}) \quad [8]$$

$$\text{X1} = 1. / \text{MD} ** 6$$

$$\text{X4} = \text{MD} ** 9$$

$$\text{X2} = \text{MD} ** 10$$

$$\text{X5} = \text{MD} ** 2$$

$$\text{X3} = 1. / \text{MD} ** 5$$

$$\text{X6} = 1. / \text{MD} ** 10$$

Merchantable Lorey's Height

$$\text{MLH} = \text{TLH} * (1.7579011 - 0.34753553 * \text{TD} + 0.05931062 * \text{TD} ** 2 - 0.004419402 * \text{TD} ** 3 + 0.000120477 * \text{TD} ** 4) \quad [9]$$

Total Volume Per Acre

$$\text{TV} = \text{SBA} * (-1.0618863 + 0.53024549 * \text{TLH} - 0.00098811065 * \text{TLH} ** 2) \quad [10]$$

Sawlog Lorey's Height

$$\text{SLH} = \text{MLH} * (1.9734681 - 0.36787463 * \text{MD} + 0.0535809 * \text{MD} ** 2 - 0.0034888 * \text{MD} ** 3 + 0.00008405 * \text{MD} ** 4) \quad [11]$$

Merchantable Volume Per Acre

$$\text{MV} = \text{MBA} * (-11.387294 + 0.78957812 * \text{MLH} - 0.0036803273 * \text{MLH} ** 2 + 0.96001972 * \text{MLH} ** 3 / 100000.) \quad [12]$$

Sawlog Volume Per Acre

$$\text{SV} = \text{SBA} * (-23.472994 + 2.5721469 * \text{SLH} - 0.1798915 * \text{SLH} ** 3 / 10000.) \quad [13]$$

\* = multiplication sign

\*\* 2, \*\* 3, \*\* 4, etc. = raised to the power 2, 3, 4, etc.

E - 05, E - 02, etc. =  $10^{-5}$ ,  $10^{-2}$ , etc.

/ = division sign

SI(50) = Site Index in feet at 50 years of age

SA = Stump Age

## Appendix 2

### Summary of regression statistics for prediction equations

Dependent Variable		Regression Statistics*	
Symbol	Name	R <sup>2</sup>	SEE
TD	Total Diameter	.837	11.5 %
MD	Merch Diameter	.975	3.7 %
SD	Sawlog Diameter	.974	2.6 %
TLH	Total Lorey's Ht	Derived from the Nova Scotia Site -	
TH	Top Height	Quality Yield Tables -	
MLH	Merch Lorey's Ht	.901	1.3 %
SLH	Sawlog Lorey's Ht	.707	2.1 %
TF	Total Frequency	.943	
MBA	Merch Basal Area	.978	2.2 %
SBA	Sawlog Basal Area	.985	4.0 %
TV	Total Volume	.964	4.0 %
MV	Merch Volume	.961	4.9 %
SV	Sawlog Volume	.942	5.5 %

R<sup>2</sup> = Coefficient of Multiple Determination

SEE = Standard error of the estimate expressed as a % of the mean

\* = See Appendix 1 for regression equations



## **Appendix 3**

### **The Metric Normal Yield Tables for Softwoods**

**Values inside shaded areas are extrapolated**

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	0.5
25	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.0
30	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.7
35	1.6	0.0	0.0	1.6	0.0	0.0	35.3	0.0	0.0	176142	0	0	18.49	0.00	0.00	2.4
40	2.2	0.0	0.0	2.1	0.0	0.0	36.8	0.0	0.0	109137	0	0	30.29	0.00	0.00	3.0
45	2.7	0.0	0.0	2.5	0.0	0.0	38.1	0.0	0.0	75055	0	0	42.19	0.00	0.00	3.7
50	3.3	0.0	0.0	3.0	0.0	0.0	39.1	0.0	0.0	55380	0	0	53.93	0.00	0.00	4.2
55	3.8	0.0	0.0	3.4	0.0	0.0	40.1	0.0	0.0	43024	0	0	65.33	0.00	0.00	4.8
60	4.2	0.0	0.0	3.9	0.0	0.0	40.8	0.0	0.0	34790	0	0	76.23	0.00	0.00	5.3
65	4.7	0.0	0.0	4.3	0.0	0.0	41.5	0.0	0.0	29062	0	0	86.49	0.00	0.00	5.8
70	5.1	0.0	0.0	4.6	0.0	0.0	42.1	0.0	0.0	24953	0	0	95.98	0.00	0.00	6.2
75	5.4	0.0	0.0	5.0	0.0	0.0	42.6	0.0	0.0	21946	0	0	104.58	0.00	0.00	6.6
80	5.7	0.0	0.0	5.3	0.0	0.0	43.0	0.0	0.0	19721	0	0	112.18	0.00	0.00	7.0
85	6.0	0.0	0.0	5.5	0.0	0.0	43.3	0.0	0.0	18077	0	0	118.69	0.00	0.00	7.3
90	6.2	0.0	0.0	5.7	0.0	0.0	43.6	0.0	0.0	16883	0	0	124.00	0.00	0.00	7.5
95	6.4	0.0	0.0	5.9	0.0	0.0	43.8	0.0	0.0	16055	0	0	128.02	0.00	0.00	7.7
100	6.5	0.0	0.0	6.0	0.0	0.0	43.9	0.0	0.0	15543	0	0	130.67	0.00	0.00	7.8
105	6.5	0.0	0.0	6.0	0.0	0.0	44.0	0.0	0.0	15320	0	0	131.86	0.00	0.00	7.8
110	6.5	0.0	0.0	6.0	0.0	0.0	44.0	0.0	0.0	15382	0	0	131.52	0.00	0.00	7.8

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	1.6	18.49	0.00	0.00	3.70	.53	0.00	0.00	0.00	0.00
40	2.2	30.29	0.00	0.00	2.36	.76	0.00	0.00	0.00	0.00
45	2.7	42.19	0.00	0.00	2.38	.94	0.00	0.00	0.00	0.00
50	3.3	53.93	0.00	0.00	2.35	1.08	0.00	0.00	0.00	0.00
55	3.8	65.33	0.00	0.00	2.28	1.19	0.00	0.00	0.00	0.00
60	4.2	76.23	0.00	0.00	2.18	1.27	0.00	0.00	0.00	0.00
65	4.7	86.49	0.00	0.00	2.05	1.33	0.00	0.00	0.00	0.00
70	5.1	95.98	0.00	0.00	1.90	1.37	0.00	0.00	0.00	0.00
75	5.4	104.58	0.00	0.00	1.72	1.39	0.00	0.00	0.00	0.00
80	5.7	112.18	0.00	0.00	1.52	1.40	0.00	0.00	0.00	0.00
85	6.0	118.69	0.00	0.00	1.30	1.40	0.00	0.00	0.00	0.00
90	6.2	124.00	0.00	0.00	1.06	1.38	0.00	0.00	0.00	0.00
95	6.4	128.02	0.00	0.00	.80	1.35	0.00	0.00	0.00	0.00
100	6.5	130.67	0.00	0.00	.53	1.31	0.00	0.00	0.00	0.00
105	6.5	131.86	0.00	0.00	.24	1.26	0.00	0.00	0.00	0.00
110	6.5	131.52	0.00	0.00	.07	1.20	0.00	0.00	0.00	0.00

- + 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER
- + 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER
- + 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES)    DIAMETER (CENTIMETRES)    M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

- +1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)
- +9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)
- +14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	5
10	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	8
15	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.6
20	1.6	0.0	0.0	1.6	0.0	0.0	35.2	0.0	0.0	177717	0	0	18.30	0.00	0.00	2.4
25	2.3	0.0	0.0	2.1	0.0	0.0	37.0	0.0	0.0	102191	0	0	32.20	0.00	0.00	3.1
30	2.9	0.0	0.0	2.7	0.0	0.0	38.5	0.0	0.0	66518	0	0	46.61	0.00	0.00	3.9
35	3.6	0.0	0.0	3.3	0.0	0.0	39.7	0.0	0.0	46936	0	0	61.22	0.00	0.00	4.6
40	4.2	0.0	0.0	3.8	0.0	0.0	40.8	0.0	0.0	35071	0	0	75.80	0.00	0.00	5.3
45	4.8	0.0	0.0	4.4	0.0	0.0	41.7	0.0	0.0	27367	0	0	90.14	0.00	0.00	6.0
50	5.4	0.0	0.0	5.0	0.0	0.0	42.5	0.0	0.0	22100	0	0	104.09	0.00	0.00	6.6
55	5.9	0.0	0.0	5.5	0.0	0.0	43.3	0.0	0.0	18359	0	0	117.51	0.00	0.00	7.2
60	6.5	0.0	0.0	6.0	0.0	0.0	43.9	0.0	0.0	15622	0	0	130.25	0.00	0.00	7.8
65	6.9	8.3	0.0	6.5	10.4	0.0	44.5	19.0	0.0	13573	2222	0	142.20	43.46	0.00	8.3
70	7.4	8.6	9.8	6.9	10.7	15.2	45.0	21.6	1.7	12016	2410	93	153.24	54.02	2.51	8.8
75	7.8	8.9	10.1	7.3	10.9	15.3	45.4	23.8	2.9	10820	2552	159	163.27	64.17	4.55	9.2
80	8.1	9.2	10.4	7.7	11.1	15.4	45.7	25.7	4.2	9899	2657	224	172.18	73.57	6.74	9.6
85	8.4	9.5	10.6	8.0	11.3	15.5	46.1	27.2	5.4	9193	2733	284	179.88	81.94	8.94	9.9
90	8.7	9.7	10.8	8.3	11.4	15.6	46.3	28.5	6.4	8662	2786	337	186.26	89.05	10.97	10.1
95	8.8	9.8	11.0	8.5	11.5	15.7	46.5	29.4	7.3	8277	2821	380	191.25	94.70	12.68	10.3
100	9.0	9.9	11.1	8.6	11.6	15.7	46.6	30.1	8.0	8022	2843	410	194.75	98.71	13.95	10.5
105	9.1	10.0	11.1	8.7	11.7	15.7	46.7	30.5	8.3	7886	2854	427	196.69	100.94	14.68	10.6
110	9.1	10.0	11.1	8.7	11.7	15.7	46.7	30.5	8.4	7865	2856	430	196.98	101.28	14.79	10.6

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5.	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.	.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.	.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.	1.6	18.30	0.00	0.00	3.66	.91	0.00	0.00	0.00	0.00
25.	2.3	32.20	0.00	0.00	2.78	1.29	0.00	0.00	0.00	0.00
30.	2.9	46.61	0.00	0.00	2.88	1.55	0.00	0.00	0.00	0.00
35.	3.6	61.22	0.00	0.00	2.92	1.75	0.00	0.00	0.00	0.00
40.	4.2	75.80	0.00	0.00	2.92	1.89	0.00	0.00	0.00	0.00
45.	4.8	90.14	0.00	0.00	2.87	2.00	0.00	0.00	0.00	0.00
50.	5.4	104.09	0.00	0.00	2.79	2.08	0.00	0.00	0.00	0.00
55.	5.9	117.51	0.00	0.00	2.68	2.14	0.00	0.00	0.00	0.00
60.	6.5	130.25	0.00	0.00	2.55	2.17	0.00	0.00	0.00	0.00
65.	6.9	142.20	43.46	0.00	2.39	2.19	8.69	0.00	.67	0.00
70.	7.4	153.24	54.02	2.51	2.21	2.19	2.11	.50	.77	.04
75.	7.8	163.27	64.17	4.55	2.01	2.18	2.03	.41	.86	.06
80.	8.1	172.18	73.57	6.74	1.78	2.15	1.88	.44	.92	.08
85.	8.4	179.88	81.94	8.94	1.54	2.12	1.67	.44	.96	.11
90.	8.7	186.26	89.05	10.97	1.28	2.07	1.42	.41	.99	.12
95.	8.8	191.25	94.70	12.68	1.00	2.01	1.13	.34	1.00	.13
100.	9.0	194.75	98.71	13.95	.70	1.95	.80	.25	.99	.14
105.	9.1	196.69	100.94	14.68	.39	1.87	.45	.15	.96	.14
110.	9.1	196.98	101.28	14.79	.06	1.79	.07	.02	.92	.13

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES)    DIAMETER (CENTIMETRES)    M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	5
10	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.2
15	1.4	0.0	0.0	1.5	0.0	0.0	34.7	0.0	0.0	209865	0	0	14.96	0.00	0.00	2.2
20	2.3	0.0	0.0	2.2	0.0	0.0	37.1	0.0	0.0	100376	0	0	32.73	0.00	0.00	3.2
25	3.2	0.0	0.0	2.9	0.0	0.0	38.9	0.0	0.0	58662	0	0	51.55	0.00	0.00	4.1
30	4.0	0.0	0.0	3.7	0.0	0.0	40.5	0.0	0.0	38492	0	0	70.89	0.00	0.00	5.1
35	4.8	0.0	0.0	4.4	0.0	0.0	41.7	0.0	0.0	27258	0	0	90.39	0.00	0.00	6.0
40	5.6	0.0	0.0	5.2	0.0	0.0	42.9	0.0	0.0	20385	0	0	109.78	0.00	0.00	6.9
45	6.4	0.0	0.0	5.9	0.0	0.0	43.8	0.0	0.0	15890	0	0	128.86	0.00	0.00	7.7
50	7.1	8.4	0.0	6.7	10.6	0.0	44.7	20.3	0.0	12801	2315	0	147.43	48.38	0.00	8.5
55	7.8	9.0	10.2	7.4	10.9	15.3	45.5	24.2	3.2	10595	2578	173	165.34	66.32	5.02	9.3
60	8.5	9.5	10.7	8.1	11.3	15.5	46.2	27.7	5.8	8974	2755	305	182.44	84.78	9.73	10.0
65	9.1	10.0	11.2	8.8	11.7	15.8	46.8	30.8	8.7	7754	2864	444	198.61	103.17	15.42	10.6
70	9.7	10.5	11.6	9.4	12.1	16.0	47.3	33.5	11.7	6820	2921	581	213.72	120.99	21.75	11.3
75	10.2	10.9	12.0	10.0	12.4	16.2	47.8	35.8	14.6	6095	2941	707	227.67	137.86	28.39	11.8
80	10.7	11.3	12.3	10.5	12.8	16.4	48.2	37.7	17.4	5529	2935	820	240.33	153.47	35.01	12.3
85	11.1	11.7	12.6	11.0	13.1	16.6	48.6	39.3	19.9	5086	2913	916	251.62	167.55	41.34	12.8
90	11.5	12.0	12.9	11.5	13.4	16.8	48.9	40.6	22.1	4741	2882	995	261.44	179.91	47.11	13.1
95	11.8	12.2	13.1	11.8	13.6	17.0	49.2	41.6	23.9	4476	2850	1058	269.68	190.34	52.13	13.5
100	12.1	12.4	13.3	12.1	13.8	17.1	49.4	42.4	25.3	4279	2820	1106	276.28	198.71	56.25	13.7
105	12.2	12.6	13.4	12.3	14.0	17.2	49.5	43.0	26.4	4142	2796	1139	281.13	204.88	59.33	13.9
110	12.4	12.7	13.5	12.5	14.1	17.2	49.6	43.3	27.1	4059	2780	1159	284.16	208.74	61.27	14.0

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	1.4	14.96	0.00	0.00	2.99	1.00	0.00	0.00	0.00	0.00
20	2.3	32.73	0.00	0.00	3.55	1.64	0.00	0.00	0.00	0.00
25	3.2	51.55	0.00	0.00	3.76	2.06	0.00	0.00	0.00	0.00
30	4.0	70.89	0.00	0.00	3.87	2.36	0.00	0.00	0.00	0.00
35	4.8	90.39	0.00	0.00	3.90	2.58	0.00	0.00	0.00	0.00
40	5.6	109.78	0.00	0.00	3.88	2.74	0.00	0.00	0.00	0.00
45	6.4	128.86	0.00	0.00	3.81	2.86	0.00	0.00	0.00	0.00
50	7.1	147.43	48.38	0.00	3.71	2.95	9.68	0.00	.97	0.00
55	7.8	165.34	66.32	5.02	3.58	3.01	3.59	1.00	1.21	.09
60	8.5	182.44	84.78	9.73	3.42	3.04	3.69	.94	1.41	.16
65	9.1	198.61	103.17	15.42	3.23	3.06	3.68	1.14	1.59	.24
70	9.7	213.72	120.99	21.75	3.02	3.05	3.56	1.27	1.73	.31
75	10.2	227.67	137.86	28.39	2.79	3.04	3.37	1.33	1.84	.38
80	10.7	240.33	153.47	35.01	2.53	3.00	3.12	1.33	1.92	.44
85	11.1	251.62	167.55	41.34	2.26	2.96	2.82	1.26	1.97	.49
90	11.5	261.44	179.91	47.11	1.96	2.90	2.47	1.15	2.00	.52
95	11.8	269.68	190.34	52.13	1.65	2.84	2.09	1.00	2.00	.55
100	12.1	276.28	198.71	56.25	1.32	2.76	1.67	.82	1.99	.56
105	12.2	281.13	204.88	59.33	.97	2.68	1.23	.62	1.95	.57
110	12.4	284.16	208.74	61.27	.61	2.58	.77	.39	1.90	.56

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE



NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	5
10	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.7
15	2.1	0.0	0.0	2.0	0.0	0.0	36.5	0.0	0.0	119341	0	0	27.82	0.00	0.00	2.9
20	3.1	0.0	0.0	2.9	0.0	0.0	38.8	0.0	0.0	60524	0	0	50.29	0.00	0.00	4.1
25	4.1	0.0	0.0	3.8	0.0	0.0	40.7	0.0	0.0	36435	0	0	73.76	0.00	0.00	5.2
30	5.1	0.0	0.0	4.7	0.0	0.0	42.2	0.0	0.0	24315	0	0	97.67	0.00	0.00	6.3
35	6.1	0.0	0.0	5.6	0.0	0.0	43.5	0.0	0.0	17396	0	0	121.65	0.00	0.00	7.4
40	7.1	8.4	0.0	6.6	10.5	0.0	44.6	19.8	0.0	13091	2280	0	145.41	46.46	0.00	8.4
45	8.0	9.1	10.3	7.5	11.0	15.4	45.6	24.9	3.7	10242	2619	198	168.72	69.88	5.85	9.4
50	8.9	9.8	11.0	8.5	11.5	15.7	46.5	29.5	7.3	8266	2822	381	191.40	94.86	12.73	10.3
55	9.7	10.5	11.6	9.4	12.1	16.0	47.3	33.4	11.6	6846	2920	576	213.26	120.43	21.54	11.2
60	10.5	11.1	12.2	10.3	12.6	16.3	48.0	36.8	16.0	5795	2940	765	234.16	145.84	31.72	12.1
65	11.2	11.7	12.7	11.1	13.2	16.7	48.7	39.6	20.4	5000	2906	936	253.98	170.51	42.70	12.9
70	11.9	12.3	13.2	12.0	13.7	17.0	49.2	42.0	24.5	4388	2837	1079	272.57	194.00	53.92	13.6
75	12.6	12.9	13.7	12.7	14.3	17.4	49.8	43.9	28.3	3911	2748	1195	289.83	215.96	64.93	14.3
80	13.1	13.4	14.2	13.4	14.8	17.7	50.2	45.5	31.5	3535	2651	1283	305.65	236.12	75.37	14.9
85	13.7	13.9	14.6	14.1	15.3	18.0	50.6	46.8	34.3	3238	2553	1347	319.94	254.27	84.97	15.4
90	14.1	14.3	15.0	14.7	15.7	18.3	51.0	47.8	36.6	3003	2461	1392	332.59	270.25	93.54	15.9
95	14.5	14.7	15.3	15.2	16.1	18.6	51.3	48.6	38.5	2819	2379	1421	343.51	283.97	100.96	16.3
100	14.9	15.0	15.6	15.7	16.5	18.8	51.5	49.2	40.0	2677	2309	1439	352.62	295.33	107.13	16.6
105	15.1	15.3	15.8	16.0	16.7	19.0	51.7	49.6	41.1	2571	2253	1450	359.83	304.26	111.99	16.9
110	15.3	15.4	16.0	16.2	17.0	19.1	51.8	49.9	41.8	2498	2212	1455	365.06	310.70	115.51	17.1

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE



VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	2.1	27.82	0.00	0.00	5.56	1.85	0.00	0.00	0.00	0.00
20	3.1	50.29	0.00	0.00	4.49	2.51	0.00	0.00	0.00	0.00
25	4.1	73.76	0.00	0.00	4.69	2.95	0.00	0.00	0.00	0.00
30	5.1	97.67	0.00	0.00	4.78	3.26	0.00	0.00	0.00	0.00
35	6.1	121.65	0.00	0.00	4.80	3.48	0.00	0.00	0.00	0.00
40	7.1	145.41	46.46	0.00	4.75	3.64	9.29	0.00	1.16	0.00
45	8.0	168.72	69.88	5.85	4.66	3.75	4.68	1.17	1.55	.13
50	8.9	191.40	94.86	12.73	4.53	3.83	5.00	1.38	1.90	.25
55	9.7	213.26	120.43	21.54	4.37	3.88	5.11	1.76	2.19	.39
60	10.5	234.16	145.84	31.72	4.18	3.90	5.08	2.04	2.43	.53
65	11.2	253.98	170.51	42.70	3.96	3.91	4.93	2.20	2.62	.66
70	11.9	272.57	194.00	53.92	3.72	3.89	4.70	2.24	2.77	.77
75	12.6	289.83	215.96	64.93	3.45	3.86	4.39	2.20	2.88	.87
80	13.1	305.65	236.12	75.37	3.16	3.82	4.03	2.09	2.95	.94
85	13.7	319.94	254.27	84.97	2.86	3.76	3.63	1.92	2.99	1.00
90	14.1	332.59	270.25	93.54	2.53	3.70	3.20	1.71	3.00	1.04
95	14.5	343.51	283.97	100.96	2.18	3.62	2.74	1.48	2.99	1.06
100	14.9	352.62	295.33	107.13	1.82	3.53	2.27	1.23	2.95	1.07
105	15.1	359.83	304.26	111.99	1.44	3.43	1.79	.97	2.90	1.07
110	15.3	365.06	310.70	115.51	1.05	3.32	1.29	.70	2.82	1.05

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5.	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	9
10.	1.6	0.0	0.0	1.6	0.0	0.0	35.1	0.0	0.0	183195	0	0	17.66	0.00	0.00	2.3
15.	2.8	0.0	0.0	2.6	0.0	0.0	38.2	0.0	0.0	73058	0	0	43.15	0.00	0.00	3.7
20.	4.0	0.0	0.0	3.6	0.0	0.0	40.4	0.0	0.0	38786	0	0	70.50	0.00	0.00	5.1
25.	5.2	0.0	0.0	4.7	0.0	0.0	42.2	0.0	0.0	23921	0	0	98.75	0.00	0.00	6.4
30.	6.3	0.0	0.0	5.9	0.0	0.0	43.8	0.0	0.0	16194	0	0	127.32	0.00	0.00	7.6
35.	7.5	8.7	9.9	7.0	10.7	15.2	45.1	22.1	2.0	11690.	2449.	109.	155.83	56.59	2.99	8.9
40.	8.6	9.6	10.8	8.2	11.4	15.6	46.2	28.0	6.0	8848.	2768.	318.	183.96	86.47	10.21	10.0
45.	9.6	10.4	11.5	9.3	12.0	16.0	47.2	33.1	11.2	6948.	2915.	560.	211.47	118.29	20.74	11.2
50.	10.6	11.3	12.3	10.4	12.7	16.4	48.1	37.4	16.9	5621.	2937.	801.	238.16	150.78	33.84	12.2
55.	11.6	12.1	13.0	11.6	13.5	16.8	49.0	40.9	22.6	4661.	2873.	1014.	263.86	182.97	48.57	13.2
60.	12.5	12.8	13.7	12.7	14.2	17.3	49.7	43.8	28.0	3947.	2756.	1186.	288.41	214.15	64.01	14.2
65.	13.4	13.6	14.3	13.7	15.0	17.8	50.4	46.0	32.7	3405.	2611.	1312.	311.67	243.78	79.40	15.1
70.	14.2	14.3	15.0	14.7	15.8	18.3	51.0	47.9	36.8	2986.	2454.	1395.	333.53	271.44	94.18	15.9
75.	14.9	15.0	15.6	15.7	16.5	18.8	51.5	49.3	40.1	2658.	2300.	1441.	353.86	296.87	107.97	16.7
80.	15.6	15.7	16.2	16.6	17.3	19.3	52.0	50.4	42.9	2399.	2154.	1460.	372.56	319.89	120.53	17.4
85.	16.2	16.3	16.8	17.5	18.0	19.8	52.4	51.2	45.1	2192.	2022.	1458.	389.54	340.40	131.74	18.0
90.	16.8	16.9	17.3	18.2	18.6	20.3	52.8	51.9	46.8	2028.	1906.	1444.	404.70	358.37	141.54	18.6
95.	17.3	17.3	17.7	18.9	19.2	20.8	53.1	52.4	48.2	1898.	1807.	1423.	417.96	373.81	149.92	19.1
100.	17.7	17.8	18.1	19.5	19.7	21.1	53.4	52.8	49.2	1796.	1725.	1400.	429.23	386.71	156.89	19.5
105.	18.0	18.1	18.4	19.9	20.2	21.5	53.6	53.1	49.9	1718.	1660.	1378.	438.42	397.09	162.46	19.8
110.	18.3	18.4	18.7	20.3	20.5	21.7	53.8	53.3	50.5	1662.	1611.	1359.	445.47	404.95	166.66	20.1

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.6	17.66	0.00	0.00	3.53	1.77	0.00	0.00	0.00	0.00
15	2.8	43.15	0.00	0.00	5.10	2.88	0.00	0.00	0.00	0.00
20	4.0	70.50	0.00	0.00	5.47	3.52	0.00	0.00	0.00	0.00
25	5.2	98.75	0.00	0.00	5.65	3.95	0.00	0.00	0.00	0.00
30	6.3	127.32	0.00	0.00	5.72	4.24	0.00	0.00	0.00	0.00
35	7.5	155.83	56.59	2.99	5.70	4.45	11.32	.60	1.62	.09
40	8.6	183.96	86.47	10.21	5.63	4.60	5.98	1.44	2.16	.26
45	9.6	211.47	118.29	20.74	5.50	4.70	6.36	2.11	2.63	.46
50	10.6	238.16	150.78	33.84	5.34	4.76	6.50	2.62	3.02	.68
55	11.6	263.86	182.97	48.57	5.14	4.80	6.44	2.95	3.33	.88
60	12.5	288.41	214.15	64.01	4.91	4.81	6.24	3.09	3.57	1.07
65	13.4	311.67	243.78	79.40	4.65	4.79	5.93	3.08	3.75	1.22
70	14.2	333.53	271.44	94.18	4.37	4.76	5.53	2.96	3.88	1.35
75	14.9	353.86	296.87	107.97	4.07	4.72	5.09	2.76	3.96	1.44
80	15.6	372.56	319.89	120.53	3.74	4.66	4.60	2.51	4.00	1.51
85	16.2	389.54	340.40	131.74	3.40	4.58	4.10	2.24	4.00	1.55
90	16.8	404.70	358.37	141.54	3.03	4.50	3.59	1.96	3.98	1.57
95	17.3	417.96	373.81	149.92	2.65	4.40	3.09	1.68	3.93	1.58
100	17.7	429.23	386.71	156.89	2.25	4.29	2.58	1.39	3.87	1.57
105	18.0	438.42	397.09	162.46	1.84	4.18	2.08	1.11	3.78	1.55
110	18.3	445.47	404.95	166.66	1.41	4.05	1.57	.84	3.68	1.52

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5.	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.4
10.	2.2	0.0	0.0	2.1	0.0	0.0	36.8	0.0	0.0	110813	0	0	29.86	0.00	0.00	3.0
15.	3.6	0.0	0.0	3.3	0.0	0.0	39.7	0.0	0.0	47669	0	0	60.51	0.00	0.00	4.6
20.	4.9	0.0	0.0	4.5	0.0	0.0	41.9	0.0	0.0	26187	0	0	92.89	0.00	0.00	6.1
25.	6.3	0.0	0.0	5.8	0.0	0.0	43.7	0.0	0.0	16455	0	0	126.04	0.00	0.00	7.6
30.	7.6	8.8	10.0	7.1	10.8	15.2	45.2	22.9	2.4	11267	2500	132	159.34	60.13	3.69	9.0
35.	8.9	9.9	11.0	8.5	11.6	15.7	46.5	29.7	7.5	8193	2829	390	192.39	96.00	13.09	10.4
40.	10.1	10.8	11.9	9.9	12.4	16.2	47.7	35.3	14.0	6232	2939	682	224.86	134.43	26.99	11.7
45.	11.3	11.8	12.8	11.2	13.2	16.7	48.7	40.0	21.0	4910	2899	956	256.50	173.68	44.17	13.0
50.	12.5	12.8	13.6	12.6	14.2	17.3	49.7	43.6	27.7	3981	2764	1178	287.09	212.47	63.16	14.1
55.	13.5	13.8	14.5	13.9	15.2	17.9	50.5	46.5	33.6	3307	2578	1333	316.47	249.86	82.63	15.3
60.	14.6	14.7	15.3	15.3	16.2	18.6	51.3	48.6	38.6	2803	2372	1423	344.46	285.16	101.60	16.3
65.	15.6	15.6	16.2	16.5	17.2	19.3	52.0	50.3	42.7	2420	2166	1459	370.95	317.91	119.45	17.3
70.	16.5	16.5	17.0	17.8	18.2	20.0	52.6	51.5	45.8	2122	1974	1454	395.79	347.85	135.81	18.2
75.	17.3	17.4	17.8	18.9	19.3	20.8	53.1	52.4	48.2	1889	1800	1421	418.89	374.88	150.50	19.1
80.	18.1	18.2	18.5	20.0	20.3	21.5	53.6	53.2	50.1	1704	1648	1374	440.15	399.02	163.49	19.9
85.	18.8	18.9	19.2	21.0	21.2	22.3	54.1	53.7	51.5	1556	1517	1318	459.47	420.32	174.80	20.6
90.	19.4	19.5	19.7	22.0	22.1	23.0	54.5	54.2	52.5	1438	1407	1262	476.76	438.87	184.47	21.2
95.	20.0	20.0	20.3	22.8	23.0	23.7	54.8	54.6	53.3	1345	1317	1210	491.95	454.74	192.56	21.7
100.	20.5	20.5	20.7	23.5	23.7	24.3	55.1	54.8	53.9	1270	1245	1164	504.96	468.00	199.17	22.2
105.	20.9	20.9	21.0	24.1	24.3	24.8	55.3	55.1	54.3	1213	1190	1126	515.71	478.74	204.41	22.6
110.	21.2	21.2	21.3	24.6	24.8	25.2	55.5	55.3	54.6	1171	1148	1097	524.13	487.06	208.40	22.9

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5.	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.	2.2	29.86	0.00	0.00	5.97	2.99	0.00	0.00	0.00	0.00
15.	3.6	60.51	0.00	0.00	6.13	4.03	0.00	0.00	0.00	0.00
20.	4.9	92.89	0.00	0.00	6.48	4.64	0.00	0.00	0.00	0.00
25.	6.3	126.04	0.00	0.00	6.63	5.04	0.00	0.00	0.00	0.00
30.	7.6	159.34	60.13	3.69	6.66	5.31	12.03	7.4	2.00	1.2
35.	8.9	192.39	96.00	13.09	6.61	5.50	7.17	1.88	2.74	.37
40.	10.1	224.86	134.43	26.99	6.49	5.62	7.69	2.78	3.36	.67
45.	11.3	256.50	173.68	44.17	6.33	5.70	7.85	3.44	3.86	.98
50.	12.5	287.09	212.47	63.16	6.12	5.74	7.76	3.80	4.25	1.26
55.	13.5	316.47	249.86	82.63	5.87	5.75	7.48	3.89	4.54	1.50
60.	14.6	344.46	285.16	101.60	5.60	5.74	7.06	3.80	4.75	1.69
65.	15.6	370.95	317.91	119.45	5.30	5.71	6.55	3.08	4.89	1.84
70.	16.5	395.79	347.85	135.81	4.97	5.65	5.99	2.85	4.97	1.94
75.	17.3	418.89	374.88	150.50	4.62	5.59	5.41	2.62	5.00	2.01
80.	18.1	440.15	399.02	163.49	4.25	5.50	4.83	2.39	4.99	2.04
85.	18.8	459.47	420.32	174.80	3.86	5.41	4.26	2.16	4.94	2.06
90.	19.4	476.76	438.87	184.47	3.46	5.30	3.71	1.93	4.88	2.05
95.	20.0	491.95	454.74	192.56	3.04	5.18	3.17	1.70	4.79	2.03
100.	20.5	504.96	468.00	199.17	2.60	5.05	2.65	1.47	4.68	1.99
105.	20.9	515.71	478.74	204.41	2.15	4.91	2.15	1.23	4.56	1.95
110.	21.2	524.13	487.06	208.40	1.68	4.76	1.66	1.00	4.43	1.89

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.00	0.00	0.00	1.9
10	2.8	0.0	0.0	2.6	0.0	0.0	38.2	0.0	0.0	71842	0	0	43.75	0.00	0.00	3.7
15	4.4	0.0	0.0	4.0	0.0	0.0	41.1	0.0	0.0	32632	0	0	79.77	0.00	0.00	5.5
20	5.9	0.0	0.0	5.5	0.0	0.0	43.3	0.0	0.0	18395	0	0	117.36	0.00	0.00	7.2
25	7.5	8.7	9.9	7.0	10.7	15.2	45.0	22.1	1.9	11728	2245	107	155.52	56.29	2.93	8.9
30	8.9	9.9	11.0	8.6	11.6	15.7	46.6	29.9	7.7	8103	2836	400	193.63	97.42	13.54	10.4
35	10.4	11.0	12.1	10.1	12.5	16.3	47.9	36.3	15.4	5928	2941	739	231.24	142.24	30.20	12.0
40	11.7	12.2	13.1	11.8	13.6	16.9	49.1	41.4	23.5	4528	2857	1046	268.02	188.23	51.11	13.4
45	13.1	13.3	14.1	13.4	14.7	17.6	50.2	45.3	31.1	3579	2664	1273	303.70	233.63	74.07	14.8
50	14.3	14.5	15.1	15.0	15.9	18.4	51.1	48.2	37.6	2908	2420	1408	338.07	277.15	97.26	16.1
55	15.6	15.6	16.2	16.5	17.2	19.3	52.0	50.3	42.7	2420	2166	1459	370.94	317.91	119.45	17.3
60	16.7	16.8	17.2	18.1	18.5	20.2	52.7	51.8	46.5	2054	1925	1447	402.17	355.39	139.91	18.5
65	17.8	17.8	18.2	19.6	19.9	21.2	53.4	52.9	49.4	1775	1708	1395	431.61	389.40	158.34	19.6
70	18.8	18.9	19.1	21.0	21.2	22.3	54.1	53.7	51.5	1559	1519	1319	459.15	419.97	174.62	20.6
75	19.7	19.8	20.0	22.4	22.6	23.4	54.6	54.4	53.0	1388	1359	1235	484.69	447.20	188.74	21.5
80	20.6	20.6	20.8	23.7	23.9	24.4	55.2	54.9	54.0	1253	1228	1153	508.13	471.19	200.74	22.3
85	21.4	21.4	21.5	24.9	25.1	25.4	55.6	55.4	54.8	1145	1123	1078	529.40	492.23	210.84	23.1
90	22.1	22.1	22.1	25.9	26.1	26.4	56.0	55.8	55.4	1059	1039	1013	548.41	511.77	219.81	23.8
95	22.7	22.7	22.7	26.9	27.1	27.2	56.3	56.1	55.8	990	972	957	565.09	528.84	227.43	24.4
100	23.2	23.2	23.2	27.8	27.9	28.0	56.6	56.4	56.1	935	919	911	579.38	543.40	234.27	24.9
105	23.6	23.6	23.6	28.5	28.7	28.7	56.9	56.6	56.4	893	878	873	591.20	555.42	239.87	25.3
110	24.0	24.0	24.0	29.0	29.2	29.2	57.1	56.8	56.5	862	847	843	600.50	564.85	244.28	25.6

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG; (G.M.V. INSIDE BARK)

+14.1 = SAWLOG; N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	1.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	2.8	43.75	0.00	0.00	8.75	4.38	0.00	0.00	0.00	0.00	
15	4.4	79.77	0.00	0.00	7.20	5.32	0.00	0.00	0.00	0.00	
20	5.9	117.36	0.00	0.00	7.52	5.87	0.00	0.00	0.00	0.00	
25	7.5	155.52	56.29	2.93	7.63	6.22	11.26	.59	2.25	.12	
30	8.9	193.63	97.42	13.54	7.62	6.45	8.23	2.12	3.25	.45	
35	10.4	231.24	142.24	30.20	7.52	6.61	8.96	3.33	4.06	.86	
40	11.7	268.02	188.23	51.11	7.36	6.70	9.20	4.18	4.71	1.28	
45	13.1	303.70	233.63	74.07	7.14	6.75	9.08	4.59	5.19	1.65	
50	14.3	338.07	277.15	97.26	6.87	6.76	8.70	4.64	5.54	1.95	
55	15.6	370.94	317.91	119.45	6.57	6.74	8.15	3.86	5.78	2.17	
60	16.7	402.17	355.39	139.91	6.24	6.70	7.50	3.60	5.92	2.33	
65	17.8	431.61	389.40	158.34	5.89	6.64	6.80	3.34	5.99	2.44	
70	18.8	459.15	419.97	174.62	5.51	6.56	6.11	3.09	6.00	2.49	
75	19.7	484.69	447.20	188.74	5.11	6.46	5.45	2.83	5.96	2.52	
80	20.6	508.13	471.19	200.74	4.69	6.35	4.80	2.57	5.89	2.51	
85	21.4	529.40	492.23	210.84	4.25	6.23	4.21	2.31	5.79	2.48	
90	22.1	548.41	511.77	219.81	3.80	6.09	3.91	2.05	5.69	2.44	
95	22.7	565.09	528.84	227.43	3.34	5.95	3.41	1.80	5.57	2.39	
100	23.2	579.38	543.40	234.27	2.86	5.79	2.91	1.54	5.43	2.34	
105	23.6	591.20	555.42	239.87	2.36	5.63	2.40	1.28	5.29	2.28	
110	24.0	600.50	564.85	244.28	1.86	5.46	1.89	1.02	5.14	2.22	

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

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**NORMAL YIELD PARAMETERS**

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	1.7	0.0	0.0	1.7	0.0	0.0	35.6	0.0	0.0	160261	0	0	20.55	0.00	0.00	2.5
10	3.5	0.0	0.0	3.2	0.0	0.0	39.5	0.0	0.0	49662	0	0	58.66	0.00	0.00	4.5
15	5.2	0.0	0.0	4.8	0.0	0.0	42.3	0.0	0.0	23449	0	0	100.07	0.00	0.00	6.4
20	7.0	8.3	0.0	6.5	10.5	0.0	44.5	19.2	0.0	13472	2234	0	142.86	44.07	0.00	8.3
25	8.6	9.7	10.8	8.2	11.4	15.6	46.3	28.4	6.4	8684	2784	335	185.98	88.74	10.88	10.1
30	10.3	11.0	12.0	10.0	12.5	16.2	47.8	35.9	14.9	6042	2941	717	228.79	139.23	28.96	11.9
35	11.9	12.3	13.2	11.9	13.7	17.0	49.2	41.8	24.1	4441	2845	1067	270.81	191.77	52.83	13.5
40	13.4	13.6	14.3	13.7	15.0	17.8	50.4	46.1	32.7	3405	2611	1312	311.70	243.81	79.42	15.1
45	14.8	14.9	15.5	15.6	16.4	18.8	51.5	49.1	39.7	2698	2320	1437	351.19	293.55	106.16	16.6
50	16.2	16.3	16.8	17.4	17.9	19.8	52.4	51.2	45.0	2198	2026	1458	389.04	339.80	131.41	18.0
55	17.5	17.6	18.0	19.2	19.5	21.0	53.3	52.7	48.8	1832	1755	1409	425.10	382.00	154.35	19.3
60	18.8	18.9	19.1	21.0	21.2	22.3	54.1	53.7	51.5	1558	1519	1319	459.19	420.02	174.64	20.6
65	20.0	20.0	20.2	22.7	22.9	23.7	54.8	54.5	53.3	1349	1321	1212	491.21	453.97	192.18	21.7
70	21.0	21.1	21.2	24.4	24.6	25.0	55.4	55.2	54.5	1186	1163	1107	521.03	484.01	206.94	22.8
75	22.1	22.1	22.1	26.0	26.1	26.4	56.0	55.8	55.4	1058	1039	1012	548.57	511.93	219.89	23.8
80	23.0	23.0	23.0	27.4	27.6	27.7	56.5	56.3	56.0	956	940	929	573.74	537.66	231.59	24.7
85	23.8	23.8	23.8	28.8	29.0	29.0	57.0	56.7	56.5	875	860	856	596.48	560.78	242.37	25.5
90	24.6	24.6	24.6	30.0	30.2	30.2	57.4	57.1	56.9	810	797	793	616.71	581.26	252.00	26.2
95	25.2	25.2	25.2	31.1	31.3	31.3	57.7	57.5	57.2	759	747	742	634.38	599.10	260.43	26.8
100	25.8	25.8	25.8	32.1	32.3	32.3	58.0	57.8	57.5	718	707	703	649.42	614.25	267.62	27.4
105	26.3	26.3	26.3	32.9	33.0	33.1	58.2	58.0	57.7	687	676	672	661.78	626.68	273.55	27.8
110	26.6	26.6	26.6	33.5	33.7	33.7	58.4	58.2	57.9	663	653	650	671.39	636.35	278.17	28.1

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE



VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH							
		TOTAL	MERCHANTABLE		P.A.I.		M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1		
5.	1.7	20.55	0.00	0.00	4.11	4.11	0.00	0.00	0.00	0.00		
10.	3.5	58.66	0.00	0.00	7.62	5.87	0.00	0.00	0.00	0.00		
15.	5.2	100.07	0.00	0.00	8.28	6.67	0.00	0.00	0.00	0.00		
20.	7.0	142.86	44.07	0.00	8.56	7.14	8.81	0.00	2.20	0.00		
25.	8.6	185.98	88.74	10.88	8.62	7.44	8.93	2.18	3.55	.44		
30.	10.3	228.79	139.23	28.96	8.56	7.63	10.10	3.62	4.64	.97		
35.	11.9	270.81	191.77	52.83	8.40	7.74	10.51	4.78	5.48	1.51		
40.	13.4	311.70	243.81	79.42	8.18	7.79	10.41	5.32	6.10	1.99		
45.	14.8	351.19	293.55	106.16	7.90	7.80	9.95	4.86	6.52	2.36		
50.	16.2	389.04	339.80	131.41	7.57	7.78	9.25	4.55	6.80	2.63		
55.	17.5	425.10	382.00	154.35	7.21	7.73	8.44	4.24	6.95	2.81		
60.	18.8	459.19	420.02	174.64	6.82	7.65	7.60	3.93	7.00	2.91		
65.	20.0	491.21	453.97	192.18	6.40	7.56	6.79	3.63	6.98	2.96		
70.	21.0	521.03	484.01	206.94	5.96	7.44	6.01	3.32	6.91	2.96		
75.	22.1	548.57	511.93	219.89	5.51	7.31	5.58	3.01	6.83	2.93		
80.	23.0	573.74	537.66	231.59	5.03	7.17	5.15	2.70	6.72	2.89		
85.	23.8	596.48	560.78	242.37	4.55	7.02	4.62	2.39	6.60	2.85		
90.	24.6	616.71	581.26	252.00	4.05	6.85	4.10	2.09	6.46	2.80		
95.	25.2	634.38	599.10	260.43	3.53	6.68	3.57	1.78	6.31	2.74		
100.	25.8	649.42	614.25	267.62	3.01	6.49	3.03	1.47	6.14	2.68		
105.	26.3	661.78	626.68	273.55	2.47	6.30	2.49	1.16	5.97	2.61		
110.	26.6	671.39	636.35	278.17	1.92	6.10	1.93	.85	5.78	2.53		

- + 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER
- + 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER
- + 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES)    DIAMETER (CENTIMETRES)    M-3 (SOLID CUBIC METRES/HECTARE)  
 TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))  
 BASAL AREA (SQUARE METRES/HECTARE)  
 FREQUENCY (NUMBER OF TREES/HECTARE)  
 VOLUME (SOLID CUBIC METRES/HECTARE)

- +1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)
- +9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)
- +14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5.	2.2	0.0	0.0	2.1	0.0	0.0	36.8	0.0	0.0	108513	0	0	30.45	0.00	0.00	3.0
10.	4.2	0.0	0.0	3.8	0.0	0.0	40.7	0.0	0.0	36193	0	0	74.11	0.00	0.00	5.2
15.	6.1	0.0	0.0	5.6	0.0	0.0	43.4	0.0	0.0	17571	0	0	120.87	0.00	0.00	7.6
20.	8.0	9.1	10.3	7.5	11.0	15.4	45.6	24.9	3.7	10238	2619	198	168.77	69.93	5.86	9.4
25.	9.8	10.6	11.7	9.5	12.2	16.0	47.4	34.0	12.3	6654	2928	608	216.72	124.59	23.12	11.4
30.	11.6	12.1	13.0	11.6	13.5	16.9	49.0	40.9	22.7	4655	2873	1016	264.05	183.21	48.69	13.3
35.	13.3	13.6	14.3	13.7	14.9	17.8	50.3	45.9	32.4	3435	2620	1306	310.27	241.98	78.46	15.0
40.	15.0	15.1	15.6	15.8	16.6	18.9	51.6	49.3	40.3	2641	2291	1443	355.00	298.29	108.74	16.7
45.	16.5	16.6	17.1	17.9	18.3	20.1	52.6	51.6	46.1	2099	1957	1452	397.99	350.46	137.23	18.3
50.	18.0	18.1	18.4	20.0	20.2	21.5	53.6	53.1	50.0	1713	1656	1376	439.00	397.74	162.81	19.8
55.	19.5	19.5	19.8	22.0	22.2	23.1	54.5	54.2	52.6	1431	1400	1258	477.87	440.04	185.07	21.2
60.	20.8	20.8	21.0	24.0	24.2	24.7	55.3	55.1	54.3	1220	1196	1131	514.44	477.49	203.81	22.6
65.	22.1	22.1	22.1	26.0	26.1	26.4	56.0	55.8	55.4	1058	1038	1012	548.61	511.97	219.91	23.8
70.	23.2	23.2	23.2	27.8	28.0	28.1	56.6	56.4	56.1	932	916	908	580.27	544.31	234.69	24.9
75.	24.3	24.3	24.3	29.6	29.8	29.8	57.2	57.0	56.7	833	819	815	609.35	573.82	248.49	25.9
80.	25.3	25.3	25.3	31.2	31.4	31.4	57.7	57.5	57.2	755	743	739	635.78	600.51	261.10	26.9
85.	26.2	26.2	26.2	32.7	32.9	32.9	58.2	57.9	57.7	692	682	678	659.50	624.39	272.46	27.7
90.	27.0	27.0	27.0	34.1	34.3	34.3	58.6	58.3	58.1	642	633	629	680.45	645.44	282.52	28.4
95.	27.6	27.6	27.6	35.3	35.5	35.5	58.9	58.7	58.4	603	594	591	698.59	663.64	291.26	29.1
100.	28.2	28.2	28.2	36.3	36.5	36.5	59.2	59.0	58.7	572	564	560	713.87	678.97	298.64	29.6
105.	28.7	28.7	28.7	37.2	37.3	37.4	59.4	59.2	58.9	548	540	537	726.25	691.38	304.62	30.1
110.	29.0	29.0	29.0	37.8	38.0	38.0	59.6	59.4	59.1	531	524	521	735.66	700.83	309.18	30.4

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

## VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	2.2	30.45	0.00	0.00	6.09	6.09	0.00	0.00	0.00	0.00	
10	4.2	74.11	0.00	0.00	8.73	7.41	0.00	0.00	0.00	0.00	
15	6.1	120.87	0.00	0.00	9.35	8.06	0.00	0.00	0.00	0.00	
20	8.0	168.77	69.93	5.86	9.58	8.44	13.99	1.17	3.50	.29	
25	9.8	216.72	124.59	23.12	9.59	8.67	10.93	3.45	4.98	.92	
30	11.6	264.05	183.21	48.69	9.47	8.80	11.73	5.11	6.11	1.62	
35	13.3	310.27	241.98	78.46	9.24	8.86	11.75	5.95	6.91	2.24	
40	15.0	355.00	298.29	108.74	8.95	8.88	11.26	5.49	7.46	2.72	
45	16.5	397.99	350.46	137.23	8.60	8.84	10.43	5.14	7.79	3.05	
50	18.0	439.00	397.74	162.81	8.20	8.78	9.46	4.79	7.95	3.26	
55	19.5	477.87	440.04	185.07	7.77	8.69	8.46	4.45	8.00	3.36	
60	20.8	514.44	477.49	203.81	7.31	8.57	7.49	4.10	7.96	3.40	
65	22.1	548.61	511.97	219.91	6.83	8.44	6.90	3.75	7.88	3.38	
70	23.2	580.27	544.31	234.69	6.33	8.29	6.47	3.41	7.78	3.35	
75	24.3	609.35	573.82	248.49	5.82	8.12	5.90	3.06	7.65	3.31	
80	25.3	635.78	600.51	261.10	5.29	7.95	5.34	2.71	7.51	3.26	
85	26.2	659.50	624.39	272.46	4.74	7.76	4.78	2.37	7.35	3.21	
90	27.0	680.45	645.44	282.52	4.19	7.56	4.21	2.02	7.17	3.14	
95	27.6	698.59	663.64	291.26	3.63	7.35	3.64	1.67	6.99	3.07	
100	28.2	713.87	678.97	298.64	3.06	7.14	3.07	1.33	6.79	2.99	
105	28.7	726.25	691.38	304.62	2.47	6.92	2.48	.98	6.58	2.90	
110	29.0	735.66	700.83	309.18	1.88	6.69	1.89	.63	6.37	2.81	

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES)      DIAMETER (CENTIMETRES)      M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD &amp; SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

## NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	2.7	0.0	0.0	2.5	0.0	0.0	37.9	0.0	0.0	78436	0	0	40.65	0.00	0.00	3.6
10	4.8	0.0	0.0	4.4	0.0	0.0	41.7	0.0	0.0	27525	0	0	89.79	0.00	0.00	6.0
15	6.9	8.2	0.0	6.4	10.4	0.0	44.4	19.0	0.0	13633	2215	0	141.81	43.11	0.00	8.3
20	9.0	9.9	11.1	8.6	11.6	15.7	46.6	30.1	7.9	8026	2843	410	194.70	98.65	13.93	10.5
25	11.0	11.5	12.5	10.8	13.0	16.6	48.4	38.7	18.9	5248	2923	880	247.33	162.18	38.89	12.6
30	12.9	13.2	14.0	13.1	14.6	17.5	50.0	44.9	30.2	3687	2694	1248	298.98	227.61	70.94	14.6
35	14.8	14.9	15.5	15.5	16.3	18.7	51.4	49.0	39.4	2730	2336	1433	349.14	291.00	104.77	16.5
40	16.5	16.6	17.0	17.8	18.3	20.1	52.6	51.6	46.0	2104	1961	1452	397.44	349.81	136.87	18.3
45	18.2	18.3	18.6	20.2	20.4	21.7	53.7	53.3	50.4	1676	1624	1364	443.62	402.88	165.56	20.0
50	19.8	19.9	20.1	22.5	22.7	23.5	54.7	54.4	53.1	1372	1343	1226	487.44	450.07	190.20	21.6
55	21.3	21.3	21.5	24.8	25.0	25.4	55.6	55.4	54.8	1148	1126	1080	528.74	491.59	210.53	23.1
60	22.8	22.8	22.8	27.1	27.2	27.4	56.4	56.1	55.9	981	963	950	567.40	531.19	228.54	24.4
65	24.1	24.1	24.1	29.2	29.4	29.4	57.1	56.9	56.6	853	838	834	603.31	567.70	245.62	25.7
70	25.3	25.3	25.3	31.2	31.4	31.4	57.8	57.5	57.2	753	741	737	636.38	601.12	261.38	26.9
75	26.4	26.4	26.4	33.2	33.4	33.4	58.3	58.1	57.8	675	665	661	666.55	631.48	275.84	28.0
80	27.5	27.5	27.5	35.0	35.1	35.2	58.8	58.6	58.3	613	604	601	693.78	658.82	288.94	28.9
85	28.4	28.4	28.4	36.6	36.8	36.8	59.3	59.0	58.8	564	556	553	718.02	683.13	300.64	29.8
90	29.2	29.2	29.2	38.1	38.2	38.3	59.7	59.4	59.1	525	517	514	739.23	704.41	310.91	30.5
95	29.9	29.9	29.9	39.3	39.5	39.5	60.0	59.7	59.5	494	487	484	757.37	722.63	319.71	31.2
100	30.4	30.4	30.5	40.4	40.6	40.6	60.3	60.0	59.7	470	464	461	772.41	737.76	327.01	31.7
105	30.9	30.9	30.9	41.3	41.5	41.5	60.5	60.2	59.9	452	446	444	784.31	749.76	332.80	32.1
110	31.2	31.2	31.2	41.9	42.1	42.1	60.6	60.4	60.1	440	434	431	793.03	758.56	337.04	32.4

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

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+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH					
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.	P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1
5	2.7	40.65	0.00	0.00	8.13	8.13	0.00	0.00	0.00	0.00
10	4.8	89.79	0.00	0.00	9.83	8.98	0.00	0.00	0.00	0.00
15	6.9	141.81	43.11	0.00	10.41	9.45	8.62	0.00	2.87	0.00
20	9.0	194.70	98.65	13.93	10.58	9.74	11.11	2.79	4.93	7.0
25	11.0	247.33	162.18	38.89	10.53	9.89	12.71	4.99	6.49	1.56
30	12.9	298.98	227.61	70.94	10.33	9.97	13.09	6.41	7.59	2.36
35	14.8	349.14	291.00	104.77	10.03	9.98	12.68	6.34	8.31	2.99
40	16.5	397.44	349.81	136.87	9.66	9.94	11.76	5.94	8.75	3.42
45	18.2	443.62	402.88	165.56	9.23	9.86	10.61	5.53	8.95	3.68
50	19.8	487.44	450.07	190.20	8.76	9.75	9.44	5.12	9.00	3.80
55	21.3	528.74	491.59	210.53	8.26	9.61	8.30	4.71	8.94	3.83
60	22.8	567.40	531.19	228.54	7.73	9.46	7.92	4.31	8.85	3.81
65	24.1	603.31	567.70	245.62	7.18	9.28	7.30	3.90	8.73	3.78
70	25.3	636.38	601.12	261.38	6.61	9.09	6.68	3.49	8.59	3.73
75	26.4	666.55	631.48	275.84	6.04	8.89	6.07	3.08	8.42	3.68
80	27.5	693.78	658.82	288.94	5.45	8.67	5.47	2.68	8.24	3.61
85	28.4	718.02	683.13	300.64	4.85	8.45	4.86	2.27	8.04	3.54
90	29.2	739.23	704.41	310.91	4.24	8.21	4.26	1.86	7.83	3.45
95	29.9	757.37	722.63	319.71	3.63	7.97	3.64	1.45	7.61	3.37
100	30.4	772.41	737.76	327.01	3.01	7.72	3.03	1.04	7.38	3.27
105	30.9	784.31	749.76	332.80	2.38	7.47	2.40	.64	7.14	3.17
110	31.2	793.03	758.56	337.04	1.74	7.21	1.76	.23	6.90	3.06

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5.	3.1	0.0	0.0	2.9	0.0	0.0	38.9	0.0	0.0	59754.	0.	0.	50.80	0.00	0.00	4.1
10.	5.5	0.0	0.0	5.0	0.0	0.0	42.6	0.0	0.0	21718.	0.	0.	105.31	0.00	0.00	6.7
15.	7.7	8.9	10.1	7.3	10.9	15.3	45.3	23.6	2.8	10910.	2542.	153.	162.46	63.33	4.37	9.1
20.	9.9	10.7	11.8	9.7	12.2	16.1	47.5	34.6	13.0	6470.	2934.	639.	220.17	128.74	24.73	11.5
25.	12.1	12.5	13.3	12.2	13.9	17.1	49.4	42.5	25.6	4251.	2815.	1113.	277.26	199.96	56.87	13.8
30.	14.2	14.3	15.0	14.7	15.7	18.3	51.0	47.8	36.7	2996.	2458.	1393.	332.98	270.75	93.81	15.9
35.	16.1	16.2	16.7	17.3	17.8	19.8	52.4	51.1	44.7	2224.	2043.	1459.	386.81	337.12	129.95	17.9
40.	18.0	18.1	18.4	19.9	20.2	21.5	53.6	53.1	49.9	1719.	1660.	1378.	438.37	397.03	162.43	19.8
45.	19.8	19.9	20.1	22.5	22.7	23.5	54.7	54.4	53.1	1372.	1343.	1226.	487.39	450.02	190.18	21.6
50.	21.5	21.5	21.6	25.1	25.3	25.7	55.7	55.5	55.0	1125.	1104.	1063.	533.66	496.62	212.88	23.2
55.	23.1	23.1	23.1	27.6	27.8	27.9	56.6	56.3	56.1	944.	928.	919.	577.03	541.01	233.15	24.8
60.	24.6	24.6	24.6	30.1	30.2	30.3	57.4	57.1	56.9	808.	795.	791.	617.37	581.93	252.31	26.2
65.	26.0	26.0	26.0	32.4	32.6	32.6	58.1	57.9	57.6	705.	694.	690.	654.61	619.47	270.11	27.5
70.	27.3	27.3	27.3	34.6	34.8	34.8	58.7	58.5	58.2	624.	615.	611.	688.68	653.70	286.48	28.7
75.	28.4	28.4	28.4	36.7	36.9	36.9	59.3	59.1	58.8	561.	553.	550.	719.53	684.65	301.37	29.8
80.	29.5	29.5	29.5	38.6	38.8	38.8	59.8	59.6	59.3	511.	504.	501.	747.13	712.35	314.74	30.8
85.	30.4	30.4	30.4	40.3	40.5	40.5	60.3	60.0	59.7	471.	465.	463.	771.46	736.81	326.55	31.7
90.	31.2	31.2	31.2	41.9	42.1	42.1	60.6	60.4	60.1	440.	435.	432.	792.49	758.01	336.78	32.4
95.	31.9	31.9	31.9	43.2	43.4	43.4	60.9	60.7	60.4	416.	411.	408.	810.20	775.93	345.41	33.0
100.	32.5	32.5	32.5	44.3	44.5	44.5	61.2	60.9	60.6	397.	392.	390.	824.57	790.52	352.41	33.5
105.	32.9	32.9	32.9	45.1	45.3	45.3	61.4	61.1	60.8	384.	379.	377.	835.56	801.72	357.77	33.9
110.	33.2	33.2	33.2	45.7	45.9	45.9	61.5	61.3	61.0	375.	370.	368.	843.15	809.46	361.47	34.2

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE



VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	3.1	50.80	0.00	0.00	10.16	10.16	0.00	0.00	0.00	0.00	
10	5.5	105.31	0.00	0.00	10.90	10.53	0.00	0.00	0.00	0.00	
15	7.7	162.46	63.33	4.37	11.43	10.83	12.67	87	4.22	29	
20	9.9	220.17	128.74	24.73	11.54	11.01	13.08	4.07	6.44	1.24	
25	12.1	277.26	199.96	56.87	11.42	11.09	14.24	6.43	8.00	2.27	
30	14.2	332.98	270.75	93.81	11.14	11.10	14.16	7.39	9.02	3.13	
35	16.1	386.81	337.12	129.95	10.77	11.05	13.27	7.23	9.63	3.71	
40	18.0	438.37	397.03	162.43	10.31	10.96	11.98	6.50	9.93	4.06	
45	19.8	487.39	450.02	190.18	9.80	10.83	10.60	5.55	10.00	4.23	
50	21.5	533.66	496.62	212.88	9.25	10.67	9.32	4.54	9.93	4.26	
55	23.1	577.03	541.01	233.15	8.67	10.49	8.88	4.05	9.84	4.24	
60	24.6	617.37	581.93	252.31	8.07	10.29	8.19	3.83	9.70	4.21	
65	26.0	654.61	619.47	270.11	7.45	10.07	7.51	3.56	9.53	4.16	
70	27.3	688.68	653.70	286.48	6.81	9.84	6.84	3.27	9.34	4.09	
75	28.4	719.53	684.65	301.37	6.17	9.59	6.19	2.98	9.13	4.02	
80	29.5	747.13	712.35	314.74	5.52	9.34	5.54	2.67	8.90	3.93	
85	30.4	771.46	736.81	326.55	4.87	9.08	4.89	2.36	8.67	3.84	
90	31.2	792.49	758.01	336.78	4.21	8.81	4.24	2.05	8.42	3.74	
95	31.9	810.20	775.93	345.41	3.54	8.53	3.58	1.73	8.17	3.64	
100	32.5	824.57	790.52	352.41	2.87	8.25	2.92	1.40	7.91	3.52	
105	32.9	835.56	801.72	357.77	2.20	7.96	2.24	1.07	7.64	3.41	
110	33.2	843.15	809.46	361.47	1.52	7.67	1.55	0.74	7.36	3.29	

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES)    DIAMETER (CENTIMETRES)    M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	3.6	0.0	0.0	3.3	0.0	0.0	39.7	0.0	0.0	47412	0	0	60.76	0.00	0.00	4.6
10	6.1	0.0	0.0	5.6	0.0	0.0	43.4	0.0	0.0	17648	0	0	120.53	0.00	0.00	7.3
15	8.5	9.6	10.7	8.1	11.3	15.5	46.2	27.8	5.8	8953	2757	307	182.70	85.06	9.81	10.0
20	10.9	11.5	12.5	10.7	12.9	16.5	48.4	38.4	18.4	5337	2927	861	245.07	159.37	37.63	12.5
25	13.2	13.4	14.2	13.5	14.8	17.7	50.2	45.6	31.7	3518	2646	1287	306.44	237.11	75.89	14.9
30	15.4	15.5	16.0	16.3	17.0	19.2	51.8	50.0	42.0	2486	2203	1456	366.00	311.86	116.14	17.1
35	17.5	17.5	17.9	19.1	19.5	20.9	53.2	52.6	48.6	1849	1768	1413	423.24	379.88	153.20	19.3
40	19.5	19.5	19.8	22.0	22.2	23.1	54.5	54.2	52.6	1432	1401	1259	477.78	439.94	185.02	21.2
45	21.4	21.4	21.5	24.9	25.0	25.4	55.6	55.4	54.8	1146	1124	1078	529.33	492.17	210.81	23.1
50	23.1	23.1	23.1	27.7	27.9	27.9	56.6	56.4	56.1	942	925	916	577.72	541.71	233.48	24.8
55	24.8	24.8	24.8	30.4	30.6	30.6	57.5	57.2	57.0	792	779	775	622.80	587.42	254.90	26.4
60	26.4	26.4	26.4	33.0	33.2	33.2	58.3	58.0	57.8	680	670	666	664.47	629.39	274.84	27.9
65	27.8	27.8	27.8	35.6	35.7	35.8	59.0	58.8	58.5	594	586	582	702.67	667.74	293.23	29.2
70	29.1	29.1	29.1	37.9	38.1	38.1	59.6	59.4	59.1	528	521	518	737.36	702.54	310.00	30.5
75	30.3	30.3	30.3	40.1	40.3	40.3	60.2	59.9	59.7	476	470	467	768.51	733.84	325.12	31.6
80	31.4	31.4	31.4	42.1	42.3	42.3	60.7	60.4	60.1	435	430	427	796.10	761.66	338.54	32.5
85	32.3	32.3	32.3	43.9	44.1	44.1	61.1	60.9	60.6	403	398	396	820.14	786.01	350.25	33.4
90	33.1	33.1	33.1	45.5	45.7	45.7	61.5	61.2	60.9	378	373	371	840.61	806.86	360.23	34.1
95	33.8	33.8	33.8	46.8	47.0	47.0	61.8	61.5	61.2	359	354	352	857.50	824.16	368.48	34.7
100	34.3	34.3	34.3	47.9	48.1	48.1	62.0	61.7	61.4	344	340	338	870.80	837.86	374.97	35.2
105	34.7	34.7	34.7	48.7	48.9	48.9	62.2	61.9	61.6	334	330	328	880.50	847.88	379.71	35.5
110	34.9	34.9	34.9	49.2	49.3	49.4	62.3	62.0	61.7	328	324	322	886.55	854.16	382.66	35.7

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE



VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	3.6	60.76	0.00	0.00	12.15	12.15	0.00	0.00	0.00	0.00	
10	6.1	120.53	0.00	0.00	11.95	12.05	0.00	0.00	0.00	0.00	
15	8.5	182.70	85.06	9.81	12.43	12.18	17.01	1.96	5.67	.65	
20	10.9	245.07	159.37	37.63	12.48	12.25	14.86	5.56	7.97	1.88	
25	13.2	306.44	237.11	75.89	12.27	12.26	15.55	7.65	9.48	3.04	
30	15.4	366.00	311.86	116.14	11.91	12.20	14.95	8.05	10.40	3.87	
35	17.5	423.24	379.88	153.20	11.45	12.09	13.60	7.41	10.85	4.38	
40	19.5	477.78	439.94	185.02	10.91	11.94	12.01	6.36	11.00	4.63	
45	21.4	529.33	492.17	210.81	10.31	11.76	10.45	5.16	10.94	4.68	
50	23.1	577.72	541.71	233.48	9.68	11.55	9.91	4.53	10.83	4.67	
55	24.8	622.80	587.42	254.90	9.02	11.32	9.14	4.28	10.68	4.63	
60	26.4	664.47	629.39	274.84	8.33	11.07	8.39	3.99	10.49	4.58	
65	27.8	702.67	667.74	293.23	7.64	10.81	7.67	3.68	10.27	4.51	
70	29.1	737.36	702.54	310.00	6.94	10.53	6.96	3.35	10.04	4.43	
75	30.3	768.51	733.84	325.12	6.23	10.25	6.26	3.02	9.78	4.33	
80	31.4	796.10	761.66	338.54	5.52	9.95	5.57	2.68	9.52	4.23	
85	32.3	820.14	786.01	350.25	4.81	9.65	4.87	2.34	9.25	4.12	
90	33.1	840.61	806.86	360.23	4.09	9.34	4.17	2.00	8.97	4.00	
95	33.8	857.50	824.16	368.48	3.38	9.03	3.46	1.65	8.68	3.88	
100	34.3	870.80	837.86	374.97	2.66	8.71	2.74	1.30	8.38	3.75	
105	34.7	880.50	847.88	379.71	1.94	8.39	2.00	.95	8.08	3.62	
110	34.9	886.55	854.16	382.66	1.21	8.06	1.26	.59	7.77	3.48	

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

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+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

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NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5.	4.0	0.0	0.0	3.6	0.0	0.0	40.4	0.0	0.0	38725.	0.	0.	70.58	0.00	0.00	5.1
10.	6.7	8.0	0.0	6.2	10.3	0.0	44.2	17.5	0.0	14642.	2094.	0.	135.65	37.55	0.00	8.0
15.	9.3	10.2	11.3	8.9	11.8	15.8	46.9	31.6	9.5	7475.	2884.	482.	202.84	108.09	17.09	10.8
20.	11.8	12.2	13.1	11.8	13.6	17.0	49.2	41.6	23.9	4471.	2849.	1060.	269.84	190.55	52.23	13.5
25.	14.2	14.4	15.0	14.8	15.8	18.4	51.0	48.0	37.1	2954.	2440.	1400.	335.40	273.79	95.45	16.0
30.	16.6	16.6	17.1	17.9	18.4	20.1	52.7	51.6	46.1	2091.	1952.	1451.	398.68	351.28	137.67	18.3
35.	18.8	18.9	19.1	21.0	21.2	22.3	54.1	53.7	51.5	1559.	1519.	1319.	459.17	419.99	174.63	20.6
40.	20.9	20.9	21.1	24.1	24.3	24.8	55.3	55.1	54.4	1209.	1186.	1123.	516.47	479.49	204.78	22.6
45.	22.9	22.9	22.9	27.2	27.4	27.5	56.4	56.2	55.9	970.	952.	940.	570.32	534.17	229.95	24.6
50.	24.7	24.7	24.7	30.3	30.4	30.5	57.4	57.2	56.9	799.	786.	781.	620.56	585.15	253.83	26.3
55.	26.5	26.5	26.5	33.2	33.4	33.4	58.3	58.1	57.8	674.	663.	660.	667.06	631.99	276.09	28.0
60.	28.1	28.1	28.1	36.0	36.2	36.2	59.1	58.9	58.6	580.	572.	568.	709.74	674.83	296.65	29.5
65.	29.5	29.5	29.5	38.7	38.9	38.9	59.8	59.6	59.3	509.	501.	499.	748.58	713.80	315.44	30.8
70.	30.9	30.9	30.9	41.2	41.4	41.4	60.5	60.2	59.9	453.	447.	445.	783.54	748.98	332.42	32.1
75.	32.1	32.1	32.1	43.5	43.7	43.7	61.0	60.8	60.5	410.	405.	403.	814.63	780.42	347.56	33.2
80.	33.1	33.1	33.1	45.6	45.8	45.8	61.5	61.2	60.9	376.	372.	370.	841.85	808.14	360.84	34.1
85.	34.1	34.1	34.1	47.4	47.6	47.6	61.9	61.6	61.3	350.	346.	344.	865.22	832.11	372.25	35.0
90.	34.8	34.8	34.8	49.0	49.2	49.2	62.2	62.0	61.7	330.	326.	324.	884.75	852.30	381.79	35.6
95.	35.5	35.5	35.5	50.3	50.5	50.5	62.5	62.2	61.9	314.	311.	309.	900.44	868.63	389.45	36.2
100.	36.0	36.0	36.0	51.3	51.5	51.5	62.7	62.4	62.1	303.	300.	298.	912.29	881.05	395.23	36.6
105.	36.3	36.3	36.3	52.0	52.2	52.2	62.8	62.6	62.3	296.	293.	291.	920.28	889.46	399.13	36.9
110.	36.4	36.4	36.4	52.3	52.5	52.5	62.9	62.6	62.3	293.	289.	288.	924.37	893.79	401.12	37.0

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	4.0	70.58	0.00	0.00	14.12	14.12	0.00	0.00	0.00	0.00	
10	6.7	135.65	37.55	0.00	13.02	13.57	7.51	0.00	3.76	0.00	
15	9.3	202.84	108.09	17.09	13.44	13.52	14.11	3.42	7.21	1.14	
20	11.8	269.84	190.55	52.23	13.40	13.49	16.49	7.03	9.53	2.61	
25	14.2	335.40	273.79	95.45	13.11	13.42	16.65	8.64	10.95	3.82	
30	16.6	398.68	351.28	137.67	12.66	13.29	15.50	8.45	11.71	4.59	
35	18.8	459.17	419.99	174.63	12.10	13.12	13.74	7.39	12.00	4.99	
40	20.9	516.47	479.49	204.78	11.46	12.91	11.90	6.03	11.99	5.12	
45	22.9	570.32	534.17	229.95	10.77	12.67	10.94	5.04	11.87	5.11	
50	24.7	620.56	585.15	253.83	10.05	12.41	10.20	4.78	11.70	5.08	
55	26.5	667.06	631.99	276.09	9.30	12.13	9.37	4.45	11.49	5.02	
60	28.1	709.74	674.83	296.65	8.54	11.83	8.57	4.11	11.25	4.94	
65	29.5	748.58	713.80	315.44	7.77	11.52	7.79	3.76	10.98	4.85	
70	30.9	783.54	748.98	332.42	6.99	11.19	7.04	3.40	10.70	4.75	
75	32.1	814.63	780.42	347.56	6.22	10.86	6.29	3.03	10.41	4.63	
80	33.1	841.85	808.14	360.84	5.45	10.52	5.54	2.66	10.10	4.51	
85	34.1	865.22	832.11	372.25	4.67	10.18	4.79	2.28	9.79	4.38	
90	34.8	884.75	852.30	381.79	3.91	9.83	4.04	1.91	9.47	4.24	
95	35.5	900.44	868.63	389.45	3.14	9.48	3.27	1.53	9.14	4.10	
100	36.0	912.29	881.05	395.23	2.37	9.12	2.48	1.16	8.81	3.95	
105	36.3	920.28	889.46	399.13	1.60	8.76	1.68	.78	8.47	3.80	
110	36.4	924.37	893.79	401.12	.82	8.40	.86	.40	8.13	3.65	

+ 1.5 = ALL TREES 1.5 CM. (DBH) AND GREATER

+ 9.1 = ALL TREES 9.1 CM. (DBH) AND GREATER

+ 14.1 = ALL TREES 14.1 CM. (DBH) AND GREATER

HEIGHT (METRES) DIAMETER (CENTIMETRES) M-3 (SOLID CUBIC METRES/HECTARE)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

VOLUME (SOLID CUBIC METRES/HECTARE)

+1.5 = TOTAL: STUMP, TOP (G.T.V. INSIDE BARK)

+9.1 = CORDWOOD & SAWLOG: (G.M.V. INSIDE BARK)

+14.1 = SAWLOG: N.B. LOG RULE

NORMAL YIELD PARAMETERS

AGE	HEIGHT			DIAMETER			BASAL AREA			FREQUENCY			VOLUME			TOP HT
	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	+1.5	+9.1	+14.1	
5	4.4	0.0	0.0	4.0	0.0	0.0	41.0	0.0	0.0	32798	0	0	79.49	0.00	0.00	5.5
10	7.2	8.5	0.0	6.8	10.6	0.0	44.8	20.7	0.0	12504	2351	0	149.57	50.43	0.00	8.6
15	10.0	10.7	11.8	9.7	12.3	16.1	47.6	34.8	13.3	6404	2936	651	221.46	130.30	25.34	11.6
20	12.7	13.0	13.8	12.9	14.4	17.4	49.8	44.2	28.9	3837	2731	1213	292.77	219.71	66.85	14.4
25	15.2	15.3	15.9	16.1	16.8	19.1	51.7	49.8	41.4	2538	2235	1452	362.18	307.15	113.57	17.0
30	17.7	17.7	18.1	19.4	19.7	21.1	53.4	52.8	49.1	1799	1728	1401	428.84	386.26	156.65	19.5
35	20.0	20.1	20.3	22.8	23.0	23.7	54.8	54.6	53.3	1343	1315	1209	492.20	455.00	192.69	21.8
40	22.2	22.2	22.2	26.2	26.3	26.6	56.1	55.8	55.5	1044	1025	1001	551.90	515.35	221.42	23.9
45	24.2	24.2	24.2	29.5	29.7	29.7	57.2	56.9	56.7	839	825	820	607.69	572.14	247.70	25.9
50	26.2	26.2	26.2	32.7	32.9	32.9	58.2	57.9	57.7	692	682	678	659.42	624.31	272.42	27.7
55	28.0	28.0	28.0	35.8	36.0	36.0	59.1	58.8	58.6	586	577	574	706.98	672.06	295.31	29.4
60	29.6	29.6	29.6	38.8	39.0	39.0	59.9	59.6	59.3	506	499	496	750.33	715.57	316.29	30.9
65	31.1	31.1	31.1	41.6	41.8	41.9	60.6	60.3	60.0	445	439	436	789.46	754.96	335.31	32.3
70	32.5	32.5	32.5	44.3	44.4	44.5	61.2	60.9	60.6	398	393	391	824.38	790.32	352.32	33.5
75	33.7	33.7	33.7	46.6	46.8	46.8	61.7	61.5	61.2	361	357	355	855.10	821.70	367.31	34.6
80	34.7	34.7	34.7	48.8	49.0	49.0	62.2	61.9	61.6	333	329	327	881.65	849.08	380.27	35.5
85	35.6	35.6	35.6	50.6	50.8	50.8	62.6	62.3	62.0	311	307	306	904.08	872.43	391.22	36.3
90	36.4	36.4	36.4	52.1	52.3	52.4	62.9	62.6	62.3	294	291	289	922.39	891.69	400.16	37.0
95	36.9	36.9	36.9	53.4	53.5	53.6	63.1	62.8	62.5	282	279	278	936.60	906.77	407.09	37.5
100	37.4	37.4	37.4	54.2	54.4	54.4	63.3	63.0	62.7	274	271	269	946.72	917.59	412.03	37.8
105	37.6	37.6	37.6	54.8	55.0	55.0	63.4	63.1	62.8	269	266	265	952.73	924.04	414.96	38.0
110	37.7	37.7	37.7	54.9	55.1	55.1	63.4	63.1	62.8	268	265	263	954.60	926.05	415.86	38.1

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HEIGHT (METRES) DIAMETER (CENTIMETRES)

TOP HT (AVERAGE HEIGHT OF FIVE TALLEST TREES (METRES))

BASAL AREA (SQUARE METRES/HECTARE)

FREQUENCY (NUMBER OF TREES/HECTARE)

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VOLUME GROWTH AND YIELD

AGE	HT	VOLUME			VOLUME GROWTH						
		TOTAL	MERCHANTABLE		P.A.I.	M.A.I.		P.A.I.		M.A.I.	
		M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3	M-3
		+1.5	+9.1	+14.1	+1.5	+1.5	+9.1	+14.1	+9.1	+14.1	
5	4.4	79.49	0.00	0.00	15.90	15.90	0.00	0.00	0.00	0.00	
10	7.2	149.57	50.43	0.00	14.02	14.96	10.09	0.00	5.04	0.00	
15	10.0	221.46	130.30	25.34	14.38	14.76	15.97	5.07	8.69	1.69	
20	12.7	292.77	219.71	66.85	14.26	14.64	17.88	8.30	10.99	3.34	
25	15.2	362.18	307.15	113.57	13.88	14.49	17.49	9.34	12.29	4.54	
30	17.7	428.84	386.26	156.65	13.33	14.29	15.82	8.61	12.88	5.22	
35	20.0	492.20	455.00	192.69	12.67	14.06	13.75	7.21	13.00	5.51	
40	22.2	551.90	515.35	221.42	11.94	13.80	12.07	5.74	12.88	5.54	
45	24.2	607.69	572.14	247.70	11.16	13.50	11.36	5.26	12.71	5.50	
50	26.2	659.42	624.31	272.42	10.34	13.19	10.43	4.94	12.49	5.45	
55	28.0	706.98	672.06	295.31	9.51	12.85	9.55	4.58	12.22	5.37	
60	29.6	750.33	715.57	316.29	8.67	12.51	8.70	4.20	11.93	5.27	
65	31.1	789.46	754.96	335.31	7.83	12.15	7.88	3.80	11.61	5.16	
70	32.5	824.38	790.32	352.32	6.98	11.78	7.07	3.40	11.29	5.03	
75	33.7	855.10	821.70	367.31	6.14	11.40	6.28	3.00	10.96	4.90	
80	34.7	881.65	849.08	380.27	5.31	11.02	5.48	2.59	10.61	4.75	
85	35.6	904.08	872.43	391.22	4.48	10.64	4.67	2.19	10.26	4.60	
90	36.4	922.39	891.69	400.16	3.66	10.25	3.85	1.79	9.91	4.45	
95	36.9	936.60	906.77	407.09	2.84	9.86	3.02	1.39	9.54	4.29	
100	37.4	946.72	917.59	412.03	2.02	9.47	2.16	.99	9.18	4.12	
105	37.6	952.73	924.04	414.96	1.20	9.07	1.29	.59	8.80	3.95	
110	37.7	954.60	926.05	415.86	.37	8.68	.40	.18	8.42	3.78	

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**FOREST RESEARCH SECTION  
FORESTRY BRANCH  
N.S. DEPT. OF LANDS AND FORESTS**

**FOREST RESEARCH SECTION PERSONNEL**

Technicians: Dave Arseneau, Steve Brown, George Keddy, Randy McCarthy, Keith Moore,  
Bob Murray, Peter Romkey, Ken Wilton

Chief Technicians : Laurie Peters, Cameron Sullivan

Data Processing: Sylvia Chase, Eric Robeson

Foresters: Brian Chase, Tim McGrath, Peter Neily, Tim O'Brien, Carl Weatherhead

Supervisor: Russell McNally

Director: Ed Bailey

Secretary: Angela Walker