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Yields of Unthinned Loblolly Pine Plantations on Cutover Sites in the West Gulf Region

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Summary

The system of equations presented here uses diameter distributions and tree taper functions to forecast in detail the development of unthinned loblolly pine plantations. Data were collected in parts of east Texas, Louisiana, southern Arkansas, and southern Mississippi. Only plantations established on cutover sites that did not require preparation were sampled. However, the results should serve as interim guides for yields in plantations where site preparation is employed. Two sets of yield tables are given, corresponding to predictions made from the site index, plantation

age, and number of trees surviving or number of trees planted and the survival pattern expressed in the study data.

To enhance stand description, new techniques are presented for predicting crown ratio by d.b.h. class. Crown ratios are used to select the appropriate set of taper curves. The computer program USLYCOWG (unthinned slash and loblolly yields for cutover sites in the West Gulf region) that produces the yield tables can be obtained from the authors.

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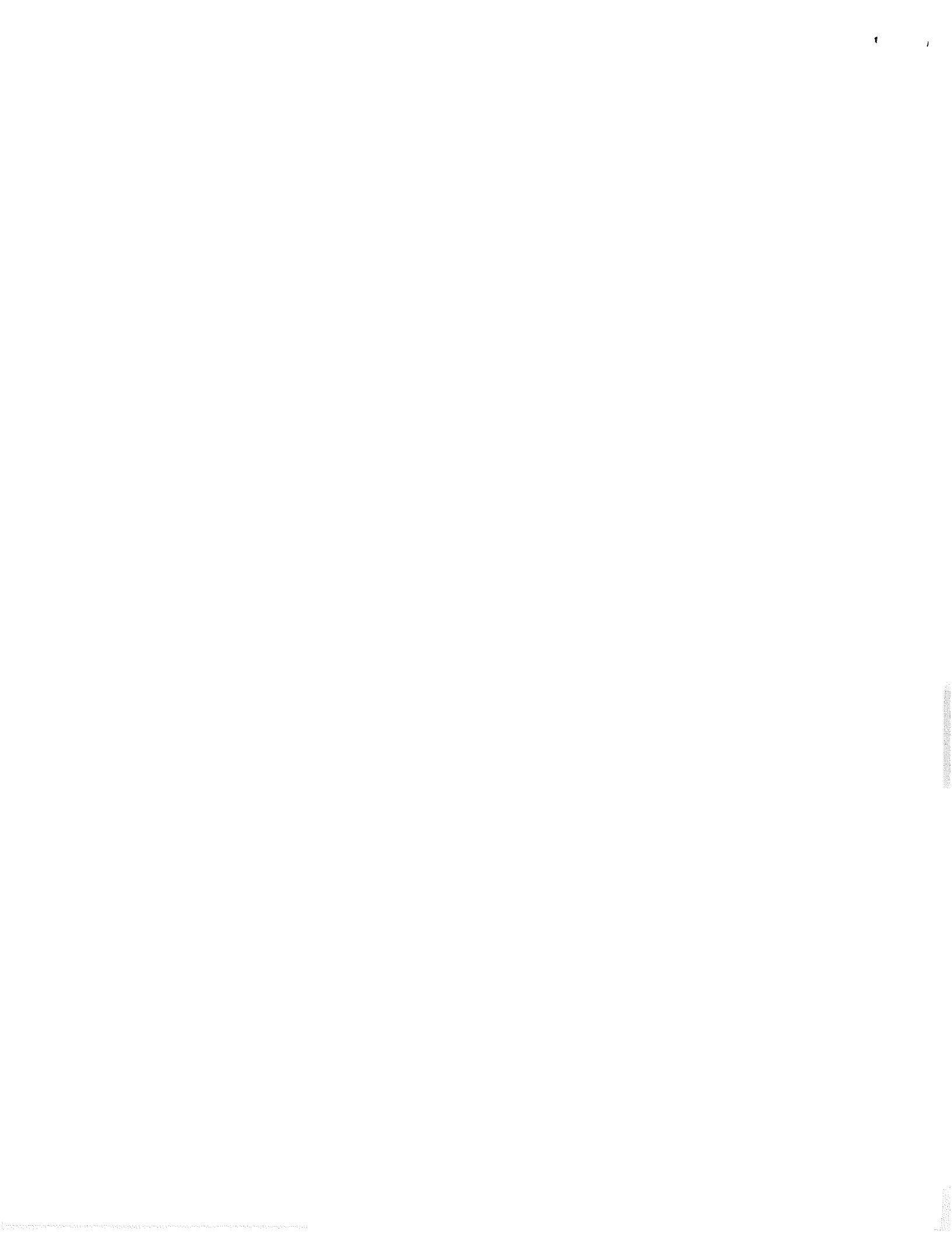
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BY

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Loblolly pine (*Pinus taeda* L.) is a preferred species for planting in the South. We estimate that from 1970 through 1977 forest landowners in the West Gulf region planted about 1.3 million acres to loblolly. The number of acres planted in 1977 was double that planted in 1970, and the trend is expected to continue. Managers of loblolly plantations need accurate predictions of growth and yield in relation to site index, planting density, age, and percent survival in order to formulate management policies.

For unthinned loblolly plantations the only comprehensive yield tables previously available that specifically included the West Gulf region were by Coile and Schumacher (1964) and Lenthart (1972). The system of equations presented here improves forecasts of plantation development on cutover sites in the lower West Gulf Coastal Plain by using diameter distributions and stem taper functions. Coile and Schumacher's work did not utilize these techniques and Lenthart's yields involved unthinned, old field plantations located within the interior West Gulf Coastal Plain.

The data in this study were collected from plantations relatively free of establishment problems. The virgin stands were clearcut; grazing and repeated burning controlled woody vegetation, allowing successful establishment of planted pines without intensive site preparation.

Many such problem-free sites should be available in the future as pine density is carefully controlled throughout the rotation, and utilization is more complete at final harvest. Thus, our results

may apply to repeated crops of pines in the region. Also, the results can be used-at least until better guides are published-to predict yields where site preparation is employed. Yield forecasts by various systems were used by Clutter and Dell (1978) to anticipate yield with site preparation.

In the text that follows we will explain the equations used in the system. Some readers may want to apply our system to circumstances not covered in the yield tables. To do so, the computer program USLYCOWG (unthinned slash and loblolly yields for cutover sites in the West Gulf region), which is written in FORTRAN, is available from the Southern Forest Experiment Station, Statistical Methods for Research and Application, T-10210, 701 Loyola Avenue, New Orleans, LA 70113.

Readers who wish to can proceed directly to the Applications section, which explains how to use the yield tables. First, however, it will be necessary to become familiar with the following notations:

A , = Plantation age: the number of growing seasons since the seedlings were planted.

H_D = Average height of dominant and codominant trees at any given A .

S_I = Site index; the average height of dominant and codominant trees at a given reference age (I). In the tables, I is for plantation age 25.

T_p = Number of trees planted per acre.

T_s = Number of trees surviving at A .

Feduccia is Research Forester; Dell, Mathematical Statistician; Mann, Chief Silviculturist; Campbell, Silviculturist; and Polmer, Statistician. All are employed by the Southern Forest Experiment Station, Forest Service-USDA, except Feduccia, who is assigned to the Southern Station by the Louisiana Office of Forestry.

Plantation Data

Study plots were in unthinned loblolly pine plantations established on cutover forest land. Wildfires burned the idle lands frequently and prevented natural regeneration and hardwood brush invasion. On some areas the heavy grass rough that predominated was burned off before planting; on others, it was not. We selected plantations on areas of good survival and within plantations chose plots free of heavy insect, disease, or other damage.

Many of the data used in developing the prediction system were from records on unthinned plots of various sizes in 9 long-term stand density studies. Some plots had been remeasured from one to six times, at intervals of 1 to 5 years. In addition, 67 supplementary plots were installed to include specifically site, age, and initial planting density combinations not well represented in existing studies. Collectively, 409 plot observations were available and their geographic coverage is shown in figure 1. Summaries of the distributions of these observations are given in tables 1 through 3. Only limited data was available outside the following ranges: (1) ages 3 to 27, (2) sites 38 to 77, and (3) planting densities of 251 to 1,500 trees per acre.

The average height of dominant and codominant trees was obtained to determine site index. Diameter at breast height (d.b.h.) to the nearest 0.1 inch was measured for each tree on the plot. In addition, measurements were made on individual volume sample trees relating to total height, height to the base of the living crown, and upper stem outside bark diameters. However, these sample tree data were not consistently available for all plots.

Model Development

Site Index

The observations covered in this paper and from other sources were used to define a set of site index curves for the category of loblolly plantations and the geographic area considered in this paper. This development was prompted by the fact that application of existing curves for natural loblolly resulted in a persistently increasing estimate of site index with repeated measurements over time on the same plot. The same was true of the Coile and Schumacher (1964) curves for planted loblolly pine on drainage classes d_1 - d_4 . In general, the problem-free cutover site plantations in the West Gulf were making more rapid height growth

in the first 25 years than was expressed in the other curves. However, when compared with results from old fields in the same general vicinity (Lenhart 1971), there was a distinctly less rapid early height growth pattern for our plots. Thus, the following equations were developed¹ and utilized in this system:

$$H_D = (S_I) (10) \left\{ b_1 \left[\frac{1}{A_p} - \frac{1}{I} \right] + b_2 \left[\left(\frac{1}{A_p} \right)^2 - \left(\frac{1}{I} \right)^2 \right] + b_3 \left[\left(\frac{1}{A_p} \right)^3 - \left(\frac{1}{I} \right)^3 \right] + b_4 \left[\left(\frac{1}{A_p} \right)^4 - \left(\frac{1}{I} \right)^4 \right] \right\}$$

and

$$S_I = (H_D) (10) \left\{ b_1 \left[\frac{1}{I} - \frac{1}{A_p} \right] + b_2 \left[\left(\frac{1}{I} \right)^2 - \left(\frac{1}{A_p} \right)^2 \right] + b_3 \left[\left(\frac{1}{I} \right)^3 - \left(\frac{1}{A_p} \right)^3 \right] + b_4 \left[\left(\frac{1}{I} \right)^4 - \left(\frac{1}{A_p} \right)^4 \right] \right\}$$

where

$$\begin{aligned} b_1 &= -21.0977 \\ b_2 &= 316.282 \\ b_3 &= -2443.85 \\ b_4 &= 6318.86 \end{aligned}$$

In this paper the reference age is set at a plantation age of 25 years. The computer routines associated with the system allow flexibility in defining index age. Yield tables for an index age of 50 years, for example, can be produced. This system and the associated computer program are designed to facilitate substitution of site index equations. We expect that certain users may elect to obtain the routines and insert an equation for their own situation.

Diameter Distributions

The three parameter Weibull function (Bailey and Dell 1973) was adopted as a model for the distribution of diameters. The cumulative distribution function (c.d.f.) and the probability density function (p.d.f.) for the Weibull distribution, where x is a specified d.b.h. value and a , b , and c are the parameters to be estimated, are,

¹Popham, T. W., D. F. Feduccia, T. R. Dell, W. F. Mann, Jr. and T. E. Campbell. Site index of planted loblolly on cutover sites in the West Gulf. U.S. Dep. Agric. For. Serv. Exp. Stn., New Orleans, La. (In preparation.)

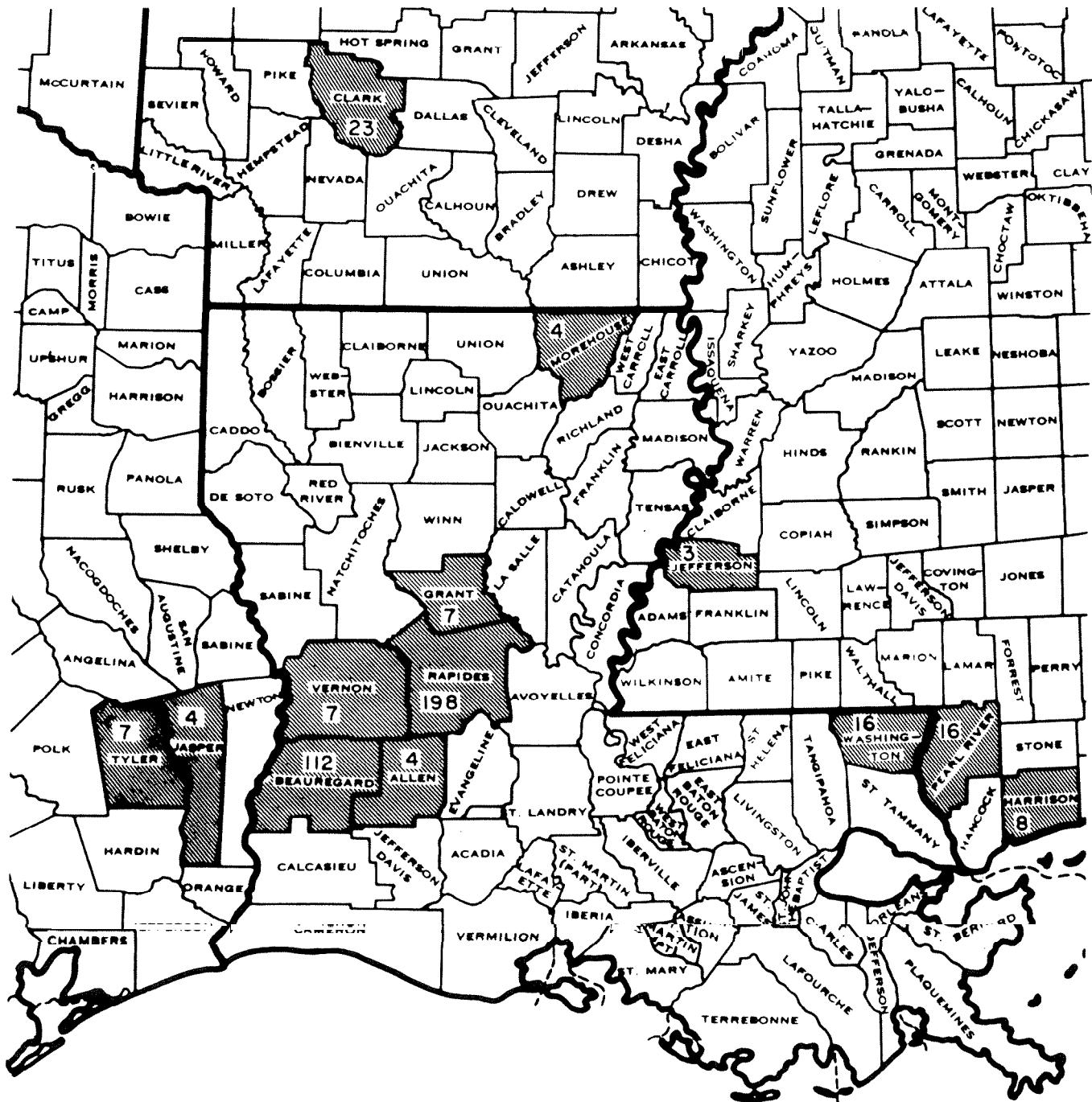


Figure I. Geographic location of 409 plot observations

Table 1.-**Distribution of observations by plantation age and planting density**

Age class	Planting density range (trees per acre)							Totals
	< 250 — —	251- 500 — —	501- 750 — —	751- 1000 — —	1001- 1250 — —	1251- 1500 — —	> 1500 — —	
Years								
3- 7	8	4	4	15	—	—	—	31
8-12	—	3	4	38	16	—	—	61
13-17	—	50	34	19	46	—	—	149
18-22	—	35	23	14	29	20	6	127
23-27	—	9	3	7	3	3	—	25
28-32	—	4	—	—	—	—	—	4
33-45	—	12	—	—	—	—	—	12
Totals	8	117	68	93	94	23	6	409

Table 2.-**Distribution of observations by plantation age and site index**

Age class	Site index class (age 25)												Totals	
	< — —	23- 27 — —	28- 32 — —	33- 37 — —	38- 42 — —	43- 47 — —	48- 52 — —	53- 57 — —	58- 62 — —	63- 67 — —	68- 72 — —	73- 77 — —	78	
Years														
3- 7	—	—	—	—	1	—	4	1	4	2	—	2	17	31
8-12	3	2	1	—	2	—	417	8	11	3	6	4	61	
13-17	—	—	—	4	1	4	4	34	66	30	4	2	—	149
18-22	—	—	—	—	—	1	17	41	40	22	6	—	—	127
23-27	—	—	—	—	—	11	5	10	7	1	—	—	—	25
28-32	—	—	—	—	—	—	—	1	2	1	—	—	—	4
33-45	—	—	—	—	—	—	—	—	—	—	183	—	—	12
Totals	3	2	14	5	6	34	105	135	70	13	10	21	—	409

Table 3.-**Distribution of observations by planting density and site index**

Planting density range	Site index class (age 25)												Totals	
	23- 27 — —	28- 32 — —	33- 37 — —	38- 42 — —	43- 47 — —	48- 52 — —	53- 57 — —	58- 62 — —	63- 67 — —	68- 72 — —	73- 77 — —	> 77 — —		
No. of trees														
≤ 250	—	—	—	—	—	—	—	—	—	—	—	—	8	8
251- 500	—	—	—	3	1	2	4	26	38	30	5	3	5	117
501- 750	3	1	1	—	4	2	2	19	26	12	2	6	6	68
751-1000	—	1	1	—	4	2	11	20	24	—	5	2	—	93
1001-1250	—	1	—	1	—	1	3	—	16	4	—	—	—	94
1251-1500	—	—	—	—	—	—	8	32	42	12	—	—	—	23
≥ 1500	—	—	—	—	—	—	6	—	—	—	—	—	—	6
Totals	3	2	1	4	5	6	34	105	135	70	13	10	21	409

c.d.f.:

$$F(x) = 1 - \exp \left\{ - \left(\frac{x-a}{b} \right)^c \right\}, \text{ for } a \leq x < \infty$$

$$= 0, \text{ otherwise}$$

p.d.f.:

$$f(x) = \frac{c}{b} \left(\frac{x-a}{b} \right)^{c-1} \exp \left\{ - \left[\frac{x-a}{b} \right]^c \right\}, \text{ for}$$

$$a \leq x < \infty$$

$$= 0, \text{ otherwise.}$$

In general for this distribution $b > 0$ and $c > 0$ and for the application to the distribution of d.b.h. $a \geq 0$ is specified.

For each of the 409 plots, counts by one-inch d.b.h. classes on a plot basis were used to obtain fitted estimates of the three parameters. The routine FITTER provided by Bailey (1974) was employed. These estimates of the plot parameters were then used as dependent variables for developing the following multiple regression equations to predict the diameter distribution parameters as functions of H_D , T_s , and A .

$$\begin{aligned}
a &= 0.13391 - 0.076245 \log^* (H_i) + 2.3569 \\
\log (A_p) &- 0.70442 \log (T_s) \\
R^2 &= 0.13, S_{y \cdot x} = 1.8002, \bar{Y} = 0.95, \\
S_y^2 &= 2.0135 \\
a + b &= 2.14570 + 8.1415 \log (H_D) + 2.1264 \\
\log (A_p) &- 4.13600 \log (T_s) \\
R^2 &= 0.90, S_{y \cdot x} = 0.5045, \bar{Y} = 6.87, \\
S_y^2 &= 4.9730 \\
c &= 2.69350 + 5.3594 \log (H_D) - 5.1274 \\
\log (A_p) &- 0.53123 \log (T_s) \\
R^2 &= 0.15, S_{y \cdot x} = 1.3317, \bar{Y} = 3.86, \\
S_y^2 &= 1.5482
\end{aligned}$$

The equations for the a and c parameters account for little of the variation. The a, or location parameter, expresses the smallest d.b.h. that could be encountered and the c parameter relates to the shape of the distribution. Estimates of these parameters vary greatly depending on the occurrence of small trees on the sample plot. On plots having the same site, age, and essentially the same density the extent to which weaker trees have been eliminated by competition or fire can vary greatly, which contributes to the difficulty of predicting the location and shape parameters.

Despite the inherent variability, the system of equations adequately defines the diameter distribution trends. Observed and predicted basal areas for the 409 plot observations had a simple correlation of 0.93 and the deviations expressed as a percent of the observed value averaged only 0.6 percent under prediction. Of the 409 observations, 257 had predictions that were within 15 percent of the observed value. The predictions were made on the basis that T_s was known along with H_D and A_p .

Height-Diameter Relationships

This component predicts the total height of a tree (H_i), given its d.b.h. (D_i) and information on H_D , A_p , T_s , and DMAX. The latter variable is the midpoint of the largest diameter class containing at least one tree per acre as defined by the Weibull c.d.f. and T_s . The model employed was the one used by Smalley and Bailey (1974).

* Logarithms to the base 10 and e are denoted respectively by log and ln.

The data set for the following equation involved 3,787 individual height-diameter pairs.

$$\begin{aligned}
\log (H_D/H_i) &= -0.032876 + (1/D_i - \\
&1/DMAX)(1.9930 + \\
&2.5047A_p T_s (10^{-5}) + \\
&0.0043249T_s/A_p - 1.0360 \\
&\log (T_s/A_p) - 0.026038 \\
&\log (H_D/A_p)) \\
R^2 &= 0.70, S_{y \cdot x} = 0.0015, \bar{Y} = 0.0317, \\
S_y^2 &= 0.0051.
\end{aligned}$$

For certain combinations of the arguments the equation predicts H_i values under 4.5 feet. When this happens the height estimate is set at 5 feet by the computer routines used to implement this system of yield predictions.

When the equation was rearranged to predict H_i and applied to the trees from which the coefficients were derived, the average value of the deviation (predicted - observed) was -0.12 feet, and 93 percent of the variation about mean height was explained.

Crown Ratio-Diameter Relationships

The ratio of living crown length to total height of the tree expressed as a percentage (CR) is a variable of interest in both silvicultural and mensurational considerations. A component was added in this system to predict the CR, of a tree of a given D_i growing in a stand with specified values for H_D , A_p , T_s , and the three Weibull parameters of the diameter distribution.

The prediction of CR_i was built upon the following specifications:

$$(1) 0 < CR_i < 100$$

(2) When D_i is equal to the expected value of the diameters (\bar{D}), then CR_i must equal the average crown ratio of all trees (CR)

(3) A monotonic relationship exists such that an increase in the D_i value is associated with an increase in the predicted CR_i .

The related equations are:

$$CR_i = 100 \left[1 - \exp \left\{ \left(\frac{D_i}{\bar{D}} \right)^{\lambda} \ln \left(1 - \frac{CR}{100} \right) \right\} \right]$$

where $\bar{D} = 248.63 - 35.872 \log (H_D) - 43.565$

$$\log (A_p) = 33.424 \log (T_s)$$

and

$$A = -5.6919 + 2.2974 \log (H_D) + 0.16988$$

$$\log (A_p) + 0.77763 \log (T_s).$$

$\bar{D} = a + b\Gamma(c^{-1} + 1)$ with $\Gamma(z)$ defined as the gamma function $\int_0^\infty t^{z-1} e^{-t} dt$ and a, b, c are the Weibull parameters of the diameter distribution.

The equation for CR was based upon a regression fitting with 65 plot observations and had the following related statistics:

$$R^2 = 0.824, S_{y \cdot x}^2 = 6.16, \bar{Y} = 37.39, \text{ and}$$

$$S_y^2 = 33.41.$$

The coefficients for the equation to predict λ were obtained from a regression that used data from 1,259 trees. With early ages and poor sites the equation predicts negative λ values, so the computer routines are arranged to set λ at zero if it is predicted to be negative.

Volume-Defining Functions

In this system for estimating the volume in a tree an appropriate taper equation is defined and integrated between two points. The taper model was taken from Bennett and others (1978). In their work, separate taper equations for inside and outside bark predictions are defined by two sets of coefficients. Total height and the diameter outside bark at breast height are required for defining the taper equation of a given tree. However, we found in fitting their general model for trees of different crown ratio classes, a pattern of change occurred in some of the coefficients. Thus, given the CR of a tree, one should be able to obtain a refined taper equation for the tree.

To use the technique so that the taper function formulation was not severely complicated, we established three classes of CR values and developed separate sets of inside and outside bark taper function coefficients for each of these classes. The six sets of coefficients are given below and are based on data from 100 felled trees. These trees were deliberately selected to cover a wide range of total height, d.b.h., and crown ratio combinations. The sample included d.b.h.'s from 2 to 18 inches.

For the three classes of increasing crown ratio we had 188, 290, and 302 upper stem measurements for both inside and outside bark. These data were used to estimate coefficients (B_1 through B_4) relating to the portion of the stem above breast height.

The two coefficients in the taper model that relate to the prediction of inside bark diameter at breast height (G_1 and G_2) did not differ significantly by crown ratio classes and the overall estimates based on 100 trees were adopted. Coefficients concerning the taper function below breast height (η) for inside and outside bark situations were fitted separately for each crown ratio group. There were 62, 103, and 113 observations for the groups in order of increasing CR. For the outside bark situation the use of the G_1 and G_2 coefficients of 0.0 and 1.0 simply reproduces the d.b.h. outside bark. This was done to facilitate general utility of computer routines for both inside and outside bark situations.

The results of using the sets of taper curves were compared with 13 previously published volume equations for loblolly plantation trees. In each case the taper curves were used to predict volumes for the specifications and the range of tree sizes in the published work. Taper-based volumes tended to agree with equations given by Coile and Schumacher (1964) and by Bailey and Clutter (1970). The taper curve for the > 50 crown ratio group followed the volumes predicted by Schmitt and Bower (1970) more closely than the other two crown ratio groups, which was expected since these authors were dealing with a 7-year-old plantation of a 10x10 foot spacing. The taper-based tree volume predictions proved to be persistently higher

Coefficient	OUTSIDE BARK		
	CR < 36	36 ≤ CR ≤ 50	CR > 50
B1	21.9012	14.1180	9.6 108
B2	0.130381	1.164817	-0.556774
B3	0.059713	--- 0.015343	0.062742
B4	--- 15.31340	--- 12.35060	-4.23910
ETA	--- 0.10105	--- 0.11065	-0.12297
G1	0.0	0.0	0.0
G2	1.0	1.0	1.0

Coefficient	INSIDE BARK		
	CR < 36	36 ≤ CR ≤ 50	CR > 50
B1	16.5261	9.5731	6.2789
B2	--- 0.150774	1.153531	-0.567733
B3	0.089512	--- 0.012421	0.077350
B4	--- 9.85254	--- 7.88853	--- 1.69543
ETA	--- 0.10287	--- 0.10378	-0.10370
G1	--- 0.46206	0.46206	-0.46206
G2	0.93157	0.93157	0.93157

than predictions given by Hasness and Lenhart (1972) for old fields in the interior West Gulf. The best agreement of the taper-based volumes with a published set of equations was with Smalley and Bower (1968).

In the taper equations there was a trend toward predicting greater volume as the crown ratio decreased for a given d.b.h. and total height. It seems reasonable that lower crown ratios would be associated with less drastic taper and generally more volume.

Survival

The system of equations given thus far allows predictions of detailed stand information by diameter classes if one is given T_s , A., , and S.. Computer routines are available to implement these predictions and were used in the development of tables contained in Appendix 1. Certain users of this system may not be able to specify T_s , however, and would rather substitute an estimate of T_s based upon a specified T_p and other information including A, and perhaps S_I or H_D . We encourage users of this system to develop survival functions based on their experience, but we provide two survival functions in the computer routines that might be used.

Plots of this study were initially placed so as to avoid areas of poor survival and heavy damage by destructive agents. Thus, the survival function fitted to these data provides nearly ideal survival patterns. Our equation is,

$$\log(T_p/T_s) = A, \{0.013480 \log(T_p) + 0.00060783 H_D - 0.0084124 \sqrt{H_D}\}.$$

$$R^2 = 0.66, S_{y,x}^2 = 0.018058, \bar{Y} = 0.1792, S_y^2 = 0.020627.$$

This is the model used by Smalley and Bailey (1974). Our regression fitting was based on 409 plot observations.

Tables of yields based on this survival response utilizing S., A., and T_p are given in Appendix 2. The computer routines for our system also provide an option to use the survival function of Coile and Schumacher (1964):

$$\log(T_s) = \log(T_p) + [2.1346 - 1.1103$$

$$\log(T_p) - 0.13841 \frac{A_p}{100}.$$

The two functions give similar predictions of survival with the major difference being that our

equation includes S_I indirectly by including H . In the rest of this paper we will use only our survival function. In the companion paper (Dell and others 1979), which deals with slash pine yields, predictions were presented separately for the two different survival functions because of obviously large differences.

Applications

Yields of unthinned plantations can be forecast if one specifies the S_I , A., and a factor that expresses stand density. The density factor can be in terms of T_s or T . When the number of trees planted is specified, a prediction of survival is needed. This necessitates the presentation of two sets of tables.

The tables in Appendix 1 are based on S_I , A., and T_s . Site index changes from 40 through 70 by 10-foot intervals. Within each site index group, tables are presented for each of three ages. Finally, within each S_I and A, combination there are tables corresponding to six levels of T . For each S_I , tables for the following combinations are given.

A_p	T_s						
10	400	500	600	800	1,000	1,300	
20	300	400	500	700	900	1,100	
30	200	300	400	500	600	800	

Appendix 2 provides tables of yield where T_p is the density argument and the survival function is based on our plots. Site index is fixed at 40 through 70 in steps of 10 feet; T_p at 400, 600, 800, 1,000, 1,200, and 1,500 trees per acre; and A, at 10, 15, 20, 25, and 30 years. The order of presentation of the tables, in which A, changes most rapidly, facilitates viewing the plantation development through time for a given site and planting density.

After each table are estimates for such variables as the arithmetic mean d.b.h., the diameter corresponding to the tree of average basal area (quadratic mean diameter), and the corresponding site index for a base age 50. Also given in each table is an estimate by diameter class of the crown ratio or crown length as a percentage of total tree height. The coefficient, lambda, used in this prediction is listed.

Volume yield estimates, on an acre basis, were established as follows:

1. Estimate the number of trees per acre in each one-inch diameter class using predicted Weibull parameters and T_s .
2. Use midpoint diameter for each class to estimate total height and crown ratio.
3. Compute volume of the midpoint tree using appropriate specifications and taper curve as determined by variables above.
4. Multiply volume in the midpoint tree of the class by number of trees per acre in the class.
5. Sum across the diameter classes.

Projections of stand and stocking data are risky beyond the following limits: (1) ages 10 to 30, (2) sites 40 to 70, and (3) planting densities of 250 to 1,500 stems per acre. Relationships outside these ranges are not well defined due to the limited data base, as shown in tables 1, 2, and 3, (p. 4).

Trends

The following discussion of trends is limited to data predicted on the basis of the ideal survival. Figures 2 to 7 show trends for a planting density of 800 stems per acre, or about a 6- by 9-foot spacing, for sites 40 through 70 feet. Trends related to other circumstances can be obtained from the tables or by use of the computer routines.

Survival

On all sites, survival percentage decreases as age increases (fig. 2). At age 10, survival declines with decreasing site index. However, because of intensified competition on the better sites with advancing age, survival by 25 years is highest on the poorest sites (sites 40 and 50). Survival percentage on the poorest sites is similar by age 30.

Total and merchantable yields

Cubic-foot yields (o.b.) per acre for the entire stem of all trees (total yield) and trees 5 inches d.b.h. and larger to o.b. top of 4 inches (merchantable yield) increase directly with site index (figs. 3 and 4). The culmination of yield, due to the onset of mortality from suppression, does not occur by age 30.

Basal area

Basal area of all trees increases directly with site (fig. 5). Culmination occurs at age 26 on site 70 and age 30 on site 60. For sites 40 and 50, culmination does not occur by age 30.

Quadratic mean diameter

A lo-foot increase in site index results in an average gain of 0.6 inch in mean stand diameter at age 10, increasing to 0.7 inch by 30 years (fig.

6). After age 20, diameter increase tends to be linear. However, to evaluate the effects of site, age, and initial planting density, diameter distribution is more useful than mean diameter.

Mean crown ratio

The proportion of the bole with live crown declines with age and increasing site index (fig. 7). A mean crown ratio of 35 percent occurs 7 years earlier on site 70 than on site 50.

Validation and Extensions

Each of the equations presented here was evaluated by summarizing trends in deviations between predicted and observed values for the observations upon which they were based. Also, graphs were developed to insure that the predictions were reasonable. These checks were reassuring, but comprehensive validation must be based on independent data. Assistance in compiling such data has been offered by cooperating organizations, and results will be available in the future.

We did accomplish some evaluation of the total and merchantable outside bark volume predictions. Of the 409 observations, 214 involved outside bark, upper stem measurements on standing sample trees that allowed the determination of volume yields for each observation by height accumulation (Lohrey and Dell 1969) and did not utilize the taper curves. The 214 plots covered a considerable range in site index (36 · SO), planting densities (306 · 1390), and ages (10 · 45).

The volumes computed directly with the sample tree data are referred to as observed yields to contrast them with predicted yields from the system of equations. Predictions were made for the case that T_s is known and also for the **case** that T_p is known. For each situation, the correlation of observed and predicted values was computed as was the mean percent deviation, which is the average of the 100 (predicted - observed)/observed, values. The following summary indicates that the overall system, including the taper curve component, produces reasonably close estimates.

<u>Variable</u>	<u>r</u>	<u>Mean Percent Deviation</u>
Total volume, o.b. given T_s	+0.92	+2.1
Merchantable volume, o.b. given T_s	+0.90	-3.9
Total volume, o.b. given T_p	+0.91	-2.1
Merchantable volume, o.b. given T_p	+0.90	-5.6

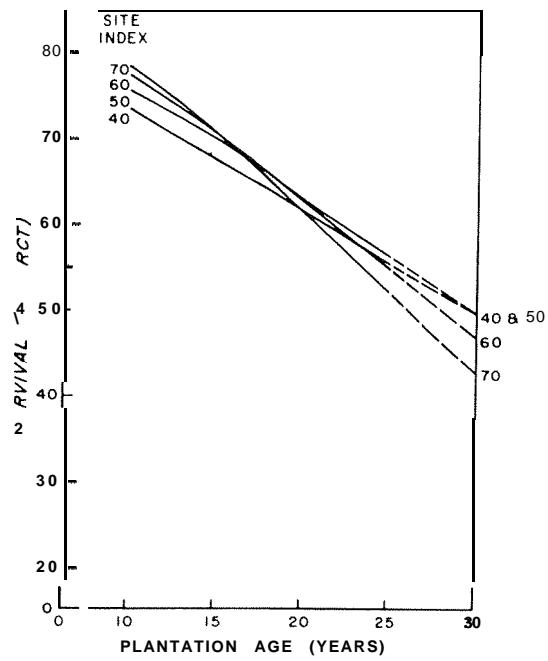


Figure 2. —Percent survival by site index classes from age 10 to 30 years.

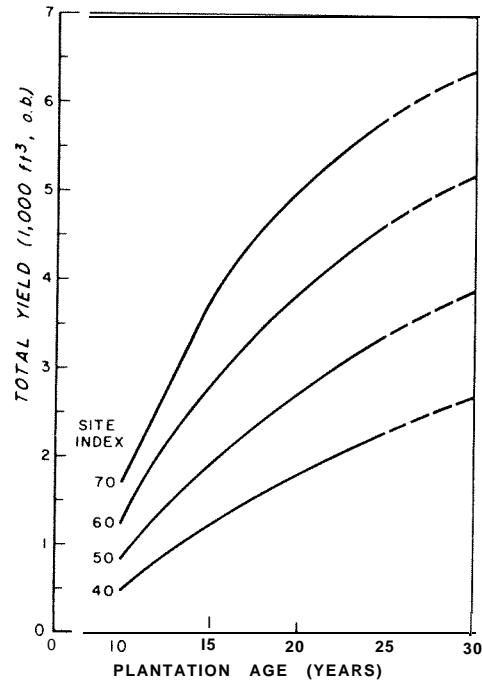


Figure 3. —Total yield per acre by site index classes of all trees from age 10 to 30 years.

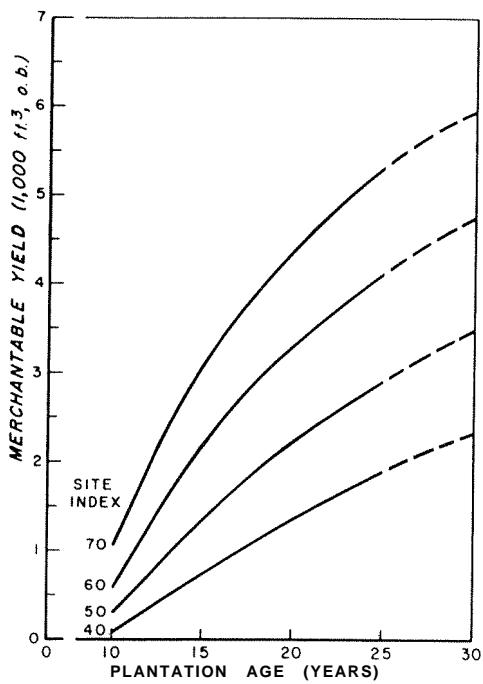


Figure 4. —Merchantable yield per acre by site index classes of trees over 4 inches d.b.h. to 4-inch top (o.b.) from age 10 to 30 years.

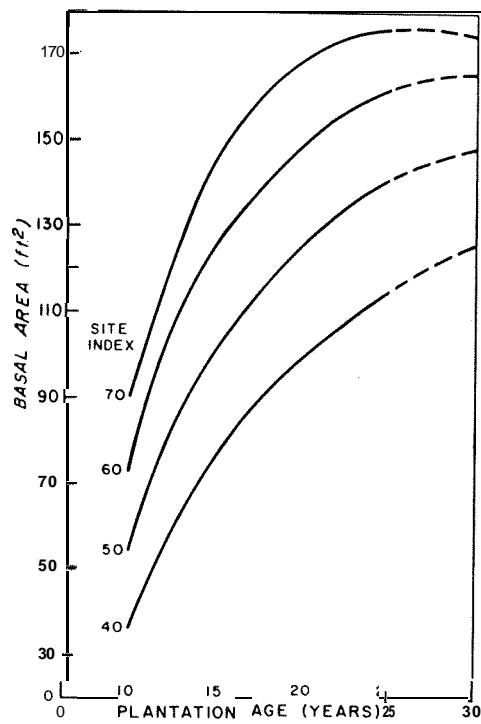


Figure 5. —Total basal area per acre by site index classes from age 10 to 30 years.

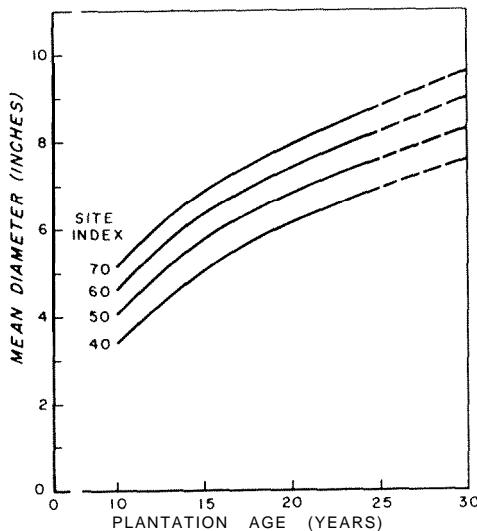


Figure 6-Average stand diameters by site index classes from age 10 to 30 years.

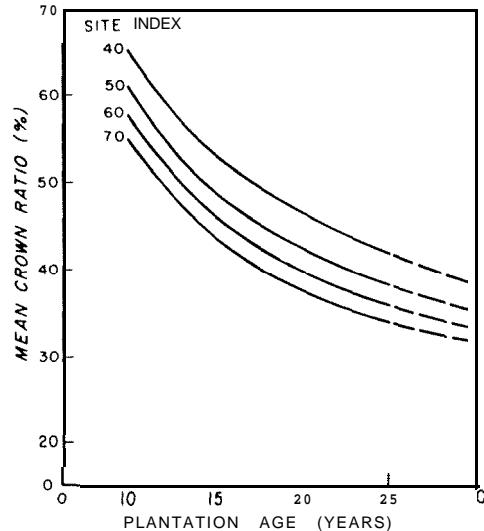


Figure 7-Mean crown ratio by site index classes from age 10 to 30 years.

The equations of this system could be used with modifications and extensions of the existing computer routines to facilitate future work to predict yields: (1) with other limits of merchantability and stump height than presented here, (2) in metric units, (3) on the basis of weight, and (4) with multiproduct processing. The system is to be the foundation on which components for predicting results with thinning will be developed from currently available data.

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APPENDIX I
Yield Tables Given Site Index, Age, and
Number of Surviving Stems

YIELDS GIVEN T_s -

A_p 10

S_I 40

ARITH. MEAN DBH= 3.9 QUADRAT IC MEAN DBH= 4.0 WEIBULL PARAMETERS A = .6, B = 3.71 C = 3.26
 MEAN CROWN RATIO= 70.7 LAMBDA = .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 56

ARITH. MEAN DBH= 3.5 . QUADRATIC MEAN DBH= 3.7 . WEIBULL PARAMETERS A= .5 . B= 3.38 C= 3.21
 MEAN CROWN RATIO- 67.5 . LAMBDA- .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

ARITH. MEAN DBH= 3.2 , QUADRATIC MEAN DBH= 3.4 , WEIBULL PARAMETERS A=.4 . B= 3.11 , C= 3.17
MEAN CROWN RATIO- 64.8 , LAMBDA = .000
CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

YIELDS GIVEN T_s —

A, 10

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP. 0.B. 1.B.		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.B. TOPS OF -- 2 INCHES		3 INCHES		4 INCHES	
O.B.	1.B.	O.B.	1.B.	O.B.	1.B.	O.B.	O.B.	1.B.	O.B.	1.B.	O.B.	1.B.	O.B.	1.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	-----	-----	-----	-----	-----	-----	Ft ³
10	21	1	57										
	2	263	5.3	51	18	66	1						
	3	329	16.1	61	19	204	34						
	4					21							
	5	116	11.8	61	23	152	121	26	19	24	17	19	13
	---	---	---	800	36.2	453	284	26	19	24	17	19	13

ARITH. MEAN DBH= 2.7 , QUADRATIC MEAN DBH= 2.9 , WEIBULL PARAMETERS A= .3 , B= 2.68 , C= 3.10
 MEAN CROWN RATIO= 60.6 , LAMBDA=.000
 CORRESPONDING SITE INDEX FOR EASE AGE 50= 58

10	21	1	.7	57	8	1							
	2	445	9.7	57	15	112	58						
	3	356	17.5	57	19	220	136						
	4					21							
	5	692	60.3	57	23	784	523	3	2	3	2	2	2
	---	---	---	1000	34.2	420	250	3	2	3	2	2	2

ARITH. MEAN DBH= 2.4 , QUADRATIC MEAN DBH= 2.5 , WEIBULL PARAMETERS A= .3 , B= 2.34 , C= 3.05
 MEAN CROWN RATIO= 57.4 , LAMBDA=.000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

10	21	1											
	2	335	1.8	54	7	13	3						
	3	713	15.6	51	15	180	92						
	4	242	11.9	54	20	155	96						
	10	10	.9	54	23	12	8						
	---	---	---	1300	30.	1	360	199	0	0	0	0	0

ARITH. WAN DBH= 1.9 , QUADRATIC MEAN DBH= 2.0 , WEIBULL PARAMETERS A= .2 , B= 1.95 , C= 2.99
 MEAN CROWN RATIO= 53.6 , LAMBDA=.000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

YIELDS GIVEN T_s —

A, 20

S_t 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME					
							ALL TREES GROUND TO TIP			5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF --		
0.B.	1.B.	0.B.	1.B.	0.B.	1.B.	0.B.	1.B.	0.B.	1.B.	0.B.	1.B.	0.B.
20	35	2	.0	53	15	1	0					
		3	.6	53	22	8	5					
		4	2.4	53	26	37	25					
		5	6.1	53	29	97	70	88	64	79	57	60
		6	5.7	53	32	188	140	172	129	163	122	143
		7	5.6	15.0	54	33	256	194	236	181	229	175
		8	4.7	16.4	54	35	293	227	272	213	267	208
		9	3.0	13.3	54	36			179	223	177	217
		10	1.5	8.2	54	37	242	154	122	190	144	115
		11	6	4.0	54	38	7.6	6.2	7.2	58	71	58
		12	2	1.6	54	38	31	2.5	2.9	24	29	23
			300	78.7		1383	1060	1239	963	1203	934	1125
												875
ARITH. MEAN DBH= 6.7.			QUADRATIC MEAN DBH= 6.9			WEIBULL PARAMETERS A= 1.3 , B= 5.95 , C= 3.01						
			MEAN CROWN RATIO= 53.6			LAMBDA= .016						
			CORRESPONDING SITE INDEX FOR BASE AGE 50= 58									
20	35	5										
		2	22	1.1	45	16	1	1				
		3	22	47	22	14	9					
		4	4.8	4.2	48	30	63	44				
		5	7.2	9.8	49	32	160	119	146	109	133	99
		6	84	16.5	49	286	219	265	205	253	195	90
		7	74	19.8	50	34	362	285	339	268	330	261
		8	52	50	35	343	274	322	259	317	255	306
		9	28	18.2124	51	36	226	178	211	167	208	165
		10	11	6.0	51	37	113	90	105	85	84	82
		11	3	2.0	52	38	38	31	36	29	184	29
		12	1	.a	52	38	15	12	14	12	14	12
			400	90.8		1621	1262	1438	1154	1395	1100	1279
												1006
ARITH. MEAN DBH= 6.2 .			QUADRATIC MEAN DBH= 6.4			WEIBULL PARAMETERS A= 1.2 , B= 5.52 , C= 2.95						
			MEAN CROWN RATIO= 49.4			LAMBDA= .113						
			CORRESPONDING SITE INDEX FOR BASE AGE 50= 58									
20	35	9	.2	40	16	2	1					
		3	37	1.8	42	23	24	15				
		4	7.4	6.5	44	28	99	70				
		5	102	13.9	45	31	232	173	212	159	192	144
		6	107	21.0	46	33	372	286	345	267	330	255
		7	52	23.0	47	36	421	331	394	311	384	303
		8	23	10.216.2	48	37	350	200	300	160	265	155
		9	8	38	89	73	84	83	108	101	83	69
		10	2	41.48	50	38	27	22	26	819	25	21
			500	100.4		1818	1414	1581	1247	1527	1206	1380
												1087
ARITH. MEAN DBH= 5.6 .			QUADRATIC MEAN DBH= 6.1			WEIBULL PARAMETERS A= 1.2 , B= 5.19 , C= 2.90						
			MEAN CROWN RATIO= 46.1			LAMBDA= .189						
			CORRESPONDING SITE INDEX FOR BASE AGE 50= 58									

YIELDS GIVEN T_S -

A, 20

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME										
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET.		FOR O.B. TOPS OF --		2 INCHES		3 INCHES		4 INCHES
O.B.	I.B.	O.0.	I.B.	O.0.	I.B.	0.0.	I.B.	0.0.	I.B.	0.0.	I.B.	0.0.	I.B.	0.0.	I.B.	0.0.	I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
20	35	1	2	.0	28	17	6	0	0					
		2		.5	33			7	4					
		3	77	3.8	36			51	33					
		4		39	24									
		5	111 115	225 119	41	28	181	111 121	343 257	311	232	210	152	
		7	145	28.5	43	33	504	388	468 362	447	346	390	299	
		8	411	24.9 15.0	45 44	36	465	311 316	272 436 219 345	425	336	397	314	
		9	14	6.2	47	3-1	123	99	116 94	269	216	259	208	
		10	3	1.6	48	38	33	27	32 26	136 26	182	25		
				700	114.8		2029	1556	1667 1303	1598	1249	1399	1089	

ARITH. MEAN DBH= 5 . 3 , QUADRATIC MEAN DBH= 5 . 5 , WEIBULL PARAMETERS A= 1.1 , B= 4.69 , C= 2.82
MEAN CROWN RATIO= 41.3 , LAMBDA= .302
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

20	35	1	2	.0	23	6	0	0						
		2	45	1.0	28	16	13	7						
		4	132	6.5	32	23	94	64						
		5	221	30.1 182	35	28	290	212						
					38	31	502	374	459 344	416	311	282	203	
		6	165	3 2 . 4	40	33	574	441	532 412	509 394	443 341			
		7			42	36	435	343	407 323	397 314	371 294			
		8	31	23.3 108	44	37	209	167	196 153	194 156	186 150			
		9	8	3 . 5	45		70	57	66 54	65 53	64 52			
		10	1	.5	46	38	11	9	11 9	10 9	10 8			
				900	126.3		2198	1674	1671 1300	1591	1237	1356	1048	

ARITH. MEAN DBH= 4.8 , QUADRATIC MEAN DBH= 5.1 , WEIBULL PARAMETERS A= 1.0 , B= 4.31 , C= 2.76
MEAN CROWN RATIO= 37.6 , LAMBDA= .387
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

20	35	1	2	.0	19	5	0	0						
		2	76	1.7	25	16	21	12						
		3	200	9.8	23		143	97						
		4			30									
		5	224	24.8 36.4 36 33	31	30	307 311	288 302	554 416	503	376	340	246	
		6	170	33.4	38	34	604	465	561 435	536 415	466 359			
		7			31		311 311	291 302	350 336 277 310	341 270	318 252			
		8	21	19.5 7.3 42	41	37	371	316	350 336 277 310	334 108	129 104			
		9	4	1.8	44	38	36	29	34 28	33 27	33 27	33 27		
			1100	134.7		2324	1754	1635 1266	1547 1196	1286 988				

ARITH. MEAN DBH= 4 . 5 , QUADRATIC MEAN DBH= 4 . 7 , WEIBULL PARAMETERS A= .9 , B= 4.01 , C= 2.71
MEAN CROWN RATIO= 34.7 , LAMBDA= .455
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

YIELDS GIVEN T_S -

A, 30

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							0.8.	1.8.	2 INCHES	3 INCHES	4 INCHES	0.8.	1.8.	
Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
30	44	3	3	1	44	21	2	8						
	4	9	9	1	44	21	2	8						
	6	23	4.5	45	31	302	27	33	25	30	23	20	15	
	7	28	7.5	44	35	146	115	107	160	74	58	64	50	
	8	29	10.1	12.4	44	41	208	167	106	193	156	186	150	
	9	28	10.1	12.4	44	41	208	167	106	193	156	186	150	
	10	23	12.5	49	43	202	232	269	222	250	204	244	199	
	11	23	12.5	49	45	101	101	104	102	266	220	262	217	
	12	17	1861.2	50	45	101	101	104	102	245	204	242	201	
	13	7	6.5	51	46	155	130	148	125	147	124	147	123	
	14	3	3.2	51	46	75	62	59	71	53	70	59		
	15	3	3.2	51	46	49	71	47	49	47	56	47		
	16	2	2.4	51	48	88	29	56	28	88	28	33	28	
				200	83.5		1820	1485	1712	1406	1692	1391	1640	1348
ARITH. MEAN DBH= 8.4		QUADRATIC MEAN DBH= 6.7 , MEAN CROWN RATIO = 48.3 , CORRESPONDING SITE INDEX FOR BASE AGE 50= 58						WEIBULL PARAMETERS A= 1.9 , B= 7.30 , C= 2.72						
30	44	2	1	.0	32	14	0							
	3	8	8	.0	35	23	6	0						
	4	19	19	.4	37	18								
	5	31	4.2	1.7	39	33	74	55	67	51	61	46	41	30
	6	41	8.1	40	36	152	118	141	110	135	105	117	90	
	7	48	12.8	42	38	255	202	240	191	234	186	218	173	
	8	39	15.7	17.2	44	44	101	101	31	151	306	248	294	238
	9	39	15.7	17.2	44	44	101	101	31	151	355	291	346	283
	10	29	15.8	45	43	356	293	338	280	336	276	331	273	
	11	19	12.5	46	45	294	244	280	234	273	232	276	230	
	12	16	8.6	46	46	207	173	198	166	197	155	195	164	
	13	2	5.5	47	46	133	144	150	107	126	107	126	106	
	14	2	2.1	48	47	52	26	29	42	50	42	50		
	15	1	1.2	48	48	31			25	29	25	29	29	111
				300	106.0		2292	1861	2140	1751	2108	1725	2023	1654
ARITH. MEAN DBH= 7.7 ,		QUADRATIC MEAN DBH= 8.1 , MEAN CROWN RATIO = 41.5 , CORRESPONDING SITE INDEX FOR BASE AGE 50= 58						WEIBULL PARAMETERS A= 1.7 , B= 6.69 , C= 2.62						
30	44	2	2	.0	26	15	1	0						
	3	2	2	.0	26	15	1	0						
	4	15	.7	30	23		35							
	5	50	2.9	32	29	121	92	112	85	101	77	65	48	
	6	62	12.2	36	36	230	178	214	167	204	159	177	137	
	7		17.1			347	275	327	261					
	8	64		38	39									
	9	59	25.8	20.6	39	41	454	371	432	416	337	350	417	342
	10	32	17.5	42	44	400	329	381	315	378	313	372	308	
	11	19	12.5	43	45	294	244	280	234	273	232	276	230	
	12	14	7.9	44	46	188	157	180	151	179	150	177	149	
	13	2	3.7	45	46	88	74	85	71	84	71	84	71	
	14		2.1	47	47	31	26	29	25	29	25	29	29	111
	15		2.11	47	47									
			420	126.0		2706	2186	2506	2042	2460	2005	2338	1907	
ARITH. MEAN DBH= 7.2 ,		QUADRATIC MEAN DBH= 7.6 , MEAN CROWN RATIO = 38.3 , CORRESPONDING SITE INDEX FOR BASE AGE 50= 58						WEIBULL PARAMETERS A= 1.7 , B= 6.27 , C= 2.56						

YIELDS GIVEN T_s -

A, 30

S_I 40

ARITH. MEAN DBH= 6.9 . QUADRATIC MEAN DBH= 7.2 . WEIBULL PARAMETERS A= 1.6 . B= 5.93 , , c = 2.51
 MEAN CROWN RATIO= 35.0 . LAMBDA= .438
 CORRESPONDING SITE INDEX FOR BASE AGE SO= 58

ARITH. MEAN DBH= 6.6 , QUADRATIC MEAN DBH= 6.9 , WEIBULL PARAMETERS A= 1.5 , B= 5.66 C= 2.46
 MEAN CROWN RATIO= 32.4 , LAMBDA*= 500
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

ARITH. MEAN O B H - 6 . 1 . QUADRATIC MEAN DBH = 6 . 4 . WEIBULL PARAMETERS A - 1 . 4 . B = 5 . 2 3 . C = 2 . 4 0
 MEAN CROWN RATIO = 28 . 2 . LAMBDA = .597
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

YIELDS GIVEN T_s —

A, 10

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							O.B.	I.B.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET.			

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³					
10	26	2	15	.0								
		3	56	.3	57	9	0	0				
		4		2.7	67	17	4	2				
		5	104	111	67	21	37	23				
		6		168.95	245	135	92	213	153	195	140	151
		7	73	11.3	67	27	213	156	193	143	184	136
		8	21	56.7	67	28	11	68	10	597	759	577
			400	50.0		724	514	494	362	463	340	393
												288

ARITH. MEAN DBH= 4.6 . QUADRATIC MEAN DBH= 4.8 . WEIBULL PARAMETERS A = .5 , B= 4.51 , C= 3.76
MEAN CROWN RATIO= 67.2 . LAMBDA= .000
CORRESPONDING SITE INDEX FOR BASE AGE 50* 73

10	26	1	3	.7	54	18	0	0				
		2	30	2	64	18	9	5				
		3										
		4	97	4.8	22	67	42					
		5	161	14.0	64	25	206	140	254	183	231	166
		6										
		7	5%	12.4	64	27	180	124	153	119	146	108
					28							
			500	62.6		770	540	440	322	409	299	338
												244

ARITH. MEAN DBH= 4.2 . QUADRATIC MEAN DBH= 4.4 . WEIBULL PARAMETERS A = .5 , B= 4.17 , C= 3.73
MEAN CROWN RATIO= 64.0 . LAMBDA= .000
CORRESPONDING SITE INDEX FOR BASE AGE 50* 73

10	26	1	5	.0	61	10	0	0				
		2	50	1.1	51	18	15	8				
		3	148	7.3	61	22	102	64				
		4		18.4	61	25		183				
		5	21	1435	61	2669	265	203	256	184	233	167
		6	39	7.7	61	27	14	83	103	77	98	73
		7	4	1.1	61	28	16	12	15	11	14	11
			600	55.0		801	553	374	272	345	251	280
												201

ARITH. MEAN DBH= 3.9 . QUADRATIC MEAN DBH= 4.1 . WEIBULL PARAMETERS A = .4 , B= 3.90 , C= 3.69
MEAN CROWN RATIO= 61.3 . LAMBDA= .000
CORRESPONDING SITE INDEX FOR BASE AGE 50* 73

YIELDS GIVEN T_S -

A, 10

S_I 50

GROWING SEASONS SINCE 1951.	AV. D+C HT..	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP				CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET. FOR 0.8. TOPS OF --			
							0.8.	1.8.	2 INCHES 0.8. 1.8.	3 INCHES 0.6. 1.6.	4 INCHES 0.6. 1.6.			

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³							
10	26	1	15	.1	57	10	1	0						
		2	116	2.5	57	18	34	18						
		3	276	13.5	57	23	196	124						
		4	276	24.1	57	25	352	240						
		5	105	14.3	57	27	215	154	193	139	176	126	135	95
		6	12	2.4	57	28	36	26	33	24	31	23	27	20
				800	56.9		834	562	226	163	207	149	162	115

ARITH. MEAN DBH= 3.5 QUADRATIC MEAN DBH= 3.6 WEIBULL PARAMETERS A= .3 B= 3.47 C= 3.62
MEAN CROWN RATIO= 57.2 LAMBDA= .000 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

10	26	1	35	51	9	2								
		2	221	53	18	64	0							
		3	413	54	22	284	178							
		4	276	55	25	352	240							
		5		55	27									
		6	532	56	28	1096	784	965	704	89	64	66	48	
			1000	57.0		817	534	103	74	5	4	5	3	

ARITH. MEAN DBH= 3.1 QUADRATIC MEAN DBH= 3.2 WEIBULL PARAMETERS A= .3 B= 3.14 C= 3.57
MEAN CROWN RATIO= 53.9 LAMBDA= .069 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

10	26	1	93	.5	45	8	4							
		2	452	9.9	49	19	114							
		3	565	27.7	51	23		59						
		4	180	15.7	52	26	402	236	253	161				
		5	10	1.4	54	26	21	15	19	we 14	17	12	13	9
			1300	55.2		777	489	19	14		17	12	13	9

ARITH. MEAN DBH= 2.7 QUADRATIC MEAN DBH= 2.8 WEIBULL PARAMETERS A= .2 B= 2.75 C= 3.51
MAN CROWN RATIO= 50.1 LAMBDA= .158 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN $T_s =$

A, 20

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		-CUBIC FOOT VOLUME-			5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	
							0.0.	I.B.	0.0.	1.8.	0.0.	I.B.	0.0.
Yrs	Ft	In	No.	Ft ²	Pct	Ft							
20	44	2	5	.0	40	18	0	0					
		3		.2	43	27	4	2					
		4	15	1.3	45	32	22	16					
		5	.30	4.1	47	36	76	57	69	53	61	46	40
		6	.47	9.2	48	39	185	144	172	135	164	129	138
			58										129
		7	58	202	155	50	41	327	260	308	247	300	240
		8				51	43	424	332	390	314	396	307
		9	45	19.9	52	44	426	336	401	321	291	236	372
		10	.26	14.2	53	45	311	250	294	236	291	236	306
		11	11	7.3	53	46	164	133	155	127	154	126	265
		12		2.4		47	55		52	43	52	51	230
		13		.9	2	48	22	48	21	17	21	47	21
							2016	1595	1870	1495	1829	1460	1722
				300	95.2								1371

ARITH. MEAN DBH= 7.4 QUADRATIC MEAN DBH= 7.6 WEIBULL PARAMETERS A= 1.3 , B= 6 . 7 5 C= 3 . 5 3
MEAN CROWN RATIO= 50.1 LAMBDA= .239
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

20	44	3	10	.0	20	0	0						
		4		.5	33	28	7	5					
		5	27.52	7.1	40.42	37	134	1012	123	93	108	82	71
		6	74	14.5	44	40	2 %	231	277	217	264	207	221
		7	84										171
		8	73	255	224	48	424	483	575	384	455	546	443
		9									537	437	413
		10	47	20.8	50	45	462	394	456	377	453	372	442
		11	23	125.46	51	46	47	290	2486	264	236	282	234
		12	7					106		82	82	90	80
			2	1.6	52	48	37	30	35	29	106	29	35
							2459	1971	2279	1843	2222	17%	2074
				400	111.9								1673

ARITH. MEAN DBH= 6 . 9 QUADRATIC MEAN DBH= 7.2 WEIBULL PARAMETERS A= 1.2 , B= 6.32 C= 3.47
MEAN CROWN RATIO= 45.9 LAMBDA= .336
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

20	44	3	17	.1	20	1							
		4	44	.8	29	29	14	10					
		5	78	1063.6	39	38	204	154	188	143	165	125	104
		6	104	20.4	42	40	416	325	309	305	371	291	310
		7											241
		8	1081	263	45	424	69	639	485	575	606	460	446
		9									596	465	521
		10	47	19.993	48	45	461	220	182	210	439	174	465
		11	4	2.6	50	47	64	53	61	51	61	51	573
		12		.8	51	48	15	15	18	15	18	14	465
							2713	2166	2466	2001	2413	1944	2213
				500	125.0								1779

ARITH. KAN DBH= 6.6 QUADRATIC MEAN DBH= 6.6 WEIBULL PARAMETERS A= 1.2 , B= 5.96 C= 3.42
MEAN CROWN RATIO= 42.7 LAMBDA= .411
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_s -

A, 20

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET, FOR 0.B. TOPS OF ..		2 INCHES		3 INCHES		4 INCHES
0.B.	1.8.	0.6.	1.8.	0.9.	1.8.	0.B.	1.8.	0.B.	1.8.	0.B.	1.8.	0.B.	1.8.	0.B.	1.8.

Yrs	Ft	In	No.	Ft 2	Pct	Ft	Ft ³								
20	44	2	8	.2	23	21	3	2							
	3	37		1.8	28	29	30	21							
	4	87		7.6	32	35	140	105							
	5	140		19.1	35	38	372	287	345	268	311	241	184	135	
	6	163		32.0	38	41	665	519	622	489	592	465	4 %	384	
	7	138		36.9	40	43	808	644	763	611	623	507	690	552	
	8	83		29.0	42	45	666	539	633	515			5 %	486	
	9	34		15.0	44	46	355	290	338	278	334	275	326	268	
	10	9		4.9	46	47	119	98	113	94	112	93	111	92	
	11	1		.7	48	48	16	14	16	13	16	13	15	13	
				700	147.1		3174	2519	2830	2268	2730	2189	2419	1930	

ARITH. MEAN DBH= 6 . 0 . QUADRATIC MEAN DBH= 6 . 2 . WEIBULL PARAMETERS A= 1.1 , B= 5.48 , C= 3.34
MEAN CROWN RATIO= 37 . 8 LAMBDA= .525
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

20	44	2	16	.3	20	21	5								
	3	57		3.3	25	35	39								
	4	444		42.6	32	39	566 231	474	525	409	473	367	279	205	
	5	214		42.0	35	42	889	703	836	664	801	636	673	531	
	6														
	7														
	8	152		40.5	41	44.5	578	468 123	856	687 46	032	669	774	620	
	9	72		25.1							540	440	518	422	
	10	224		22.97	45.43	48.47	2454	1914	22351	18343	220	181	215	177	
											51	42	50	42	
				900	164.4		3518	2783	3040	2432	2917	2334	2509	1997	

ARITH. MEAN DBH= 5 . 6 . QUADRATIC MEAN DBH= 5 . 6 . WEIBULL PARAMETERS A= 1.0 , B= 5.11 , C= 3.26
MEAN CRDN RATIO= 34.1 LAMBDA= .610
CDRRESPDNDING SITE INDEX FOR BASE ACE 50= 73

20	44	1		.0	11	6	0	0							
	2	28		.6	18	20	9	5							
	3	107													
	4														
	5	213 278		18.6	27.30	38	739	571	686	533	618	479	366	268	
	6														
	7	251		49.3	37	43	1024	808	963	763	922	731	776	611	
	8	150 57		40.19.91			878	700	629	665	806	647	750	600	
	9										434	353	426	348	
	10	132		51.1	42.44	47.46	27	22	132	108	130	107	127	104	
											26	21	25	21	
				1100	178.5		3695	2900	3070	2443	2929	2333	2454	1938	

ARITH. MEAN DBH= 5 . 2 . QUADRATIC MEAN DBH= 5 . 4 . WEIBULL PARAMETERS A= .9 , EI= 4.81 , C= 3.23
MEAN CRDN RATIO= 31.2 LAMBDA= .670
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_s -

A, 30

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES CROWN TO TIP			CUBIC FOOT VOLUME								
							O.B.	I.B.	B.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET.			2 INCHES			3 INCHES		
							O.B.	I.B.	O.R.	I.B.	O.B.	I.B.	O.R.	I.B.	O.B.	I.B.	O.B.	I.B.
30	55	3	1	.0	33	26	1	1										
		4	4	.3	36	34	6	4										
		5	5	1.2	38	39	24	18	22	17	19	15	12	9				
		6	16	3.1	40	44	69	54	65	51	61	48	51	40				
		7	23	6.1	42	47	144	116	137	110	133	107	123	99				
		9	31	9.8	43	51	24	196	229	187	226	184	216	177				
		10	29	15.6	46	45	53	42	32	29	31	406	337	333	275	324	266	
															402	336	396	330
		11	24	15.6	47	56	440	309	422	355	420	353	415	348				
		12	17	13.4	48		376	318	354	307	362	306	359	303				
		13	10				266	225	256	217	255	217	253	215				
		14	5	9.2	49	57					151	128	150	128				
		15	2	2.5	51	59	157	111	151	129	69	59	69	58				
		16	1	1.4	52	60	42	36	41	35	41	35	50	34				
		200		97.8			2615	2171	2499	2063	2472	203	2408	2009				

ARITH. MEAN DBH= 9.1 . QUADRATIC MEAN DBH= 9 . 4 . WEIBULL PARAMETERS A= 1.9 . B= 6.09 , C= 3.24
 MEAN CROWN RATIO= 44.9 , LAMBDA= .352
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	3	3	1	26	20	2	2										
		4	10	.														
		5	20	92.7	32	413	56	42	52	41	47	37	27	20				
		6	42	11.26	3334	4546	140	215III	254	132	205105	125	100	102	81			
		7										199	229	185				
		8					51											
		9	47	20.9	17.1	40	39	53	551	454	355	415528437340	408	334	391	320		
		10	40				54						432	508	420			
		11	28	21.6	16.5	42	43	56	521	456	483	501569421474	488	364	419	555	463	
		12	17	13.4	44	57		364	323	369	312	366	311	364	308			
		13				58										206	175	
		14	8	7.4	46	59	216	183	208	79	207	176	91	78				
		15	31	3.2	1.2	47	48	60	9537	812	92	36	31	31	36	30		
		300		124.6			3314	2741	3156	2622	3114	2589	3001	2493				

ARITH. KAN DBH= 6 . 4 , QUADRATIC MEAN DBH= 6 . 6 WEIBULL PARAMETERS A= 1.7 . B= 7.49 . C= 3.14
 MEAN CROWN RATIO= 39.0 , LAMBDA= .489
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	2	.0	18	0	0												
		3	.3	217	29	5	3											
		4	6	25	36	28	21											
		5	34	4.6	1.5	28	42	97	76	90	71	79	62	47	35			
		6	51	10.0	30	45	223	177	210	168	200	159	163	129				
		7	64	33	48													
		8	67	23.4	17.1	3551	407	594	485	326	560	387	465	313	304	349	262	
		9	46	26.9	537	54	716	590	665	567	676	551	456	536	440			
		10	29	25.	1	39	56	662	567	654	546	649	541	636	532			
		11		19.1	40		540	452	519	436	516	434	509	426				
		12	15	11.8	42	57	339	265	326	276	325	274	322	272				
		13	6	5.5	43	58	162	137	156	132	155	132	154	131				
		14	2	2.1	45	59	64	54	61	52	61	52	61	52				
		15		1.2	46	60	37	32	36	31	36	31	36	30				
		400		146.6		3894	3207	3692	3057	3634	3006	3474	2076					

ARITH. MEAN DBH= 8 . 0 . QUADRATIC MEAN DBH= 6 . 3 . WEIBULL PARAMETERS A= 1.6 . B= 7.06 . C= 3.08
 MEAN CROWN RATIO= 34.6 . LAMBDA= .586
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_S —

A, 30

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA'	CR	AV. HT.	CUBIC FOOT VOLUME									
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF --		2 INCHES		3 INCHES		4 INCHES	
							O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.		

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³							
30	55	2	1	.0	15	29	19	8	0	6				
		3	10	.5	19									
		4	27	2.4	22	37	45	34						
		5	50	6.8	25	42	143	111	133	104	116	91	70	51
		6	72	14.1	28	46	320	255	302	241	286	229	233	185
		7	88	23.5	30	49	568	459	541	438	526	426	488	395
		8	85	29.7	32	52	765	626	732	600	721	592	691	568
		9	71	31.4	35	54							790	655
		10	49		37	55	851	614	817	591	808	586	690	577
		11	28	267 185	38	57	529	443	509	428	506	426	499	420
		12	13	10.2	40	58	298	251	287	243	286	242	283	239
		13	5	4.6	42	59	137	116	132	112	132	112	131	111
		14	—	1 1	43	60	32	27	31	27	31	27	31	26
			500	169.5		4434		3645	4 1 9 2	3461	4114	3401	3906	3227

ARITH. MEAN DBH= 7.6 . QUADRATIC MEAN DBH= 7.9 . WEIBULL PARAMETERS A= 1.6 . B= 6 . 7 3 . C= 3 . 0 2
MEAN CROWN RATIO= 31.6 . LAMBDA= .661
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73 *

30	55	2	2	.7	13	19	12	0						
		3	15	3.4	16	21	65	49						
		4	39		20									
		5	69	9.4	23	42	197	153	183	143	160	125	96	71
		6	95	18.7	26	46	422	336	398	318	378	302	308	244
		7			49									
		8	108	28.9	35.3	28 52 6 9 7 9 0 9 5 6 3 7 4 4		664 870 538 713		56 851	533 703		822	674 485
		9	79	34.9	33	54	946	782	909	753	899	745	879	729
		10	50	27.3	35	55	766	639	737	616	732	612	720	602
		11	26	17.2	37	57	491	412	472	397	470	395	464	390
		12	11	8.6		58	252	213	243	205	242	204	240	203
		13	—	4	1.1	402	560	180	27	136	27	135	84	89
													131	26
						600	189.	1	4900	4020	4 6 1 3	3 8 0 0	4519	3725
													4262	3513

ARITH. KAN DBH= 7 . 3 . QUADRATIC MEAN DBH= 7 . 6 . WEIBULL PARAMETERS A= 1 . 5 , B= 6 . 4 6 , C= 2 . 9 8
MEAN CROWN RATIO= 28.9 . LAMBDA= .723
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	4	5	.1	10	18	2	1						
		5	29	1.4	14	29	24	17						
		6	59	6.0	17	37	115	87						
		7	113	15.4	20	42	322	251	300	235	263	205	157	116
		8	144	28.3	23	46	640	509	604	482	573	458	467	369
		9	151	40.4	25	49	975	707	928	752	902	731	837	678
		10	126	44.0	28	52	1134	928	1085	890	1069	877	1025	841
		11	86	38.0	30	54	1030	851	990	820	979	811	956	793
		12	47	25.6	32	56	731	610	704	583	699	585	687	575
		13	21	13.9	34	57	409	345	395	333	393	332	389	328
						36								
							12	5.5	163	137	157	133	156	132
								38	59	56	54	46	53	45
									60	47				
										5601	4570	5217	4280	5087
													4176	4726
														3876

ARITH. MEAN DBH= 6.8 . QUADRATIC MEAN DBH= 7.1 . WEIBULL PARAMETERS A= 1.4 , B= 6.03 , C= 2.9 2
MEAN CROWN RATIO= 24.7 . LAMBDA= .820
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_S -

A, 10

S_I 60

YIELDS GIVEN T_s -

A., 10

S_I 60

GROWING SEASONS SINCE EST.	A.V. D+C HT..	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							0.B.	1.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF ..	2 INCHES	3 INCHES	4 INCHES
							0.B.	1.B.	0.B.	1.B.	0.0.	I.E.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³					
10	31	1	2	5	1.0	46	II	0	0			
		2	52	52	1.1	50	21	14	7			
		3	176	176			27	141				
		4			8.6	52	30	91				
		5	216 213	25.0 29.3	5.4	56	32	418	500	288	361	
		6							454	331	408	296
		7	615	12.0 1.3	58	57	33	34	206	23	153	18
									189	22	142	17
										179	134	
										21	16	156
											19	15
											608	446
											481	349

ARITH. MEAN DBH= 4.1 QUADRATIC MEAN DBH= 4.2 WEIBULL PARAMETERS A= .3, B= 4.12, C= 4.05
MEAN CROWN RATIO= 54.3 LAMBDA= .175
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

10	31	1	2	11	2.2	40	II	28	1	0		
		3	103	103	14.6	4621	4926	207	15			
		4	290	290	32.9	52	52	39	134			
		5	377	377	25.1	54	31	418	369			
			5	184					301	379	276	
		6	26	26	5.1	55	33	88	65	81	60	
		7	1	1	.3	57	34	5	4	4	3	
										76	57	
										4	3	67
											307	50
											320	3
											235	

ARITH. MEAN DBH= 3.7 QUADRATIC MEAN DBH= 3.0 WEIBULL PARAMETERS A= .3, B= 3.79, C= 4.00
MEAN CROWN RATIO= 51.1 LAMBDA= .251
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

10	31	1	2	31	.2	35	9	2	1			
		3	517	517	25.4	42	20	60	31			
		4				46	30	360	232			
		5	424 97	424 97	37.0 132	50	32	31	463	205	149	
		6	4	4	.8	54	34	14	10	13	10	
										184	134	
										12	9	138
										10	8	90
											148	106

ARITH. MEAN DBH= 3.3 QUADRATIC MEAN DBH= 3.4 WEIBULL PARAMETERS A= .2, B= 3.40, C= 3.94
MEAN CROWN RATIO= 47.3 LAMBDA= .339
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_s -

A, 20

S_I 60

GROWING SEASONS SINCE EST.	AV. C-C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							0.0.	1.8.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET. FOR 0.6. TOPS OF -	2 INCHES 0.0. 1.8.	3 INCHES 0.B. 1.8.	4 INCHES 0.0. 1.8.

Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³			
20	53	4	2	.1	34	39	32					
		5	8	.7	38	41	13	2	101	51	39	34
		6	35	2.6	41	44	55	42	149	118	45	112
		7	51	16.9	43	47	158	125		305	246	203
					45	49	331	266				228
		8	61	21.3	47	52			525	431	517	424
		9	56	24.7	49	53	51	67	629	520	622	515
		10	39	21.3	50	54			554	463	550	459
		11	20	13.2	52	56	576	351	481	367	335	273
		12	7	5.5	53	57	150	124	144	119	143	119
		13	2	1.8	54	57	51	42	49	41	49	41
					300	111.7			2897	2368	2750	2260
									2705	2223		
										2585		2124

ARITH. MEAN DBH= 6.0 , QUADRATIC MAN DBH= 8.2 WEIBULL PARAMETERS A= 1.3 , B= 7.40 , C= 3.96
MEAN CROWN RATIO= 41.2 , LAMBDA= .421
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

20	53	2	1	.0	25	23	0	0				
		3	4	.2	33	30	26	3				
		2	35	4.8	37	44	102	78	94	72	82	63
		6	59	11.6	39	47	267	210	251	199	238	189
		7	79		50				494			
		8	83	21.20	42.44	52	521	749	611	499	715	400
									586		460	703
										388		445
		9	66	29.2	48	53	774	636	741	613	733	607
		10	38	20.7	50	55	572	476	549	459	545	455
		11	15	9.9	56		279	234	266	225	267	224
		12	4	3.1	51	57	86	71	82	68	82	68
		13	1	.9	53	57	26	21	24	20	24	20
					400	131.0			3406	2761	3218	2642
									3154	2590		
										2984		2446

ARITH. KAN DBH= 7.5 , QUADRATIC WAN DBH= 7.6 WEIBULL PARAMETERS A= 1.2 , B= 6.97 , C= 3.69
MEAN CROWN RATIO= 41.1 , LAMBDA= .518
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

20	53	2	1	.0	21	24	0	0				
		3	8	.2	26	30	41	45	34			
		4	25	2.2	34	45	162	127	151	119	132	103
		5	54	7.4	34	45						
		6	87	17.1	37	48	400	316	376	299	357	263
					39	51						
		7	108	28.9	42	53	724	583	667	556	667	540
		8	102	35.6	54	55	935	764	093	732	876	720
		9	70	30.9	44	55	834	666	799	662	790	655
		10	33	18.0	48	57	497	413	477	396	473	395
		11	10	6.6	50	57	189	158	182	153	181	152
		12	2	1.6			45	36	43	37	43	37
					500	148.6			3838	3126	3606	2956
									3521	2005		
										3265		2667

ARITH. MEAN DBH= 7.2 , QUADRATIC MEAN DBH= 7.4 , WEIBULL PARAMETERS A= 1.2 , B= 6.63 , C= 3.64
MEAN CROWN RATIO= 39.8 , LAMBDA= .593
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_s -

A, 20

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STWS PER ACRE	BASAL AREA	CR	AV HT.	CUBIC FOOT VOLUME											
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.0. TOPS OF		2 INCHES		3 INCHES		4 INCHES			
0.B.	I.B.	0.0.	I.B.	0.B.	I.B.	0.0.	0.B.	I.B.	0.0.	I.B.	0.B.	I.B.	0.0.	I.B.	0.0.	I.B.		

Yrs	Fl	In	No.	Ft ²	Pct	Ft	Ft ³											
20	53	2	.1															
		3	3	.9	17	25	1	16	12									
		4	18		22	35		96	74									
		5	153	14.2 4.6	24 11	41 42	316	249	295	233	259	203	146	108				
		6	150	29.5	33	49	699	559	661	530	626	503	509	404				
		8	161	43.0	36	54	1096	883	1041	844	1011	819	937	758				
		9	122	42.6 28.3	39	55	1136 774	639 921	1085	819 891	1067	876	1022	039				
		10	21	11.5	44	57	321	267	308	258	306	256	301	251				
		11	4	2.6	46		76	63	73	61	72	61	71	60				
				700	177.2		4531	3675	4205	3432	4074	3327	3700	3012				

ARITH. MEAN DBH= 6.6 QUADRATIC MEAN DBH= 6.8 WEIBULL PARAMETERS A= 1.1 , B= 6.13 C= 3.76
WEAN CROWN RATIO= 34.9 LAMBDA= .707
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

20	53	2	6	.1	14	19	24	3 :	2 :									
		3	34	1.7	19	24	34											
		4	93	8.1														
		5	167	22.8	111	41	166	127	474	374	414	326	235	173				
		6	216	42.4	31	49	1007	804	951	763	902	724	733	582				
		7			34	51	1326	1073	1264	1026	1228	998	1138	924				
		8	156	53.3	37	53	1137	928	1085	890	1067	876	1023	839				
		9	49	21.6	40	55	593	489	568	471	562	466	546	453				
		10	11	6.0	42	56	168	140	161	135	160	134	157	132				
		11		.7	45	57	15	16	18	15	18	15	18	15				
				900	199.9		4957	3999	4521	3674	4351	3539	3850	3118				

ARITH. MEAN DBH= 6.2 QUADRATIC MEAN DBH= 6.4 WEIBULL PARAMETERS A= 1.0 , B= 5.76 C= 3.70
MEAN CROWN RAT G= 3.3 LAMBDA= .792
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

20	53	2	11	.2	12	24	5 :	2										
		3	57	2.8	17	34												
		4			21													
		5	142	32.124	25	41	253	201	675	534	590	464	335	246				
		6	278	54.6	29	49	1296	1035	1224	982	1161	932	943	749				
		7			32	52	1495	1211	1426	1159	1385	1127	1283	1044				
		8	113	29.4	35	54	1049	859	1005	825	990	813	940	780				
		9	34	15.0	38	56	418	345	400	332	396	329	385	319				
		10	6	3.3	41	57	93	78	89	75	89	74	87	73				
				1100	219.3		5383	4329	4819	3907	4611	3739	3981	3211				

ARITH. MEAN DBH= 5.9 QUADRATIC MEAN DBH= 6.0 WEIBULL PARAMETERS A= .9 , B= 5.46 C= 3.66
WEAN CROWN RATIO= 20.4 LAMBDA= .860
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_S —

A_P 30

S_I 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET, FOR O.B. TOPS OF		2 INCHES		3 INCHES	
							0.6.	1.8.	0.8.	1.8.	0.8.	1.8.	0.0.	1.8.

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³							
30	66	4	2	.2	29	41	4	3	14	11	13	10	39	111
		5	5	.7	32	47	15	12	51	41	48	39	111	111
		6	11	2.2	34	52	54	43	545	458	541	454	531	446
		7	18	4.8	37	56	130	105	124	101	120	98	589	498
		8	25	0.7	39	59	250	206	240	198	236	195	226	186
		9	30	13.3	62	402	333	386	322	382	318	371	309	
		10	33	18.0	64	566	473	545	458	541	454	531	446	
		11	29	19.1	44	66	622	524	601	508	597	505	589	498
		12	22	17.3	46	67	572	485	553	470	551	468	545	464
		13	14	12.9	47	68	434	370	420	359	419	358	416	355
		14	7	7.5	48	70	259	221	251	215	250	215	249	213
		15	3	3.7	50	71	129	111	125	108	125	108	124	107
		16	1	1.4	51	72	50	42	48	41	48	41	48	41
							3407	2928	3358	2832	3330	2809	3256	2745

ARITH. MEAN DBH= 9.7 QUADRATIC MEAN DBH= 10.0 WEIBULL PARAMETERS A= 1.9 , B= 8.75 C= 3.66
MEAN CROWN RAT 10= 42.0 LAMBDA
CORRESPONDING SITE INDEX FOR BASE AGE 50%

30	66	3	5	.0	19	34	1	1	36	28	31	25	17	12
		4	4	.4	12	26	38	93	36	28	31	25	17	12
		5	12	1.6	29	54	115	210	109	88	104	84	84	67
		6	23	4.5	31	58	258	247	202	196	240	196	219	179
		7	35	9.4	31	58								
		8	34											
		9	51	25.5	36	61	462	300	444	367	437	361	418	346
											659	549	640	533
		10	47	25.6	38	65	817	684	708	662	781	656	767	645
		11	37	24.4	40	67	804	678	777	657	773	654	762	645
		12	24	18.8	42	68	632	536	611	520	609	518	603	513
		13	13	12.0	44	70	414	352	401	342	399	341	396	339
		14	5	5.3	45	71	187	160	182	156	181	155	180	155
		15	2	2.5	47	72	87	75	85	73	84	73	84	72
							4516	3781	4346	3650	4298	3612	4170	3506

ARITH. MEAN DBH= 9.1 QUADRATIC MEAN DBH= 9.3 WEIBULL PARAMETERS A= 1.7 , B= 8.14 , C= 3.57
MEAN CROWN RATIO= 36.1 LAMBDA = .670
CORRESPONDING SITE INDEX FOR BASE AGE 50= 68

30	66	3	3	.1	16	35	3	2						
		4	9	.8	19	44	17							
		5	3.0	22	55	71	43							
		6	38	2.5	58	194	131	183	53					
		7	55	14.7	28				148					
			67											
		8	69	23.4	31	63	687	566	661	546	651	538	622	515
		9	30.5	33	65	10494	875	1908	848	1001	98	142	76	731
		10	59	32.2	35								984	823
		11	41	27.1	37	67	891	751	861	729	856	724	844	714
		12	23	18.1	39	68	603	513	586	498	583	496	578	491
		13	10	9.2	41	71	318	271	308	263	307	293	305	261
		14	3	3.2	43	72	1412	1137	10942	9131	10942	36	108	93
		15	1	1.2	45							42	36	
							5333	4450	5121	4280	5056	4235	4074	4086

ARITH. MEAN DBH= 8.6 QUADRATIC MEAN DBH= 8.9 WEIBULL PARAMETERS A= 1.6 , B= 7.71 , C= 3.50
MEAN CROWN RATIO= 31.0 LAMBDA = .768
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_s -

A, 30

S_I 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET.					
							O.B.	1.8.	O.B.	1.8.	2 INCHES O.B.	3 INCHES O.B.	4 INCHES 0.0.	
Yrs	Ft	In	No.	Ft ²	Pct	Ft				Ft ³				
30	66	3	4	.2	13	35	4	3	28	22				
		4												
		5	15	4.5	10.1	94	108	86	101	81	88	47	35	
		6	56	11.0	23	55	285	230	270	219	256	22	207	165
		7	77	20.6	26	59	576	470	551	451	535	438	489	400
			91											
		8	85	31.8	28	62	946	780	910	752	896	741	857	710
		9		37.6	31	64	1175	978	1134	946	1121	936	1094	914
		10	66	36.0	33	66	1182	993	1144	963	1135	956	1116	940
		11	42	27.7	35	68	955	809	926	786	921	782	911	774
		12	21	16.5	37	69	560	475	542	461	540	459	535	455
			8		39									
		13	2	7.4	41	70	255	217	247	211	246	210	244	208
		14		2.1		72	76	65	74	63	73	63	73	63
				500	196.6		6150	5128	5899	4933	5811	4862	5573	4664

ARITH. MEAN DBH= 8.2 . QUADRATIC MEAN DBH= 8.5 . WEIBULL PARAMETERS A= 1.6 , B= 7.38 C= 3.45
 MEAN CROWN RATIO= 20.7 LAMBDA= .643
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

ARITH. KAN DBH= 7.9 . QUADRATIC MEAN DBH= 8.2 , WEIBULL PARAMETERS A=.15 , B= 7.11 , C= 3.41
 MEAN CROWN RATIO= 26.1 , LAMBDA*= .905
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

30	66	2	12	.0	6	9	34	13	9	0				
		4	42	.7										
		5	82	123.7	15	101		265	210	248	197	216	171	116
		6	124	24.3	18	55		631	508	599	484	566	458	458
		7	149	39.8	21	59	15	909	1067	873	1035	848	946	774
		8	148	51.7	23	6839		1269	1480	1 2 2 4	1457	1205	1394	1154
		9	117	51.7	26	1647		1346	1 5 6 0	1 3 0 2	1543	1288	1506	1258
		10	72	39.3	28	66	1289	1083	1248	1 0 5 0	1239	1043	1217	1025
		11	34	22.4	31	68	773	655	750	637	746	633	738	626
		12	12	9.4	33	69	336	287	327	280	325	278	323	276
		13	3	2.8	35	70	102	88	99	86	99	85	98	85
		14	1	1	1	37	72	38	32	37	32	37	31	36
		800	258.	1	7796		6455	7 4 1 5	6 1 6 5	7263	6040	6832	5680	

ARITH. MEAN DBH = 7.4 QUADRATIC MEAN DBH = 7.7 WEIGHTED PARAMETERS A = 1.4 B = 6.68 C = 3.34
 MEAN CROWN RATIO = 21.9 LAMBDA = 1.002
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 88

YIELDS GIVEN T_s -

A, 10

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME												
							ALL TREES GROUND TO TIP		S-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		FOR O.B. TOPS OF ..		2 INCHES		3 INCHES		4 INCHES		
0.9.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.	O.B.	1.8.		
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³												
10	37	2	3	1	58	23	1	1											
		3	16	.8	50	29	14	9											
		4	49	4.3	61	33	77	54											
		5	95	13.0	61	35	236	172	415	158	193	141	143	102					
		6	120	23.6	62	37	442	331	408	309	388	293	334	250					
		7	84		63										356	274			
		8	29	24.9	63	38	496	37153	397	183	144	180	141	172	135				
		9	4	1.8	64	40	35	28	33	26	32	26	31	25					
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
		400	75.0				1428	1075	1236	944	1178	898	1036	786					
ARITH. MEAN DBH= 5.8 , QUADRATIC MEAN DBH= 5.9 , MEAN CROWN RATIO= 62.0 , CORRESPONDING SITE INDEX FOR BASE AGE 50=102							WEIBULL PARAMETERS A = .5 , B = 5.71 , C = 4.57												
10	37	2	6	.1	53	24	2	1											
		3	30	1.5	55	24	26	17											
		4	83	7.2	57	30													
		5	143	19.5	58	35	356	130	258	324	238	290	212	215	154				
		6	145	28.5	59	37	534	400	493	373	468	354	403	302					
		7			60	38										322	248		
		8	76	203.5.6	61	39	386	108	2884	39101	27779	99	78	95	74				
		9	1	.4	62	40	9	7	B	7	8	6	8	6					
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		500	83.2				1551	1153	1285	974	1214	919	1043	784					
ARITH. MEAN DBH= 5 . 4 , QUADRATIC MEAN DBH= 5 . 5 , MEAN CROWN RATIO= 58.7 , CORRESPONDING SITE INDEX FOR BASE AGE 50=102							WEIBULL PARAMETERS A = .5 , B = 5.37 , C = 4.52												
10	37	1	2	10	.2	48	13	0	0										
		2	10		2.4		25	3	2										
		3																	
		4	49			52	30	43	28										
		5	189	258	11.0	54	36	481	141	438	322	392	207	290	207				
		6	158	31	.0	58	38	534	445	549	416	521		448	336				
		7				58	39	30655	2343	28552	241	27651	214	2548	19638				
		8	58	15.8	28	59	39												
		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		600	89.0				1685	1243	1324	999	1240	935	1041	777					
ARITH. MEAN DBH= 5 . 1 , QUADRATIC MEAN DBH= 5 . 2 , MEAN CROWN RATIO= 56.1 , CORRESPONDING SITE INDEX FOR BASE AGE 50=102							WEIBULL PARAMETERS A = .4 , B = 5.10 , C = 4.47												

YIELDS GIVEN T_s -

A, 10

S_I 70

ARITH. MEAN DBH= 4.6 . QUADRATIC MEAN DBH= 4.7 WEIBULL PARAMETERS A= .3 , B= 4.67 , c = 4.41
 MEAN CROWN RATIO- 51.9 LAMBDA= .329
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

ARITH. KAN DBH= 4.2 . QUADRATIC MEAN DBH= 4 . 3 . WEIBULL PARAMETERS A= .3 . B= 4.34 , C= 4.36
MEAN CROWN RATIO= .48 .7 , LAMBDA= .405
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

10	37	2	12	2 : :	27	10	1	0					
		114			35	23		25					
		3 6 6		10.0	41	29		177					
					46	33							
		5	59 26	44.35.9	50	36	68 72	59 49	608	462	536	405	352 255
		6											
		7	351	69.3	53								
					55	38	132.5	99.4	122.5	92.4	116.5	87.4	99.4 74.3
			1300	107.9			1862	1343	735	558	657	496	455 332

ARITH. KAN DBH= 3.8 . QUADRATIC MEAN DBH= 3.9 , WEIBULL PARAMETERS A= .2 , B= 3.921 . C= 4.30
MEAN CROWN RATIO=.44.9 LAMBDA=.493
CORRESPONDING SITE INDEX FOR BASE AGE 50-102

YIELDS GIVEN T_s -

A, 20

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME		J-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	
							0.8.	I.B.	0.B.	I.B.	0.0.	I.B.

Yrs	Fl	In	No.	Ft ²	Pct	Ft			Ft ³			
20	62	3	5	.0	28	38	1	9	32	25	17	13
		4			32	45			119	95	98	77
		6	12	1.6	35	51	39	3:	37	29		
		7	42	15.1	38	55	106		125	400	289	235
		8				60					267	217
		9	57	27.4	19.9	46 44 62 57 9	830 476	689	555 790 665	458	546	450
		10	62			48			790		790	522
		11	50	29.4	19.8	510 64 65 63 5	057 53 5	717	613 826 69s 518		658	639
		12	12	2.8	53	66	293	242	281	234	819	688
		13	3		67	88	74		05	71	805	676
											280	601
				300	125.0		3776	3131	3618	3 0 1 2	3570	2970
											3437	2861

ARITH. MEAN DBH= 8 . 6 . QUADRATIC MEAN DBH= 6 . 8 . WEIBULL PARAMETERS A= 1.3 . B= 7 . 9 6 . C= 1.1.32
MEAN CROWN RATIO= W.O. LAMBDA= .575
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	4	2	.1	24	39	2	13	62	49	33	24
		5	9	.8	28	46	17		206	166	166	133
		23	3.1	32	52	77	61	72	474	387	439	357
		45	8.8	35	55	229	185	217				
		69	18.4	38	58	513	416	489	399			
		8										
		9	84	29.3	40	60	853	701	818	675	804	664
		79	34.9	43	62	1058	878	1017	848	1006	839	769
		10	54	29.5	45	64	926	775	892	750	885	743
		11	26	17.2	47	65	550	463	531	449	528	446
		12	8	6.3	49	66	205	174	198	169	197	168
		13	1	.9	51	67	29	25	28	24	28	23
				400	149.3		4459	3692	4262	3547	4190	3486
											3990	3322

ARITH. MEAN DBH= 8 . 1 . QUADRATIC MEAN DBH= 8 . 3 . WEIBULL PARAMETERS A= 1 . 2 . B= 7 . 5 2 . C= 4 . 25
MEAN CROWN RATIO= .771.7 LAMBDA= .672
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	3	4	.2	21	40	4	3	80	53	204	
		6	37	5.0	35	56	23		255	254		
		7	98	13.4	35	59	351	98	335	2%	100	
									681	558	622	509
		8	190	30.7	38	61	1144	940	1097	906	1078	890
		9	52	39.8	41	62	1205	1000	1159	966	1146	955
		10	2 e.r.	43	64	891	746	859	722	652	716	837
		11	2.0	13.2	46	65	423	357	409	345	406	343
		12	4	3.1	48	66	103	87	84	84	84	98
		13	1	.9	50	67	31	26	90	25	90	25
				500	170.2		5037	4161	4803	3984	4707	3906
											4438	3681

ARITH. MEAN DBH= 7 . 7 . QUADRATIC MEAN DBH= 7 . 9 . WEIBULL PARAMETERS A= 1 . 2 . B= 7 . 18 . C= 4 . 20
MEAN CROWN RATIO= .37.4 . LAMBDA= .747
CORRESPONDING SITE INDEX FOR EASE AGC 50=102

YIELDS GIVEN T_S -

A, 20

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP			CUBIC FOOT VOLUME			5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							0.8.	1.B.	2 INCHES O.B. I.B.	3 INCHES 0.6. I.B.	4 INCHES O.B. I.B.				
Yrs	Ft	In	No	Ft ²	Pct	Ft						Ft ³			
20	62	2	10	.0	12	29	10	65	51	0					
		3	33	29.5	17	40									
		4		21											
		5	75	10.2	25	53	253	201	237	109	206	164	1	10	81
		6	125	24.5	29	57	654	529	621	503	507	476	1	474	380
		7	159	42.5	35	62	1189	970	1138	932	1105	905	1009	826	
		8	149	52.0	38	63	1550	1278	1490	1232	1467	1214	1403	1162	
		9	97	42.9			1316	1093	1267	1056	1253	1045	1217	1014	
		10	40	21.8	41	65	69	502	670	563	665	559	653	549	
		11	10	6.6	44	66	21	181	207	175	206	174	203	172	
		12	1	.8	46	67	26	22	25	21	25	21	25	21	
		---	---	---	---	---	---	---	---	---	---	---	---	---	
		700	204.7				5973	4913	5655	4671	5514	4558	5094	4205	
ARITH. KAN DBH= 7.1		QUADRATIC MEAN DBH= 7.3			WEIBULL PARAMETERS A = 1.1, B = 6.68, C = 4.12										
		MEAN CROWN RATIO = 32.5			LAMBDA = .861										
		CORRESPONDING SITE INDEX FOR BASE AGE 50*102													
20	62	2	3	1	10	28	1	1							
		3		15	40		19	14							
		4	19	.9	48										
		5	159	15.1	23	53	417	333	391	313	340	271	181	133	
		6	192	37.7	26	57	1005	811	954	773	902	732	728	583	
		7			30	60									
		8	111	57.93	33	62	1638	1458	1700	1295	1674	1385	1101	1326	
		9	07	36.4	36	64	1197	995	1152	961	1139	951	1108	923	
		10	26	14.2	39	66	458	384	442	371	438	368	430	362	
		11	4	2.6	42	67	07	73	84	71	84	71	62	70	
		---	---	---	---	---	---	---	---	---	---	---	5518	4536	
ARITH. MEAN DBH= 6.7		QUADRATIC MEAN DBH= 6.9			WEIBULL PARAMETERS A = 1.0, B = 6.71, C = 4.06										
		MEAN CROWN RATIO = 29.9			LAMBDA = .946										
		CORRESPONDING SITE INDEX FOR BASE AGE 50*102													
20	62	3	31	1.5	18	29	2	30	2 :						
		4	93	8.1											
		5	185	25.2	21	43	124	102	8141	504	467	507	404	270	199
		6	262	51.4	25	57	1372	1107	1301	1055	1231	998	993	796	
		7			60										
		8	111	703.607	32	62	1810	1492	1910	1564	1700	1417	1692	1387	
		9	70	30.9	35	64	967	805	934	779	923	771	901	753	
		10	15	8.2	38	66	264	221	255	214	253	212	249	209	
		11	2	1.3	41	67	43	37	42	36	42	35	41	35	
		---	---	---	---	---	---	---	---	---	---	---	5764	4736	
ARITH. MAN DBH= 6.4		QUADRATIC MEAN DBH= 6.5			WEIBULL PARAMETERS A = .9, B = 6.01, C = 4.02										
		MEAN CROWN RATIO = 26.0			LAMBDA = 1.013										
		CORRESPONDING SITE INDEX FOR BASE AGE 50*102													

YIELDS GIVEN T_s —

A, 30

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME												
							ALL TREES GROUND TO TIP			5-INCH CLASS AND GREATER FOR 0.6. TOPS OF --			STUMP HEIGHT .5 FEET.			2 INCHES			
0.9.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.
Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³												
30	77	4 5 6 7 8	1 3 7 13 21	.4 .4 1.4 3.5 7.3	23 26 29 32 35	47 55 61 66 69	2 8 31 67 198	10 39 31 107 239	8 37 30 102 230	8 35 28 84 191	8 35 28 99 227	7 27 22 82 188	4 27 22 90 217	3 22 74 70 180					
		9 10 11 12 13	26 33 32 27 19	12.4 18.0 21.1 21.2 17.5	37 39 41 43 45	72 75 77 78 80	426 650 766 803 681	356 547 666 604 563	412 629 763 780 662	345 531 648 666 568	407 624 75% 776 660	341 527 644 663 566	395 527 517 769 562						
		14 15 16	10 5 1	10.7 6.1 1.4	46 48 50	81 82 83	422 245 56	362 211 49	410 239 55	353 206 48	409 236 55	352 206 48	407 237 55	350 205 47					
				200	121.1		4466	3784	4329	3678	4296	3652	4216	3583					
ARITH. MEAN DBH= 10.3							WEIBULL PARAMETERS A= 1.9 . B= 9.30 . C= 4.02												
MEAN CROWN RATIO= 39.6							LAMBDA= .687												
CORRESPONDING SITE INDEX FOR BASE AGE 50=102																			

30	77	3 4 5 6 7	1 3 8 16 27	.0 .3 1.1 3.1 7.2	15 18 21 24 27	39 49 57 62 67	1 2 27 65 184	23 21 21 69 215	19 80 86 177 177	12 19 23 66 209	19 66 80 172 172	12 62 66 190 190	9 50 50 157 157					
		8 9 10 11 12	39 49 50 45 32	13.6 21.6 21.6 29.3 39	30 32 35 37 73	70 75 1001 1106 963	449 756 845 1073 820	372 634 972 911 935	433 734 622 911 799	360 615 964 906 931	426 725 616 1066 931	354 609 616 906 795	407 708 947 1052 922	339 594 602 894 787				
		13 14 15 16	18 8 3 1	16.6 6.6 3.7 1.4	41 43 45 47	80 81 83 83	646 337 149 56	552 290 128 49	627 329 145 55	536 263 125 48	625 327 145 55	536 282 125 40	620 325 144 55	532 280 124 47				
				300	159.3		5813	4913	5629	4768	5576	4726	5444	4615				
ARITH. MEAN DBH= 9.6							WEIBULL PARAMETERS A= 1.7 . B= 6.69 . C= 3.93											
MEAN CROWN RATIO= 33.7							LAMBDA= .824											
CORRESPONDING SITE INDEX FOR BASE AGE 50=102																		

30	n	4 5 6 7 8	1 5 14 28 36	.4 1.9 5.5 12.0 21	12 15 18 51 664	41 51 58 10 3781	1 8 51 10 311	50 47 125 153 299	38 125 41 89 899	33 118 290 562 562	22 111 3211 264							
		9 10 11 12 13	71 67 53 33 16	31.4 36.5 35.0 25.9 14.7	74 3276 34 81 82	1111 1357 80 1004	930 1146 1361 656	570 903 1159 976	675 1054 1129 634	893 1054 1318 971	645 1038 1266 962	537 872 1089 622						
		14 15	5 1	5.3 1.2	41 43	213 50	183 43	179 48	178 42	178 42	207 48	178 42	206 48	177 41				
				400	191.3	6988	5894	6763	5718	6690	5659	6499	5498					
ARITH. MEAN DBH= 9.1							WEIBULL PARAMETERS A= 1.6 . B= 8.26 . C= 3.86											
MEAN CROWN RATIO= 29.6							LAMBDA= .921											
CORRESPONDING SITE INDEX FOR BASE AGE 50=102																		

YIELDS GIVEN T_s -

A, 30

S_I 70

GROWING SEASONS SINCE EST.	A.V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP			CUBIC FOOT VOLUME		
							O.B.	I.B.	5-INCH CLASS AND GREATER, STUMP HEIGHT .5 REL.	2 INCHES O.B. 1.8.	3 INCHES 0.8. I.B.	4 INCHES 0.8. I.B.
Yrs	Ft	In	No.	Ft ²	Pct	Ft				Ft ³		
30	77	4	2	.1	10	41						
		5	22.9	.8	13	51	2	2				
		6	42	3.0	16	64	19	45				
		7	65	18.2	19	68	241	546	449 196	74	187	64
		8	84	29.3 40.6	27	71	1440	979	12812	432	177	52
		9	92				74					34
		10	80	43.6	29	76	1621	1368	1574	1170	1379	1157
		11	56	37.0	32	70	1438	1224	1400	1331	1562	1321
		12	31	24.3	34	80	992	852	967	1193	1392	1168
		13	12	11.1	36	81	435	372	423	363	422	362
		14	4	4.3	39	82	171	47	166	143	166	143
		15	1	1.2	41	83	50	43	48	42	48	41
				500	221	.0	8013	6749	7744 6539	7649	6463	7396 6248

ARITH. KAN DBH= 8.7 . QUADRATIC MEAN DBH= 9.0 . WEIBULL PARAMETERS A= 1.6 . B= 7.93 . C= 3.81
 MEAN CROWN RATIO= 26.3 LAMBDA= .997
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

30	n	3	3	1	9	52	41					
		4		.	12		27	2				
		5	32	4.1	17	59	117	21				
		6	59	11.6	20	65	343	2 %	326	266	308	252
		7	88	23.5		69	748	615	719	593	697	575
		8			23				1057	1023	1209	1007
		9	109.12	49.5 37.7	25	72.75	1773	485	1718	1442	1698	1426
		10	69	48.5	30	77	1824	1540	1771	1499	1758	1488
		11	57	37.6	32	79	161	1261	1441	1229	1434	1223
		12	27	21.2		81	874	751	852	733	849	730
		13			35	82		340	394	333	383	332
		14	102	9.22.1	37	83	393	74	84	72	84	72
							8942	7519	8634	7270	8515	7181
												8183
												6907

ARITH. KAN DBH= 8.4 . QUADRATIC MEAN DBH= 9.7 . WEIBULL PARAMETERS A= 1.5 . B= 7.66 . C= 3.77
 MEAN CROWN RATIO= 23.7 LAMBDA= 1.058
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

30	77	1	.0	4	0	0						
		2	.3	7	25	7	5					
		4	2.2	25	9	40	52	40				
		5	57	7.8	12	58	206	165	193	155	167	134
		6	99	19.4	15	64	568	462	540	441	510	417
		7	138	36.9	17	68	1159	952	1113	918	1079	891
		8	156	54.5	20	72	1839	1527	1775	1477	1747	1455
		9	140	61.9	22	75	2217	1857	2148	1803	2123	1783
		10	99	54.0	25	77	2029	1714	1970	1667	1956	1655
		11	52	34.3	27	79	1351	1151	1315	1122	1308	1116
		12	20	15.7	29	81	647	556	631	543	629	541
		13	5	4.6	32	82	197	170	192	166	191	166
		14	1	1.1	34	83	47	41	46	40	46	40
							10319	8640	9923	8332	9756	8198
												9280 7798

ARITH. MEAN DBH= 8.0 . QUADRATIC MEAN DBH= 9.2 . WEIBULL PARAMETERS A= 1.4 . B= 7.23 . C= 3.70
 MEAN CROWN RATIO= 19.5 . LAMBDA= 1.156
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

APPENDIX II
**Yield Tables Given Site Index, Age,
Number of Trees Planted, and Ideal Survival**

YIELDS GIVEN T_P WITH IDEAL SURVIVAL —

T_P 400

S₁ 40

ARITH. MEAN DBH= 4.2 , QUADRATIC MEAN DBH= 4.4 , WEIBULL PARAMETERS A=.6 , B= 4.03 , C= 3.31
 PERCENT SURVIVAL= 80.7 , MEAN CROWN RATIO= 73.8 , LAMBDA=.000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

ARITH. MEAN DBH= 5.8 , QUADRATIC MEAN DBH= 6 . 0 , WEIBULL PARAMETERS A= 1 . 0 , B= 5 . 3 4 , C= 3 . 2 7
 PERCENT SURVIVAL = 78.0 , MEAN CROWN RATIO= 6 ~~~~ , LAMBDA= .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

ARITH. MEAN DBH= PERCENT SURVIVAL= MEAN DBH= MEAN 69 CROWHEIBULL RATIOPARAMETERS 53.7 A- 1.3 B- 5.97 C- 3.02
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58 LAMBOA= .012

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 400

S_i 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME									
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET. FOR 0.8 TOPS OF		2 INCHES		3 INCHES		4 INCHES	
O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³									
25	40	4	1	.0	43	14	0	0								
		8	.4	.4	45	22	5	3								
		5	1.7	1.7	46	27	25	17								
			4.5	4.5	47	31	75	56	69	51	62	46	42	30		
		6	4.3	8.4	48	34	153	118	142	110	136	105	118	91		
		7	48	12.8	48	36	245	193	230	182	224	178	209	166		
		8	4.5	15.7	49	38	316	253	298	240	294	237	283	228		
		9	3.6	15.9	50	39	329	267	311	254	308	251	300	245		
		10	2.4	13.1	50	40	278	228	263	217	261	215	257	212		
		11	14	9.2		41	201	166	191	158	190	157	187	156		
		12	6	4.7	51	42	100	33	94	77	38	77	93	76		
		13	2	1.8	51	43	40	20	38	31	22	31	38	31		
		14	1	1.1	51	43	24		22	19	19	19	22	18		
				280	89.4		1791	1435	1658	1339	1629	1316	1549	1253		
ARITH. MEAN DBH= 7.3		QUADRATIC MEAN DBH= 7.7		WEIBULL PARAMETERS A= 1.6 , B= 6.46		c = 2.81										
PERCENT SURVIVAL= 70.0		MEAN CROWN RATIO= 48.5		LAMBDA= .129												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58																
30	44	2	1	35	14											
		6	.0	38	22	0	0									
		3				4										
		4	.3	3.4	33	20	2									
		5	15	3.4	41	59	44	54	41	49	37	33	24			
		6	3.4	6.7	42	36	126	97	117	91	112	87	97	75		
		7		38												
		8	10.7	14.0	40	111	112	168	200	176	159	195	155	182	144	
		9	35	15.5	45	42	339	276	322	264	318	261	311	254		
		10	28	15.3	46	43	344	283	327	270	324	268	319	264		
		11	19	12.5	47	44	289	239	275	229	273	228	270	225		
		13	11	8.6	47	45	203	170	194	162	193	162	191	160		
		14	6.3	5.5	3.2	48	49	46	47	133	111	127	107	126	106	
		15	1	1.2	49	48	31	26	29	25	29	25	29	25		
				264	98.2		2131	1731	1996	1635	1966	1613	1894	1552		
ARITH. MEAN DBH= 7.9		QUADRATIC MEAN DBH= 8.3		WEIBULL PARAMETERS A= 1.8 , B= 6.88		C= 2.65										
PERCENT SURVIVAL= 66.0		MEAN CROWN RATIO= 44.3		LAMBDA= .223												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58																

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 600

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							O.B.	I.B.	2 INCHES 0.B.	3 INCHES 1.B.	4 INCHES 0.0.
Yrs	Ft	In	No	Ft ²	Pct	Ft			Ft ³		
10	21	1 7 2 60 3 138 4 5 181	11.0	1.0 6.8 18 20 21	69 69 82 50	14 18 82 50	14 7 50	0			
6	19	3.7 .5	6.9	2.2 2.3	48 7 5	35 5	43 6 5	32	41 6 5	30 5	37 6 4
	459	36.7			456	306	172	125	161	116	134
											95
ARITH. MEAN DBH= 3.7 , QUADRATIC MEAN DBH= 3.8 , WEIBULL PARAMETERS A= .5 , B= 3.51 , C= 3.23 PERCENT SURVIVAL= 76.5 , MEAN CROWN RATIO= 60.7 , LAMBDA= .000 CORRESPONDING SITE INDEX FOR EASE AGE 50= 58											
15	30	2 11 3 41 4 81 5 107 6 98	.2 2.0 7.1 1't.6 19.2	56 56 56 56 56	16 22 25 27 29	3 28 103 157 300	2 18 70 157 222				
7	61	56	30								
8	25	16.3 8.7	56	31	142	191 101	102	129	176	223	164
9	6	2.7	56	32	44	35	41	32	41	32	39
10	1	.5	56	33	9	7	9	7	9	7	8
	431	71.4			1107	816	890	669	849	638	753
											565
ARITH. KAN DBH= 5.3 , QUADRATIC MEAN DBH= 5.5 , WEIBULL PARAMETERS A= .9 , B= 4.86 , C= 3.20 PERCENT SURVIVAL= 71.8 , MEAN CROWN RATIO= 56.2 , LAMBDA= .000 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58											
20	35	2 5 3 22 5 48 6 102	.1 .1 9.8 16.1	45 47 48 49	16 22 27 30	1 14 63 160	1 9 44 119				
7	74	50	34								
8	52	18.2	50	35	343	285	331 321	258 251	330 317	261	309 301
9	28	12.4	52	36	226	178	211	167	208	165	202
10	18	8.0	52	38	138	31	106	85	106	84	160
12	—	—	52	30	15	17	14	12	14	12	12
	392	90.4			1614	1252	431	1129	1389	1096	1274
											1002
ARITH. MEAN DBH= 6.0 , PERCENT SURVIVAL= 66.0 , MEAN DBH= 6.0 , MEAN CROWN RATIO= 49.4 METERS A= 1.3 , B= 5.53 , C= 2.95 LAMBDA= .112 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58											

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 600

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							O.B.	I.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		FOR O.B. TOPS OF .	
							O.B.	I.B.	2 INCHES	3 INCHES	4 INCHES	
							O.B.	I.B.	O.B.	I.E.	O.B.	I.B.
Yrs	Ft	In	No.	Ft ²	Pct	Ft					Ft ³	
25	40	3 4	3 14	.1 .7	36 39	15 23	1 9	0 6				
		5	32	2.8	4 14	32	118	30				
		6	63	12.4	4 4	35	229	177	108	81	98	74
		7	65						213	165	203	158
		8	56	17.4 19.5	6 15	38	310 310	315	318	253	310 315	295
		9	56	17.7	4 7	40	373	303	353	288	349	285
		10	40								341	289
		11	24 1 5	13.1 7.9	4 8	4 11	261 215	212 145	167	119	211 111	164
		12	2	3.9	4 9	4 2	87	73	83	69	83	69
		13	1.8	4.9	4 3		42	35	40	33	40	33
				367	104.2		2092	1672	1922	1549	1881	1518
											1772	1429

ARITH. MEAN DBH= 6.9 QUADRATIC MEAN DBH= 7.2 WEIBULL PARAMETERS A= 1.5 B= 6.06 C= 2.75
 PERCENT SURVIVAL= 61.2 MEAN CROWN RATIO= 44.6 LAMBDA= .220
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

30	44	3 4	10 2 5	3.0 33	14 23	0 7	0 5					
		5	39	5.2	37 33	90	67	83	62	75	56	50
		6	49	9.6	39	36	181	140	169	132	161	125
		7	53									
		8	51	18.6	43	41	288	228	211 260	216 201	204 231	287
		9	42				407	332	386	316	302	313
		10	30	16.4	4 4	43	368	303	350	289	347	342
		11	19	12.5	4 5	45	294	244	280	234	279	232
		13	11	4.6	45	46	207	173	198	166	197	165
		14	11	2.1 46	47	47	111	93	106	89 42	105	105
		15	1	1.2	48	48			44	50	50	42
		e-e-		336	113.4		2450	1986	2 2 8 2	1862	2243	1831
											2146	1753

ARITH. MEAN DBH= 7.5 QUADRATIC MEAN DBH= 7.9 WEIBULL PARAMETERS A= 1.7 B= 6.52 C= 2.60
 PERCENT SURVIVAL= 56.0 MEAN CROWN RATIO= 40.6 LAMBDA= .304
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_I 40

GROWING SEASONS A.V. SINCE EST.	D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			STUMP MIGHT .5 FEET.	
							O.B.	1.8.	5-INCH CLASS AND GREATER. FOR 0.B. TOPS OF -- 2 INCHES	3 INCHES O.B. 1.8.	4 INCHES 0.8. 1.8.		

Yrs	Ft	In	No	Ft ²	Pct	Ft			Ft ³			
10	21		1 19 2 118 3 219 4 5 17254 6 6	.1 2.6 10.8 65 15.0 7.4 1.2	65 65 65 65 22 65 23	8 15 18 20 16 11	1 30 130 80 188 16 298	0 15 80 85 61 14 71	78 56 10 13 10 13 66	62 12 10 12 10 12 52	43 9	
			588	37.0			461		99	91	74	52

ARITH. MEAN DBH = 3.2 , QUADRATIC MEAN DBH = 3.4 , WEIBULL PARAMETERS A = .4 , a = 3.14 , C = 3.18
 PERCENT SURVIVAL = 73.5 , MEAN CROWN RATIO = 6.5 , LAMBDA = .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

15	30	1 2 3 4 5 7 8 9	21 21 69 3.4 10.8 124 144 21.6 14.4 5.6 1.3	.5 52 53 53 53 53 53 54 54	51 52 53 53 53 31 32 33 33	17 17 26 26 163 111 274 21 18	0 6 48 111 274 199 248 21 21	0 3 30 111 236 236 300 84 178	178 178 1a9 134 263 196 81 20 16	1a9 134 263 196 81 -63 20 16		
			542	77.2			1217	885	912	683	a63	645
											749	557

ARITH. KAN DBH = 4.9 , QUADRATIC MEAN DBH = 5.1 , WEIBULL PARAMETERS A = .9 , B = 4.52 C = 3.14
 PERCENT SURVIVAL = 67.7 MEAN CROWN RATIO = 5.2 .9 , LAMBDA = .034
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

20	35	2 3 4 5 6 7 8 9 10 11	9 35 1.7 16.2 20.6 85 28.2 10.6 4.4 1.3	.2 40 42 45.44 47 34 48 48 49 50	40 23 23 2255 365 34 36 280 37 38	16 15 167 281 362 27 22	2 15 208 156 339 26 26 389 330 27	1 15 208 141 324 25 21 39325 308 21	141 127 250 282 300 25 21 355 280 21	141 127 250 282 300 25 21 355 280 21		
			491	99.5			1804	1405	1575	1243	1520	1202
											1376	1084

ARITH. MEAN DBH = 5.6 , QUADRATIC MEAN DBH = 6.1 , WEIBULL PARAMETERS A = 1.2 , B = 5.21 C = 2.90
 PERCENT SURVIVAL = 61.4 MEAN CROWN RATIO = 4.6 .4 , LAMBDA = 1.1 ;
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.6% TOPS OF --		2 INCHES		3 INCHES	
O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³							
25	40	2	22	.1	32	16	16	11	147	110	133	100	89	65
		3							277	215	264	205	230	177
		4		4.0	37	23								
		5		9.4	39	32	161	120						
		6	82	16.1	41	35	297	230						
		7	78											
		8	63	208 220	4244	1617	407 440	331 335	417 342	303 337	411 312	294 321	347 314	275 314
		9		18.6	45	40	391	318	371	303	367	300	356	292
		10	42											
		11	40	12.5 6.6	4746	41	271 216	223 221	239	216	256 231	215	137	114
		12					70	66					66	
		13	4	3.1	47	42	21	56	20	55	66	55	20	55
			1	.9	48	43		18		17	20	17		17
				444	115.3		2263	1819	2 0 7 7	1668	2027	1631	1895	1522
ARITH. KAN DBH= 6 PERCENT SURVIVAL- 55.5														
6 QUADRATIC MEAN DBH= 6.9 , MEAN CROWN RATIO= 41.6 , LAMBDA= .285														
WEIBULL PARAMETERS A= 1.4 , B= 5.77 , C= 2.71														
CORRESPONDING SITE INDEX FOR BASE AGE 50= 56														
30	44	2	2	.0	26	23	1	0						
		3	15	.7	30	29	46	41						
		4	32	2.8	32			33						
		5	50	6.8	34	33	121	92	112	85	101	77	65	48
		6	62	12.2	36	36	230	178	214	167	204	159	177	137
		7	65				353	280	332	265	323	256	301	240
		8	59	206 174	383	41	440	354	416	337	410	332	394	319
		10	46	20.3	41	42	446	363	423	347	418	343	406	334
		11	19	125 115	4342	44	400	329	381	315	376	313	372	308
						45	294	244	260	234	279	232	276	230
		12	.10	7.9	44	46	188	157	185	151	184	150	184	149
		13	4	3.7	45	46	52	74	50	71	50	71	50	71
		14	2	2.1	46	47		44		42		42		42
		15	1	1.2	47	46	31	26	29	25	29	25	29	25
				399	125.8		270 1	2181	2502	2039	2455	2002	2333	1903
ARITH. MEAN DBH= 7.2 PERCENT SURVIVAL- 49.9														
2 QUADRATIC MEAN DBH= 7.6 , MEAN CROWN RATIO= 36.3 , LAMBDA= .362														
WEIBULL PARAMETERS A= 1.7 , B= 6.27 , C= 2.56														
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58														

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 1000

S_I 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET, FOR 0.8 TOPS OF -- 2 INCHES 3 INCHES 4 INCHES 0.8. 1.6. 0.8. 1.8. 0.8. 1.6.					
							0.6.	1.8.						

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³					
10	21		1 37 2 196 4.3 3 292 14.3 4 5 159 28 13.9 3.6 62 6 1 2 62 23	62 62 62 62 22 62	8 15 18 20 173 50 2 3	2 50 174 107 44 2	0 25 116 35 2 2 41 2	29 2 2 2 2 32 2	3 23 1 34 24			
			713 36.7			452 285	46	33	43	31		

ARITH. MEAN DBH = 2.9 . QUADRATIC MEAN DBH = 3.1 . WEIBULL PARAMETERS A = .4 . B = 2.85 . C = 3.13
 PERCENT SURVIVAL = 71.3 . MEAN CROWN RATIO = 62.3 . LAMBDA = .000
 CORRESPONDING SITE INDEX FOR EASE AGE 50 = 58

15	30	1 2 3 4 5 7 8 9	2 33 103 49 174 168 44.7 113 22.2 44 10 11.8 3.5 1 4 ----- 648	.0 45 48 5 : : 50 51 51 30 52 53 82. 1	7 17 23 26 20 31 355 158 33 33	0 8 4 43 67 214 366 262 160 263 324 145 154 142 892 1266	8 0 4 43 331 239 299 216 226 162	299 216 270 200 159 122 51 39	226 162			

ARITH. KAN DBH = 4.6 . QUADRATIC MEAN DBH = 1.8 . WEIBULL PARAMETERS A = .8 . B = 4.26 . C = 3.10
 PERCENT SURVIVAL = 64.6 . MEAN CROWN RATIO = 50.3 . LAMBDA = .094
 CORRESPONDING SITE INDEX FOR EASE AGE 50 = 58

20	35	2 3 4 5 7 9 10 11	14 51 1296 18.4 124 24.3 91 24.3 50 17.5 20 6 8.8 3.3 1 7 107. 1	.3 2.5 42 45 46 47 48 49 49 38	37 23 31 431 34 445 337 175 6/14254 13 13	3 21 128 431 34 350 269 175 6/14254 11 11	2 195 260 332 347 350 317 165 63 135 52 13 13	235 176 382 312 406 329 312 164 63 135 52 11 11	159 115 333 301 390 300 301 160 61 51	115 300 242 130 61 51		

ARITH. BEAN DBH = 5 . 6 QUADRATIC MEAN DBH = 5 . 6 . WEIBULL PARAMETERS A = 1.1 . B = 4.97 . C = 2.66
 PERCENT SURVIVAL = 57.9 . MEAN CROWN RATIO = 44.9 . LAMBDA = .238
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1000

S_i 40

GROWING SEASONS	AV. S INCH.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF --		2 INCHES		3 INCHES	
O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³							
25	40	2	7	.2	29	16	2	1						
		3	30	1.5	33	23	21	15						
		4	61	5.3	35	29	87	64						
		5	87	11.9	37	32								
		6	97	19.0	39	35	202	282	185	254	362	228	271	2%
		7	90	24.1	41	37	469	371	441	350	429	341	401	316
		8	67	23.4	42	38	470	377	444	358	437	353	421	339
		9	42	18.6	43	40	391	318	371	303	367	300	358	292
		10	21	11.5	44	41	248	203	235	194	234	193	230	190
		11	8	5.3	46	42	117	91	111	92	111	92	109	91
									50				49	
		12	3	2.4	46	42	52	44	20	42	50	41	20	41
		13	1	.9	47	43	21	18	17	20	20	17		17
			514	123.9			2432	1931	2184	1749	2127	1705	1972	1578

ARITH. MEAN DBH= 6.3 QUADRATIC MAN DBH= 6.6 WEIBULL PARAMETERS A= 1.4 B= 5.55 C= 2.67
PERCENT SURVIVAL= 51.4 MEAN CROWN RATIO= 39.6 LAMBDA= .335
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

30	44	2	3	.1	24	27	15	1	0					
		3	41	1.0	30	24		15	10					
		4	61	8.3	33	34	150	58	43					
		5	74	14.5	35	37	280	219	139	107	126	96	81	59
		6									252	198	213	167
		7	76		36	39							352	280
		9	66	20.3	23.0	393	41	413	492	396	327	465	388	309
		10	50	33	22.1	18.0	41	43	44	494	413	403	340	469
										393	385	325	378	300
		11	18	11.9	42	45	279		231	266	221	264	220	261
		12	9	7.1	43	46	169	141	162	136	161	135	160	134
		13	3.7		44	47	90	76	86	73	86	72	85	72
		14	4	1.1	45	48	27	22	25	22	25	22	25	21
			456	134.6			288	1	2323	2656	2161	2604	2117	2455
														1996

ARITH. MEAN DBH= 7.0 QUADRATIC MEAN DBH= 7.4 WEIBULL PARAMETERS A= 1.6 B= 6.07 C= 2.53
PERCENT SURVIVAL= 45.6 MEAN CROWN RATIO= 36.4 LAMBDA= .407
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL --

T_p 1200

S_i 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME					
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET. FOR 0.6 TOPS OF - 2 INCHES		3 INCHES	
0.8.	I.B.	O.B.	1.9.	O.B.	I.B.	0.8.	I.E.					

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft					
10	21	1	208	.4	60	8	1					
		2	208	6.4	60	15	3	38				
		3	340	16.7	60	19	2..	130				
		4	124	10.8	60	21	140	94				
		5	12	1 .6	60	23	22	16	20	14	18	13
			635	35.9		450	279	20	14	18	13	14
												10

ARITH. MEAN DBH= 2.7 QUADRATIC MEAN DBH= 2.6 WEIBULL PARAMETERS A= .3, B= 2.61 C= 3.09
PERCENT SURVIVAL= 69.6 MEAN CROWN RATIO= 60.0 LAMBDA= .000
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

15	30	1	50	.0	41	8	0	0				
		2	50	1.1	44	17	12	6				
		3	141	6.9	46							
		4										
		5	194	18.6	49	23	92	59				
		6	107	A . 0	51	32	347	265	321	247	307	236
		7										
		8	346	21.91	51	33	152 36	1315	140 117 21	135 12	125	131 24
			749	65.3		1331	975	679	666	825	625	665 498

ARITH. MEAN DBH= 4.4 QUADRATIC MEAN DBH= 4.6 WEIBULL PARAMETERS A= .8, B= 4.04, C= 3 . 0 7
PERCENT SURVIVAL= 62.4 MEAN CROWN RATIO= 48.2, LAMBDA= .144
CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

20	35	1	20	.0	29	6	0	0				
		2	69	3 ..	23	6	3					
		3	122	10.6	40	28	163	115				
		4										
		5	152	20.7	41	31	345	257	316	237	296	214 329
		6	139	27.1	43	34	480	369	445	345	425	328 371 205
		7	93	24.9	45	36	455	359	426	336	415	399 306
		8	46	16.1	46		310	248	292	234	287	231 277 222
		9	16		47		140	114	132	108	131	107 128 104
		10										
		11										
			661	113.1		2000	1539	1666	1306	1599	1254	1412 1101

ARITH. KAN DBH= 5.3 QUADRATIC MEAN DBH= 5.6 WEIBULL PARAMETER: A= 1.1, B= 4.77, C= 2.93
PERCENT SURVIVAL= 55.1 MEAN CROWN RATIO= 42.1, LAMBDA= .283
CORRESPONDING SITE INDEX FOR BASE AGE 50= 59

YIELDS GIVEN T_p WITH IDEAL SURVIVAL

T_p 1200

S_i 40

GROWING SEASONS SINCE TEST.	AV. D+C HT.,	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							0.B.	1.B.	2 INCHES 0.8. 1.8.	3 IN CMS 0.B. 1.8.	4 INCHES 0.B. 1.B.

Yrs	Ft	In	No.	Ft 2	Pct	Ft			Ft 3			
25	40	2	39	1.0	2.7	16		2				
	4	4		1.0	31	24						
	5	105.76	14.366	36	29	186	228	172	206	155	138	100
	6	112	22.0	38	35	406	314	370	294	361	280	313
	7	99	26.5	39	37	516	408	485	385	472	375	441
	8	70	24.4	41	39	502	403	474	383	467	377	449
	9	41	18.1	42	40	382	311	362	296	358	293	349
	10	19	10.4	44	41	224	184	213	175	211	174	208
	11	7	4.6	45	42	102	85	97	81	97	80	96
	12	2	1.6	46	43	36	30	34	28	34	28	33
			580	130.6		1557	2022	2271	1814	2206	1762	2027
												1619

ARITH. MEAN DBH= 6.1 , QUADRATIC MEAN DBH= 6.4 , WEIBULL PARAMETERS A= 1.4 , B= 5.37 , C= 2.64
 PERCENT SURVIVAL= 48.3 , MEAN CROWN RATIO= 37.9 , LAMBDA= .375
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

30	44	4	5	22	15	18	1					
	5	50	100	26	31	34	52					
	5	73	10.044	31	33	37	171	137	166	110	150	115
	6	85	16.7	35							289	228
	7	84	37	413	453	412	400	401	419	335	390	312
	8	71	224.248						493	399	474	384
	10	52	23.0	36	43	514	419	488	400	482	396	471
	11	48	119.180	40	44	413	340	393	325	390	322	384
				41	45	279	231	266	221	264	220	261
	12	6.3	42	46	151	126	144	121	143	120	142	119
	13	8	2.8	44	48	88	82	65	55	64	54	64
	14	1	1.1					25	22	25	22	25
											2553	2073
			508	142.5		3028	2430	2780	2257	2719	2211	

ARITH. MEAN DBH= 6.8 , QUADRATIC MEAN DBH= 7.2 , WEIBULL PARAMETERS A= 1.6 , B= 5.91 , C= 2.50
 PERCENT SURVIVAL= 42.3 , MEAN CROWN RATIO= 34.8 , LAMBDA= .444
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_i 40

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							0.B.	I.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	2 INCHES O.B. I.B.	3 INCHES O.B. I.B.	4 INCHES O.B. I.B.

Yrs	Ft	In	No	Ft ²	Pct	Ft			Ft ³			
10	21	1	1	.7	57	8						
		2	456	9.9	57	15	115	59				
		3	355	17.4	57	19	220	136				
		4			57	21						
		5	652	57.3	57	23	734	493	3	2	3	2
		***	***	***							2	2
		1013	34.1				418	248	3	2	3	2
										2	2	2

ARITH. MEAN DBH= 2.4 QUADRATIC MEAN DBH= 2.5 . WEIBULL PARAMETERS A = .3 , B = 2.32 . C = 3.05
 PERCENT SURVIVAL= 67.5 MEAN CROWN RATIO= 57.2 , LAMBDA= .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

15	30	1				0	0					
		2	81	1.8	47	17	20	10				
		3	206	10.1	44		134					
		4				23						
		5	221	28.8	44	26 29	48 39	245 39	418	312	380	283
		6	91								260	187
		7	21	17.9	40	30	295	226	273	210	262	201
		8	2	56.7	50	33	90 13	77 10	92 12	72 9	12	70 9
											11	66 9
			095	88.9			1368	993	795	603	743	563
											584	437

ARITH. MEAN DBH= 4.1 QUADRATIC MEAN DBH= 4.3 . WEIBULL PARAMETERS A= .7 , B= 3.77 , C= 3.03
 PERCENT SURVIVAL= 59.7 MEAN CROWN RATIO= 45.6 , LAMBDA= .204
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 58

20	35	1	1			0	0					
		2	31	.7	31	18	9	5				
		3			35							
		4	97	4.8		24						
		5	186	14.2	40 37	28 31	42 2	153	386	290	350	262
		6				33					237	171
		7	155	22	246 304	41 43	40 59	414 362	431 500	341	40 42	370 333
		8				36					416	320
		9	39	11	1364.9	646	37	263	210 78	247	199 74	244
								96	91	90	196 73	393
		10	2	1.1	47	38	22	18	21	17	21	20
											17	
			777	119.6			2100	1604	1676	1308	1603	1251
											1389	1078

ARITH. KAN DBH= 5.1 QUADRATIC MEAN DBH= 5.3 . WEIBULL PARAMETERS A= 1.0 , B= 4.53 , C= 2.79
 PERCENT SURVIVAL= 51.8 MEAN CROWN RATIO= 39.7 , LAMBDA= .338
 CORRESPONDING SITE INDEX FOR EASE AGE 50= 58

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_i 40

GROWING SEASONS SINCE EST.	A V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 1 A. JRC OF -				
							0.B.	I.B.	0.6.	I.B.	0.B.	I.B.	0.B.
Yrs	Ft	In	No.	Ft ²	Pct	Ft							
25	40	3	54	.3	24	16							
		4		2.7	28	24							
		5	130 99	17.7 66	31	33	141	23 104	290	222	263	201	169 124
		6	135	26.5	36	35	490	370	456	354	435	336	376 291
		8	109	29. 1	36	37	569	449	534	424	520	413	405 305
		9	72 38	25.1 168	4140	4039	516 34	414 26	487 336	274 33	480 332	271 336	462 373
		11	16	8.7	43	41	189	155	179	148	178	147	175 144
		12	5 1	3.3 .8	45 44	42 43	73 18	60 15	70 17	58 14	69 17	57 14	68 57
													17 14
				673	139.7	2107	2131	2369	1887	2 2 9 4	1829	2078	1653
ARITH. MEAN DBH= PERCENT SURVIVAL = MEAN DBH= MEAN CROWN RATIO= M3 E.T F R S LAMBDA=. B=. 5.15 . C=. 2.61 . CORRESPONDING SITE INDEX FOR BASE AGE 50= 59 . 425													
30	44	2	7	.2	20	15	2	1					
		3	33			23							
		4	64	1.6	24	29	24	16					
		5	89	15.6	27 29	34	2691	167	203	156	183	141	118 86
		6	100	19.6	32	37	379	297	355	279	340	266	266 225
		7	96		34								
		8	77	26.9 27	35	41 39	574	414 43	481 56	441 39	479 57	45 36	446 357
		9					37						516 419
		10	54 32	23.9 17.5	39	43 44	400 533	45 329	4381	45 315	501 376	411 313	372 308
		11	17	11.2	40	45	263	216	251	209	249	206	247 205
		12	3	5.5	41	46	132	110	126	105	125	105	124 104
		13		2.0	43	47	68	57	65	55	64	54	64 54
		14	1	1. 1	44	49	27	22	25	22	25	22	25 21
							3232	2597	2 9 4 9	2 3 9 0	2881	2340	2689 2180
ARITH. MEAN DBH= 6 . 6 . QUADRATIC MEAN DBH= 7 . 0 . WEIBULL PARAMETERS A= 1.5 , B= 5.71 , C= 2.47 PERCENT SURVIVAL = 38.7 , MEAN CROWN RATIO= 32.9 , LAMBDA=. 489 CORRESPONDING SITE INDEX FOR BASE AGE 50= 56													

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 400

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							0.8.	I.B.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET.	TOPS OF -	2 INCHES	3 INCHES
							O.B.	I.B.	O.B.	I.B.	O.B.	1.8.

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³					
10	26	1 2 9	1 2 77 99 13.5	.0 .2 1.8 6.7 14.9	70 70 21 24 192	8 16 24 95 136	0 2 15 65 172	1.8	157 112	122	86	
		6 7 8	76.10 5 1.7	8.0 70 70	27 28 121 191 26 20	191 28 111 184 24 19	191 142 108 82 24 18	169 125 101 77 23 18				
			333	46.9		681 491	508	375	480	354	415	306

ARITH. KAN DBH= 4.9 . QUADRATIC MEAN DBH= 5.1 . WEIBULL PARAMETERS A= .6 . B= 4 . 78 . C= 3 . 83
 PERCENT SURVIVAL= 63.2 , MEAN CROWN RATIO= 69.9 , LAMBDA= .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

15	38	1 2 3 4 5 6 7 8 9 10 11	9 26 50 71 13.9 74 54 54 27 8 1 7	.0 54 55 30 56 57 57 58 58 59 41	54 55 30 33 251 368 358 281 232 40	19 26 26 4 86 187 378 278 342 07 14	0 0 7 26 108 231 174 214 214 82 13	0 0 108 79 174 218 171 171 81 65 10	97 218 71 164 190 142	73 190 142			
			321	79.	1	1474	1126	1327	1028	1282	994	1182	914

ARITH. MEAN DBH= 6.5 . QUADRATIC MEAN DBH= 6.7 WEIBULL PARAMETERS A= 1.0 . B= 6 . 10 . C= 3 . 78
 PERCENT SURVIVAL= 80 , MEAN CROWN RATIO= 57.0 , LAMBDA= .080
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

20	44	1 2 3 4 5 6 7 8 9 10 11 12 13	0 5 15 31 48 9.4 58 45.9 45 26 11 3 9	.0 .2 13 27 32 35 11% 51 43 44 45 53 54 48	18 27 32 59 189 147 49 51 43 426 311 164 47 55 22 18	0 0 16 72 138 168 314 314 401 321 294 154 43 52 21	40 131 42 141 30						
			303	95.8	20.	8	1605	1883	1503	1840	1468	1731	1378

ARITH. MEAN DBH= 7.4 . QUADRATIC MEAN DBH= 7.6 WEIBULL PARAMETERS A= 1.3 . B= 6 . 73 . C= 3.53
 PERCENT SURVIVAL= 75.7 MEAN CROWN RATIO= 49.9 , LAMBDA= .243
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 400

S_I 50

GROWING SEASONS SINCE EST.	I.V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME					
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.0. TOPS OF --		2 INCHES	
0.B.	I.E.	0.0.	f.B.	0.B.	f.B.	0.6.	0.B.	f.B.	0.B.	f.B.	0.6.	f.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	---	---	---	Ft ³	---	---
25	50	3	10	.1	34	27	2	2	2	324	381	310
		4	21	.9	37	34	15	11	45	34	28	82
		5		2.9	39	39	56	42	52	39	23	187
		6	34	6.7	41	42	141	110	132	104	126	99
		7	45	12.0	43	45	273	218	258	207	251	202
		8	51	17.6	45	47	424	344	403	329	397	324
		9	35	20.3	46	49	506	415	483	398	477	393
		10	22	19.1	47	50	486	403	465	367	462	384
		11		14.5	49	51	378	315	362	303	360	302
		12	11	0.6	50	52	230	193	220	186	219	185
		13	4	3.7	51	53	96	79	92	76	91	76
		14	1	1.1	51	54	29	24	27	23	27	23
		---	---	---	---	---	---	---	---	e.m.	90	23
		263	107.7				2636	2156	2494	2052	2455	2022
											2356	1940

ARITH. MEAN DBH= 8.1 , QUADRATIC MEAN DBH= 6.3 WEIBULL PARAMETERS A= 1.6 , B= 7.24 , C= 3.33
 PERCENT SURVIVAL= 70.7 , MEAN CROWN RATIO= 44.6 LAMBDA= .356
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	4	2	.1	30	35	2	1	1	288	336	276
		5	25	2.0	36	41	42	33	39	31	206	81
		6	35	c.9	38	45	109	86	103	81	206	63
		7		9.4	48	223	179	212	171	166	191	154
		8	43	15.0	40	50	376	306	356	293	352	288
		9	41	18.1	41	52	473	390	453	374	448	371
		10	36	19.6	43	54	534	444	512	427	508	424
		11	27	17.8	44	56	503	421	483	406	480	404
		12	17	13.4	46	57	384	323	369	312	368	308
		13	9	8.3	47	58	243	206	234	199	233	198
		14	4	43.12	49	51	127.37	108.1	123.36	105.31	122.36	104.31
		15		m.e..								
		262	114.7				3064	2537	2922	2430	2886	2401
											2793	2322

ARITH. MEAN DBH= 8.7 , QUADRATIC MEAN DBH= 9.0 WEIBULL PARAMETERS A= 1.8 , B= 7.69 , C= 3.17
 PERCENT SURVIVAL= 65.5 , MEAN CROWN RATIO= 40.9 LAMBDA= .443
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL

T_p 600

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.0. TOPS OF		2 INCHES 0.0. I.E.		3 INCHES 0.8. 1.8.		4 INCHES 0.8. 1.8.
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³								
10	26	1	.0	65	9	0	0	0	0	0	0	0			
		2	A	.5	65	17	7	4							
		3	8.5	4.2	65	21	57	35							
		4		12.8	65	24	182	123							
		5	147	18.3	65	26	275	196	247	178	225	161	174	123	
		6	63	12.4	65	27	183	135	166	124	158	118	140	103	
		7	12	3.2	65	28	48	37	44	34	43	33	40	31	
		8	1	.3	65	29	5	4	5	4	5	4	5	4	
				473	52.3		757	534	462	340	431	316	359	261	
ARITH. MEAN DBH= 4.3 , QUADRATIC MEAN DBH= 4.5 , WEIBULL PARAMETERS A=.5 , B=.4.26 , C=.3.75															
PERCENT SURVIVAL = 79.9 , MEAN CROWN RATIO = 64.8 , LAMBDA = .000															
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73															
15	38	2	4	1.0	45	20	14	1							
		3	20		48	31	74								
		4	52	12.34.5	51	34	219	131	199	146	179	130	133	95	
		5	111	21.8	52	36	400	299	369	278	348	262	303	226	
		6													
		8	94	25.1	53	38	478	365	444	343	431	333	398	306	
		9	52	18.2	54	39	352	274	329	258	322	253	308	241	
		10	18	8.0	55	40	158	125	148	118	146	116	142	113	
		10	3	1.6	56	41	33	27	31	25	31	25	30	24	
				444	92.5		1729	1312	1520	1168	1457	1119	1314	1005	
ARITH. K A N DBH= 6.0 , QUADRATIC MEAN DBH= 6.2 , WEIBULL PARAMETERS A=.9 , B=.5.61 , C=.3.71															
PERCENT SURVIVAL = 74.0 , MEAN CROWN RATIO = 52.3 , LAMBDA = .190															
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73															
20	44	2	2	.0	37	20	1	0							
		3				28									
		4	10	.5				5							
		5	28	2.474	44	337	139	130	127	97	112	85	73	53	
		6	77	15.1	44	40	308	240	288	226	274	215	230	178	
		7													
		8	85	27.258	44	4244	41156	472309	461563	450369	448	359	417	334	
		9	47	20.8	50	45	482	394	458	377	453	372	523	425	
		10	22	12.0	51	46	285	235	272	225	270	224	266	220	
		11	7	4.6	47	106	86	101	82	100	82	90	80		
		12	2	1.6	52	48	37	30	35	29	35	29	35	29	
				408	113.0		2479	1986	2295	1855	2237	1809	2084	1682	
ARITH. MEAN DBH= 6.9 , QUADRATIC MEAN DBH= 7.1 , WEIBULL PARAMETERS A= 1.2 , B= 6.29 , C= 3.46															
PERCENT SURVIVAL = 68.0 , MEAN CROWN RATIO = 45 , LAMBDA = .343															
CORRESPONDING SITE INDEX FOR BASE AGL 50= 73															

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 600

S_I 50

GROWING SEASONS SINCE EST.	A V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP			CUBIC FOOT VOLUME		
							O.B.	1.8.	5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET. FOR 0.6. TOPS OF --	2 INCHES O.B. I. B.	3 INCHES 0.8. 1.8.	4 INCHES O.B. I. B.
Yrs	Ft	In	No.	Ft ²	Pct	Ft				Ft ³		
25	50	2	1	.0	25	19	0	0				
		3	6	.3	29	28	5	3				
		4	18	1.6	33	35	29	22				
		5	35	4.8	35	39	95	73	88	68	79	62
		6	53	1C.4	38	43	224	176	210	165	200	157
		7	66	17.6	40	45	400	320	379	304	368	295
		8	66	23.0	42	47	549	445	522	425	513	419
		9	56	24.7	43	49	615	505	587	485	581	419
		10	38	20.7	45	50	528	437	505	420	501	417
		11	20	13.2	46	51	344	287	329	276	327	274
		12	8	6.3	48	52	167	140	160	135	159	134
		13	3	2.8	49	53	75	63	72	72	72	72
		14	1	1.1	50	54	29	25	28	61	28	61
												111
				371	126.5		3060	2496	2880	2363	2828	2323
											2687	2206
ARITH. MEAN DBH= 7.6 . QUADRATIC MAN DBH= 7.9 . WEIBULL PARAMETERS A= 1.5 . B= 6.83 . C= 3.27												
PERCENT SURVIVAL= 61.8 . MEAN CROWN RATIO= 40.9 . LAMBDA= .447												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												
30	55	3	4	.2	24	29	3	2				
		4	12	1.0	36	20	15					
		5	24	3.3	27.30	41	67	52	63	49	56	44
		6	38	7.5	33	45	166	132	157	125	149	119
		7	49	13.1	35	48	311	251	296	240	268	233
		8										
		9	55	20.0	192	37	2	10	503	398	481	458
			42	39	54				481		458	375
		10	29	22.9	40	56	623	518	597	498	592	494
		11		19.1	42		540	452	519	436	516	434
		12	16	12.6	43	57	361	304	348	294	346	293
		13				58						
		14	8	7.4	32	46	59	216.95	181	208.92	177	176
											79	78
		15	1	1.2	47	60	37	32	36	31	36	31
			333	133.7			3538	2923	3366	2793	3318	2755
											3189	2648
ARITH. MEAN DBH= 8.3 . QUADRATIC MAN DBH= 8.6 . WEIBULL PARAMETERS A= 1.7 . B= 7.33 . C= 3.12												
PERCENT SURVIVAL= 55.5 . MEAN CROWN RATIO= 37.4 . LAMBDA= .524												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME		
							0.B.	I.B.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET. FOR 0.B. TOPS OF -- 2 INCHES	O.B.	I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³			
10	26		1 5 2 52 3 152 4 5 142	1.1 61 7.5 61 18.8	61 18 105 22 25.5	18 15 6 283 187	0 6 66 254 183	231 166 179 126				
	6	38	7.5 3 .8	61 61	27 28	111 12	81 9	100 11	75 8	96 11	71 8	84 10
	7											62 8
			607	55.0		800	553	365	266	338	245	273
												1%

ARITH. MEAN DBH = 3.9 . QUADRATIC MEAN DBH = 4.1 WEIBULL PARAMETERS A = .4 , B = 3.88 , C = 3.69
PERCENT SURVIVAL = 15.9 MEAN CROWN RATIO = 61.2 LAMBDA = .000
CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

15	38	2 8 3 .2 4 35 5 85 6 144	1.7 43 28.3 18.1 50	40 21 28 48 34	21 2 25 123 242	2 17 88 533 413						
	7	100	26.7	52	39	508	389	473	365	459	354	424
	8											326
	9	40	15.0 44	53	40	2988	22769	2782	21466	2681	20965	255
	10	1	.5	54	41	11	9	10	8	10	8	10063
			559	102.4		1903	1455	1629	1263	1557	1206	1357
												1044

ARITH. MEAN DBH = 5.6 . QUADRATIC MEAN DBH = 5.8 . WEIBULL PARAMETERS A = .9 , B = 5.27 , C = 3.66
PERCENT SURVIVAL = 69.9 . MEAN CROWN RATIO = 49.0 LAMBDA = .267
CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

20	44	2 17 3 .8 4 11 5 10.8 6 105	2.9 33 36 38 40	20 29 66 156 328	14 10 48 156 308	1 10 48 190 393						
	7	107	26.6	43	42	615	490	580	464	564	452	526
	8	81	28.3	45	44	639	516	606	492	596	485	573
	9	45	19.9	47	45	461	377	439	361	434	357	465
	10	17	9.3	48	46	220	182	210	174	209	173	423
	11	4	2.6	50	47	64	53	61	51	61	51	348
	12	1	.4	51	48	19	15	18	15	18	14	60
			503	125.6		2726	2176	2497	2010	2423	1952	2222
												1786

ARITH. MEAN DBH = 6.5 . QUADRATIC MEAN DBH = 6.8 . WEIBULL PARAMETERS A = 1.2 , B = 5.97 , C = 3.41
PERCENT SURVIVAL = 66.9 . MEAN CROWN RATIO = 42.6 LAMBDA = .414
CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							O.B.	1.8.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	2 INCHES FOR O.B. TOPS OF	3 INCHES	4 INCHES
0.B.	1.8.	0.B.	1.8.	0.B.	1.8.				0.B.	1.8.	0.B.	1.8.

Yrs	Ft	In	No	Ft ²	Pct	Ft			Ft ³					
25	50	2	1	.0	22		0	0						
		3		.0	26	19	0	0						
		4		5	2.4	29	8	6						
		5	50	10	30									
		6	72	27	6.8	33	138	44	to 7	33	115	90	68	
		7	84	14.1	35	43	304	241		286	228	274	218	
		8	80	22	4	2.7	9	40	46	518	676	415	550	
							49	644	526	395	477	384	443	
											633	517	356	
		9	62	27.4	41	51	693	570		662	546	655	541	
		10	31	20.2	43	52	523	433		500	416	496	413	
		11	18	11.9	45		315	263		301	253	300	251	
		12										296	2400	
		13	2	4.7	1.8	48	46	31	51	107	43	122	103	
									49	103	41	49	41	
				449	140.2		33	97	27	68	3183	2608	3121	2558
												2931	2400	

ARITH. MEAN DBH= 7.3 QUADRATIC MEAN DBH= 7.6 WEIBULL PARAMETERS A = 1.4 B = 6.55 C = 3.22
 PERCENT SURVIVAL = 55.1 MEAN CROWN RATIO = 38.1 LAMBDA = .511
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

30	55	2	1	.0	17	18	0	0					
		3	6	.3	25	29	5						
		4	17	1.5	28	31	28	2					
		5	33	4.5			94	73	88	69	77	60	46
		6	50	9.8	31	45	219	174	206	164	196	156	160
		7	63										126
		8	66	230	168	33	48	400	323	381	308	370	300
						35	51	585	478	559	458	551	452
			9	60	26.5	37	53	704	580	674	558	667	552
		10	46	25.1	39	54	682	567	654	546	649	541	638
		11	29	19.1	40	56	540	452	519	436	516	434	509
		12	15	11.8	42	57	339	285	326	276	325	274	322
		13	7	6.5	44	58	189	160	182	155	181	154	180
		14	2	2.1	45	59	64	54	61	52	61	52	52
		15	1	1.2	46	60	37	32	36	31	36	31	36
			396	148.3			3886	3202	3686	3053	3629	3006	3471
													2074

ARITH. MEAN DBH= 8.0 QUADRATIC MEAN DBH= 8.3 WEIBULL PARAMETERS A = 1.7 B = 7.08 C = 3.08
 PERCENT SURVIVAL = 49.5 MEAN CROWN RATIO = 35.0 LAMBDA = .582
 CORRESPONDING SITE INDEX FOR EASE AGE 50 = 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1000

S_I 50

GROWING SEASONS SINCE EST.	D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND			S-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF --				
							O.B.	TIP I.B.	O.B.	2 INCHES I.B.	O.B.	3 INCHES I.B.	0.8.	4 INCHES I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³						
10	26	1		.1	58		2	: 14					
		2	11	2.0	58	10							
		3	91			18							
		4	233	11.4			161	101					
		5	4		58	22	334	227					
			111	229 164	58	25	240	170	215	154	196	140	151 107
		7	18	3.3	58	27	52	39	48	35	45	34	40 30
					58	28	4	3	4	3	4	3	3 3
				7 3 6	5 6.5		819	554	267	192	245	177	194 140

ARITH. MEAN DBH= 3.0 , QUADRATIC MEAN DBH= 3.7 WEIBULL PARAMETERS A= .4 , B= 3.60 , C= 3.64
 PERCENT SURVIVAL= 73.6 , MEAN CROWN RATIO= 58.4 LAMBDA= .000
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

15	38	1	.0	30		0	Ft ³						
		2	13	.3	36	21	0	2					
		3	55	2.7	40	28	50	26					
		4			32								
		5	122	77 24.1	10.6 43	46 35	437	177	329	126	401	304	362 273
		6	166	32.6	48	37	627	486	595	456	557	435	476 368
		7	97 32	25.9 11.2	49 51	40 39	527	221 417 172	495	207	395	163	462 381 358
		8	5	2.2	52	41	45	35	42	33	41	33	40 32
			668	109.7			2078	1593	1730	1351	1644	1284	1400 1085

ARITH. MEAN DBH= 5.3 , QUADRATIC MEAN DBH= 5.5 WEIBULL PARAMETERS A= .8 , B= 5.01 , C= 3.61
 PERCENT SURVIVAL= 66.8 , MEAN CROWN RATIO= 46.4 LAMBDA= .327
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

20	44	2	5	1::	26	21	2	1	Ft ³						
		3		31	29		14								
		4		25	5.4	34	35		75						
		5	105	62	14.3	37	38	25	1%	208	253	193	222	168	140
		6	131	25.7	40	41	534	417		500	393	476	374	397	309
		7													
		8	123 84	29.3 32.9	42 44	43 45	674	720	574 546	680 640 545 521	670 661	570 533	650 615	492	
		9	41	18.1	46	46	42.8	350	407	335	403	331	393	323	
		10	13	7.1	47	47	172	142	164	136	162	135	160	133	
		11	3	2.0	49	48	4.9	41	47	39	47	39	46	38	
			592	136.2			2974	2368	269	1	2162	2601	2090	2356	1888

ARITH. MEAN DBH= 6.3 , QUADRATIC MEAN DBH= 6.5 WEIBULL PARAMETERS A= 1.1 , B= 5.73 , C= 3.39
 PERCENT SURVIVAL= 59.2 , MEAN CROWN RATIO= 40.2 LAMBDA= .469
 CORRESPONDING SITE INDEX FOR EASE AGE 50= 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL --

T_p 1000

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND 10 TIP 0.B.		5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET. FOR 0.B. TOPS OF --		2 INCHES 0.B. 1.B.		3 INCHES 0.B. 1.B.	

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
25	50	2	2	.0	20	20	1	0						
		3	13	.6	24	29	11	a						
		4	36	3.1	2a	36	59	44						
		5	65	8.9	31	40	179	139	166	130	150	117	88	65
		6	90	17.7	33	44	387	307	365	290	349	278	283	223
		7	101	27.0	36	46	623	499	590	475	573	462	533	428
		8	91	31.a	38	48	769	625	732	598	720	588	691	564
		9	65	28.7	40	50	726	597	694	573	587	567	668	552
		10	36	19.6	42	51	509	422	487	405	483	402	475	395
		11	15	9.9	44	52	262	219	251	211	250	209	247	207
		12	5	3.9	45	53	106	a9	102	86	101	85	100	85
		13	1	.9	47	54	25	21	24	21	24	21	24	20
				520	152.2		3657	2970	3411	2789	3337	2729	3109	2539

ARITH. MEAN DBH= 3.1 , QUADRATIC MEAN DBH= 7.3 , WEIBULL PARAMETERS A= 1.4 , B= 6.33 , C= 3.19
 PERCENT SURVIVAL = 52.0 , MEAN CROWN RATIO= 36.0 , LAMBDA= .561
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	2	1	.4	16	19	0	0							
		3	8	1.9	26	29	7	28							
		5	22	5.7	29	32	130	93	111	a7	98	76	58	43	
		6	62	12.2	46	276	219	260	208	247	197	201	159		
		7	75											337	
		8	76	20.026.5	31.34	52	684	559.391	461	655	537.373	448	529.363	618	507
		9	67	29.6	36	54	798	658	764	633	756	627	735	609	
		10	48	26.2	37	55	723	601	694	579	688	575	676	565	
		11	29	19.1	39	57	548	459	527	443	524	441	517	435	
		12	14	11.0	41	58	321	270	309	261	308	260	305	258	
		13	6	5.5	59		16465	13955	158	62	13553	158	62	13453	133
		14	2	2.1	43.44	60							15762	53	
							4221	3477	4001	3309	3934	3255	3744	3099	

ARITH. MEAN DBH= 7.8 , QUADRATIC MEAN DBH= a.1 , WEIBULL PARAMETERS A= 1.6 , B= 6.88 , C= 3.05
 PERCENT SURVIVAL = 45.2 , MEAN CROWN RATIO= 33.0 , LAMBDA= .627
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1200

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEWS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET.		FOR 0.8. TOPS OF ..			
							0.8.	1.8.	2 INCHES	3 INCHES	4 INCHES	
Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³			
10	26	1	20	.1	55	10	1	0				
		2	144	3.1	56	18	42	22				
		3	320	15.7	56	23	228	143				
		4	203	21.7	56	25	361	246				
		5	88	12.0	56	27	180	129	162	117	147	
		6	7	1.4	56	28	21	15	19	14	18	
									165	106	113	
									119	129	12	
				862	57.0		833	555	181	131	92	
ARITH. MEAN DBH= 3.3 QUADRATIC MEAN DBH= 3.5 WEIBULL PARAMETERS A= .3 B= 3.36 C= 3.61												
PERCENT SURVIVAL= 71.8 MEAN CROWN RATIO= 56.1 LAMBDA= .019												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												
15	38	1	20	.0	27	9	0	0				
		2	20	.4	34	21	7	4				
		3	78	3.8	38	28	56	37				
		4	164	14.3	41	32	238	170				
		5	215	29.3	44	35	531	399	487	369	440	
		6	180	35.3	46	37	680	527	634	495	604	
		7	88	23.5	48	39	478	379	449	358	438	
		8	23	8.0	50	40	168	135	159	129	157	
		9	3	1.3	52	41	27	21	25	20	25	
									1661	1299	129	
				772	116.1		2185	1672	1754	1371	1391	
ARITH. MEAN DBH= 5.1 QUADRATIC MEAN DBH= 5.2 WEIBULL PARAMETERS A= .8 B= 9.79 C= 3.58												
PERCENT SURVIVAL= 64.3 MEAN CROWN RATIO= 11.3 LAMBDA= .376												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												
20	44	2	7	1.7	24	21	2	1				
		3	34	29	29	28	20					
		4	81	32	35	271	326	253	293	227	174	
		5	180	7.1	35	38	110	110	71	570	448	
		6	157	30.8	38	41	640	500	599	570	476	
		7	135	36.1	41	43	790	630	746	521	726	
		8	84	23.65	45	46	674	546	548	386	582	
		9	10	5.5	46	47	132	103	125	344	675	
		10	2	1.3	48	48	33	27	31	26	492	
							3145	2501	2816	2259	2719	
				677	145.4				2183	2419	1933	
ARITH. MEAN DBH= 6.0 QUADRATIC MEAN DBH= 6.3 WEIBULL PARAMETERS A= 1.1 B= 5.53 C= 3.35												
PERCENT SURVIVAL= 56.4 MEAN CROWN RATIO= 38.3 LAMBDA= .51												
CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1200

S_i 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		TOPS OF --		2 INCHES I.B.		3 INCHES I.B.
0.8.	I.E.	0.6.	I.B.	0.8.	I.B.	O.B.	I.B.	0.8.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³								
25	50	2	3	.1	18	20	1	1							
		3	18	.9	23	29	15	10							
		4	46	4.0	26	36	75	57							
		5	80	10.9	29	40	220	171	205	160	184	143	108	80	
		6	108	21.2	32	44	464	368	437	348	419	334	339	268	
		7	115	30.7	35	46	707	568	672	542	653	527	606	490	
		8	99	34.6	37	48	837	680	797	650	784	640	752	614	
		9	66	29.1	39	50	738	606	704	582	697	576	678	560	
		10	34	18.5	41	51	480	398	460	383	456	380	449	373	
		11	13	ft. 6	43	52	227	190	218	183	216	181	214	179	
		12	4	3.1	44	53	85	71	81	69	81	68	80	68	
		13	—	.9	46	54	25	21	24	21	24	21	24	20	
							3874	3141	3598	2938	3514	2870	3250	2652	

ARITH. MEAN DBH= 6.9 , QUADRATIC MEAN DBH= 7.1 , WEIBULL PARAMETERS A= 1.3 , B= 6.15 , C= 3.16
 PERCENT SURVIVAL= 48.9 , MEAN CROWN RATIO= 34.2 , LAMBDA= .602
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

30	55	3	10	.0	18	19	0	0								
		4	28	.5	25	41	8	6								
		5	51	7.0	25	41	145	111	135	106	119	2 %	2 :	52		
		6	73	14.3	28	46	324	258	306	244	290				187	
		7														
		8	88	23.5	30.0	32	49	52	561	459	633	541	741	438	607	
		9	49	31.4	35	54	851	703	817	677	808	670	790	655		
		10	28	26.7	36	55	738	614	708	591	702	586	690	577		
		11		18.5	38	57	529	443	509	428	506	426	499	420		
		12	13	10.2	40	59	298	251	287	243	286	242	283	239		
		13	5	4.6	42	—	137	116	132	112	132	112	131	111		
		14	1	1.1	43	60	32	27	3	27	31	27	31	26		
							4451	3658	4207	3473	4130	3413	3920	3236		

ARITH. MEAN DBH= 7.6 , WAORATIC MEAN DBH= 7.9 , WEIBULL PARAMETERS A= 1.6 , B= 6.72 , C= 3.02
 PERCENT SURVIVAL= 42.0 , MEAN CROWN RATIO= 31.4 , LAMBDA= .664
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL --

T_p 1500

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	AV. HT.	STEMS PER ACRE	BASAL AREA	CR	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			S-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET.	
						0.9.	1.9.	0.9.	1.8.	0.8.	1.8.	0.0.

Yrs	Ft	In	No	Ft ²	Pct	Ft							
10	26	1	41	.2	50	9	2	0					
		2	250	5.5	52	18	3	39					
		3	443	21.7	53	22	705	191					
		4	267	23.3	54	25	341	232					
		5	43	5.9	55	21	88	63	79	57	72	52	
		6	1	.2	55	28	3	2	3	2	3	2	
			1045	56.8		812	527	82	59	75	54	57	41

ARITH. MEAN DBH= 3.0 QUADRATIC MEAN DBH= 3.1 WEIBULL PARAMETERS A = .3, B = 3.07, C = 3.66
 PERCENT SURVIVAL = 59.7, MEAN CROWN RATIO = 53.3, LAMBDA = .084
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

15	38	1	2										
		2	33	.0	24	9	0	0					
		3	120	.7	31	21	11	7					
		4		5.9	36	28	87	57					
		5	270	230	20.1	36.8	333	238	612	463	553	417	
		6	186	36.5	45	39	703	545	655	511	625	487	
		7									343	273	
		8	68	18.4	42	49	40	3588	297	71	383	291	
		9	1	.4	51	41	9	7	67	7	82	66	
			923	123.7		2273	1723	1710	1329	1611	1250	1307	1003

ARITH. MEAN DBH= 4.8 QUADRATIC MEAN DBH= 4.9 WEIBULL PARAMETERS A = .7, B = 4.53, C = 3.54
 PERCENT SURVIVAL = 61.5, MEAN CROWN RATIO = 71.7, LAMBDA = .436
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

20	44	2	11	.2									
		4	50	2.5	28	29	4	29					
		5	113	23.5	34	38	478	353	424	330	382	296	
		6	189	37.1	37	41	771	602	721	567	666	539	
		7	147	39.3	39	43	861	686	812	651	790	634	
		8	79	21.6	41	45	634	513	602	490	593	482	
		9	28	12.4	44	46	292	239	278	229	275	226	
		10	6	3.3	46	47	79	65	76	63	75	62	
		11	1	.7	47	48	16	14	16	13	16	13	
			796	156.3		3333	2636	2929	2343	2817	2252	2460	1958

ARITH. MEAN DBH= 5.8 QUADRATIC MEAN DBH= 6.0 WEIBULL PARAMETERS A = 1.0, B = 5.29, C = 3.31
 PERCENT SURVIVAL = 53.1, MEAN CROWN RATIO = 35.9, LAMBDA = .569
 CORRESPONDING SITE INDEX FOR BASE AGE 50 = 73

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_I 50

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	CUBIC FOOT VOLUME					
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET, FOR 0.8 TOPS OF --		2 INCHES	
0.0.	1.8.	0.0.	1.B.	0.0.	1.B.	0.8.	1.B.	0.8.	1.B.	0.8.	1.B.	
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³					
25	50	2	5	.4	16	20	2	15				
		3		1.2	21	30		76				
		4	25									
		5	162	14.25.4	111	413	101	227	271	212	244	190
		6	134	2.6.3	30	44	576	457	543	432	519	414
		7	136	3.6.3	33	47	850	684	BOB	653	786	635
		8	107	3.7.4	35	49	918	749	877	717	864	707
		9	66	2.9.2	38	50	730	606	704	582	697	576
		10	30	16.4	40	52	431	357	413	344	409	341
		11	10	6.6	42	53	178	148	170	143	169	142
		12	2	1.6	44	54	43	36	41	35	41	35
				681	174.6		4150	3356	3827	3118	3729	3040
											341.1	2774
ARITH. MEAN DBH= 6.6 . QUADRATIC MEAN DBH= 6.9 . WEIBULL PARAMETERS A= 1.3 . B= 5.93 . C= 3.13 PERCENT SURVIVAL .45.1 , MEAN CROWN RATIO= 32.1 , LAMBDA= .652 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												
30	55	2	2	.0	13	19	1	0				
		3	14	.7	17	29	11	8				
		4	36	3.1	20	37	60	45				
		5	64	8.7	23	42	182	142	170	133	149	116
		6	89	17.5	26	46	396	315	373	298	354	283
		7				49	671	542	639	518	621	504
		8	10%	23.0	31	52	873	714	836	685	823	675
		9	77		33	54	922	762	886	734	877	726
		10	50	27.3 34.0	35	55	766	639	737	616	732	612
		11	27	17.0	37	57	510	428	491	413	488	410
		12	11	8.6	39	58	252	213	243	205	242	204
		13	4	3.7	41	59		93		90	105	89
		14	1	1.1	42	60	130	27	131	27	31	27
				576	184.2		4786	3928	4512	3719	4422	3646
											4175	3443
ARITH. K N DBH= 7.4 . QUADRATIC MEAN DBH= 7.7 . WEIBULL PARAMETERS A= 1.5 . B= 6.52 . C= 2.99 PERCENT SURVIVAL .39.4 , MEAN CROWN RATIO= 29.5 . LAMBDA= .709 CORRESPONDING SITE INDEX FOR BASE AGE 50= 73												

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 400

S_I 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME-----					
							O.B.	I.B.	5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET,		FOR O.B. TOPS OF --			
									O.B.	I.B.	2 INCHES	3 INCHES		
									0.B.	I.B.	0.B.	I.B.		
Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³					
10	31	2	4	.1	67	19	1	1						
		3		1.0	67	25	15	10						
		5	20		67	28	197	192	178	230	161	216		
		6	52	124.165	67						122	86		
											235	175		
		7			67									
		8	59	15.86.3	67	31	107	103	242.99	186	235.97	180		
		9	2	.9	67	34	15	12	14	11	14	11		
		---	---	---	---	---	---	---	---	---	---	---		
		340	59.5			979	726		815	615	775	583		
											683	512		
ARITH. MEAN DBH= 5.5 ,			QUADRATIC MEAN DBH= 5.7 ,			WEIBULL PARAMETERS A= .6 ,			B= 5.40		C= 4.25			
PERCENT SURVIVAL = 85.0 ,			MEAN CROWN RATIO = 66.7 ,			LAMBDA= .000								
CORRESPONDING SITE INDEX FOR EASE AGE 50= 88														
15	45	2	1	.0	43	23	0	0						
		3	4	.2	46	31	3	2						
		4	34	4.6	49	36	23	17	86	77				
		5	58	11.4	51	41	2894	169	219	208	158	56		
		6									177	40		
		7	76		54									
		8	70	203.24	55	44	541	424	401.59	402.315	401.30	305		
		9	45	19.8	57	47	449	357	425	340	418	335		
		10	18	2.6	58	48	227	183	215	175	213	173		
		11	4			49	63	51	60	49	59	48		
		---	---	---	---	---	---	---	---	---	---	---		
		325	94.6			2070	1615		1920	1512	1867	1469		
											1742	1369		
ARITH. KAN DBH= 7.1 ,			QUADRATIC MEAN DBH= 7.3 WEIBULLPARAMETERS A= 1.0 ,			B= 6.73 ,			C= 4.20					
PERCENT SURVIVAL = 81.3 ,			MEAN CROWN RATIO = 54.0 ,			LAMBDA= .266								
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88														
20	53	2	.1	32										
		3	8	.7	34	39	2	1						
		4	20	2.7	38	41	44	58						
		5							54	41	47	36		
		6	58	18.9	43	49	163	128	3203	2918	145	255		
		7									288	233		
		8	61		52									
		9	56	213.247	53	55	55.67	541	529	431	517	406		
		10	39	21.3	50	55	50.7	488	564	471	559	467		
		11	27	13.2	52	56	351	287	335	276	333	273		
		12	2	5.5	53	57	150	124	144	119	143	119		
		13		1.8	54	57	51	42	49	41	49	40		
		---	---	---	---	---	---	---	---	---	---	---		
		303	112.3			2920	2366	2773	2270	2726	2241	2604	2140	
ARITH. MAN DBH= 8.0 ,			QUADRATIC MEAN DBH= 8.2 WEIBULLPARAMETERS A= 1.3 ,			B= 7.38 ,			C= 3.96					
PERCENT SURVIVAL = 75.7 ,			MEAN CROWN RATIO = 47.1 ,			LAMBDA= .424								
CORRESPONDING SITE INDEX FOR BASE AGE 50= 88														

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 400

S_I 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER, STUMP MIGHT .5 FEET. FOR 0.6. TOPS OF --		2 INCHES O.B. I.B.		3 INCHES O.B. I.B.	
0.8.	1.8.													

Yrs	Ft	In	No	Ft ²	Pct	Ft								Ft ³
25	60	3	1	.0	27	33	1	1						
		4	5	.4	30	41	9							
		5	13	1.8	34	46	40	3:						
		6	24				92		37	29	32	25	18	13
		7	36	9.8	38	54	288	204	108	87	103	82	85	67
											233	189	216	175
		8	47	16.4	41	56	451	369	431	355	424	349	406	334
		9	50	22.1	43	56	633	523	607	505	601	499	584	485
		10	44	24.0	45	60	714	596	687	575	681	571	669	561
		11	31	20.5	46	62	630	529	512	504	509	596	503	
		12	17	13.4	48	63	419	354	404	343	402	341	399	338
		13	7	6.5	49	64	206	175	199	169	198	169	197	168
		14	2	2.1	51	65	67	57	65	55	65	55	64	54
				-----			-----	-----	-----	-----	-----	-----	-----	-----
				277	121.5		3539	2938	3386	2825	3343	2789	3234	2698

ARITH. MEAN DBH= 8.7 PERCENT SURVIVAL= 69.2 QUADRATIC MEAN DBH= 9.0 MEAN CROWN RATIO= 42.3 WEIBULL PARAMETERS A= 1.6 B= 7.92 C= 3.76 LAMBDA= .530 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

30	66	3	1	.0	22	33	1	1						
		4	3	.4	25	42	5							
		5	16	1.4	29	48	25	20	23	19	20	16	12	8
		6	26	3.1	31	53	79	64	75	60	71	57	57	46
		7	6.9		34	57	189	154	181	148	176	144	162	133
		8				60							311	257
		9	34	11.9 17.7	38	62	511 316	284	515 311	429 211	509 315	249 425	49.5	412
		10	40	21.8	40	66	686	574	661	596	655	551	644	541
		11	34	22.4	42	67	729	615	705	513	700	592	691	584
		12	24	18.8	44		624	529	603		601	510	595	506
		13	14	16.4	45	69	440	375	426	364	424	363	421	360
		14	6	2.5	47	70	286	190	215	184	215	184	213	183
		15	2		48	71	50	74	84	72	83	72	83	71
		16		1.4	49	72		43	48	42	48	42	48	41
				249	127.3		4017	3371	3867	3255	3627	3225	3732	3142

ARITH. MEAN DBH= 9.4 PERCENT SURVIVAL= 62.2 QUADRATIC MEAN DBH= 9.7 MEAN CROWN RATIO= 38.9 WEIBULL PARAMETERS A= 1.8 B= 8.42 C= 3.61 LAMBDA= .607 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 600

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROWN TO TIP		CUBIC FOOT VOLUME				
							0.0.	I.B.	5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET, FOR O.B. TOPS OF "	2 INCHES O.B. 1.8.	3 INCHES O.B. 1.8.	4 INCHES O.B. 1.8.	
Yrs	Ft	In	No	Ft ²	Pct	Ft			Ft ³				
10	31	1 2 3 4 5 6 7 8	1 11 2 2.4 49 152 113 20.7 9.9 62 113 22.2 62 39 5 10.4 1.7 62 483	.0 .2 2.4 61 61 62 62 32 33 373 277 341 256 323 242 159 28 122 148 1121	61 21 26 62 62 29 31 32 33 373 277 341 256 323 242 159 28 122 148 1121	0 2 38 38 345 161 249 161 313 228 282 20s 212 151							
				67.6		1129	822	846	632	792	593	670	495
ARITH. MEAN DBH= 4.9 , QUADRATIC MEAN DBH= 5.1 , WEIBULL PARAMETERS A=.5 , B= 4.87 , C= 4.16 PERCENT SURVIVAL= 80.5 , MEAN CROWN RATIO= 61.6 , LAMBDA= .005 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88													
15	45	2 3 4 5 6 7 8 9 10 11	10 32 32 66 101 19.890 109 81 29.1 29.3 52 48 43 37 101 55.7 56 101 112.0	.0 .5 2.8 5 40 32 37 51 37 50 46 47 427 179 334 136 400 165 315 126 145 300 110 91 317 247	40 32 37 51 37 50 46 47 370 126 102 13 120 15 97 12 115 18 96 12 116 15 94 12	0 8 5 0 400 165 315 126 145 300 110 91 317 247							
					2465	1940	2263	1798		2187	1739	1986	1572
ARITH. MEAN DBH= 6.6 , QUADRATIC MEAN DBH= 6.8 , WEIBULL PARAMETERS A=.9 , B= 6.25 , C= 4.13 PERCENT SURVIVAL= 74.8 , MEAN CROWN RATIO= 49.3 , LAMBDA= .376 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88													
20	53	2 3 4 5 6 7 8 9 10 11 12 13	1 5 .2 24 29 33 44 44 105 80 97 74 84 65 52 38 61 12.0 39 47 50 534 430 507 579 492 398 457 369 81 21.6 42 52 700 60648 706 623 744 6658 724 599 38 15 20.7 3.9 48 49 55 56 572 270 476 231 549 268 459 225 545 27 224 263 221 407 133.1	0 0 4 3 28 21 105 80 259 206 246 155 204 160 36 49.4 33 36 276 217 57 57 572 270 476 231 549 268 459 225 545 27 224 263 221 3436 2805 3244 2664 3178 2610 3006 2466	0 0 4 3 28 21 105 80 259 206 246 155 204 160 36 49.4 33 36 276 217 57 57 572 270 476 231 549 268 459 225 545 27 224 263 221 3436 2805 3244 2664 3178 2610 3006 2466								
ARITH. MEAN DBH= 7 . 5 , QUADRATIC MEAN DBH= 7 . 7 , WEIBULL PARAMETERS A= 1.2 , B= 6.24 , C= 3.09 PERCENT SURVIVAL= 67.8 , MEAN CROWN RATIO= 42.8 , LAMBDA= .524 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88													

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 600

S_i 60

GROWING SEASONS SINCE EST.	AV. 0+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP MIGHT .5 FEET. FOR O.B. TOPS OF --		2 INCHES		3 INCHES		4 INCHES
0.8.	1.8.	0.6.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.	0.8.	1.8.

Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³									
25	60	3	3	.4	23	34	3	16	2	55	44	31	23			
		4	9	.8	27	47	16	54	12	63	50	136	108			
		5	22	3.0	30	51	187	150	177	143	168	135				
		6	39	7.7	33					373	303	362	295			
		7	56	15.0	35	54	390	317					335	273		
		8	66	23.0	38	57		527	615	506	604	498		579	176	
		9	65	28.7	40	60	834	691	801	666	793	659	770	640		
		10	51	27.8	42	62	827	690	796	667	789	661	776	650		
		11	31	20.5	44			529	607	512	604	509	596	503		
		12	14	11.0	46	63	345	292	333	282	331	281	328	279		
		13	5	4.6	47	64	147	125	142	121	142	121	121	120		
		14	1	1.1	49	65	35	30	33	29	33	29	33	28		
			362	143.3			4125	3419	3940	3279	3881	3232	3725	3100		

ARITH. KAN DBH= 8.3 PERCENT QUADRATIC MEAN DBH= 6.5. WEIBULL PARAMETERS A= 1.5, B= 7.52, C= 3.70
SURVIVAL= 60.2, MEAN CROWN RATIO= 38.4, LAMED&= 621
CORRESPONDING SITE INDEX FOR EASE AGE 50= 88

30	66	3	6	1	19	34	1	1								
		4	6	.0	22	43	11	8								
		5	14	.5	25	49	45	35	42	33	36	29	20	14		
		6	25	1.9	28	54	126	101	119	96	113	91	91	73		
		7	38	4.9	31	58	280	229	268	219	260	213	238	195		
		8	49	10.2	33								455	583		
		9	55	24.3	35	61	601	581	624	581	601	581	581	581		
		10	49	26.7	38	65	851	713	821	690	814	684	800	672		
		11	38	67		67								662		
		12	24	25.1	40	68	626	581	617	581	626	581	626	581	513	
		13	12	11.1	43	70	382	325	370	316	369	315	366	313		
		14	1	5.12	45	72	144	100	142	100	142	100	142	100	155	
		15	1	1.12	45	72										
			317	17.2			4638	3879	4459	3743	4408	3702	4276	3593		

ARITH. MEAN DBH= 9.0 PERCENT QUADRATIC MEAN DBH= 9.3 SURVIVAL= 52.8 WEIBULL PARAMETERS A= 1.7, B= 8.06, C= 3.55
MEAN CROWN RATIO= 35.4 LAMBDA= .689 CORRESPONDING SITE INDEX FOR EASE AGE 50= 88

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP				CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET.			
							0.8.	1.B.	0.8.	1.B.	2 INCHES	3 INCHES	4 INCHES	

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³						
							0	8	0	8	6	4	2
10	31	1	2	.0			0	8	0	8	6	4	2
		2	2	.5	53	11							
		3	24	55	21								
		4	93	4.6	57	26							
		5	4	58	181								
		6	105 197	16.1	181								
		7	6	59	3.2	3.26	2.42	2.99	2.24	2.83	2.12	2.48	1.84
		8	7	60	3.3	8.7	6.6	8.0	6.1	7.8	6.0	7.2	5.5
		9	8	1	3.4	6	5	6	4	6	4	5	4
		10	620	73.0		1210	866	790	584	732	541	600	438

ARITH. MEAN DBH= 4.5 QUADRATIC MEAN DBH= 4.6 WEIBULL PARAMETERS A=.4 B=.450 C= 4.11
 PERCENT SURVIVAL= 77.5 MEAN CROWN RATIO= 58.0 LAMBDA= .089

15	45	2	18	.1	31	25	1	1	WEIBULL PARAMETERS				
									A	B	C	LAMBDA	
3	3	18	.9	36	33	14	9						
4	4	53	4.6	40	38	86	62						
5	5	104	14.2	43	41	287	219	265	203	232	177	145	105
6	6	143	28.1	45	44	615	483	577	455	548	433	457	356
7	7	133	35.5	50	46	821	657	777	625	755	608	702	564
8	8	79	27.6	47	6.5	533	624	509	509	614	501	590	481
9	9	27	11.9	52	4.8	274	218	259	208	256	205	248	198
10	10	5	2.7	53	4.9	64	52	61	49	60	49	59	48
		565	125.6			2819	2234	2563	2049	2465	1973	2201	1752

ARITH. MEAN DBH= 6.2 QUADRATIC MEAN DBH= 6.4 WEIBULL PARAMETERS A=.8 B=.591 C= 4.08
 PERCENT SURVIVAL= 70.6 MEAN CROWN RATIO= 46.0 LAMBDA= .453

20	53	2	1	0	21	24	0	0	WEIBULL PARAMETERS				
									A	B	C	LAMBDA	
3	3	8	26	2.6	34	7	5						
5	5	26	2.6	30	41	46	35						
6	6	58	17.3 75	34	45	165	129	154	121	134	105	76	56
7	7	102	28.6 35.6	42	53	93.5	764	893	732	878	720	841	690
9	9	70	30.9	44	54	834	699	799	662	790	655	768	636
10	10	33	18.0	46	55	497	413	477	398	473	395	465	388
11	11	10	6.6	48	57	189	158	182	153	181	152	178	150
12	12	2	1.6	50	57	45	38	43	37	43	37	43	36
		502	148.8			3840	3126	3609	2956	3521	2886	3283	2686

ARITH. MEAN DBH= 7.2 QUADRATIC MEAN DBH= 7.4 WEIBULL PARAMETERS A= 1.2 B= 6.63 C= 3.94
 PERCENT SURVIVAL= 62.7 MEAN CROWN RATIO= 39.8 LAMBDA= .595

YIELDS GIVEN T_p WITH IDEAL SURVIVAL --

T_p 800

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. FOR 0.8, TOPS OF 2 INCHES		3 INCHES		4 INCHES	
O.B.	I.B.	O.B.	1.8.	0.6.	I.E.	0.8.	1.8.	0.8.	1.8.	0.6.	I.E.	0.8.	1.8.	

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
							4	25	3	25	3	4	5	6
25	60	3	4	.2	20	34								
		4					25	3						
		5	32	4.412	30	51	100	79	94	74	82	65	46	34
		6	54	10.6	33	55	260	208	245	197	233	187	189	150
		7	75	20.0			530	431	507	413	492	401	455	371
		8												
		9	76	27.336	38	59	121 916	111 101	112 101	112 101	112 101	927	771	900
		10	54	29.5	40	62	876	731	843	706	836	700	821	688
		11	29	19.1	42	63	589	495	568	479	565	477	557	470
		12	12	9.4	44		295	250	285	242	284	241	281	239
		14	1	3.18	48	65								
							64							
							35	36	83	29	85	72	84	72
							4606	3807	4389	3644	4315	3584	4111	3414

ARITH. KAN DBH= 8.0 , QUADRATIC MEAN DBH= 8.2 , WEIBULL PARAMETERS A= 1.4 , B= 7.24 , C= 3.65
 PERCENT SURVIVAL 54.9 , MEAN CROWN RATIO- 35.6 , LAMBDA- .685
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

30	66	3	8	.1	16	35	2	1	Ft ³								
									4	20	43	15	11	57	46	50	40
		4															
		5	34	6.7	26	54	61	49									
		6	50	13.4	29	58	171	137									
		7					369	301									
		8							61								
		9	64	216 283	36	65	111 111	524 524	848	111 111	833	498	498	576	477	513	256
		10	56	30.5	38	67	973	815	936	789	930	702	914	678			
		11	41	27.1			891	751	861	729	856	724	844	714			
		12	24	18.8	40	68	632	536	611	520	609	518	603	513			
		13					10.1	42	70								
		14						71		350	298	339	290	338	289	335	287
		15	4	4.31	45	72			544	128	145	125 36	142	124	144	124	36
										4961	4162	4901	4109	4735	3972		

ARITH. MEAN DBH= 8.7 , QUADRATIC MEAN DBH= 9.0 , WEIBULL PARAMETERS A= 1.7 , B= 7.81 , C= 3.51
 PERCENT SURVIVAL 47.0 , MEAN CROWN RATIO- 32.9 , LAMBDA= .747
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1000

S_I 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND		5-INCH CLASS AND GREATER.		STUMP HEIGHT .5 FEET.				
							10 TIP 0. B.	1. 8.	2 INCHES 0. B.	1. B.	3 INCHES 0. B.	1. 8.	4 INCHES 0. B.	1. 8.	
Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³								
10	31	1	4	.0	47										
		2	43	.9	51	11	0	0							
		4	259	7.4	53	22	15	8							
		5	216	29.5 22.6	55	27	121	78							
					56	30	378	261							
						32	502	362	456	332	410	298	307	219	
		6	72	14.1	57	33	243	181	223	168	211	158	184	137	
		7	7	1. 9	58	34	33	25	30	23	29	22	27	21	
							1292	915	709	523	650	478	518	377	
ARITH. MEAN DBH= 4.2 PERCENT SURVIVAL= 75.2 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88														A= .4 B= 4.22 C= 4.06	
15	45	2	5	.1	28	25	2	1							
		3					26	19							
		4	29	1.4	33	33	94								
		5	180	17.0	37	38	401 129	305	369	283	324	247	202	146	
		6	181	35.5	44	44	778	611	730	576	694	548	570	451	
		7													
		8	146	70	46	47	901 582	472 721	553 653	686 451	829 544	667 444	522 770	619 426	
		9			49										
		10	182	8.0 1.1	51	53	48 49	183 26	145 21	173 24	139 20	170 24	137 23	165 24	132 19
							3028	2389	2702	2155	2585	2063	2261	1793	
ARITH. MEAN DBH= 5.9 PERCENT SURVIVAL= 67.6 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88														A= .8 B= 5.64 C= 4.04	
20	53	2	12	.0	19	25	11	0							
		4	37	.6	24	66									
		5	75	10.2 3.2	32	45 41	225	1 %	209	165	183	144	104	77	
		6	115	22.6	35	48	528	421	498	399	473	379	384	305	
		7			38	51									
		8	131 114	35.0 39.8	40	53	10878	853 707	83 98	819	809 991	655 805	940	771	
		9	69	30.5	43	54	822	678	787	652	779	646	757	627	
		10	28	15.3	45	57	422	351	405	338	491	335	395	329	
		11	7	4. 6	47	57	132	III	127	107	126	106	125	105	
		12	1	.a	49		23	19	22	18	22	18	21	18	
							4153	3374	3879	3173	3774	3088	3476	2838	
ARITH. MEAN DBH= 6.9 PERCENT SURVIVAL= 59.1 CORRESPONDING SITE INDEX FOR BASE AGE 50= 88														A= 1.1 B= 6.39 C= 3.80	

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1000

S_i 60

GROWING SEASONS SINCE EST.	AV. D+H HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME						
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		FOR O.B. TOPS OF 2 INCHES		
O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	0.8.	1.8.	O.B.	I.B.	0.8.	1.8.	0.8.	1.8.
Yrs	Ft	In	No	Ft ²	Pct	Ft	Ft ³						
25	60	2 3	6 20	.0 17.3	14 48	24 43	0 5	0 4	107 306	2 : :	61 248	45 198	
		4					37	28					
		5		5.7	26	48	132	104	123				
		6	40	13.7	29	52	341	274	323	2 %			
		7	93	24.9	34	55	658	534	628	512	610	498	
		8	100	34.9	37	58	984	809	945	779	930	767	
		9	84	37.1		60	1094	906	1051	874	1039	865	
		10	55		39		905	756	871	730	664	724	
		11	27	30.178	41	61	556	468	536	453	533	450	
		12	9				225	190	217	184	216	183	
		13	2	7.1 18	06	06	60	51	58	49	57	49	
			509	175.1			4997	4124	4752	3939	4662	3666	
											4421	3666	
ARITH.	MEAN DBH= 7.7		QUADRATIC MEAN DBH= 8.0		WEIBULL PARAMETERS	A= 1.4	B= 7.02	C= 3.62					
	PERCENT SURVIVAL= 56.9		MEAN CROWN RATIO= 33.5		LAMBDA= .735								
			CORRESPONDING SITE INDEX FOR BASE AGE 50= 88										
30	66	3 4	3 11	1	15	35	3	2					
		5	25	3.4	22	50	81	64	76	60	66	52	
		6	43	8.4	25	55	219	176	208	168	196	159	
		7	61	16.3	27	58	450	367	431	352	418	342	
		8			30	61							
		9	74	25.33.32.7	3432	65	109749	617839	720973	595811	70990	66100	
		10	42		37	67	1078	905	1043	077	1035	871	
		11	23	27.7	39		913	770	882	746	877	742	
		12		18.	1	68	606	513	566	498	583	496	
		13	9	8.3	41	70	266	244	277	237	276	236	
		14	3	3.2	42	71	112	96	109	93	109	93	
		15	1	1.2	44	72	44	37	42	36	42	36	
			429	179.2			5571	4646	5347	4473	5274	4416	
											5078	4253	
ARITH.	MEAN DBH= 8.5		QUADRATIC MEAN DBH= 6.7		WEIBULL PARAMETERS	A= 1.6	B= 7.61	C= 3.48					
	PERCENT SURVIVAL= 42.9		MEAN CROWN RATIO= 30.9		LAMBDA= .791								
			CORRESPONDING SITE INDEX FOR EASE AGE 50= 88										

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1200

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							O.B.	I.E.	5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF ..	2 INCHES	3 INCHES	4 INCHES
									O.B.	I.B.	O.B.	I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³				
10	31	1	2	7	.0	43	11	0	0				
			2	70	1.5	48	21	19	10				
			3	221	10.8		26	173	110				
			4			51							
			5	211	28.5	53.5	31	466	310	428	312	385	279
			6	45	0.0	57	33	152	113	139	105	132	99
			7	2	.5	57	34	9	7	9	7	a	6
				880	78.7		1291	900		576	424	525	384
												413	298

ARITH. MEAN DBH= 3 .9 , QUADRATIC MEAN DBH= 4 .0 , WEIBULL PARAMETERS A= .3 , B= 3 .9 8 , C= 4 .0 3
PERCENT SURVIVAL = 73.3 , MEAN CROWN RATIO= 52.9 , LAMBDA= .208
CORRESPONDING SITE INDEX FOR BASE AGE 50= ee

15	45	8	48	.2	26	23	3	27				
		4		2.1	31	18						
		5	188	59.6	35.1	41	186	141	479	367	420	320
		6	214	42.0	42	44	920	722	863	681	820	648
		7										
		8	158	202 398	48	46	482	391	458	374	846	368
		9	11	4.9	50	48	119	se	113	93	112	92
		10	1	.5	52	49	13	10	12	10	12	10
				781	145.0		3199	2522	2795	2225	266	2119
												2285
												1807

ARITH. MEAN DBH= 5 .7 , QUADRATIC MEAN DBH= 5.8 , WEIBULL PARAMETERS A= .7 , B= 5 .4 2 , C= 4 .0 0
PERCENT SURVIVAL = 65.1 , MEAN CROWN RATIO= 41.3 , LAMBDA= .562
CORRESPONDING SITE INDEX FOR BASE AGE 50= ee

20	53	2	3	.1								
		3	17		17	25	1	11				
		4	49		22	35	16	67				
		5	97	13.2 4.3	30	41	291	228	271	214	237	186
		6	142	27.9	33	48	652	520	615	493	584	468
		7	153	40.9	36	51	1025	826	973	788	945	765
		8	121	42.2	39	53	1109	906	1059	869	1041	855
		9	65	28.7	42	54	774	639	742	614	734	608
		10	22	12.0	44	55	331	276	318	265	315	263
		11	5	3.3	46	57	94	79	91	76	90	76
		12	1	e	48	57	23	19	22	18	22	18
							4403	3572	4091	3337	3968	3239
												3617
												2945

ARITH. MEAN DBH= 6.7 , QUADRATIC MEAN DBH= 6 .9 , WEIBULL PARAMETERS A = 1.1 , B= 6.19 , C= 3.77
PERCENT SURVIVAL = 56.3 , MEAN CROWN RATIO= 35.5 , LAMBDA= .695
CORRESPONDING SITE INDEX FOR BASE AGE 50= ee

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1200

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.			
							O.B.	I.B.	2 INCHES 0.0. 1.8.	3 INCHES 0.8. 1.8.	4 INCHES 0.8. 1.8.	
Yrs	Ft	In	No.	Ft ²	Pct	Ft	— Ft ³ —					
25	60	2	1				0					
		3	26	.4	13	35	0	5				
		5	54	2.3	24	48	48	37				
		6	86	16.9 14	27	52	419 169	134	391 158	125	138	303 109
											78	57
											305	243
		7									668	545
		8	110	112 29.4	39.1	33	58		1058 743 668	872	1042	589 8
		9	54	39.8		36	61		1172	971	1114	9.2 1
		10	24	29.5		38	63		888	742	848	71 1
		11		15.6		40			494	416	474	400
		12	7	55		42	64	148	169	143	168	143
		13	2	1.8		44	65	60	58	49	51	49
				574	187.8		5 3 1 2	4 3 7 6	504	1 4172	4930	4090
											4655	3652
ARITH. MEAN DBH= 7.5 , QUADRATIC W A = N DBH= 8.6 , WEIBULL PARAMETERS A= 1.3 , B= 6.83 , C= 3.59												
PERCENT SURVIVAL= 47.8 , MEAN CROWN RATIO= 31.7 , LAMBDA= .776												
CORRESPONDING SITE INDEX FOR BASE AGE 50= BB												
30	66	3	14	.2	14	35	4	26	3	20		
		5	31	4.2	17	51	102	81	95	76	83	66
		6	52	10.2	23	55	265	213	251	203	237	192
		7	72	19.2	26	59	539	439	516	422	500	410
		8	85	29.7	29	62	884	729	850	703	837	692
		9	82	36.2	31	64	1133	943	1094	912	1081	903
		11	42	55.5	33	66	1164	978	1126	948	1118	941
		12	21	27.7 16.5	38	68	50295	780	52094	46175	889	877
		13	2	7.4	40	70	255	211	247	211	246	210
		14		2.1	42	12	76	65	74	63	73	63
							5 9 3 3	4 9 4 3	5689	4 7 5 6	5604	4 6 8 8
											5378	4499
ARITH. KAN DBH= 8.3 , QUADRATIC W A = N DBH= 8.6 , WEIBULL PARAMETERS A= 1.6 , B= 7.45 , C= 3.46												
PERCENT SURVIVAL= 32.9 , MEAN CROWN RATIO= 29.4 , LAMBDA= .828												
CORRESPONDING SITE INDEX FOR BASE AGE 50= BB												

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_I 60

GROWING SEASONS SINCE EST.	A.V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUNDED TO T.L. O.B. I.B.		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							2 INCHES O.B. I.B.	3 INCHES O.B. I.B.	4 INCHES O.B. I.B.		

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³					
10	31	1	126	2 : :	39	11		0				
		2	345	16.9	45	21	34	18				
		3				27	245	159				
		4			48							
		5	399	166	22.6	34.8	53	32	583	386	279	402
		6	18	3.5	55	34	62	46	350	256	315	229
									57	43	54	41
				1068	80.7		1311	904	407	299	369	270
											283	20.3

ARITH. MEAN DBH= 3.0 . QUADRATIC MEAN DBH= 3.7 . WEIBULL PARAMETERS A= 2 . B= 3.69 . C= 3.98
 PERCENT SURVIVAL= 71.2 . MEAN CROWN RATIO= 50.1 . LAMBDA= .273 .
 CORRESPONDING SITE INDEX FOR EASE AGE 50= Ba

15	45	1	1	.0	16	11	0	0				
		2	14	.3	23	25	5	3				
		3	66	3.2	29	33	58	42				
		4	163	14.2	34	39	281	214				
		5	253	34.5	37	42	711	542	656	504	574	439
		6	249	48.9	41	44	1071	840	1004	793	955	753
		7	142	37.9	44	46	a77	702	a29	668	806	649
		8	41	14.3	47	48	347	282	330	269	325	265
		9	5	2.2	49	49	55	45	52	43	52	43
				934	155.6		3405	2670	2871	2277	2712	2149
											2263	1777

ARITH. KAN DBH= 5.4 . QUADRATIC MEAN DBH= 5 . 5 . WEIBULL PARAMETERS A= 7 . B= 5.16 . C= 3.96
 PERCENT SURVIVAL= 62.3 . MEAN CROWN RATIO= 38 . 7 . LAMBDA= .622 .
 CORRESPONDING SITE INDEX FOR EASE AGE 50= 88

20	53	2	4	15	20	25	2 :	1				
		3			35	41		17				
							97					
		2	171	16.2	28	46	405	127	318	377	298	329
		6	182	35.7	32	49	848	678	802	643	760	610
		7			35	52						
		8	180	125	48.436	38	54	1164	986	951	11812	944913
		9	57	25.2	41	55	690	569	661	548	654	542
		10	16	a.7	43	56	245	204	235	196	233	195
		11	2	1.3	45	57	38	32	36	31	36	30
				795	188.3		4759	3853	4384	3573	4233	3452
											3798	3087

ARITH. MAN DBH= 6.4 . QUADRATIC MEAN DBH= 6.6 . WEIBULL PARAMETERS A= 1.0 . B= 5.94 . C= 3.73
 PERCENT SURVIVAL= 52.3 . MEAN CROWN RATIO= 33 . 1 . LAMBDA= .750 .
 CORRESPONDING SITE INDEX FOR BASE AGE 50= BB

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_i 60

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME							
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEE?		FOR 0.0. TOPS OF -		2 INCHES	
O.B.	I.B.	0.0.	I.B.	O.B.	I.B.	O.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.
Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
25	60	2	2	.6	11	24	1	0						
		3	12	3.1	19	43	11	8						
		4	35				64	49						
		5	71	9.7	23	48	223	176	208	165	181	143	102	390
		6	110	21.6	26	52	537	430	508	409	481	388	390	329
		7	133	35.5	29	55	941	764	898	732	872	712	807	659
		8	129	45.0	32	58	1270	1044	1219	1004	1200	990	1149	948
		9	95	42.0	34	60	1243	1032	1198	996	1184	986	1156	963
		10	52	28.4	37	61	855	714	823	690	817	685	802	673
		11	20	13.2	39	63	412	347	397	335	395	334	390	329
		12	5	3.9	41	64	125	106	121	102	120	102	119	101
		13	—	.9	43	65	30	25	29	25	29	24	29	24
				665	203.9		5712	4695	5401	4458	5279	4364	4944	4083
ARITH. MEAN DBH = 7.3 PERCENT SURVIVAL = 44.3							QUADRATIC MEAN DBH = 7.5	WEIBULL PARAMETERS A = 1.3	B = 6.61	C = 3.56				
							MEAN CROWN RATIO = 29.6	LAMBDA = .826						
CORRESPONDING SITE INDEX FOR BASE AGE 50-88														
30	66	2	1	.0	9	23	0	0						
		3	6	.3	13	35	5	4						
		4	19	1.7	19	44	35	27						
		5	5.5	22	51	131	104	123	254	407	85	57	42	
		6	40	12.8			267	314		240		240		192
		7		23.5	27	62	1019	537	630	516	611	501	559	457
		8	98	34.2	30	64	1258	1047	980	810	965	798	923	764
		9	40.2					1214	1012		1200	1002	1171	978
		10	111	37.6	32	66	1236	1038	1196	1006	1187	999	1166	982
		11	41	27.1	34	68	932	790	904	768	899	763	889	755
		12	15	14.9		70	507	430	491	417	488	415	484	412
		13	7	6.5	39		223	190	216	184	215	184	213	182
		14	2	2.1	40	72	76	65	74	63	73	63	73	63
				546	206.3		6411	5339	6142	5126	6042	5050	5175	4827
ARITH. MEAN DBH = 8.1 PERCENT SURVIVAL = 35.4							QUADRATIC MEAN DBH = 8.3	WEIBULL PARAMETERS A = 1.5	B = 7.25	C = 3.43				
							MEAN CROWN RATIO = 27.4	LAMBDA = .873						
CORRESPONDING SITE INDEX FOR BASE AGE 50-88														

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 400

S_i 70

GROWING SEASONS SINCE EST.	A V. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							0.B.	1.B.	2 INCHES 0.9. 1.B.	3 INCHES 0.B. 1.8.	4 INCHES 0 .8 .1.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³		Ft ³			
							0.B.	1.B.	2 INCHES 0.9. 1.B.	3 INCHES 0.B. 1.8.	4 INCHES 0 .8 .1.B.	
10	37	2	2	.0	.5	62	23	0				
	4	11	3.1	.5	63	32	1	6				
	5	71	9.7	3.1	64	35	154	128	161	118	144	105
	6	99	19.4	6.4	37	365	273	337	255	320	241	275
	7											352
	8	37	22.2	12.9	65	39	422	251	195	234	302	180
	9	7	e-III+	3.1	65	40	61	48	58	46	57	45
												55
												44
				345	70.9		1340	1010	1182	906	1131	865
												1008
												768

ARITH. MEAN DBH= 6.0 , QUADRATIC MEAN DBH= 6.1 , WEIBULL PARAMETERS A= 6 . 8 . 5.93 C= 4.60
 PERCENT SURVIVAL 84.2 , MEAN CROWN PAT 10= 64.1 , LAMBDA= .045
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

15	53	3	2	.1	39	36	2	1				
	4	9	.8	.8	42	42	16	11				
	5	23	3.1	46	46	69	53	64	49	56	43	34
	6	44	8.6	48	49	206	162	193	154	184	146	152
	7	67	17.9	50	51	449	361	426	345	414	335	119
	8											384
	9	75	26.2	52	53	651	513	616	489	603	479	573
	10	61	26.9	54	54	683	546	649	523	639	515	618
	11	32	17.5	56	55	453	366	431	351	427	341	497
	10											340
	12	2	1.6	58	57	176	143	168	138	166	137	164
						43	35	41	34	41	34	134
				325	109.3		2748	2191	2588	2083	2530	2036
												2383
												1912

ARITH. MEAN DBH= 7.7 , QUADRATIC MEAN DBH= 7.8 , WEIBULL PARAMETERS A= 1.0 , B= 7.28 , C= 4.56
 PERCENT SURVIVAL 81.3 , MEAN CROWN RATIO= 51.6 , LAMBDA= .419
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	3	1	.0	28	37	1	1				
				.3	32	45						
	5	12	1.6	36	50	38	30	35				
	6	25	4.9	39	54	126	100	119	95	131	90	19
	7	41	11.0	41	57	301	244	286	233	278	226	73
	8	56		59								506
	9	60	26.5 19.5	48	63	792	657	837	762	843	733	732
	10	50	27.3	50	64	846	707	815	684	808	678	666
	11	30	19.8			627	527	605	511	601	508	593
	12	13	10.2	52	65	313	259	301	250	299	249	501
	13											246
	14		1	1	53.55	66.01	87	29	84.33	28	83.33	28
				2 %	125.1		3735	3094	3517	2916	3527	2936
												3405
												2832

ARITH. MEAN DBH= 8.6 QUADRATIC MEAN DBH= 8.8 WEIBULL PARAMETERS A= 1.3 , B= 7.97 , C= 4.32
 PERCENT SURVIVAL 74.0 , MEAN CROWN RATIO= 45.0 , LAMBDA= .570
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 400

S_i 70

GROWING SEASONS SINCE EST.	AV. WC HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.		
							0.8.	1.8.	FOR 0.8. TOPS OF --	2 INCHES	3 INCHES
Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft	3	
25	70	3	1	.0	22	38	1	1			
		4	3	.3	26	47	6	5			
		5	7	1.0	29	53	24	19	22	18	19
		6	15	2.9	32	58	80	64	76	61	71
		7	26	6.9	35	62	202	166	194	159	188
		8	38	13.8	38	65					155
		9	46	203 133	40	67	413 450	541	634 397	500 329	627 390
									524	524	373 309
		10	47	25.6	42	69	860	722	831	700	824 694
		11	39	25.7	44	71	892	753	863	732	858 727
		12	25	19.6	46	72	693	588	671	572	669 569
		13	12	11.1	48	74	401	342	389	333	388 332
		14	4	4.3	49	75	157	135	153	131	152 131
		15	1	1.2	51	76	45	38	44	37	44 37
				264		3722	4432	4274	3602	4229	3565
											4120 3473

ARITH. MEAN DBH= 9.3 PERCENT SURVIVAL= 66.0 QUADRATIC MEAN DBH= 9.6 MEAN CROWN RATIO= 40.6 WEIBULL PARAMETERS A= 1.6 B= 8.54 LAMBDA= .667 CORRESPONDING SITE INDEX FOR BASE AGE 50=102 C= 4.13

30	77	4	1	.1	21	48	2	2			
		5	4	.5	25	56	14	11	13	11	9
		6	10	2.0	28	61	55	45	52	43	50
		7	17	4.5	30	66	139	114	134	110	130
		8	26	9.1	33	69	296	245	285	237	281
		9	38	14.6	35	72	504	422	724	409	483
		10	36	20.7	36	75	748	630	612	718	607
		11				77	885	749	858	729	853
		12	29	23.2	42	79	873	743	848	724	843
		13	19	17.5	44	80	681	583	662	568	660
		14				81	422	362	410	353	409
		15	14	10.7 4.9	47	82	196	169	191	165	191
		16	1	1.4	49	83	56	49	55	48	55
				226		132.6	487 1	4124	4720	4009	4684
											3977 4590
											3897

ARITH. K A N DBH= 10.1 PERCENT SURVIVAL= 57.0 QUADRATIC MEAN DBH= 10.3 MEAN CROWN RATIO= 37.7 WEIBULL PARAMETERS A= 1.8 B= 9.10 LAMBDA= .732 C= 3.99 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_P 600

S, 70

Yrs	Ft	In	No	Ft 2	Pct	Ft	Ft	Ft	Ft	Ft 3	Ft	Ft	Ft	Ft
10	37	2	5	.1	53	24	2	1						
		3	28	1.4	56	24	24	16						
		5			57	30		86						
		6	138	18.8	59	33	124	240	493	313	229	373	468	203
		7			61	38								148
		8	17	20.6	5.9	61	39	111	299	90	364	10828184	105	273
		9	1	.4	62	40	9	7	8	7			8	326
													6	251
													8	101
													6	79
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ARITH. MEAN DBH= 5 . 4 . QUADRATIC WEAN DBH= 5 . 5 . WEIBULL PARAMETERS A= 5 . B= 5 . 4 0 . C= 4 . 5 2
 PERCENT SURVIVAL= 81.7 , MEAN CROWN RATIO= 5 9 . 0 , LAMBDA= 164
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

ARITH. MEAN DBH= .71, QUADRATIC WEAN DBH= 7.3, WEIBULL PARAMETERS A=.9, B=.6, 8.0 C=.4, 4.9
 PERCENT SURVIVAL= 74.8, BEAN COUNT RATIO= 46.9, LAMBDA=.529
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

ARITH. MEAN DBH= 8.1, OLAORATIC MEAN DBH= 8.3, WEIBULL PARAMETERS A= 1.2, B= 1.52, C= 4.25
 PERCENT SURVIVAL= 66.2, MEAN CROWN RATIO= 40.7, LAMBDA= .670
 CORRESPONDING SITE INDEX FOR BASE AGE 50= 102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 600

S_i 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME			
							0.B.	I.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	FOR 0.B. TOPS OF --	2 INCHES	3 INCHES
									0.B.	1.B.	0.B.	1.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³					
25	70	3	1	.0	18	3.9	1	1				
		4	5	.4	22	4.9	10	30				
		5	13	1.8	26	5.5	45	36	42	34	37	29
		6	26	5.1	29	6.0	142	115	135	109	127	104
		7	42	11.2	32	6.3	331	271	318	261	308	253
		8	58	20.2	34	6.6	635	525	612	507	602	500
		9	65	37	37	6.8	942	785	908	760	898	751
		10	59	28.7322	39	70	1093	918	1057	890	1048	883
		11	42	27.7	42	72	973	822	942	790	936	794
		12	23	18.1	44	73	645	548	625	533	622	530
		13	9		46	74	301	257	292	250	291	249
		14	2	0.32.1	48	76	80	68	77	66	77	66
				345		155.9	5198	4354	5008	4209	4946	4159
											4782	4020

ARITH. MEAN DBH= 8.9 . QUADRATIC MEAN DBH= 9.1 . WEIBULL PARAMETERS A= 1.5 , B= 8.14 . C= 4.0 .
 PERCENT SURVIVAL= 57.5 . MEAN CROWN RATIO= 3.6 . 7 . LAMBDAB= .758
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

30	n	3	1	.0	15	3.9	1	5				
		4	5	15	28	5.4	25	20	23	19	20	16
		6	26	2.9	25	6.2	8.4	3	8.0	6.5	75	61
		7	6.9	28	6.7	216	177	207	171	201	166	183
		8	38	13.3	33	7.0	437	363	422	351	415	345
		9	47	20.8	73	7.27	608	704	590	636	584	679
		10	48	26.2	35	75	961	811	933	789	926	783
		11	44	29.0	37	77	1031	916	1049	891	1042	886
		12	32	25.1	39	79	963	820	935	799	931	795
		13	18	16.6	41	81	646	552	627	538	625	536
		14	8	8.6	43	337	290	328	283	327	282	325
		15	3	3.7	45	82	147	127	143	124	143	123
		16	1	1.4	47	83	56	49	55	46	55	48
				291		155.8	5687	4807	5506	4668	5456	4625
											5330	4519

ARITH. MEAN DBH= 9 . 6 . QUADRATIC MEAN DBH= 9 . 9 . WEIBULL PARAMETERS A= 1.7 , B= 8 . 74 . C= 3 . 93
 PERCENT SURVIVAL= 48.5 . MEAN CROWN RATIO= 34.2 . LAMBDAB= .814
 CORRESPONDING SITE INDEX FOR EASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_F 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME				
							0.B.	1.8.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET.	FOR O.B. TOPS OF --			
									0.B.	1.B.	2 INCHES	3 INCHES	4 INCHES
									0.9.	1.8.	0.8.	1.8.	

Yrs	Ft	In	No.	Ft 2	Pct	Ft			Ft ³				
10	37	1	12	.0	42	13	0	0					
		2	12	.3		25	3	2					
		3	56										
		4		2.7									
		5	121	12.1	55	30	49	32					
		6				34	223	156					
		7	151	13	114.1	57	38						
		8	6	2.1	60	39	314 275	445211					
		---	---	---	---	40	41	32					
		---	---	628	90.1		1701	1254					
							1315	990					
									1228	924			
										1024	762		

ARITH. MEAN DBH= 5.7, QUADRATIC MEAN DBH= 5.1, WEIBULL PARAMETERS A=.4, B=.5, C=.3, C= 4.46
 PERCENT SURVIVAL = 70.5, MEAN CROWN RATIO= 55.9, LAMBDA= .248
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

15	53	2	10	.0	24	29	0	0					
		4	33	.5	30	38	10	7					
		5	75	2.9	34	34	62						
		6	123	10.2	38	48	232	148					
		7		24.2	41	50	584	462					
		8	112	38.5	44	52	980	790					
		9	52	23.0	50	55	1043	852					
		10	13	7.1	52	56		910	818				
		11	1	.7	54	57	187	151	178	145	177	146	17
		---	---	564	146.1		3745	3023	3489	2035	3381	2749	3090
													2505

ARITH. KAN DBH= 5.7, QUADRATIC MEAN DBH= 6.9, WEIBULL PARAMETERS A=.8, B=.6, C=.46, C= 4.44
 PERCENT SURVIVAL = 70.5, MEAN CROWN RATIO= 43.6, LAMBDA= .606
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	4	15	.2	21	4	3						
		5	66	.3	25	47	29	23					
		6	96	13.0	32	56	120	95					
		7		25.7	36	58	341	275					
		8			38	61	714	579	680	555			
		9	105	36.7	41	62	1205	889	1037	1159	966	857	
		10	53	2d.9	44	65	909	760	876	736	1146	952	113 975
		11	20										
		12	5	13.2 3.9 48 46	66	428	357 109	409 124 345 105	406 123	30	1.5	411 122	3104
		13	1	.9	50	67	31	26	30	25	30	25	29 25
		---	---	491	168.4		4986	4116	4750	3940	4655	3863	4403
													3651

ARITH. MEAN DBH= 7.7, QUADRATIC MEAN DBH= 7.9, WEIBULL PARAMETERS A= 1.2, B= 7.21, C= 4.20
 PERCENT SURVIVAL = 61.1, MEAN CROWN RATIO= 37.7, LAMBDA= .741
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 800

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP			CUBIC FOOT VOLUME						
							O.B.	I.B.		5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET.		FOR 0.8. TOPS OF --		2 INCHES		
							O.B.	I.B.	O.B.	I.B.	O.B.	I.R.	O.B.	I.R.	O.B.	I.R.
Yrs	Ft	In	No.													
25	70	3	2	.1												
		4	7	.6	16	40	2	14	1							
		6	19	2.6	20	49	66	53		62	49	54	43	28	21	
		7	37	1557.3	23	60	202	463	163	45 192	365 156	181	147	140	112	
			58			64						431	355	393	323	
						32	66									
		8	76	26.5	35	69	833	609	802	665	789	655	755	627		
		9	81	35.8			1194	397	1154	966	1141	955	1113	933		
		10	67	36.5	38	70	1242	1042	1200	1011	1190	1003	1168	985		
		11	43	28.4	40	72	396	841	964	817	958	813	946	802		
		12	20	15.7	42	73	561	476	544	463	541	461	536	457		
						75										
		13	6	5.5	44	76	203	173	197	169	196	168	195	167		
		14	1	1.1	46		40	34	39	33	39	33	38	33		
			417	175.6			5816	4860	5599	4694	5520	4633	5312	4460		

ARITH. KAN DBH= 2.6, QUADRATIC MEAN DBH= 8.8, WEIBULL PARAMETERS A= 1.4, B= 7.86, C= 4.02
 PERCENT SURVIVAL= 52.1, MEAN CROWN RATIO= 33.9, LAMBDA= .822
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

30	<i>n</i>	3	1	.0	40											
		4	1	.3	13	50	1	8	1							
		5	10	4.1	20	58	36	29	34	27	29	23	15	11		
		6	21	9.4	23	63	119	97	113	92	107	87	83	66		
		7	35		26	68	294	242	282	233	274	226	249	206		
		8	69	17.1	28	71	571	474	551	458	542	451	518	431		
		10	58	32.2	31	76	908	760	879	738	869	730	848	712		
		11	59	32.3	33	78	1218	109 1032	1161	1092	1152	974	1133	959		
									1182		1174	998	1159	905		
		12	33	25.9	38	80	1004	856	976	834	971	830	962	822		
		13	17	17.5	40	82	617	528	599	514	597	512	593	509		
		14	2	2.5	42	83	299	256	290	250	290	249	288	248		
		15			44		99	85	97	83	96	03	96	83		
			345	174.0			6369	5375	6164	5215	610:	5163	5944	5032		

ARITH. KAN DBH= 0.4, QUADRATIC MEAN DBH= 9.6, WEIBULL PARAMETERS A= 1.7, B= 8.48, C= 3.89
 PERCENT SURVIVAL= 43.1, MEAN CROWN RATIO= 31.7, LAMBDA= .872
 CORRESPONDING SITE INDEX FOR BASE AGE 50-102

YIELDS GIVEN T, WITH IDEAL SURVIVAL —

T_P 1000

S_I 70

GROWING SEASONS SINCE EST.	AV. O+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME							
							O.B.	I.B.	5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET.							
									O.B.	I.B.	2 INCHES O.B.	2 INCHES I.B.	3 INCHES O.B.	3 INCHES I.B.	4 INCHES O.B.	4 INCHES I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft								
10	37	1		.0	37	13	0	0						
		2	22	.5	44	25	6	3						
		3	93	4.6	40	30								
		4			51	34	70	46						
		5	210	26	39	183	53	36	338	474	594	436	531	382
		6	147	20.9	57	39	553	414	511	387	405	367	417	313
		7					1614	1231	153	110	1613	1110	13412	1039
		8	312	03.7	59	40	1793	1306	1268	949	1174	877	955	705

ARITH. MEAN DBH= 4.7 , QUADRATIC MEAN DBH= 4.8 , WEIBULL PARAMETERS A= .3 , B= 4.75 , C= 4.42
 PERCENT SURVIVAL- 76.2 MEAN CROWN RATIO- 52.6 LAMBDA= .313
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

15	53	2	2	.0	22	30								
		3	15	.7	27	39	1	1						
		5	50	4.4	36	48	95	11						
		6	165	324 147	40	51	335	73						
							795	28 60	749 310	240 597	270 710	208 566	365	420
		7	173	46.2	43	55	1195	965	1136	922	1103	995	1022	828
		8	113	39.4	46	56	1068	874	1021	839	1004	a25	961	790
		9			48	56								
		10	417	18.38	51	57	902	416 83	483 97	401 79	470 96	396 19	464 94	385 77
													3293	2662
			674	159.9			4110	3311	3796	3070	3661	2969		

ARITH. MEAN DBH= 6.4 , QUADRATIC MEAN DBH= 6.6 , WEIBULL PARAMETERS A= .6 , B= 6.19 , C= 4.40
 PERCENT SURVIVAL- 67.4 , MEAN CROWN RATIO- 41.0 , LAMBDA= .656
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	2	6	.0	14	29	0	0						
		3		.3	19	40	6	4						
		4	21	1.8	23	48	42	32						
		5	50	6.8	27	53	169	134	158	126	137	109	73	337
		6	89	17.5	31	57	466	376	442	358	418	339		2 %
		7												
		8	122	32.6	59	913	745	874	713	848	694	774	634	
		9	128		34	62	1337	1100	1282	1060	1260	1042	1206	996
		10	95	42.0	60	63	1289	1071	1240	1034	1227	1023	1191	994
		11	40	26.2	42	65	734	699	804	676	797	670	783	659
		12	IF;	9.9	45	66	322	271	311	263	39	261	305	258
			3	2.4	47	67	78	66	75	64	75	64	74	63
							5456	4497	5186	4296	5071	4202	4743	3926

ARITH. MEAN DBH= 7.1 , QUADRATIC MEAN DBH= 7.6 , WEIBULL PARAMETERS A = 1.1 , B= 6.97 , C= 4.16
 PERCENT SURVIVAL- 57.8 , MEAN CROWN RATIO= 35.3 , LAMBDA= .796
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1000

S_i 70

GROWING SEASONS SINCE EST.	AV. WC HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	CUBIC FOOT VOLUME								
							ALL TREES GROUND TO TIP		5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.8, TOPS OF --		2 INCHES		3 INCHES		4 INCHES
O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	O.B.	I.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³							
25	70	3	10	.1	15	40	3	2	69	74	793	914	29	
	4	4	10	.9	18	49	20	16	575	557	1296	1264	149	
	5	5	10	25	28	50	91	73	288	206	1097	1085	186	
6	49	9.5	28	25	267	216	132	135	1351	1101	1296	1092	418	
7	7.5	20.0	64	599	491	575	472	575	557	1296	1271	1072	1059	
			31											
8	9.2	32.1	34	66	1008	834	971	805	956	740	1085	914	759	
9	9.2	40.6	36	69	1356	1132	1311	1097	1296	1092	1059	1264	1072	
10	7.2	39.3	36	71	1351	1135	1306	1101	1296	1271	1296	1264	1059	
11	4.2	21.7	39	72	973	822	942	798	936	794	924	784	784	
12	17	13.4	41	13	477	405	462	394	460	392	456	388	388	
			75											
13	5	4.6	43	76	169	144	164	141	164	140	162	139	139	
14	1	1.1	45	40	34	39	33	33	39	33	36	33	33	
			484	193.0	6354	5304	6110	5116	6018	5042	5762	4830		

ARITH. MEAN DBH= 8.3. QUADRATIC MEAN DBH= 6.5. WEIBULL PARAMETERS A= 1.4. B= 7.64. C= 3.99
 PERCENT SURVIVAL= 48.4. MEAN CROWN RATIO= 31.8. LAMBDA= .872
 CORRESPONDING SITE INDEX FOR BASE AGE 50+102

30	77	3	1	.0	12	41	10	8	47	38	41	33	22	16
	4	5	14	1.9	15	51	51	40	47	38	41	33	22	16
	5	14	5.3	18	58	51	40	47	120	120	139	114	107	86
6	27	5.3	21	64	155	126	147	120	139	139	284	313	259	
7	44	11.8	24	68	369	304	355	293	344	344	971	830	962	822
e	6.0	20.9	27	699	580	675	561	664	552	634	528			
3	6.9	30.5	29	711	1080	904	1046	878	1034	668	1000	847		
10	6.6	36.0	32	76	1337	1129	1298	1098	1288	1090	1261	1073		
11	3.4	3.3	34	78	1336	1137	1300	1108	1293	1103	1278	1090		
12	2.3	2.5	36	80	1004	656	976	834	971	830	962	822		
13	16	14.7	39	81	560	496	564	484	562	482	558	479		
14	6	6.4	41	82	256	220	249	214	248	214	247	213		
15	1	1.2	43	83	50	43	48	42	48	42	48	41		
					394	189.5	6928	5844	6705	5670	6632	5612	6444	5454

ARITH. MEAN DBH= 9.1. QUADRATIC MEAN DBH= 9.4. WEIBULL PARAMETERS A= 1.6. B= 6.28. C= 3.86
 PERCENT SURVIVAL= 39.4. MEAN & OWN RATIO= 29.8. LAMBDA= .917
 CORRESPONDING SITE INDEX FOR BASE AGE 50+102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 1200

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A" HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME		
							O.B.	I.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR O.B. TOPS OF	2 INCHES	3 INCHES
0.B.	I.B.	0.B.	I.B.	0.B.	I.B.	0.B.	I.B.	0.B.	I.B.	0.B.	I.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	Ft ³					
10	37	1	3	.0	33							
		2	35	.8	41	18	10	0				
		3	141	6.9	46	31	108	5				
		4	296	25.0	49	34	430	309				
		5	292	39.8	52	37	759	553	692	510	619	453
					54	38						
		6	121	23.0	56	40	455	341	421	318	399	302
		7	15	4.0			79	61	74	57	72	55
			893	100.2			1841	1340	1187	885	1090	810

ARITH. MEAN DBH= 4.4 QUADRATIC MEAN DBH= 4.5 WEIBULL PARAMETERS A= .3 B= 4.51 C= 4.38
PERCENT SURVIVAL= 74.4 MEAN CROWN RATIO= 5.0 LAMBDA= .366
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

15	53	2	2	.1	20							
		3	71	2.1	25	29	2	1				
		5	145	1.1	30	39	22	17				
		6	205	2.5	35	44	133	102				
					38	48	455 988	783 39	425 930	742 331	882 370	292 703
						51					209 730	574 154
		7	192	51.3	42	53	1327	1071	1261	1023	1225	994
		8	106	37.0	45	55	1002	820	958	797	942	774
		9	30	13.3	48	56	366	304	353	293	350	290
		10	4	2.2	50	57	62	52	60	50	59	49
			780	171.2			4359	3509	3987	3232	3828	3102
											3374	2718

ARITH. KAN DBH= 6.2 QUADRATIC MEAN DBH= 6.3 WEIBULL PARAMETERS A= .7 B= 5.98 C= 4.36
PERCENT SURVIVAL= 65.0 MEAN CROWN RATIO= 3.8 LAMBDA= .715
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

20	62	2	1	0	0							
		4	29	2.5	18	29	0	0				
		5	66	9.0	26	53	223	177	208	167	181	144
		6	113	22.2	29	57	592	477	561	455	531	431
		7	39.6	33	59		1107 1493	1229 903	1060 33	1184 867	1028	1164 842
					36						1347 999	1113 769
		8	143	49.9	62							
		9	97	42.5	39	63	1316	1093	1267	1056	1253	1045
		10	41	23.5	41.4	66	286 747	499	721	606 193	717	600 192
		11	2	7.3	46	67	52	44	50	43	50	43
		12		1.6								
											224 02	189 42
			661	198.7			5831	4799	5528	4571	5392	4461
											6003	4131

ARITH. MEAN DBH= 7.2 QUADRATIC MEAN DBH= 7.4 WEIBULL PARAMETERS A= 1.1 B= 6.77 C= 4.13
PERCENT SURVIVAL= 55.1 MEAN CROWN RATIO= 33.4 LAMBDA= .841
CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL -

T_p 1200

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	A". HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME								
							O.B.	I.B.	5-INCH CLASS AND GREATER. STUMP HEIGHT .5 FEET, FOR O.B. TOPS OF --			2 INCHES			3 INCHES		
							O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.	I.B.	O.B.

Yrs	Ft	In	No.	Ft ²	Pct	Ft	4	3	109	87	94	75	50	37	1043	866
25	70	3	4	.2	13	41	28	22								
		4	14	1.2	17	49										
		5	33	4.5	21	56	116	93	109	87	298	243	231	185		
		6	61	12.0	24	60	332	269	316	257						
		7	91	24.3	27	64	727	596	697	573	676	557	617	507		
		8														
		9	101	105	36.7	30	66	1150	951	1108	919	1091	905	1043	866	
					45.5	32	69	1518	1267	1468	1228	1451	1215	1416	1186	
		10	75		35	71	1431	1205	1367	1171	1377	1162	1353	1143		
		11	40	20.4	38	72	926	783	897	760	891	756	880	746		
		12	15	11.8	40	73	421	357	408	347	406	346	402	343		
		13	4	3.7	42	75	135	116	131	112						
		14	1	1.1	44	76	40	34	39	33	39	33	30	33		
							6828	5696	6560	5487	6454	5404	6160	5157		

ARITH. MEAN DBH= 8.1 . QUADRATIC MEAN DBH= 8.3 . WEIBULL PARAMETERS A = 1.4 , B = 7.46 , C = 3.96
 PERCENT SURVIVAL = 45.5 , MEAN CROWN RATIO = 30.0 , LAMBDA = .913
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

30	77	3	2	.1	41	2	2	1	11	57	46	50	40	26	19	
		4	7	.6	14	51	14	11								
		5	17		17	58	61	49								
		6	33	2.3	64	189	154	180	147							
		7	53	16.5	111	68	445	366	428	352	414	342	370	311		
		8	70		26	71	816	677	787	655	774	644	740	616		
		9	77	24.0	28	74	1205	1009	1167	979	1154	969	1125	945		
		10	73		31	76	1479	1248	1436	1214	1425	1206	1401	1186		
		11	55	30.8	33	78	1413	1203	1375	1172	1367	1166	1351	1153		
		12	32	25.1	35	80	1024	879	998	858	994	855	987	849		
		13	14	12.9	38	81	508	434	494	424	492	422	488	419		
		14	5	5.3	40	82	213	183	207	179	207	178	206	177		
		15	1	1.2	8	83	50	43	48	42	48	42	48	41		
		439		202.8		7419	6258	7177	6068	7095	6003	6881	5822			

ARITH. MEAN DBH= 9.0 QUADRATIC MEAN DBH= 9.2 WEIBULL PARAMETERS A = 1.6 , B = 8.12 , C = 3.84
 PERCENT SURVIVAL = 36.6 , MEAN CROWN RATIO = 28.2 , LAMBDA = .953
 CORRESPONDING SITE INDEX FOR BASE AGE 50=102

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_i 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME— 5-INCH CLASS AND GREATER, STUMP HEIGHT .5 FEET. FOR 0.8. TOPS OF --					
							0.8.	1.8.	0.8.	1.8.	0.0.	1.8.	0.8.	1.8.
Yrs	Ft	in	No.	Ft ²	Pct	Ft							Ft ³	
10	37	2	1	6	.0	30	12							
		2	65	1.4	38	24	0	0						
		3	232	11.4	43	30	18	10						
		4				34	174	114						
		5	359	30141.0	34.847	5136	1116	431	557	690	513	625	457	461
		6	76	14.9	56	38	286	214	264	200	251	190	216	162
		7	4	1.1	40	21	21	16	20	15	19	15	18	14
			1083	104.7		1866	1342	982	728		895	662	695	506
ARITH. MEAN DBH= 4.1 QUADRATIC MEAN DBH= 4.2 WEIBULL PARAMETERS A=.2, B=.4.22, C=.4.34														
PERCENT SURVIVAL- 72.2 MEAN CROWN RATIO- 47.5 LAMBDA= .431														
CORRESPONDING SITE INDEX FOR BASE AGE 50=102														
15	53	2	6	.1										
		3	36	1.8	18	11	2	2						
		4	107	9.3	23	48	35	26						
		5	205	28.0	33	51	200	154						
		6	263	51.6	37	1267	643	507	600	476	523	413	296	218
		7	207	55.3	40	53	1430	1154	1360	1103	1320	1071	1223	990
		8	89	31.1	44	55	841	688	804	661	791	650	757	622
		9	18	8.0	47	56	221	183	212	176	210	174	204	169
		10	1	.5	49	57	16	13	15	12	15	12	15	12
			932	185.7		4655	3731	4185	3379	3991	3222	3431	2746	
ARITH. MEAN DBH= 5.9 QUADRATIC MEAN DBH= 6.0 WEIBULL PARAMETERS A=.7, B=.5.71, C=.4.32														
PERCENT SURVIVAL- 52.1, MEAN CROWN RATIO- 36.3, LAMBDA= .776														
CORRESPONDING SITE INDEX FOR BASE AGE 50=102														
20	62	2	.0											
		3	2	.6	11	28	1							
		4	13	.6	16	40	13	10						
		5	42	12.53.7	24	53	83	65						
		6	150	29.5	28	56	310	247	290	232	252	201	134	99
		7	184	49.2	31	59	1376	1123	1317	1078	1278	1047	1168	956
		8	159	55.5	34	61	1631	1344	1568	1295	1544	1276	1477	1222
		9	94	41.5	37	63	1276	1060	122	1023	1214	1013	1179	903
		10	34	18.5	40	65	591	495	570	479	565	475	555	466
		11	7	4.6	43	66	150	127	145	123	144	122	142	120
		12	1	.8	45	67	26	22	25	21	25	21	25	21
			776	216.5		6232	5118	587	4846	5717	4718	5241	4316	
ARITH. MEAN DBH= 7.0 QUADRATIC MEAN DBH= 7.1 WEIBULL PARAMETERS A= 1.0, B= 6.53, C= 4.10														
PERCENT SURVIVAL- 51.9, MEAN CROWN RATIO- 31.0, LAMBDA= .896														
CORRESPONDING SITE INDEX FOR BASE AGE 50=102														

YIELDS GIVEN T_p WITH IDEAL SURVIVAL —

T_p 1500

S_I 70

GROWING SEASONS SINCE EST.	AV. D+C HT.	DBH	STEMS PER ACRE	BASAL AREA	CR	AV. HT.	ALL TREES GROUND TO TIP		CUBIC FOOT VOLUME 'FINCH CLASS AND GREATER. STUMP HEIGHT .5 FEET. FOR 0.6. TOPS OF --			
							0.8.	1.8.	2 INCHES	0.8.	1.8.	3 INCHES

Yrs	Ft	In	No.	Ft ²	Pct	Ft			Ft ³			
25	70	2	1	.0	8	28	0	0				
		3	5	.2	12	41	5	4				
		4	19	1.7	16	50	39	30				
		5	45	6.1	19	56	158	126	148	119	128	103
		6	80	15.7	22	61	442	358	420	342	397	323
		7	114	30.5	25	65	923	756	885	728	858	707
		8	130	45.4	28	67	1442	1194	1390	1153	1368	1136
		9	114	50.4	31	70	1701	1421	1645	1377	1626	1362
		10	76	41.5	34	71	1450	1222	1406	1186	1396	1178
		11	36	23.9	36	73	844	713	817	693	812	689
		12	11	8.6	39	74	312	265	303	258	301	257
		13	2	1.8	41	76	69	59	66	57	66	56
			633	225.7			7385	6148	7080	5913	6952	5812
											6590	5504

ARITH. MEAN DBH= 7.9 . QUADRATIC MEAN DBH= 8.1 . WEIBULL PARAMETERS A= 1.3 , B= 7.24 , C= 3.93
PERCENT SURVIVAL= .412 , MEAN CROWN RATIO= 2.7 . 9 , LAMBDA= .963
CORRESPONDING SITE INDEX FOR BASE AGE 50-102

30	77	3	2	.8	10	41	2	2				
		4	9	1	51							
		5	22	8.2	19	64	79	64	74	60	64	52
		6	42	17.6	22	68	241	196	229	187	216	177
		7	66				554	455	532	439	516	426
		9	85	29.7	27	71	990	922	956	795	940	783
		10	92	43.6 40.6	29	74	1621	1381 1205	1395	1170	1379	1157
		11	80									
		12	56	24.3 37.0	34	80	148 92	124 82	140 67	119 82	1963	1188 828
		13	12	11.1	36	82	435	372	423	363	422	362
		14	1	4.31.2	41	83	111 50	147 43	161 48	148 42	148	143
			502	221.6			8032	6765	7764	6555	7668	6479
											7413	6262

ARITH. MEAN DBH= 8 . 7 . QUADRATIC MEAN DBH= 9 . 0 . WEIBULL PARAMETERS A= 1 . 6 , B= 7.92 , C= 3.81
PERCENT SURVIVAL= .235 , MEAN CROWN RATIO= 2.6 . 3 , LAMBDA= .998
CORRESPONDING SITE INDEX FOR BASE AGE 50-102

Feduccia, D. P., T. R., Dell, W. F. Mann, Jr., T. E. Campbell, and B. H. Polmer.

1979. Yields of unthinned loblolly pine plantations on cutover sites in the West Gulf region, U.S. Dep. Agric. For. Serv. Res. Pap. SO-148, 88 p. South. For. Exp. Stn., New Orleans, La.

Detailed tables of trees per acre, basal area, average height, crown ratio, and cubic-foot volumes are presented by 1-inch diameter classes for several combinations of site index, plantation age, and (1) number of trees surviving, (2) number of trees planted and an ideal survival pattern, and (3) number of trees planted and a typical survival pattern.

Additional keywords: *Pinus taeda*, volume predictions, unthinned plantation yields, volume yields of loblolly pine, Weibull distribution, taper curves, crown ratio, survival prediction, problem-free sites.