U. S. Department of Agriculture
Forest Service Research Paper SO-133

Yield Tables and Stand Structure for Unthinned **Longleaf** Pine Plantations in Louisiana and Texas

RICHARD E. LOHREY
AND
ROBERT L. BAILEY

Southern Forest Experiment Station

SUMMARY

A system of equations is developed to forecast number of trees per acre, basal area, and cubic foot yields in eight volume categories by 1-inch diameter classes for several combinations of site index, age from planting, and either number of trees planted, number of trees surviving, or basal area at a given age.

Additional keywords: Pinus palustris, volume predictions, unthinned plantation yields, volume yields of longleaf pine.

Conversion factors: English to metric

Multiply	By	To Obtain
Inches	x 2.540	= centimeters
Feet	x .3048	= meters
Cubic feet	x .02832	= cubic meters
Number per acre	x 2.471044	= number per hectare

All English units of measure in this report can be converted to metric units by multiplying by the appropriate conversion factor listed above.

Yield Tables and Stand Structure for Unthinned Longleaf Pine Plantations in Louisiana and Texas

RICHARD E. LOHREY
AND
ROBERT L. BAILEY

Longleaf pine (Pinus palustris Mill.) forests once occupied 60 million acres from Virginia to Texas, but their area was greatly decreased when the original stands were harvested. In Louisiana and Texas there is renewed interest in the species. Landowners need to know what yields can be expected from longleaf pine plantations before large expenditures for planting can be considered.

This paper presents equations that make it possible to forecast:

a. Number of trees per acre surviving at age 16 years from number of trees planted and site index.

b. Number of trees per acre surviving at a future age (A_2) from the number at a first inventory (A_1).

c. Diameter distributions from number of living trees per- acre, age, and height of the dominant stand.

d. Basal area per acre from number of living trees per acre, age, and height of dominant stand.

e. Total volume yields i.b. or o.b. in all trees and merchantable volume yields i.b. or o.b. in trees > 3.5 inches d.b.h. to any top diameter o.b. of 4 inches or less from site index, age, and one of the following: number of trees planted, number of trees surviving, or basal area at a given age.

f. Periodic volume growth, in the same units as yields, for a given age interval (A_1 to A_2), site index, and either surviving stems or basal area per acre at age A_1.

Readers interested only in Stand and Stock Tables and a brief discussion of growth trends should turn directly to page 9.

The Stand and Stock Tables show expected cubic-foot yields, basal area, and number of stems by l-inch diameter classes for several combinations of:

Density at age 15 years-100 to 700 trees per acre in increments of 100
Site index (base age 25)--40 to 70 feet in intervals of 10
Age from planting-13 to 40 years in intervals of 5.

Similar tables for various combinations of site index, age, and basal area, or for combinations of site index, age, and number of trees per acre planted, can be derived from the equations. Readers with computer facilities can acquire copies of the programs, which are written in FORTRAN, from the Southern Forest Experiment Station, Biometrics Branch, T-10210 U. S. Postal Service Building, 701 Loyola Avenue, New Orleans, Louisiana 70113.

PLANTATION MEASUREMENTS

Diameter, height, and age data were obtained from 260 unthinned plots in longleaf pine plantations in central Louisiana and east Texas, and from 176 remeasurements on these plots. All stands were at least 16 years old from planting, were on unprepared cutover forest *sites,* showed no evidence of severe insect or disease damage, and most had been burned by prescription. The extent to which hardwood understories were present depended upon ● the

The authors are silviculturist, Southern Forest Experiment Station, Alexandria, La. and Manager, Southern Forestry Research, Weyerhaeuser Company, Hot Springs, Ark., formerly Mathematical Statistician, Biometrics Branch, Southern Forest Experiment Station, New Orleans, La.

frequency and effectiveness of prescribed fires.

All plots were rectangular and 0.10 to 0.25 acre in area. The diameter at breast height of each tree on the plot was measured to the nearest 0.1 inch. Total heights of 8 to 15 dominants and codominants per plot were measured to the nearest 1.0 foot. Stand age, determined from planting records, was used with mean total height of dominants and codominants to determine site index (at base age 25 years) for each plot (Farrar 1973).

The distribution of observations by age, site index, and surviving density is shown in table 1. Plantation ages ranged from 16 to 38 years, site indices from 29 to 73 feet, planting densities from 250 to 2,500 trees per acre, and surviving densities from 30 to 1,547 trees per acre. Only 26 plots had more than 750 and 6 plots more than 1,000 surviving pines per acre. Longleaf usually has lower stocking levels than other southern pines, and most plots had densities that were from low to medium for other species.

Heights to succeeding 2-inch diameter taper steps outside bark were measured to the nearest foot on sample trees proportioned among diameter classes, and volumes of these trees were determined by height accumulation (Grosenbaugh 1954). Plot volumes, basal areas, and diameter distributions were computed from diameter data and sample tree volumes (Lohrey and Dell 1969). Height accumulation data from 1,245 trees randomly selected from 73 plots' were used to develop relationships between tree basal area and volume.

MODEL DEVELOPMENT AND EVALUATION

Survival

Two procedures were derived for estimating the number of surviving trees per acre. The first predicts living stems per acre at age 16, and the second predicts number of survivors 1 or more years after an inventory made at age 16 or later.

The number of trees planted and site index were screened to estimate transformed survival proportion of the number planted on 166 plots measured at age 16. The arcsine - square root transformation [$Y = \sin^{-1}(\sqrt{x})$, where x = proportion of stems surviving] was used to stabilize the variance and better satisfy normality of error assumptions. The equation for the number of survivors at age 16 is

$$\hat{N}_{16} = N_0 \sin^2[0.862809 + 0.449040 S^3 10^{-5} - 0.002801 S \text{ Ln } (N_0)] \quad (1)$$

where

N_0 = trees per acre planted,
$\hat{N}_{16}$ = predicted trees per acre at age 16 years,
S = site index (25),
Ln = natural (base e) logarithm, and angles are measured in radians.

The equation explained 65.9 percent of the variation in surviving stems per acre at age 16 vears.

Data used to estimate survival came from both prescribe burned and unburned stands. Burning at early ages doubled survival at age 16 in one study. In estimating yields, therefore, it is better to use number of survivors or basal area per acre rather than the number of trees planted.

Data from 176 remeasurements on plots that were 16 to 30 years old when first measured were screened to fit an equation that estimates stand density at the second inventory as a proportion of that at the first one. The proportion was related to age and stand density at the first inventory. The arcsine - square root transformation was used again. The equation for surviving trees after an initial inventory is:

$$\hat{N}_2 = N_1 \{ \text{Sin}^2 [\pi/2 + (1 - A_1/A_2)(-2.827365 - 0.032141 \sqrt{N_1} + 0.221332 A_1 - 0.004125 (A_1)^2)] \}, \quad (2)$$

where

A_1 = stand age in years at the first inventory,
A2 = stand age in years at the second inventory,
N_1 = stems per acre at age A_1,
$\hat{N}_2$ = predicted stems per acre at age A_2, and angular measurements are in radians.

Table 1. --Distribution of observations in unthinned longleaf pine plantations by age, site index and surviving density

Age	Site index (age 25)					Total
	26-35	36-45	46-55	56-65	66-75	
Years	*Number of points*					
15-19	5	53	62	38	17	175
20-24	...	22	58	33	1	114
25-29	...	14	40	13	...	67
30-34	...	9	31	3	...	43
35-39	...	5	30	2	...	37
Total	5	103	221	89	18	436

Age	Surviving density (trees per acre)						Total
	0-150	151-250	251-350	351-450	451-550	551+	
Years	*Number of points*						
15-19	58	32	27	16	9	33	175
20-24	17	9	15	20	19	34	114
25-29	17	7	11	5	7	20	67
30-34	16	6	7	7	1	6	43
35-39	24	10	2	1	...	...	37
Total	132	64	62	49	36	93	436

Site index (age 25)	Surviving density (trees per acre)						Total
	0-150	151-250	251-350	351-450	451-550	551+	
Feet	*Number of points*						
26-35	4	1	...	...	...	...	5
36-45	81	9	6	3	2	2	103
46-55	45	42	48	28	19	39	221
56-65	2	12	8	18	15	34	89
66-75	...	...	...	...	...	18	18
Total	132	64	62	49	36	93	436

A logical constraint within the equation forces $\hat{N}_2 = N_1$ if $A_2 = A_1$. Equation (2) explains 99.7 percent of the variation about mean N_2 for the 176 remeasurements.

By using equation (1), (2), or both (1) and (2), the number of trees per acre can be determined for any planting density, site index, and age $\geq$ 16 years. To construct yield tables, survival at age 15 was obtained by extrapolation.

Diameter Distributions

The Weibull probability density function was fitted to the 1-inch-class diameter distributions (Bailey and Dell 1973) by maximum-likelihood estimation (Bailey 1974). Only 1 fitted distribution out of 436 was significantly different from the observed when tested by the Kolmogorov-Smirnov test (Massey 1951) at the 0.10 probability level and none at the 0.05 level. Maximum difference between quadratic means of fitted and observed distributions was -0.643 inch.

The three Weibull parameter estimates (a, b, and c) can be transformed into distribution percentiles by applying equations of the form:

$$\hat{Y}_p = a + b\,(-\mathrm{Ln}\,(1-p))^{c} \qquad (3)$$

where $\hat{Y}_p$ is the estimated distribution percentile, p is the probability of a value less than $\hat{Y}_p$, and Ln (1-p) is the natural (base e) logarithm of the quantity (1-p).

Conversely, Weibull parameters for the two-parameter formulation (b and c only, a = 0) can be determined from any two percentiles. An approach was developed along these lines which uses the 24th and 93rd percentiles (Bailey 1973). Various linear and curvilinear functions of stand age, height of dominants and codominants, and number of surviving trees were screened in all possible regressions with the REX program (Grosenbaugh 1967) to find three-variable equations that gave best predictions of the two percentiles. The equations are:

$$\hat{Y}.24 = 15.2275 - 1.2961\ \mathrm{Ln}(N_t) + 0.3362\ A^3\ 10^{-4} - 0.1652\ H^{-1}10^3, \qquad (4)$$

$R^2 = 0.74;$

$$\hat{Y}.93 = 17.8711 - 1.1191\ \mathrm{Ln}(N_t) + 0.9717\ A^3\ 10^{-4} - 0.1651\ H^{-1}10^3, \qquad (5)$$

$R^2 = 0.89;$

where

$\hat{Y}.24$ and 6.93 are predicted values of the percentiles computed from maximum-likelihood estimates of a, b, and c,

A = stand age,

H = height of dominant stand at age A, and

N_t = number of surviving trees per acre at age A.

Equations (4) and (5) and the expressions:

$$\hat{c} = 2.271082/\mathrm{Ln}(Y.93/Y.24) \text{ and}$$

$$\hat{b} = Y.24/(0.274436)^{1/\hat{c}} \text{ (Bailey 1973)} \qquad (6)$$

were used to predict b and c of the two-parameter Weibull. Eighty-three percent of the estimated diameter distributions were not significantly different from the observed ones at the 0.05 level and 89 percent of the deviations between observed and predicted mean diameters were within + 1.0 inch.

Because predicted values with equations (4) and (5) are sometimes negative--especially for early ages, low site indices, or high densities--lower bounds of 2.5 and 1.5 were placed on predictions of b and c to keep predicted volumes from being negative.

Basal Area

Basal area per *acre* can be determined from the number of trees per acre and the corresponding diameter distribution parameters. The number of trees can be determined by equation (1), (2) or both (1) and (2) and Weibull parameters b and c by equations (4), (5), and (6). Then basal area per acre can be estimated by the equation:

$$\hat{B} = 0.005454\ N_t\ \hat{b}^2\,\Gamma\,(1 + 2/\hat{c}), \qquad (7)$$

where

$\hat{B}$ = basal area per acre,

$\hat{b}$ & $\hat{c}$ = predicted Weibull parameters, and
$\Gamma(x)$ = gamma function of x
$= \int_0^\infty e^{-t} t^{x-1}\, dt$.

This method explained 79 percent of the variation in basal area for the 176 remeasurements and 74 percent of the variation in basal area for the 166 plots measured at age 16.

When specific levels of basal area are desired, equations (4), (5), (6), and (7) are iteratively solved for the corresponding N_t.

Volume Yields

Stand basal areas from the 436 yield observations were used to develop volume yield prediction equations. A yield model reported by Clutter (1963) was fitted:

$$E[Y_i] = b_0 + b_1 S + b_2 (A_i)^{-1} + b_3 \mathrm{Ln}(B_i), \quad (8)$$

where
Y_i = natural logarithm of stand volume in cubic feet at age A_i in years,
S = site index in feet,
$\mathrm{Ln}(B_i)$ = natural logarithm of stand basal area in square feet at age A_i, and E indicates expected value.

The mathematical form of the model is desirable because it implies relationships that agree with certain concepts of even-aged stand development. Using Ln(V) in place of V as the dependent variable is compatible with statistical assumptions (linearity, normality, additivity, and homogeneity of variance), and is a convenient way to express mathematically the interaction of the independent variables (Clutter 1963).

From the basic model, equations that predict the following are developed:

Symbol	Description
V_0	Volume in cubic feet per acre of total bole outside bark including all trees with d.b.h. > 0.5 inch.
V_i	Volume in cubic feet per acre of total bole inside bark including all trees with d.b.h. > 0.5 inch.
V_{40}	Volume in cubic feet per acre outside bark to a 4-inch top o.b. including all trees with d.b.h. > 3.5 inches.
V_{4i}	Volume in cubic feet per acre inside bark to a 4-inch top o.b. including all trees with d.b.h. > 3.5 inches.

Two logical requirements were placed on predicted yields:

$$\hat{V}_o \geq \hat{V}_i \geq \hat{V}_{4i}, \text{ and}$$
$$\hat{V}_o \geq \hat{V}_{4o} \geq \hat{V}_{4i} \quad (9)$$

When merchantable yield data were initially fitted to the model these requirements were violated, so differences between total and merchantable yields were predicted as proportions of total yield. The arcsine-square root transformation was used to normalize errors. The equations are:

$$\mathrm{Ln}(\hat{V}_o) = 3.291079 + 0.014579S - 16.513309/A + 0.976898\mathrm{Ln}(B), \quad (10)$$

$$\mathrm{Ln}(\hat{V}_i) = 3.178362 + 0.015977s - 22.532962/A + 0.967366\mathrm{Ln}(B), \quad (11)$$

$$\mathrm{Sin}^{-1}\{(1-\hat{V}_{4o}/V_o)^{1/2}\} = 1.147626 - 0.035842A + 0.610749A^3\, 10^{-5} + 0.001449B - 0.983740S^3\, 10^{-6}, \quad (12)$$

$$\mathrm{Sin}^{-1}\{(1-\hat{V}_{4i}/V_i)^{1/2}\} = 1.197269 - 0.034380A + 0.554603A^3\, 10^{-5} + 0.001506B - 0.821871S^2\, 10^{-4}, \quad (13)$$

In constructing the Stand and Stock Tables presented in the appendix, these four equations were solved for total and merchantable volume yields inside and outside bark. The tables were derived from observed stems per acre, and the equations explained 92 to 94 percent of the variation in volume (Table 2, section II). Average errors ranged from 0.5 to 4.7 percent.

When stand yields were predicted from observed basal area each equation explained 98 percent of the variation about mean volume (Table 2, section III). The equations explained 73 to 80 percent of the variation in yields when estimated basal area (determined from planting density) was substituted for observed basal area

Table 2. -Evaluation of predicted survival, basal area, and volume yields per acre

Variable[1]	R^2	Average errors	Predicted relative to observed were within: 10 percent	25 percent	20 units	50 units	100 units	500 units	Predicted minus observed: Negative	Positive
		- Percent -	- - - - - - - - - - Percent of cases - - - - - - - - - - - - - -							
		I Survival, basal area, and volume yields predicted from planting density[2]								
S.P.A.	43	-10.6	13	36	20	35	55	98	69	31
B.A.	67	-10.2	15	49	62	93	100	100	73	27
V_o	73	- 8.8	16	48	6	15	27	62	73	27
V_i	74	- 8.8	17	48	8	22	35	72	72	28
V_{4o}	78	- 3.4	21	50	9	19	32	68	71	29
V_{4i}	80	- 6.1	20	50	14	27	43	79	70	30
		II Basal area and volume yields predicted from observed stems per acre[2]								
B.A.	88	- .3	40	84	84	99	100	100	57	43
V_o	92	.5	38	78	9	22	38	86	57	43
V_i	93	.5	39	80	14	31	50	92	56	44
V_{4o}	93	4.7	38	78	10	25	44	88	55	45
V_{4i}	94	2.2	38	79	14	34	54	94	54	46
		III Survival and volume yields predicted from observed basal area per acre[2]								
S.P.A.	60	10.9	27	59	27	49	72	98	43	57
V_o	98	.7	65	95	18	36	57	96	53	47
V_i	98	.7	63	95	25	45	67	98	49	51
V_{4o}	98	4.3	60	90	19	37	57	97	50	50
V_{4i}	98	2.2	58	90	25	48	69	97	48	52
		IV Future survival, basal area, and volume yields predicted from current basal area[3]								
S.P.A.	94	- 5.6	67	88	61	84	93	100	72	28
B.A.	93	6.4	57	a7	94	100	100	100	34	66
V_o	94	6.4	43	86	9	19	31	90	39	61
V_i	95	6.3	44	a7	12	26	44	97	40	60
V_{4o}	94	8.9	38	a2	a	19	30	93	32	68
V_{4i}	96	8.9	40	80	13	28	40	99	34	66
		V Future survival, basal area, and volume yields predicted from Current stems peracre[3]								
S.P.A.	99	1.5	90	99	91	100	100	100	62	38
B.A.	79	2.9	38	78	al	98	100	100	50	50
V_o	86	3.0	34	81	5	13	27	al	49	51
V_i	90	2.8	35	al	7	la	41	90	50	50
V_{4o}	88	5.6	42	80	7	18	36	84	45	55
V_{4i}	92	5.5	39	82	14	26	48	94	44	56

[1] S.P.A. = stems per acre, B.A. = basal area, V_o = total volume outside bark, V_i = total volume inside bark, V_{4o} = merchantable volume outside bark, and V_{4i} = merchantable volume inside bark.

[2] Based on data from 436 yield observations.

[3] Based on data from 176 remeasurements at 3- to 5-year intervals.

(Table 2, section I). Average errors were considerably higher when estimated basal areas were used because equation (7) was not highly efficient in estimating stand basal area. The user may get better results than we did by substituting his own survival estimate into the system to predict yields from planting density. For the 176 remeasurements, yields were forecast with 86 to 96 percent of the variation explained (Table 2, sections IV and V).

Volumes by Diameter Classes

To find the proportion of the volumes in each diameter class, volume was assumed to be a linear function of basal area. Requirements of the relationship were that constraints of (9) should not be violated for any diameter class and the relationship should be dependent on stand age, site index, and basal area per acre. The first requirement was satisfied by having one slope coefficient for all outside bark equations and another for all inside bark equations. This presumes that volume per tree above the 4-inch top is constant for all diameter classes on each plot. Although top volumes are sometimes inversely correlated with diameter, use of separate linear regression coefficients for different top diameter limits could cause the regression lines to cross and violate constraints of (9). Constant upper stem volumes were considered less undesirable. The second requirement was satisfied by forcing the equations to go through the average volume per tree for trees of average basal area.

Equations were fitted with data from 1,245 trees randomly selected from 73 plots. Statistical tests revealed no significant difference in slope coefficients for either the inside- or outside-bark regressions at the 0.05 level, which justified the presumption of constant top volume. Coefficients are $\hat{\beta}_1$ = 33.718518 for outside bark and $\hat{\beta}_2$ = 25.169762 for inside bark volumes. The fitted equations accounted for 95 percent or more of the pooled variation about mean plot volumes.

After common slopes were computed and tested, intercepts were determined to minimize the sum of squared deviations between average volume per tree and predicted volumes for trees of average basal area. For given values of stand volumes, basal area, and live trees per acre the resulting estimates are:

$$\hat{\alpha}_1 = \{V_o + V_i - (\hat{\beta}_1 + \hat{\beta}_2) B\} / 2N_t$$

$$\hat{\alpha}_2 = \{V_{40} + V_{4i} - (\hat{\beta}_1 + \hat{\beta}_2) B\} / 2N_t.$$

Another constraint required the intercept for merchantable volume on the basal area axis to equal or exceed that for total volume and for both to equal or exceed 0.

Volume to Other Top Limits

To provide further utility in the system, volumes to 2-inch and 3-inch tops were calculated by interpolation under the assumption that boles are conic above the 4-inch diameter. The outside bark diameter of 4 inches, outside bark volumes, and the formula for the volume of a cone were used to determine stem length above the 4-inch diameter. This length, inside bark volumes, and the formula for cone volume were then used to obtain inside bark diameter at the 4-inch outside bark diameter point. All necessary information was than available to determine interpolated outside and inside bark volumes to any intermediate diameter between 0 and 4 inches.

Comparisons

This system has two desirable features not available in other diameter-distribution yield tables. First, volume yields may be predicted accurately from either observed basal area or stems per acre, which makes the system more versatile than those restricted to one measure of stand density. Second, future conditions may be forecast directly from present density without involving initial planting spacing.

Predictions of volume yields per acre from this system are more precise than those in other studies. Coefficients of determination (R^2) were 98 percent when yields were estimated from observed basal area and ranged from 92 to 94 percent when estimated from stems per acre. Values of R^2 were 85 percent for shortleaf and 91 percent for loblolly pine merchant-

able yields estimated from observed stems per acre in similar studies (Smalley and Bailey 1974a and 1974b). Average errors for most yield estimates were less than those for old-field plantations of loblolly (Lenhart and Clutter 1971, Lenhart 1972) or slash pine (Bennett 1972).

Literature Cited

Bailey, R. L.
1973. Weibull model for Pinus radiata diameter distributions. Pages 51-59 In Proc. Fourth Conf. of the Advis. Group of For. Stat. IUFRO, Statistics in Forestry Research, Subject Group S6.02, Vancouver, B.C.

Bailey, R. L.
1974. Announcement: Computer programs for quantifying diameter distributions with the Weibull function. For. Sci. 20: 229.

Bailey, R. L., and T. R. Dell.
1973. Quantifying diameter distributions with the Weibull function. For. Sci. 19: 97-104.

Bennett, F. A.
1972. Cubic yields for slash pine in soil bank plantings. USDA For. Serv. Res. Note SE-182, 7 p., Southeast. For. Exp. Stn., Asheville, N. C.

Clutter, J. L.
1963. Compatible growth and yield models for loblolly pine. For. Sci. 9: 354-371.

Farrar, R. M., Jr.
1973. Southern pine site index equations. J. For. 71: 696-697.

Grosenbaugh, L. R.
1954. New tree-measurement concepts: height accumulation, giant tree, taper and shape. USDA For. Serv. Occas. Pap. 134, 32 p., South- For. Exp. Stn., New Orleans, La.

Grosenbaugh, L. R.
1967. REX-FORTRAN-4 SYSTEM for combinatorial screening or conventional analysis of multivariate regressions. USDA For. Serv. Res. Pap. PSW-44, 47 p. Pac. Southwest. For. and Range Exp. Stn., Berkeley, Calif.

Lenhart, J. D.
1972. Cubic-foot yields for unthinned old-field loblolly pine plantations in the Interior West Gulf Coastal Plain. Tex. For. Pap. 14, 46 p., Stephen F. Austin State Univ., Nacogodoches, Tex.

Lenhart, J. D., and J. L. Clutter.
1971. Cubic-foot yields tables for old-field loblolly pine plantations in the Georgia Piedmont. Ga. For. Res. Counc. Rep. 22--Ser. 3, 13 p.

Lohrey, R. E., and T. R. Dell.
1969. Computer programs using height accumulation for tree volumes and plot summaries. J. For. 67: 554-555.

Massey, F. J., Jr.
1951. The Kolmogorov-Smirnov test for goodness of fit. 3. Am. Stat. Assoc. 46: 68-78.

Smalley, G. W., and R. L. Bailey.
1974a. Yield tables and stand structure for loblolly pine plantations in Tennessee, Alabama, and Georgia highlands. USDA For. Serv. Res. Pap. SO-96, 81 p. South. For. Exp. Stn., New Orleans, La.

Smalley, G. W., and R. L. Bailey.
1974b. Yield tables and stand structure for shortleaf pine plantations in Tennessee, Alabama, and Georgia highlands. USDA For. Serv. Res. Pap. SO-97, 57 p. South. For. Exp. Stn., New Orleans, La.

STAND AND STOCK TABLES

The tables that follow are consistent with known growth and yield of longleaf pine plantations that are 15 to 40 years old and 40 to 7.0 feet in site index. Some trends are:

Survival.-Survival percentages increased directly with site index and decreased with planting density and age (fig. 1). Stands that initiated height growth soon after planting had tall trees, high site indices, and high survival. A prolonged grass stage, unique to longleaf pine, resulted in short trees and poor survival at any age. The relationship of survival to site was opposite that reported for other species (Smalley and Bailey 1974a and 1974b).

Basal area.-Total basal area of all trees increased directly with site and age at all planting densities and with planting density and age on all sites (fig. 2).

Quadratic mean diameter.-Mean diameters increased directly with age and decreased with stand density on all sites (fig. 3). They were more closely related to number of survivors than to number of trees planted. Diameters generally increased with site index but occasionally decreased on the best sites, probably because there were more stems per acre. Diameter distributions may be more useful than mean diameters in many situations.

Yields.—Total and merchantable cubic-foot yields increased with site index, age, and planting density (fig. 4). A lo-foot increase in site index doubled early yields. Volumes per acre were low at age 20 years but doubled or tripled by age 30 and nearly doubled again by age 40. Net yield and mean annual increment had not culminated to age 40 years for any site or planting density.

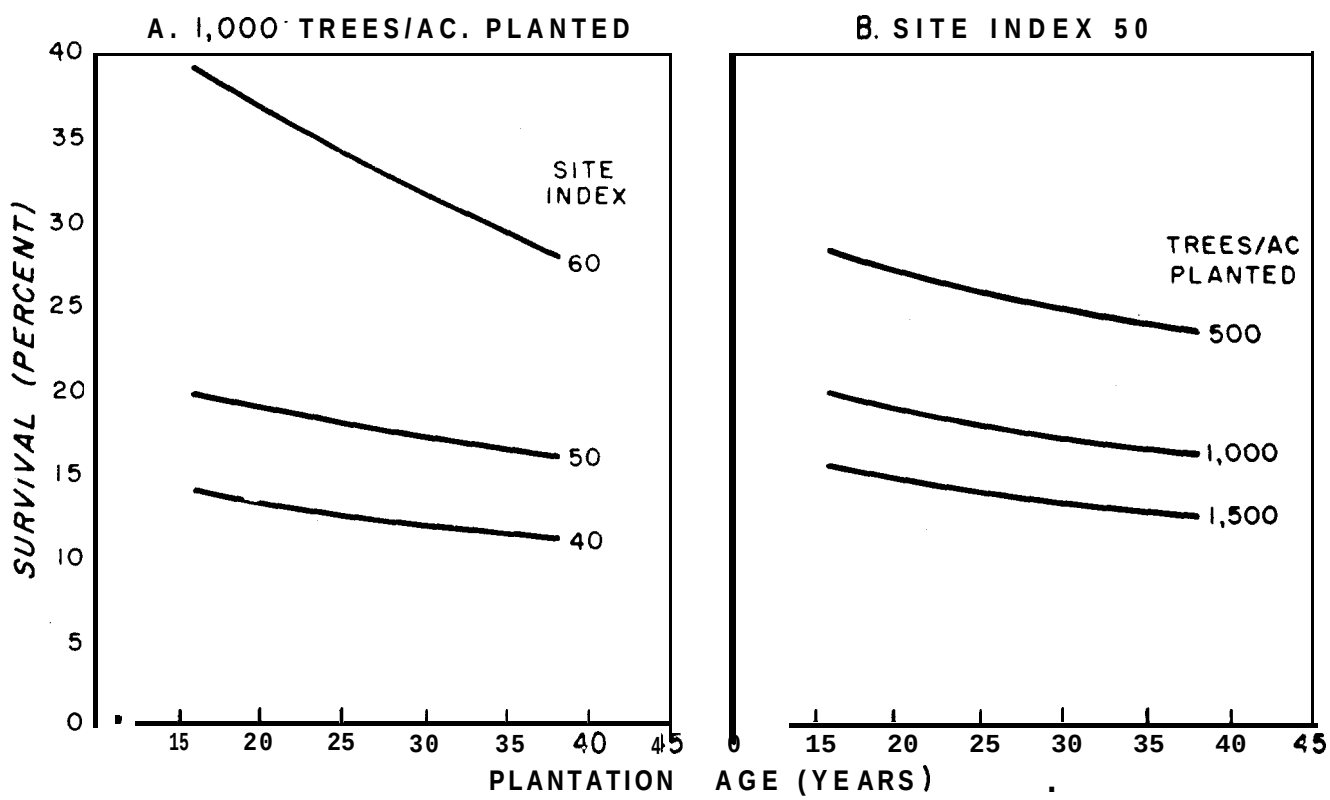

Figure 1. -Survival related to age for different sites (A) and planting densities (B).

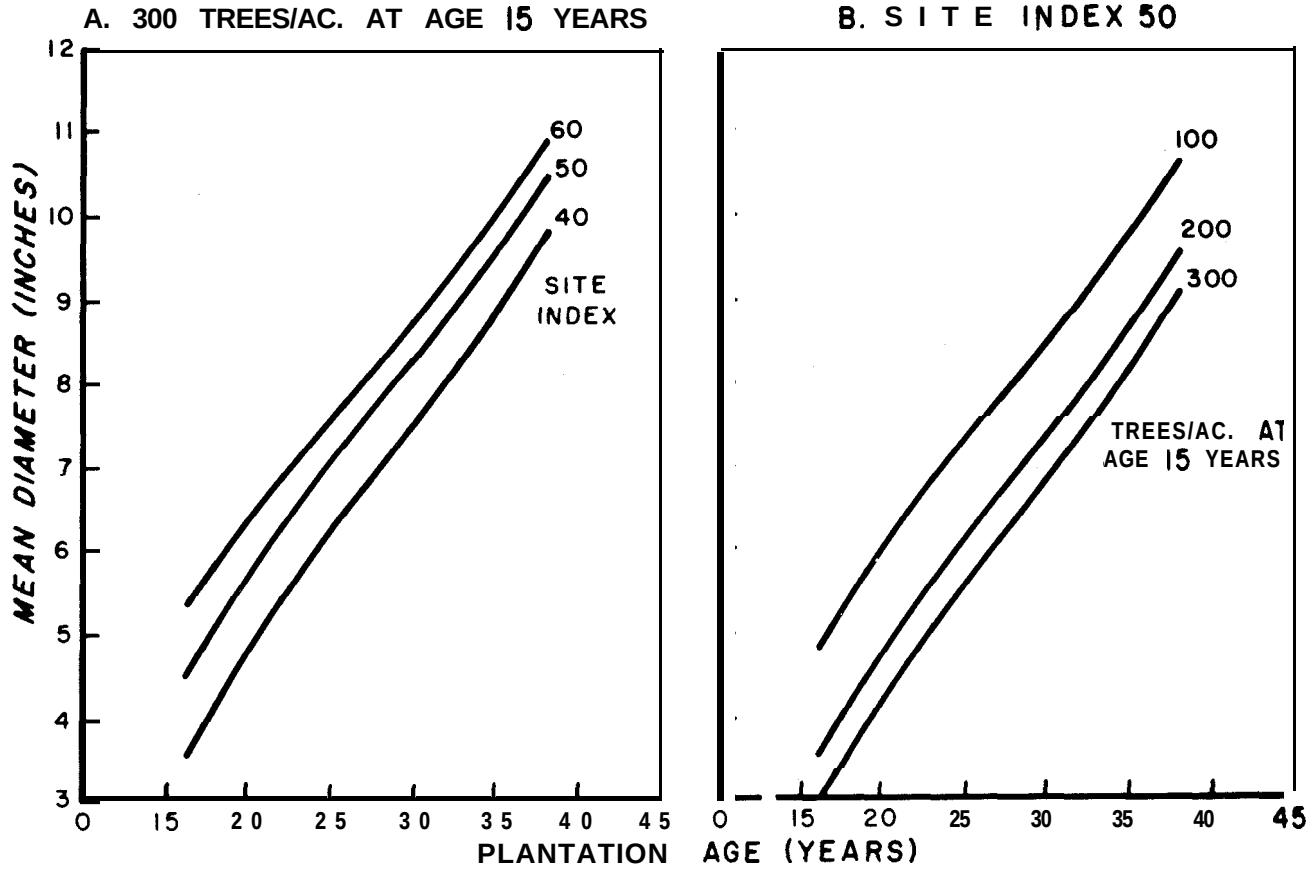

Figure 2.-Total basal area per acre related to age *for different sites (A) and planting densities (B).*

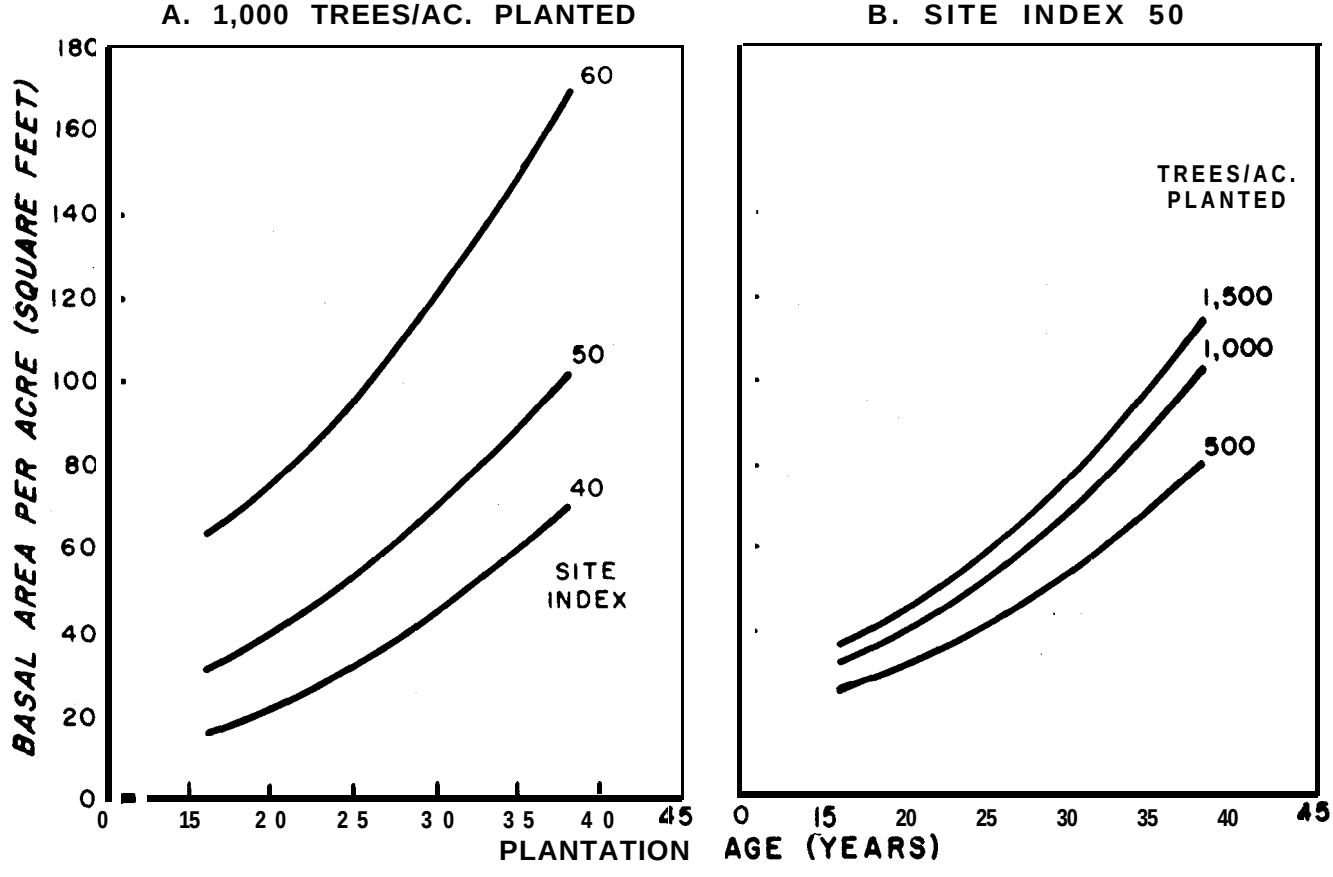

Figure 3.-Quadratic mean diameter *related to age for different sites (A) and stand densities at age 15 years (B).*

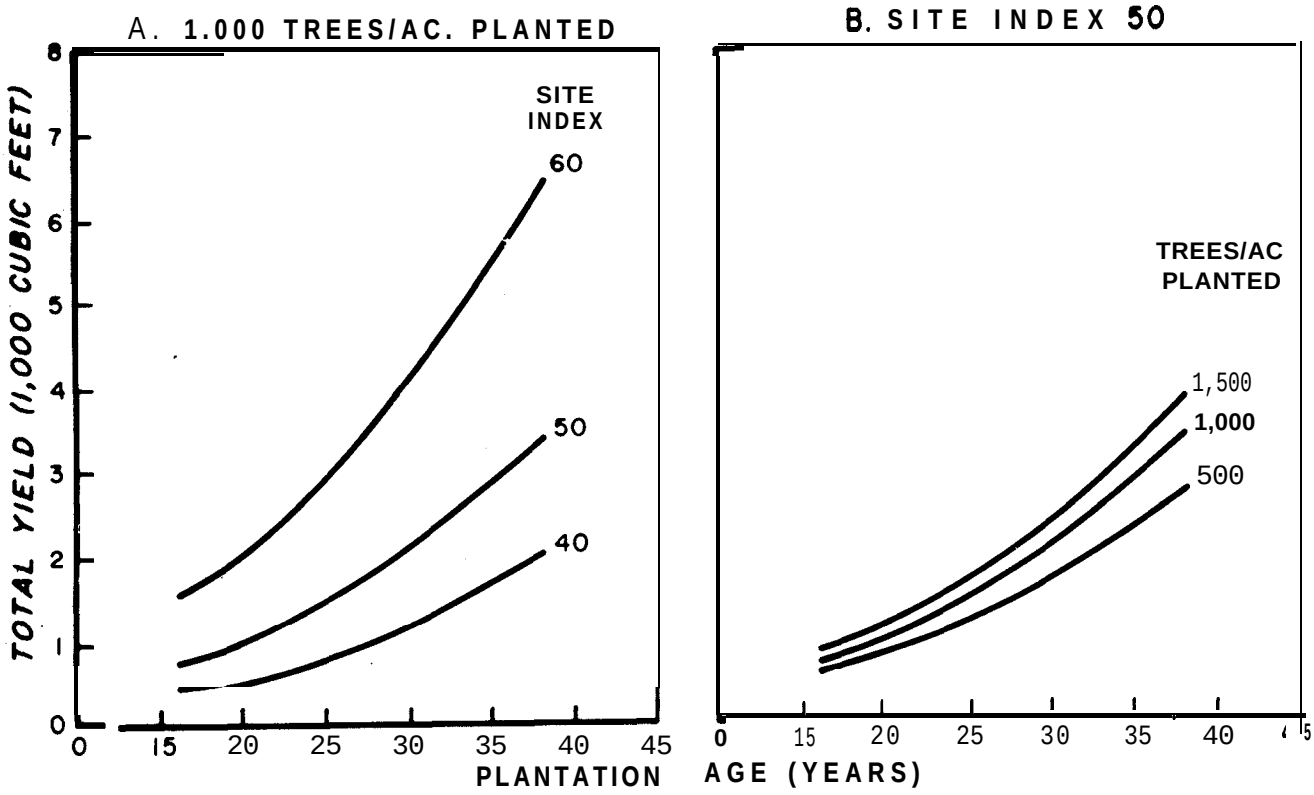

Figure 4. -Total yield per acre of entire stem (outside bark) of all trees related to age for different sites (A) and planting densities (B).

SI 40

100 trees per acre

Age	AV. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total o.b.	All trees, total i.b.	4-inch class and greater to o.b. tops of— 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.	Ft2	Ft3							
IS	23	1	10	.1	0	0						
		2	19	.4	0	0						
		3	2s	1.2	6	0						
		4	21	1.6	26	14	2s	13	22	II	17	8
		5	14	I.9	3s	23	34	22	31	20	26	16
		6	7	1.4	29	20	28	19	26	18	22	IS
		7	3	.8	18	13	18	13	16	12	14	10
		8	1	.3	6	6	8	6	7	5	6	4
			100	7.9	122	76	113	73	102	66	es	53
			MEAN DIA. 3.8 INCHES. WEIBULL PARAMETERS A= .O. B= 3.91. C= 2.35									
20	33	2	3	.1	0	0						
		3	7	.3	0	0						
		4	13	1.2	4	0	3	0	2	0	0	0
		5	18	2.S	33	14	32	13	28	9	21	3
		6	21	4.2	79	50	n	48	72	44	62	36
		7	17	4.6	102	72	100	71	95	67	85	60
		8	11	3.9	9s	70	93	69	90	67	82	62
		9	5	2.2	57	43	56	43	54	42	50	40
		10	1	.6	IS	II	IS	11	14	11	13	10
			96	19.5	395	260	376	255	355	240	313	211
			MEAN DIA. 6.1 INCHES. WEIBULL PARAMETERS A= .0. B= 6.W. C= 3.61									
2s	40	2	1	.0	0	0						
		3	2	.1	0	0						
		4	4	.4	0	0	0	0	0	0	0	0
		5	10	1.4	15	5	14	4	12	3	9	0
		6	14	2.6	49	28	46	27	45	2s	39	20
		7	17	4.6	98	67	96	66	93	62	85	56
		8	17	11.9	142	104	140	103	137	99	129	93
		9	13	5.8	146	111	146	110	143	108	136	103
		10	8	4.4	117	90	116	89	114	88	109	85
		11	3	2.0	55	43	55	43	54	42	52	41
		12	1	.8	23	18	23	18	22	18	21	17
			91	28.1	647	466	638	460	620	445	580	415
			MEAN DIA. 7.5 INCHES. WEIBULL PARAMETERS A= .0. B= 7.99. C- 3.96									
30	46	3	1	.0	0	0						
		4	3	.3	0	0	0	0	0	0	0	0
		5	5	.7	6	2	8	2	7	1	5	0
		6	8	I.6	28	16	28	16	26	14	24	12
		7	11	2.9	63	43	62	42	61	40	58	37
		8	13	4.s	109	79	108	79	106	76	101	73
		9	16	7.1	182	136	181	135	178	133	172	129
		10	12	6.5	in	135	176	134	174	133	170	130
		11	9	5.9	165	128	164	128	163	126	160	124
		12	5	3.9	II2	66	112	88	III	87	109	85
		13	2	1.8	54	42	54	42	53	42	52	41
		14	1	1.1	32	25	32	25	32	2s	31	24
			86	36.3	930	694	925	690	911	677	662	655
			MEAN DIA. 6.8 INCHES. WEIBULL PARAMETERS A= .O. B= 9.35. C= 4.02									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4.5-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2					Ft 3			
35	51	3	1	.0	0	0						
		4	2	.i?	0	0	0	0	0	0	0	0
		5	3	.4	5	2	5	2	5	1	4	0
		6	5	1.0	19	11	19	11	15	10	17	9
		7	7	1.9	42	29	42	29	Cl	26	39	26
		6	9	3.2	76	57	78	57	n	56	75	54
		9	11	4.9	129	96	128	95	127	94	125	92
		10	11	6. 1	166	127	165	127	164	126	162	124
		11	11	7.4	209	162	208	161	207	160	204	158
		12	9	7.2	206	163	200	163	206	161	204	159
		13	6	5.6	165	131	165	131	164	130	163	129
		14	4	4.3	130	103	130	103	129	103	128	102
		15	2	2.5	75	So	75	60	75	SO	74	59
		16	1	1.4	43	34	43	34	43	34	43	34
			62	46.2	1269	975	1266	973	1256	963	1238	946
		MEAN DIA. 10.2 INCNS. KIWI-L PARAMETERS A= .0, B= 10.79. C= 3.99										
40	56	3	1	.0	0	0						
		4	1	.I	0	0	0	0	0	0	0	0
		5	2	.3	4	1	4	1	4	1	3	1
		6	3	.6	12	7	12	7	12	7	11	6
		7	4	1.1	24	17	24	17	24	17	23	16
		6	6	2.1	53	39	53	38	52	37	50	36
		9	7	3.1	63	63	03	63	02	62	01	61
		10	8	4.4	122	93	122	93	121	92	119	91
		11	10	6.7	190	147	190	147	188	146	186	144
		12	9	7.1	208	163	208	163	207	162	205	160
		13	8	7.4	221	174	221	1 N	219	173	217	171
		14	7	7.5	227	179	227	179	226	178	224	i n
		15	5	6.2	188	149	188	149	187	149	1%	148
		16	4	5.6	172	138	172	138	172	137	171	136
		17	2	3.2	98	76	98	7s	99	76	97	76
		18	1	1.8	55	45	n	45	n	45	n	44
		19	1	2.0	62	50	62	50	62	50	61	so
			79	s9.3	1719	1 - 2	1719	1342	1709	1334	1689	1319
		MEAN DIA. 11.7 INCHES. WEIBULL PARAMETERS A= .O, B= 12.44. C= 3.67										

SI 40

200 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—							
							2 inches				3 inches		4 inches	
					0. b.	I.	b.	0. b.		I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3									
15	23	1	56	.3	0	0								
		2	52	1.1	0	0								
		3	42	2.1	25	11								
		4	26	2.3	39	24	3s	23		36	21	31	18	
		5	14	1.9	38	24	37	23		35	22	32	19	
		6	6	1.2	25	17	24	17		23	16	21	14	
		7	3	.8	17	12	17	12		16	11	15	10	
		6	1	.3	6	5	6	5		6	5	7	5	
			200	10.0	152	93	124	60		118	75	106	66	
			WAN DIA. 3.0 INCHES. WEIBULL PARAMETERS A= .0. B= 2.90. C= 1.70											
20	33	1	4	.0	0	0								
		2	12	.3	0	0								
		3	25	1.2	0	0								
		4	36	3.2	30	7	28	6		22	4	12	0	
		5	40	5.5	93	56	90	53		63	47	69	34	
		6	34	6.7	142	98	139	95		131	69	116	n	
		7	23	6.2	146	106	143	104		136	99	123	so	
		8	11	3.9	97	72	95	71		92	69	84	64	
		9	4	1.6	47	35	46	35		44	34	41	32	
		10	1	.5	14	12	14	12		14	11	13	10	
			190	29.2	569	366	555	376		522	353	456	307	
			KAN DIA. 5.3 INCHES. WEIBULL PARAMETERS A= .0. B= 5.59. C= 3.02											
25	40	1	1	.0	0	0								
		2	4	.1	0	0								
		3	10	.5	0	0								
		4	18	1.6	6	0	7	0		5	0	0	0	
		5	26	3.6	53	26	51	24		46	19	37	10	
		6	31	6.1	122	79	119	n		113	71	101	60	
		7	32	6.6	196	141	195	139		166	133	174	121	
		6	26	9.1	228	170	225	168		219	163	207	154	
		9	16	7.1	188	143	166	142		162	136	174	132	
		10	8	4.4	120	93	119	92		117	91	112	66	
		11	3	2.0	56	43	56	43		55	43	53	42	
		12	1	.8	23	18	23	18		a?	18	21	17	
			176	43.7	996	713	991	703		947	676	679	624	
			MEAN DIA. 6.7 INCHES. WEIBULL PARAMETERS A= .0. B= 7.15. C= 3.47											
3046		a	2	.0	0	0								
		3	5	.2	0	0								
		4	9	.8	3	0	3	0		2	0	0	9	
		5	15	2.0	29	13	28	12		26	9	21	4	
		6	21	4.1	60	51	79	50		75	46	69	40	
		7	25	6.7	153	106	151	106		147	102	139	94	
		6	25	6.7	219	161	217	159		213	156	204	146	
		9	23	10.2	270	205	268	203		264	200	255	192	
		10	18	9.6	272	209	270	206		267	205	259	200	
		11	11	7.3	207	161	206	160		203	158	196	155	
		12	6	4.7	137	108	136	106		135	107	132	105	
		13	2	1.8	55	43	55	43		54	43	53	42	
		14	1	1.1	32	25	32	25		32	25	31	25	
			163	57.6	1457	1064	1445	1074		1418	1051	1361	1005	
			MEAN DIA. 6.0 INCHES. WEIBULL PARAMETERS A= .0, B= 8.53. C= 3.56											

Age	Av. dom. ht.	D.b.h.	Stem per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					O. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
A	51	2	1	.O	0	0						
		3	3	.I	0	0						
		4	5	.4	1	0	I	0	1	0	0	0
		5	9	I.2	17	7	16	7	15	5	13	3
		6	13	2.6	51	32	50	31	46	29	43	26
		7	16	4.3	99	69	90	60	96	66	91	61
		6	19	6.7	166	124	167	123	164	120	158	114
		9	21	9.4	2%	189	249	188	245	185	239	179
		10	20	11.0	306	230	305	235	301	232	295	226
		11	17	11.3	324	251	323	250	320	248	314	244
		12	13	10.3	301	237	300	236	290	234	294	230
		13	8	7.4	221	174	220	174	219	173	216	171
		14	5	5.4	162	128	162	128	161	128	159	127
		15	2	2.5	75	59	75	59	74	59	73	60
		16	I	I.4	43	34	43	34	43	34	43	34
			153	74.2	2018	1540	2009	1533	1985	1513	1930	1475
		MEAN DIA. 9.4 INCHES. WEIBULL PARAMETERS A= .O. B= 9.99. C= 3.53										
40	56	2	1	.O	0	c						
		3	2	.I	0	0						
		4	3	.3	I	0	I	0	1	0	0	0
		5	5	.7	10	4	10	4	9	3	7	1
		6	6	1.6	31	20	31	19	29	18	27	15
		7	JO	2.7	62	43	61	42	59	40	56	37
		6	13	4.5	115	84	114	83	112	61	107	77
		9	15	6.6	177	134	176	133	174	130	169	125
		JO	18	6.7	243	187	242	186	239	163	233	178
		11	15	9.9	204	220	203	219	200	217	274	212
		12	15	11.8	345	269	344	260	341	266	335	262
		13	13	12.0	356	281	355	280	353	278	348	274
		14	10	10.7	322	255	321	254	319	253	315	250
		15	7	6.6	261	208	260	207	259	206	2%	204
		16	5	7.0	214	171	213	171	212	170	210	169
		17	3	4.7	146	116	146	115	145	116	144	115
		18	2	3.5	110	80	110	88	JO9	88	108	67
		19	I	2.0	62	49	62	49	61	49	60	40
			144	95.4	2739	2129	2729	2119	2702	2098	2649	2054
		MEAN DIA. 11.0 INCHES. WEIBULL PARAMETERS A= .O. B= 11.67. C= 3.39										

SI 50

100 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	29	1	1	.0	0	0						
		2	6	.I	0	0						
		3	13	.6	0	0						
		4	20	I.8	13	0	12	0	9	0	3	0
		5	25	3.4	53	26	51	26	46	23	36	15
		6	19	3.6	75	49	73	48	66	44	58	37
		7	II	3.0	67	47	65	46	6.2	44	54	39
		6	4	1.4	34	25	33	25	31	23	26	21
		9	I	.4	12	9	12	9	II	6	9	7
			100	14.5	254	158	246	154	227	142	166	119
			MEAN DIA. S.2 INCHES. WEIBULL PARAMETERS A= .O. B= 5.46. C= 3.26									
20	41	2	I	.0	0	0						
		3	3	.I	0	0						
		4	7	.6	I	0	I	0	I	0	0	0
		5	12	1.7	21	7	20	6	17	4	II	0
		6	17	3.c	63	36	61	36	57	32	48	24
		7	21	21.7	127	86	125	64	119	79	107	70
		6	18	6.4	158	112	155	110	150	107	138	99
		9	11	4.9	130	95	128	94	I N	92	116	66
		10	5	2.6	76	56	75	56	73	55	69	54
		11	I	.7	19	IS	19	15	19	I5	18	14
			96	26.3	595	409	584	401	560	364	507	349
			MEAN DIA. 7.1 INCHES, WEIBULL PARAMETERS A= .0. B= 7.53. C= 4.21									
25	50	3	1	.0	0	0						
		4	3	.3	1	0	1	0	1	0	0	0
		5	6	.8	13	6	13	6	II	4	9	2
		6	10	2.0	41	26	40	25	36	23	33	.19
		7	14	3.7	89	61	88	60	65	58	79	53
		6	18	6.2	161	I16	160	I15	156	112	149	lb6
		9	16	7.0	192	141	191	140	187	138	180	133
		10	12	6.5	185	138	184	137	181	136	175	133
		11	7	't.6	133	101	132	101	131	100	128	99
		12	3	2.3	70	53	70	53	69	53	67	52
		13	1	.9	28	21	26	21	28	21	27	PI
			91	34.4	913	663	907	656	697	645	847	616
			MEAN DIA. 6.3 INCHES. WEIBULL PARAMETERS A= .0, B= 6.65. C= 4.42									
3096		3	1	.0	0	0						
		4	2	.2	2	1	2	1	2	1	2	0
		5	3	.4	9	5	9	5	6	5	7	4
		6	6	I.2	26	20	26	20	27	19	26	18
		7	9	2.4	64	46	64	46	62	45	60	43
		6	12	4.2	117	67	117	87	115	85	113	63
		9	14	6.2	160	135	179	134	177	133	174	131
		10	13	7.1	211	161	210	161	208	159	205	157
		II	II	7.3	220	166	219	168	216	167	215	165
		12	6	6.3	194	149	194	149	192	148	190	146
		13	4	3.7	115	69	115	69	114	69	113	87
		14	2	2.1	66	52	60	52	67	52	66	52
		15	1	1.2	39	30	39	30	39	30	39	30
			86	42.3	IN7	943	1244	942	1229	932	1209	916
			MEAN DIA. 9.5 INCHES. WEIBULL PARAMETERS, A= .0. B= 10.09. C= 4.34									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
A64		4	I	.I	2	I	2	I	2	I	2	I
		5	2	.3	8	5	6	5	6	5	7	5
		6	4	.8	22	17	22	17	22	17	21	16
		7	6	1.6	48	37	46	37	48	3s	47	35
		8	6	2.6	86	66	86	66	85	65	64	64
		9	10	4.4	137	106	137	106	136	105	135	104
		10	II	6.0	188	146	188	146	187	145	186	144
		11	10	6.6	209	162	209	162	208	162	206	161
		12	10	7.8	250	195	250	195	249	194	248	193
		13	6	7.3	236	184	236	184	235	164	234	183
		14	6	6.4	205	161	205	161	205	161	204	160
		15	3	3.7	119	92	119	92	119	92	118	93
		16	2	2.8	91	71	91	71	so	71	89	70
		17	1	1.6	51	40	51	40	51	40	51	40
			82	52.1	1652	1283	1652	1283	1645	1278	1632	1269
		MEAN DIA. 10.8 INCHES. WEIBULL PARAMETERS A- -0. B= 11.46. C- 4.13										
40	70	4	I	.1	3	2	3	2	3	2	3	2
		5	1	.I	5	3	5	3	5	3	5	3
		6	2	.4	13	11	13	11	13	II	13	11
		7	4	1.1	36	29	36	2s	36	29	36	29
		8	5	I.8	59	46	59	46	59	46	58	47
		9	6	2.7	so	71	90	71	89	71	88	70
		10	8	4.4	147	116	147	116	146	116	145	115
		II	9	6.0	200	158	200	158	200	158	199	158
		12	9	7. 1	238	188	238	188	238	188	237	187
		13	9	8.3	279	221	279	221	278	221	277	220
		14	6	8.6	268	228	288	228	287	226	286	227
		15	6	7.4	248	197	248	197	248	197	247	1%
		16	5	7.0	235	186	235	186	235	186	234	185
		17	3	4.8	159	126	159	126	159	126	158	126
		18	2	3.6	118	94	118	94	118	94	118	94
		19	I	2.0	68	53	66	53	66	53	66	52
			79	65.2	2184	1729	2184	1729	2180	1729	2170	1722
		KAN DIA. 12.3 INCHES. WEIBULL PARAMETERS A= .0. B= 13.06. C= 3.86										

SI 50

200 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	O. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	*Ft* 2	— — — — — — — — — — — — — — *Ft* 3 — — — — — — — — — — — — — —							
15	29	1	10	.1	0	0						
		2	27	.6	0	0						
		3	42	2.0	2	0						
		4	45	3.9	51	23	48	21	43	17	31	6
		5	37	5.0	93	57	90	55	62	so	66	41
		6	23	4.5	97	64	94	63	88	59	7s	52
		7	11	2.9	69	47	67	46	63	44	54	39
		6	4	1.4	34	24	33	24	31	22	27	20
		9	1	.4	11	8	11	6	10	6	9	7
			200	20.7	A 7	223	343	217	317	200	264	167
			MEAN DIA. 4.4 INCHES. WEIBULL PARAMETERS A= .0. B= 4.54. c= 2.64									
20	41	1	1	.O	0	0						
		2	5	.1	0	0						
		3	12	.6	0	0						
		4	23	2.0	14	0	12	0	8	0	0	0
		5	34	'1.6	75	39	72	36	65	30	51	17
		6	39	7.7	161	105	157	102	148	94	130	79
		7	35	9.4	225	157	221	154	211	147	[illegible]	134
		9	24	8.4	217	157	214	155	206	150	191	141
		9	12	5.3	144	107	142	106	138	104	130	99
		10	4	2.2	61	46	60	46	59	45	56	43
		11	1	.7	19	14	19	14	18	14	17	14
			190	co.9	916	625	697	613	653	584	767	527
			MEAN DIA. 6.3 INCHES. WEIBULL PARAMETERS A= .O. B= 6.66. C= 3.61									
2s	50	2	2	.O	0	0						
		3	5	.2	0	0						
		4	11	1.0	9	1	6	1	6	1	2	0
		5	19	2.6	46	26	44	24	41	21	33	14
		6	27	6.3	119	78	117	76	111	71	100	62
		7	31	9.3	208	147	205	145	198	139	185	129
		8	31	lo.t	291	213	288	211	281	205	267	195
		9	25	11.1	310	232	306	230	302	226	290	216
		10	15	9.2	237	179	235	178	232	176	224	172
		11	7	4.6	137	104	136	104	134	103	131	101
		12	2	1.6	48	36	48	36	47	36	45	35
		13	1	.9	29	22	28	22	20	22	27	21
			176	54.6	1433	1038	1417	1027	1380	1000	1304	947
			MEAN OIA. 7 . 5 INCHES. WEIBULL PARAMETERS A= . o . B= 8.01. C= 3.69									
30%		2	1	.O	0	0						
		3	3	.1	0	0						
		4	6	.5	6	3	8	3	7	2	5	1
		4	10	1.4	29	19	26	18	27	16	24	13
		6	16	3.1	76	55	77	54	75	52	70	47
		7	22	s.9	158	115	157	114	153	111	147	106
		6	25	9.7	248	184	246	163	242	179	234	173
		9	2s	11.0	324	244	322	243	318	239	310	233
		10	22	12.0	360	274	356	275	355	271	347	266
		11	16	10.5	322	247	321	246	316	244	312	241
		12	10	7.6	243	166	a 2	1%	240	165	2 %	164
		13	5	4.6	143	111	143	111	142	110	140	109
		14	2	2.1	67	53	67	53	67	53	66	52
			163	67.9	1980	1491	1969	1484	1944	1462	1891	1425
			MEAN DIA. 9.7 INCHES. WEIBULL PARAMETERS A= .O. B= 9.26. C= 3.90									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches;		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	64	2	1	.0	3	0						
		3	2	.1	2	1						
		4	4	.3	6	5	8	5	6	5	7	4
		5	6	.8	22	15	22	15	21	14	20	13
		6	10	2.0	66	41	56	41	55	40	53	36
		7	14	3.8	112	65	111	64	109	a3	106	90
		6	17	5.9	181	138	180	137	178	136	175	133
		9	20	6.9	274	211	273	210	271	208	266	204
		10	19	10.4	325	252	324	251	322	249	317	246
		II	19	12.6	398	309	397	308	394	306	389	303
		12	I6	12.6	401	312	400	311	390	310	394	307
		13	II	10.2	325	253	324	253	323	252	320	250
		14	7	7.5	241	188	241	188	240	188	236	167
		15	4	4.9	159	12%	159	124	158	124	156	123
		16	2	2.6	90	70	90	70	90	70	90	70
		17	1	1.6	51	40	51	40	51	40	51	39
			153	64.3	2645	2044	2636	2037	2618	2025	2582	1997
			MEAN DIA. 10.1 INCHES. WEIBULL PARAMETERS A= .0. B= 10.67. C= 3.77									
40	70	3	1	.0	2	1						
		4	2	.2	6	4	6	4	6	4	5	4
		5	4	.5	16	14	18	14	18	13	17	12
		6	6	1.2	39	31	39	31	38	30	37	26
		7	9	2.4	79	63	79	63	76	61	76	59
		6	11	3.6	127	100	127	100	125	99	123	97
		9	13	5.7	190	150	189	149	188	148	185	145
		10	15	6.2	270	213	269	212	267	21 I	264	209
		11	18	11.9	393	309	392	306	390	307	385	304
		12	16	12.6	415	328	414	327	412	326	409	323
		13	14	12.9	426	336	425	336	423	334	420	332
		14	12	12.8	424	334	423	334	421	333	418	331
		15	9	11.0	365	288	365	200	363	267	361	285
		16	6	6.4	277	216	277	216	276	218	274	217
		17	4	6.3	209	164	209	164	208	164	206	163
		18	2	3.5	117	92	117	92	116	92	115	91
		19	I	2.0	65	52	65	52	65	52	65	51
		20	1	2.2	72	57	72	57	72	57	71	57
			144	105.6	3494	2754	3486	2749	3466	2736	3431	2706
			MEAN DIA. 11.6 INCHES. WEIBULL PARAMETERS A- .o. B= 12.29. C= 3.66									

SI 50

300 trees per **acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					O. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I, b.
Yrs	*Ft*	*In*	*No.*	*Ft 2*	*Ft 3*							
15	29	1	31	.2	0	0						
		2	57	1.2	0	0						
		3	70	3.4	21	0						
		4	62	5.4	85	47	92	45	74	39	59	27
		5	43	5.9	I IQ	n	115	74	107	68	91	56
		6	23	4.5	101	69	98	67	93	63	81	55
		7	I 0	2.7	64	45	63	44	59	41	52	36
		8	3	1.0	26	19	26	19	24	18	22	16
		9	I	.4	12	8	12	8	11	8	9	7
			300	24.8	427	265	396	257	368	237	314	197
			MEAN DIA. 3.9 INCHES. WEIBULL PARAMETERS A= .o. B= 3.98. c- 2.27									
20	41	I	3	.0	0	0						
		2	12	.3	0	0						
		3	27	1.3	0	0						
		4	44	3.8	40	10	37	9	29	6	14	0
		3	56	7.6	139	90	134	16	123	66	100	47
		6	55	10.8	241	162	235	158	222	147	196	127
		7	43	11.5	295	202	280	198	268	190	244	174
		8	26	9.1	241	176	237	174	229	168	21I	158
		9	11	4.9	134	100	132	99	129	97	119	92
		10	4	2.2	62	47	61	47	59	46	56	44
		11	I	.7	19	15	19	15	19	15	18	14
			282	52.1	1161	792	1135	776	1076	735	958	656
			MEAN DIA. 5.8 INCHES. WEIBULL PARAMETERS A= .0. B= 6.15, C= 3.27									
25	SO	I	1	.O	0	0						
		2	4	.1	0	0						
		3	II	.5	0	0						
		4	21	I.8	20	6	18	5	15	3	8	0
		5	33	4.5	86	51	a3	48	n	42	64	30
		6	43	8.5	197	134	193	131	184	123	167	107
		7	47	12.6	325	233	320	229	309	221	288	204
		8	41	14.4	394	289	390	286	380	279	360	266
		9	29	12.9	367	275	364	273	356	268	341	259
		IO	16	6.6	258	194	256	193	251	191	241	197
		II	7	4.6	139	106	138	105	136	104	131	102
		12	2	1.6	49	37	46	37	47	36	46	35
			255	70.3	1834	132s	1810	1307	1755	1267	1646	1190
			MEAN DIA. 7.1 INCHES. WEIBULL PARAMETERS A= .o. a= 7.54. C= 3.61									
30	58	2	2	.O	0	0						
		3	5	.2	I	0						
		4	II	1.0	15	7	14	6	12	4	9	1
		4	19	2.6	57	37	56	36	52	32	46	26
		6	27	5.3	134	95	132	93	I27	89	119	80
		7	34	9.1	248	181	246	179	240	174	229	164
		6	37	12.9	n o	276	367	274	360	268	347	258
		9	34	15.0	444	336	441	334	434	329	421	319
		10	28	15.3	462	351	460	350	454	346	442	339
		11	19	12.5	384	295	382	294	379	292	371	287
		12	10	7.9	244	169	243	196	241	166	236	184
		13	4	3.7	115	90	115	90	114	69	112	87
		14	2	2.1	67	53	67	53	67	53	66	52
			232	67.7	2541	1909	2523	1897	2480	1862	2396	1797
			MEAN DIA. 6.3 INCHES. WEIBULL PARAMETERS A- .o. B= 6.63. C- 3.67									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	64	2	1	.0	0	0						
		3	3	.I	2	I						
		4	6	.5	12	8	12	8	II	7	9	5
		5	II	1.5	39	29	38	28	37	26	34	23
		6	16	3.1	88	65	87	64	85	62	80	58
		7	22	5.8	173	131	172	130	168	126	161	120
		8	26	9.0	274	209	272	207	268	204	260	197
		9	28	12.3	380	292	370	290	373	267	364	279
		10	28	15.2	475	366	473	365	468	361	459	354
		11	25	16.4	518	401	516	400	512	397	so3	391
		12	19	14.8	472	366	470	365	467	363	460	358
		13	13	11.9	381	297	380	2 %	377	2 %	372	291
		14	8	a.5	273	213	272	213	271	212	268	210
		15	4	4.9	157	123	157	123	156	123	155	122
		16	2	2.8	69	70	89	70	89	70	88	69
		17	1	1.6	51	40	51	40	51	40	S 0	39
			213	108.5	3384	2611	3367	2599	3333	2572	3263	25516
		MEAN OIA. 9.7 INCHES. WEIBULL PARAMETERS A= .O. B= 10.25. C= 3.56										
40	70	2	1	.0	1	1						
		3	2	.I	3	2						
		4	4	.4	12	9	12	9	11	8	9	6
		5	7	1.0	31	25	30	24	29	23	26	20
		6	IO	2.0	65	51	64	50	62	48	58	45
		7	14	3.8	124	97	123	96	120	94	115	89
		8	17	6.0	196	154	195	153	191	150	185	144
		9	20	8.9	292	230	290	229	286	225	278	218
		10	22	12. I	397	312	395	310	391	307	362	299
		11	21	13.9	459	361	457	360	453	356	444	349
		12	El	16.6	546	429	544	429	540	424	531	418
		13	18	16.7	549	432	547	431	544	428	536	423
		14	15	16.1	531	418	530	417	526	415	520	411
		15	11	13.6	447	351	446	350	444	349	439	346
		16	7	9.8	323	255	322	255	321	253	318	251
		17	5	7.9	261	205	260	205	259	204	257	203
		18	2	3.6	117	92	117	92	117	92	116	92
		19	I	2.0	65	52	65	52	65	52	65	51
		20	I	2.2	73	57	73	57	72	57	71	56
			199	136.5	4492	3633	4470	3519	4431	3485	4350	3421
		MEAN DIA. 11.2 INCHES. WEIBULL PARAMETERS A= .O. B= 11.88. C= 3.43										

SI 50

400 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of-					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	*Ft*	*In*	*No:,*	*Ft 2*	*Ft 3*							
15	29	1	64	.3	0	0						
		2	so	2.0	0	0						
		3	92	4.5	42	11						
		4	72	6.2	107	63	104	60	95	54	79	42
		5	45	6.1	126	63	123	80	115	75	101	63
		6	23	4.5	101	70	99	68	94	64	84	56
		7	IO.	2.7	63	44	62	43	59	41	53	36
		8	3	1.0	26	18	25	16	24	17	21	15
		9	I	.4	11	6	11	8	II	8	10	7
			400	27.8	476	297	424	277	398	259	348	219
			MEAN DIA. 3.6 INCHES. WEIBULL PARAMETERS A= .0. B= 3.57. C= 2.02									
20	41	1	6	.0	0	0						
		2	22	.5	0	0						
		3	45	2.2	0	0						
		4	66	s.O	73	28	68	24	57	16	34	0
		5	76	10.4	202	124	195	118	180	105	149	80
		6	60	13.4	310	211	303	206	286	195	253	172
		7	48	12.6	327	234	321	230	307	221	279	204
		8	26	9.1	245	179	241	177	231	172	213	162
		9	11	4.9	136	101	134	100	129	98	120	94
		10	3	I.6	47	A	46	35	45	34	42	33
		11	I	.7	19	15	19	15	18	15	17	14
			372	61.3	1359	927	1327	905	1253	656	1107	759
			MEAN DIA. 5.5 INCHES, WEIBULL PARAMETERS A= .0. B= 5.79. c- 3.04									
25	50	1	2	.0	0	0						
		2	7	.2	0	0						
		3	16	.9	0	0						
		4	33	2.9	37	13	34	11	28	8	16	0
		5	48	6.5	131	81	127	n	117	60	98	49
		6	58	11.4	271	167	266	182	253	171	229	150
		7	59	15.6	413	297	407	292	393	202	365	261
		8	48	16.7	464	343	459	339	446	331	421	314
		9	32	14.1	406	305	402	303	393	297	375	2 %
		10	16	6.7	256	195	256	194	250	191	NO	1%
		11	7	4.6	139	106	138	105	136	104	131	102
		12	2	1.6	47	,37	47	37	46	37	45	36
			330	03.4	2166	1564	2136	1540	2062	1489	1919	1384
			MEAN DIA. 6.8 INCHES. WEIBULL PARAMETERS A= .0. B= 7.21. C= 3.41									
30	58	1	I	.0	0	0						
		2	3	.1	a	0						
		3	9	.4	2	0						
		4	17	1.5	25	12	24	11	20	8	14	-2
		5	2-1	3.7	63	55	81	53	76	48	66	30
		6	3-1	7.3	187	133	184	130	*in*	123	163	110
		7	45	12.1	334	245	330	242	321	234	303	218
		8	46	16.9	486	364	482	361	472	353	452	337
		9	41	18.2	542	410	538	407	529	401	511	309
		10	31	17.0	516	394	513	392	505	388	491	379
		11	20	13.3	409	314	407	313	402	310	392	305
		12	11	6.7	271	209	270	208	267	207	261	204
		13	4	3.7	116	90	116	90	115	69	113	88
		14	1	1.1	34	26	34	26	34	26	33	26
			295	104.1	3005	2252	2979	2233	2916	2167	2799	20%
			MEAN DIA. 6.0 INCHES. WEIBULL PARAMETERS A= .0. B= 8.52. C= 3.51									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	64	2	2	.0	0	0						
		3	5	.2	4	1						
		4	9	.S	18	11	17	10	15	9	12	6
		5	16	2.2	58	41	57	40	54	37	48	31
		6	22	4.3	122	91	120	99	116	85	108	n
		7	29	7.7	229	173	227	171	221	165	210	155
		8	34	11.9	360	275	357	273	350	267	337	2%
		9	35	15.5	477	366	474	364	467	3%	453	347
		10	34	18.5	579	448	576	446	569	440	555	429
		11	29	19. I	604	467	601	465	595	461	582	452
		12	22	17.3	549	426	547	425	542	422	532	416
		13	14	12.9	412	321	411	320	407	316	401	314
		14	9	6.5	275	214	274	214	272	212	266	210
		15	4	4.9	158	124	158	124	156	123	154	121
		16	2	2.8	90	70	90	70	89	70	88	69
		17	I	1.6	51	40	51	40	51	40	50	39
			266	128.3	39%	3068	3960	3051	3904	3007	3798	2921
			MEAN DIA. 9.4 INCHES. WEIBULL PARAMETERS A= .o. B= 9.96. C= 3.46									
40	70	2	I	.0	I	0						
		3	3	.I	5	3						
		4	6	.5	17	12	16	11	15	10	12	7
		5	9	1.2	39	31	38	30	36	28	32	23
		6	13	2.5	83	65	82	64	76	60	71	53
		7	18	4.6	156	122	154	120	149	116	140	107
		8	22	7.6	249	196	247	194	241	188	229	178
		9	25	11.0	359	282	356	280	350	274	337	262
		10	27	14.7	480	377	477	374	469	368	4%	356
		11	27	17.8	582	457	579	454	571	449	555	437
		12	25	19.6	642	504	639	502	631	4%	616	486
		13	21	19.3	633	4%	63C	496	624	492	612	483
		14	17	18.1	5%	467	593	466	587	462	577	456
		15	12	14.7	482	379	480	378	477	376	469	372
		16	6	11.1	368	287	365	267	362	285	357	283
		17	5	7.9	258	203	257	203	256	202	253	200
		18	3	5.3	173	137	173	137	172	136	1-m	135
		19	I	2.0	64	S0	64	50	64	50	63	51
		20	I	2.2	71	56	71	56	71	56	71	56
			244	160.3	5255	4126	5221	4102	5153	4048	5019	3945
			MEAN DIA. 11.0 INCHES. WEIBULL PARAMETERS A= .0. B= 11.61. C= 3.34									

SI 50

500 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	29	1	109	.6	0	0						
		2	123	2.7	0	0						
		3	110	5.4	62	25						
		4	n	6.7	122	73	119	70	111	65	95	53
		5	45	6. I	130	85	127	63	120	n	107	67
		6	22	4.3	98	66	96	65	92	61	83	55
		7	9	2.4	57	39	56	38	54	36	49	33
		6	4	I .4	34	23	a	23	32	22	29	20
		9	I	.4	II	8	11	8	II	6	10	7
			500	30.0	514	319	442	267	420	269	373	235
			MEAN DIA. 3.3 INCHES. WEIBULL PARAMETERS A- .0, B= 3.24, C= I.62									
20	41	1	II	.1	0	0						
		2	34	.7	0	0						
		3	64	3.1	2'	0						
		4	88	7.7	108	49	102	43	87	29	58	2
		5	94	12.6	262	165	254	159	234	143	195	113
		6	78	IS.3	365	251	357	246	336	232	297	207
		7	51	13.6	353	253	346	249	330	240	299	223
		8	26	9. 1	248	181	244	179	234	174	214	165
		9	10	4.4	125	93	123	92	118	90	109	85
		10	3	1.6	47	35	46	35	45	35	42	34
		II	1	.7	20	15	20	15	19	14	17	13
			460	69.2	1530	1042	1492	1018	1403	957	1231	642
			MEAN OIA. S.3 INCHES. WEIBULL PARAMETERS A- .O. B= 5.51. C= 2.67									
25	10	1	3	.0	0	0						
		2	II	.2	0	0						
		3	26	1.3	0	0						
		4	46	4.0	57	24	53	21	43	14	25	0
		5	63	6.6	i76	113	172	108	159	95	134	70
		6	74	l'i.6	366	247	349	241	332	227	298	199
		7	68	16.3	486	352	479	347	461	334	427	309
		8	53	18.6	521	386	515	382	MO	372	471	353
		9	33	14.6	425	319	421	317	410	311	390	301
		10	16	6.6	260	198	259	197	252	194	242	189
		11	6	4.0	120	92	119	92	117	91	112	89
		12	2	I .6	49	37	49	37	47	37	45	36
			401	94.6	2452	1768	2415	IN2	2321	1675	2144	1546
			MEAN DIA. 6 . 6 INCHES. WEIBULL PARAMETERS A - .09= 6.95. C= 3.27									
30	58	1	I	.O	0	0						
		2	5	.1	0	0						
		3	I2	.6	3	0						
		4	23	2.0	34	19	32	17	27	12	18	2
		5	36	4.9	112	75	109	72	101	64	87	so
		6	55	14.8	410	301	405	167	292	157	205 368	139 266
		8	54	19.0	548	411	543	407	530	397	596	370
		9	47	20.9	622	471	617	468	605	460	se2	444
		10	34	16.7	566	433	562	431	554	425	537	414
		11	21	13.9	429	330	427	329	421	326	410	326
		12	11	0.7	271	209	270	208	266	206	260	203
		13	4	3.7	117	90	116	90	115	69	112	88
		14	1	1.1	34	26	34	26	34	26	3118	26
			351	117.7	3386	2536	3351	2512	3270	2448		2330
			MEAN DIA. 7.6 INCHES. WEIBULL PARAMETERS A= .O. B= 6.30. C= 3.40									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	*Ft*	*In*	No.	*Ft 2*	--	----	------- *Ft 3* -------					
35	64	1	I	.0	0	0						
		2	3	.I	0	0						
		3	7	.3	5	2						
		4	12	1.0	23	15	22	14	20	II	15	6
		5	20	2.7	71	51	69	49	65	45	56	36
		6	28	5.5	155	115	152	II2	146	107	134	95
		7	35	9.4	276	208	273	205	265	198	249	184
		6	40	14.0	423	323	419	319	410	311	392	295
		9	41	18.I	559	429	555	426	545	418	526	402
		10	38	20.7	648	500	644	497	634	490	616	476
		II	32	21.1	667	516	663	514	655	508	636	497
		12	24	18.8	599	465	596	463	590	459	577	451
		13	15	13.8	442	344	440	343	436	341	426	336
		14	9	9.6	309	241	308	240	305	239	300	236
		15	4	4.9	158	124	158	124	156	123	154	122
		16	2	2.6	90	70	90	70	89	70	88	-- 70
		17	I	I.6	51	40	51	CO	50	40	49	39
			312	144.5	4476	3443	4440	3416	4366	3360	4222	3245
			MEAN DIA. 9.2 INCHES. WEIBULL PARAMETERS A- .0. B= 9.75. C- 3.37									
40	70	2	2	.0	I	t						
		3	4	.2	6	4						
		4	7	.6	IS	14	18	13	16	II	12	7
		5	I2	I.6	52	40	50	38	47	A	39	27
		6	17	3.3	108	83	106	81	100	76	88	66
		7	22	5.9	190	148	187	145	180	139	166	126
		8	26	9.1	295	231	291	228	263	220	266	204
		9	30	13.3	432	33C	428	334	418	325	398	306
		10	29	15.6	516	405	512	401	502	333	462	377
		11	31	20.s	669	526	664	522	653	513	632	496
		12	28	22.0	721	566	717	563	706	555	686	541
		13	24	22.1	726	570	722	567	713	561	695	549
		14	18	19.3	632	496	629	494	622	490	606	481
		15	13	16.0	524	411	522	410	517	407	507	401
		16	9	12.6	413	325	412	324	408	322	401	318
		17	5	7.9	259	204	2 %	203	256	202	252	200
		te	3	s.3	I N	137	I74	137	172	136	170	135
		19	I	2.0	65	51	65	51	64	51	63	50
		20	t	2.2	71	57	71	57	71	57	70	56
			282	179.6	5673	4607	5826	4%8	5726	4493	5535	4342
			MEAN DIA. 10.8 INCHES. WEIBULL PARAMETERS A= .0. B= 11.42. C= 3.27									

SI 60

100 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	O. b.	I. b.
Yrs	Ft	In	No.	Ft 2			Ft 3					
15	35	2	2	.0	0	0						
		3	6	.3	0	0						
		4	13	1.1	4	0	3	0	2	0	0	0
		5	20	2.7	37	16	35	IS	32	II	24	4
		6	24	4.7	90	53	88	51	62	48	71	40
		7	19	5.1	115	76	113	75	107	71	96	65
		8	11	3.8	95	66	94	65	90	63	a3	60
		9	4	1.6	47	33	46	33	44	32	41	30
		10	I	.5	15	II	15	II	14	II	13	10
			100	20.2	403	255	394	250	371	236	328	209
			MEAN DIA. 6.1 INCHES. WEIBULL PARAMETERS A- .0. B= 6.46. C= 3.69									
20	49	3	1	.0	0	0						
		4	4	.3	2	0	2	0	1	0	0	0
		5	6	1.1	18	8	17	7	15	6	11	3
		6	14	2.7	58	36	57	35	54	32	46	27
		7	19	5.0	123	82	121	80	117	77	108	70
		6	20	6.9	182	129	180	126	175	123	166	116
		9	16	7.0	1%	139	193	138	169	136	180	132
		10	9	4.9	140	102	139	102	137	100	132	98
		11	4	2.6	77	57	77	57	76	56	74	55
		12	I	.a	23	17	23	17	23	17	22	17
			96	31.4	818	569	809	562	767	547	741	519
			MEAN DIA. 7.7 INCHES. WEIBULL PARAMETERS A= .o. B= 6.23. C- 4.60									
2560		3	1	.0	0	0						
		4	2	.2	3	2	3	2	3	2	3	I
		5	4	.5	13	9	13	9	13	8	12	7
		6	8	1.6	43	31	43	31	42	29	40	27
		7	12	3.2	93	67	92	67	91	65	88	63
		6	16	6.6	169	123	168	122	1%	120	161	117
		9	16	7.1	219	161	218	169	215	159	210	156
		10	15	6.2	257	190	256	169	254	188	249	1%
		11	10	6.6	210	157	209	157	208	156	205	154
		12	5	4.0	126	95	126	95	125	95	123	94
		13	2	1.9	60	45	60	45	60	45	59	44
			91	39.0	1193	880	1188	877	1177	667	1150	849
			MEAN DIA. 8.9 INCHES. WEIBULL PARAMETERS A= .0. B= 9.41 C= 4.71									
30	69	4	I	.1	3	2	3	2	3	2	3	2
		5	3	.4	14	10	14	10	14	10	14	10
		6	5	1.0	33	26	33	26	33	26	33	25
		7	7	1.9	63	49	63	49	63	49	62	48
		8	I 0	3.5	119	91	119	91	116	91	117	90
		9	13	5.7	195	150	195	150	195	149	194	149
		10	14	7.6	260	199	260	199	259	196	257	197
		11	13	0.6	292	224	292	224	291	223	289	222
		12	10	7.8	267	204	267	204	266	204	265	204
		13	6	4.5	la6	143	166	143	188	143	187	144
		14	3	3.2	109	64	109	64	109	64	108	63
		15	I	1.2	41	32	41	32	41	32	41	32
			86	46.6	1564	1214	1584	1214	1580	121 I	1570	1205
			MEAN DIA. 10.0 INCHES. WEIBULL PARAMETERS A= .0. B= 10.59. C= 4.56									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrr	Ft	In	No.	Ft 2	--		Ft 3					
35	77	4	I	.1	3	2	3	2	3	2	3	2
		5	2	.3	10	6	10	8	10	8	10	a
		6	3	.6	22	17	22	17	22	17	22	17
		7	5	1.4	so	40	so	40	50	CO	50	40
		8	7	2.5	92	72	92	72	92	72	92	72
		9	9	4.1	149	116	149	116	149	117	148	116
		10	10	5.6	203	161	203	161	203	161	203	161
		11	II	7.4	271	213	271	213	271	213	271	213
		12	11	8.8	323	254	323	254	323	254	323	254
		13	9	8.5	309	243	309	243	309	243	309	243
		14	7	7.6	290	220	260	220	260	220	260	220
		15	4	5.0	163	144	163	144	163	144	163	144
		16	2	2.8	104	81	104	81	104	81	104	81
		17	I	1.6	59	47	59	47	59	47	59	47
			82	56.2	20%	1620	2056	1620	2056	1619	2057	1616
		MEAN DIA. 11.2 INCHES. WEIBULL PARAMETERS A= .o. B= 11.91. c= 4.29 ·.										
40	84	4	1	.1	3	2	3	2	3	2	3	2
		5	1	.1	6	4	6	4	6	4	6	4
		6	2	.4	15	12	15	12	15	12	15	12
		7	3	.8	31	25	31	25	31	25	31	25
		8	4	1.4	54	43	54	43	54	43	54	43
		9	6	2.7	104	63	104	63	104	a3	104	63
		10	7	3.6	148	119	148	119	148	119	148	119
		11	8	5.3	205	165	205	165	205	165	205	165
		12	9	7.1	275	220	275	220	275	220	275	220
		13	10	9.3	356	267	358	267	356	267	356	267
		14	8	6.6	333	267	333	267	333	267	333	267
		15	7	6.6	334	269	334	269	334	269	334	269
		16	5	7.0	272	218	272	218	272	218	272	218
		17	4	6.3	245	197	245	197	245	197	245	197
		16	2	3.6	137	110	137	110	137	110	137	110
		19	I	2.0	76	62	76	62	76	62	76	62
		20	I	2.2	85	68	65	66	65	66	65	66
			79	69.3	2661	2151	2691	2151	2681	2151	266 I	2151
		MEAN DIA. 12.7 INCHES. WEIBULL PARAMETERS A= .o. B= 13.47. C= 3.96										

SI 60

200 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I, b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	35	1	3	.0	0	0						
		2	12	.3	0	0						
		3	26	1.3	0	0						
		4	39	3.4	33	7	31	6	25	4	15	0
		5	43	5.8	102	57	93	54	91	49	76	37
		6	38	7.4	161	103	157	100	148	95	130	63
		7	24	6.4	154	105	151	103	144	99	130	91
		8	11	3.8	98	70	96	69	93	67	85	62
		9	3	1.3	36	25	35	25	34	24	31	23
		10	1	.5	15	11	15	11	14	11	13	10
			200	30.2	599	378	584	368	549	349	480	306
			MEAN DIA. 5.3 INCHES. WEIBULL PARAMETERS A= .0, B= 5.56. C= 3.23									
20	49	2	2	.0	0	0						
		3	7	.3	0	0						
		4	15	1.3	14	3	13	3	10	2	5	0
		5	26	3.5	67	31	65	35	59	30	49	21
		6	36	7.0	163	107	160	104	152	98	137	85
		7	39	10.4	2 %	185	264	182	255	176	238	163
		8	33	11.5	316	225	313	223	304	217	288	207
		9	20	8.8	253	183	251	182	245	179	234	174
		10	9	4.9	145	107	144	106	141	105	136	102
		11	3	2.0	60	44	60	44		44	56	43
			190	49.0	1286	891	1270	079	1224	851	1143	79s
			MEAN DIA. 6.9 INCHES. WEIBULL PARAMETERS A= .o, B= 7.37. c- 3.99									
25	60	2	1	.0	0	0						
		3	3	.1	2	0						
		4	7	.6	13	7	12	7	11	6	9	4
		5	14	1.9	46	33	47	32	45	30	42	27
		6	22	4.4	121	86	120	85	116	81	103	75
		7	29	7.8	220	165	226	164	222	160	213	153
		8	34	12.0	361	265	359	263	353	259	343	251
		9	29	12.9	399	295	397	294	392	290	382	284
		10	21	11.5	362	269	360	268	357	266	349	262
		11	11	7.3	232	173	231	173	229	172	225	170
		12	4	3.2	101	76	101	76	100	76	99	75
		13	1	.9	30	22	30	22	30	22	29	23
			176	62.7	1697	1391	1883	1384	1855	1362	1800	1324
			MEAN DIA. 8.1 INCHES. WEIBULL PARAMETERS A- .O. B= 8.58. C- 4.17									
30	69	2	1	.0	1	1						
		3	2	.1	3	2						
		4	4	.3	12	9	12	9	12	9	11	8
		5	8	1.1	37	28	37	28	36	28	35	27
		6	13	2.6	86	65	86	65	85	64	63	62
		7	19	5.1	170	130	170	129	168	128	166	126
		8	24	6.4	282	215	281	214	279	213	276	210
		9	25	11.0	372	283	371	202	369	281	365	278
		10	24	13.1	441	336	440	336	436	334	434	332
		11	19	12.5	422	322	421	322	419	320	416	318
		12	13	10.2	343	262	343	262	342	261	340	260
		13	7	6.5	217	165	217	165	216	165	215	165
		14	3	3.2	108	83	108	83	108	83	107	82
		15	1	1.2	41	32	41	32	41	32	41	32
			163	75.3	2535	1933	2527	1927	2513	1918	2489	1900
			MEAN DIA. 9.2 INCHES. WEIBULL PARAMETERS A- .o. B= 9.70. C=4.11									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					o. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	----------		----------	Ft 3	----------		----------	
35	77	3	1	.0	2	1						
		4	3	.3	10	8	10	8	10	8	10	7
		5	5	.7	25	19	25	19	25	19	25	19
		6	8	1.6	58	46	58	46	57	46	56	45
		7	12	3.2	117	92	117	92	117	92	116	91
		6	16	6.6	205	161	205	161	204	160	203	159
		9	19	8.5	307	241	307	241	306	241	305	240
		10	22	12.1	440	344	440	344	439	343	436	342
		11	20	13.4	483	379	483	379	462	379	481	378
		12	17	13.5	490	363	490	363	489	363	487	392
		13	13	12.1	439	344	439	344	439	343	438	342
		14	9	9.7	353	276	353	276	353	276	352	275
		15	5	6.2	225	177	225	177	225	177	224	176
		16	2	2.6	102	80	102	80	102	80	102	80
		17	1	1.6	58	46	58	46	58	46	58	46
			153	91.5	3314	2597	3312	2596	3306	2593	3295	2562
			MEAN DIA. 10.5 INCHES, WEIBULL PARAMETERS A= .0, B= 11.12. c- 3.93									
CO	84	3	1	.0	2	1						
		4	2	.2	7	5	7	5	7	5	7	5
		5	3	.4	16	12	16	12	16	12	16	12
		6	5	1.0	37	30	37	30	37	30	37	29
		7	8	2.1	81	65	81	65	81	65	81	64
		6	10	3.5	133	107	133	107	133	107	132	106
		9	12	5.3	202	162	202	162	202	162	201	161
		10	15	0.2	312	249	312	249	312	249	311	249
		11	16	10.5	402	322	402	322	402	322	401	321
		12	16	12.5	479	364	479	384	479	383	476	362
		13	15	13.6	528	421	528	421	527	421	526	421
		14	13	13.9	530	424	530	424	530	424	523	423
		15	10	12.2	466	374	469	374	468	374	467	374
		16	7	9.8	373	298	373	298	373	298	372	298
		17	5	7.9	301	240	301	240	301	240	300	240
		18	3	5.3	202	162	202	162	202	162	202	161
		19	2	3.9	150	120	150	120	150	120	150	120
		20	1	2.2	84	67	84	67	84	67	84	67
			144	112.7	4307	3443	4305	3442	4304	3441	4294	3433
			MEAN DIA. 12.0 INCHES. WEIBULL PARAMETERS A- .o. B= 12.71. c- 3.70									

SI 60

300 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	O. b.	I. b.	O. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	35	1	9	.0	0	0						
		2	29	.6	0	0						
		3	52	2.5	0	0						
		4	64	5.5	73	29	69	26	61	19	44	6
		5	63	8.5	166	98	161	95	149	87	126	73
		6	45	8.7	200	131	195	128	184	122	163	109
		7	24	6.3	159	108	156	106	148	103	133	95
		8	10	3.5	91	63	89	62	86	60	78	57
		9	3	1.3	36	25	35	25	33	24	30	23
		10	1	.5	15	11	15	11	14	11	13	10
			300	37.6	740	465	720	453	675	426	587	373
			MEAN DIA. 4.8 INCHES. WEIBULL PARAMETERS A= .0. B= 5.03. C= 2.87									
2049		1	1	.0	0	0						
		2	6	.1	0	0						
		3	16	.8	0	0						
		4	31	2.7	35	13	33	11	27	8	16	0
		5	47	6.4	131	79	127	75	118	67	99	50
		6	58	11.4	277	185	272	181	259	171	235	152
		7	53	14.2	379	265	373	261	360	253	335	236
		8	39	13.7	384	275	380	273	369	267	349	256
		9	21	9.3	272	197	269	196	263	193	251	187
		10	8	4.4	131	97	130	97	127	95	122	93
		11	2	1.3	40	30	40	30	39	30	38	29
			282	64.4	1649	1141	1624	1124	1562	1084	1445	1003
			MEAN DIA. 6.5 INCHES. WEIBULL PARAMETERS A = .0. B= 6.66. c= 3.65									
25	60	2	2	.0	0	0						
		3	7	.3	4	1						
		4	15	1.3	28	17	27	16	25	14	20	9
		5	26	3.5	90	62	88	60	84	57	76	49
		6	37	7.3	203	144	200	142	194	136	182	126
		7	45	12.0	353	256	350	253	342	248	327	236
		8	46	16.0	487	357	484	355	475	349	459	337
		9	37	16.3	506	374	503	372	496	368	462	359
		10	24	13.1	411	307	409	306	404	303	396	297
		11	11	7.2	231	172	230	172	227	170	222	166
		12	4	3.1	101	76	101	76	100	75	98	74
		13	1	.9	30	22	30	22	29	22	28	22
			255	81.2	2444	1788	2422	1774	2376	1742	2289	1677
			MEAN DIA. 7.6 INCHES. WEIBULL PARAMETERS A= .0. B= 8.11. C= 3.89									
30	69	2	1	.0	1	1						
		3	4	.2	7	5						
		4	6	.7	24	18	24	18	23	17	21	15
		5	15	2.0	68	51	67	51	66	49	63	47
		6	23	4.5	150	115	149	114	147	112	142	107
		7	30	8.0	267	203	266	202	262	199	256	194
		8	35	12.2	407	309	405	308	402	305	394	299
		9	36	151.6	529	403	528	402	524	399	517	393
		10	32	17.c	581	442	560	441	576	439	569	434
		11	23	15.1	506	385	505	384	502	382	497	379
		12	14	11.0	366	279	365	279	364	278	361	276
		13	7	6.4	215	163	215	163	214	163	212	162
		14	3	3.2	107	82	107	62	107	82	106	81
		15	1	1.2	CO	31	40	31	40	31	40	31
			232	97.7	3268	2407	3251	2475	3227	2456	3178	2418
			MEAN DIA. 6.6 INCHES. WEIBULL PARAMETERS A- .0. B= 9.33. C= 3.88									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0 . b .	I .
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	77	2	1	.0	1	1						
		3	2	.1	3	2						
		4	5	.4	16	12	16	12	16	12	15	11
		5	9	1.2	44	35	44	35	43	34	42	32
		6	14	2.7	99	77	99	77	98	76	96	74
		7	19	5.1	182	143	162	143	180	141	176	139
		8	24	a.4	302	236	301	235	299	234	295	231
		9	27	11.9	429	335	420	334	426	332	422	329
		10	20	15.2	549	430	540	429	546	427	542	424
		11	26	17.1	617	402	616	481	614	480	611	477
		12	22	17.3	622	466	621	485	619	464	616	462
		13	16	14.7	530	414	530	414	520	413	526	412
		14	10	10.7	365	300	385	300	364	300	362	299
		15	6	7.4	264	207	264	207	264	207	263	206
		16	3	4.2	150	117	150	117	150	117	150	118
		17	1	1.6	57	45	57	45	57	45	56	44
			213	116.0	4250	3322	4241	3314	4224	3302	4194	3276
		MEAN DIA. 10.1 INCHES. WEIBULL PARAMETERS A- .0. B= 10.70. C= 3.74										
40	84	2	1	.0	1	1						
		3	2	.1	3	2						
		4	3	.3	10	8	10	8	10	8	9	7
		5	6	.8	32	25	32	25	31	24	29	23
		6	9	1.8	60	54	66	54	66	53	64	51
		7	12	3.2	122	97	122	97	120	96	116	94
		8	15	5.2	199	159	199	156	197	157	195	155
		9	18	8.4	319	254	318	253	316	252	313	249
		10	21	11.4	435	346	434	345	433	344	430	342
		11	19	12.5	476	380	475	380	474	378	471	376
		12	22	17.3	656	523	655	522	654	521	651	518
		13	20	16.4	700	556	699	556	697	557	694	555
		14	16	17.1	650	516	650	518	646	517	646	515
		15	13	15.9	606	463	606	463	605	462	603	461
		16	9	12.6	477	300	477	380	476	380	475	379
		17	6	9.5	359	286	359	266	356	286	351	266
		18	3	5.3	202	160	202	160	202	160	201	161
		19	2	3.9	150	119	150	119	150	119	149	120
		20	1	2.2	63	66	83	66	63	66	02	66
			199	146.0	5546	4419	5539	4412	5520	4400	5407	4370
		MEAN DIA. 11.6 INCHES. WEIBULL PARAMETERS A= .0. B= 12.29. C= 3.55										

SI 60

400 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total		4-inch class and greater to o.b. tops of—					
						stem	2 inches		3 inches		4 inches	
					0. b.	1. b.	0. b.	I. b.	O. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
IS	35	1	20	.I	0	0						
		a	52	1.1	0	0						
		3	80	3.9	14	0						
		4	88	7.6	115	57	110	53	99	44	n	27
		5	75	10.1	209	129	203	125	190	116	163	97
		6	48	9.3	220	146	215	143	204	136	181	122
		7	24	6.3	161	110	158	106	150	104	135	96
		6	9	3.1	83	58	81	67	79	n	70	51
		9	3	1.3	36	25	35	25	34	24	31	23
		10	1	.5	16	10	16	10	14	10	13	10
			400	43.4	653	535	617	521	769	489	670	426
			MEAN DIA. 4 . S INCHES. WEIBULL PARAMETERS A= .o. B= 4.64. C= 2.61									
20	49	1	2	.0	0	0						
		2	11	.2	0	0						
		3	28	1.4	1	0						
		4	50	4.4	65	29	61	25	52	17	34	0
		5	68	9.3	199	123	193	116	180	106	153	63
		6	n	15.1	378	256	371	251	354	238	320	213
		7	64	17.1	465	327	458	323	442	312	410	292
		6	42	14.7	419	301	414	298	402	292	378	280
		9	21	9.3	274	199	271	198	264	195	251	190
		10	7	3.6	115	85	114	85	112	84	107	82
		11	2	1.3	40	30	40	30	39	30	38	29
			372.	76.6	19%	1350	1922	1328	1845	1274	1691	1169
			MEAN DIA. 6.1 INCHES. WEIBULL PARAMETERS A- .0, B= 6.51. C= 3.42									
25	60	1	1	.0	0	0						
		2	4	.1	0	0						
		3	12	.6	7	2						
		4	24	2.1	46	28	44	26	40	22	31	14
		5	39	3.3	139	95	135	92	128	66	114	74
		6	53	10.4	293	209	289	206	279	197	260	161
		7	59	15.0	466	339	461	335	450	326	429	309
		8	n	19.2	585	430	580	427	569	419	548	464
		9	42	16.5	576	428	572	426	564	420	647	409
		10	25	13.6	430	320	428	319	422	315	411	309
		11	11	7.3	231	173	230	172	227	171	222	169
		12	4	3.1	101	76	101	76	100	76	98	75
		13	I	.9	30	22	30	22	29	22	28	22
			330	96.9	2903	2122	2870	2101	2808	2054	2688	1966
			MEAN DIA. 7.3 INCHES, WEIBULL PARAMETERS A- .O. B= 7.76. C= 3.69									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total	All trees, stem	4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	1. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
30	69	2	2	.0	I	1						
		3	6	.3	10	7						
		4	13	1.1	36	26	35	27	34	25	31	22
		5	22	3.0	98	74	97	73	94	71	88	66
		6	32	6.2	207	156	205	155	201	151	192	145
		7	41	10.9	361	274	359	272	353	268	343	259
		8	45	15.6	519	394	517	392	511	367	499	377
		9	45	19.7	6 %	499	6 %	497	649	492	636	483
		10	37	20.0	668	507	666	SO6	660	502	650	495
		11	26	17.0	568	431	566	430	563	428	556	424
		12	15	11.7	390	297	389	296	387	295	363	292
		13	7	6.4	214	162	214	162	212	162	210	161
		14	3	3.2	106	61	106	81	106	81	105	60
		15	I	I.2	40	31	4 0	31	40	31	40	30
			295	116.4	3876	2942	3849	2922	3810	2 8 9 3	3733	2834
			MEAN DIA. 8.5 INCHES. WEIBULL PARAMETERS A= .o. B= 9.03. C= 3.72									
A	n	2	I	.0	I	1						
		3	4	.2	7	6						
		4	7	.8	22	17	22	17	21	16	19	15
		5	13	1.6	64	SO	63	48	61	48	58	45
		6	19	3.7	134	104	133	103	131	101	126	97
		7	26	6.9	248	194	247	193	244	190	239	185
		8	31	10.6	387	303	386	302	382	299	376	293
		9	A	IS.4	553	431	551	430	548	427	540	421
		I 0	35	19.0	683	533	681	532	677	529	669	523
		11	31	20.4	731	571	730	570	726	568	720	563
		12	25	19.6	702	548	701	547	698	545	693	541
		13	18	18.5	594	463	593	462	591	461	567	459
		14	II	11.7	421	328	420	328	419	327	417	326
		IS	6	7.3	263	205	263	205	262	205	261	204
		16	3	4.2	149	I16	I49	I16	149	116	149	116
		17	I	1.6	56	44	56	44	56	44	56	44
			266	139.6	5015	3914	4995	3898	4965	3676	4910	3832
			MEAN DIA. 9.8 INCHES. WEIBULL PARAMETERS A= .o. B= 10.41. C= 3.62									
40	.84	2	I	.0	I	1						
		3	2	.1	3	2						
		4	5	.4	17	13	17	13	I6	12	14	II
		5	8	1.1	42	32	41	32	40	31	37	29
		6	12	2.4	90	71	89	70	87	68	83	65
		7	18	4.3	162	130	161	129	159	126	154	121
		6	20	7.0	266	211	265	210	261	207	2 %	201
		9	24	10.6	403	321	401	320	398	316	390	310
		10	26	14.2	538	429	536	428	533	424	525	417
		11	26	17.2	652	519	650	518	647	514	639	508
		12	26	20.4	776	617	774	616	n o	613	762	607
		13	23	21.3	805	641	804	640	800	638	793	633
		14	19	20.4	771	614	n o	613	767	611	762	607
		15	14	17.2	652	520	651	519	649	518	646	515
		16	10	14.0	530	421	529	421	528	421	525	420
		17	6	9.5	359	286	359	286	3 %	265	358	284
		18	3	6.3	201	160	201	160	200	160	199	160
		19	2	3.9	150	119	150	I IQ	150	I19	149	I IQ
		20	I	2.2	63	66	63	66	83	66	82	65
			244	171.7	6501	5173	6481	5160	6446	5129	6371	5072
			MEAN DIA. II.4 INCHES. WEIBULL PARAMETERS A= .0. B= 12.03. C= 3.46									

SI 60

500 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of-					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
1s	35	1	37	.2	0	0						
		2	79	1.7	0	0						
		3	108	5.3	34	0						
		4	108	9.4	156	84	150	80	137	69	110	49
		5	83	11.2	242	154	236	150	221	139	193	119
		6	50	9.8	235	159	230	155	218	147	195	131
		7	23	6.1	156	109	153	107	146	102	133	93
		8	9	3.1	83	59	82	57	78	55	71	11
		9	2	.9	24	17	24	17	23	16	21	15
		10	1	.5	15	10	15	10	14	10	13	10
			MO	48.2	945	591	990	576	837	538	736	468
			MEAN DIA. 4.2 INCHES. WEIBULL PARAMETERS A = .o. a= 4.34, C= 2.92									
20	49	1	5	.0	0	0						
		2	19	.4	0	0						
		3	42	2.1	6	0						
		4	70	6.1	99	48	93	53	80	31	55	7
		5	09	12.1	269	170	261	164	243	148	207	118
		6	89	17.5	445	304	436	298	415	283	375	254
		7	72	19.2	528	374	520	369	501	357	465	334
		8	44	15.4	442	316	436	315	423	308	397	295
		9	21	9.3	275	201	272	200	265	196	251	190
		10	7	3.8	115	95	114	84	111	83	106	91
		11	2	1.3	40	30	40	30	39	30	37	29
			460	87.2	2219	1530	2172	1503	2077	1436	1893	1308
			MEAN DIA. S.9 INCHES. WEIBULL PARAMETERS A= .O. B= 6.23. C= 3.2'1									
25	60	1	1	.0	0	0						
		2	7	.2	0	0						
		3	18	.9	12	4						
		4	34	3.0	85	41	82	38	57	32	45	20
		5	52	7.1	185	128	181	124	171	115	152	97
		6	67	13.1	372	265	366	260	353	249	329	228
		7	72	19.2	570	415	564	410	548	399	519	376
		8	63	21.9	670	494	664	490	651	480	624	462
		9	45	19.9	618	459	614	456	603	450	583	437
		10	26	14.1	446	333	443	332	43-1	328	425	321
		11	11	7.2	231	173	230	172	227	171	221	168
		12	4	3.1	101	75	101	75	99	75	97	74
		13	1	.9	30	22	30	22	29	22	28	22
			401	110.5	3300	2409	3255	2379	3175	2321	3022	2205
			MEAN DIA. 7.1 INCHES. WEIBULL PARAMETERS A= .0, B= 7.53. C= 3.5'4									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal a	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. 4.	O. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
30	69	1	1	.O	0	0						
		2	3	.1	2	1						
		3	9	.4	14	10						
		4	17	1.5	46	36	47	35	45	33	40	28
		5	29	4.0	130	98	128	96	124	92	115	84
		6	41	8. 1	266	201	263	199	257	193	244	182
		7	51	13.6	452	342	449	339	441	332	425	319
		8	55	19.2	637	464	633	481	625	474	608	460
		9	51	22.6	750	569	746	566	736	560	721	548
		10	41	22.4	745	566	742	564	735	559	721	550
		11	28	18.5	616	468	614	467	609	464	600	458
		12	15	11.8	393	298	392	297	389	296	394	293
		13	7	6.5	215	164	214	164	213	163	21 I	161
		14	2	2.1	71	55	71	55	71	55	70	54
		15	1	1.2	41	31	41	31	41	31	41	31
			351	131.9	4380	3323	4340	3294	4288	3252	4180	3166
			MEAN DIA. 8.3 INCHES. WEIBULL PARAMETERS A= .O. B= 8.80, C= 3.60									
35	77	2	2	.O	I	I						
		3	5	.2	8	7						
		4	10	.9	31	24	31	23	29	22	27	19
		5	I6	2.2	79	61	76	60	75	58	70	53
		6	24	4.7	169	132	168	131	164	127	157	120
		7	32	8.6	307	236	305	236	300	232	290	224
		8	38	13.3	474	370	472	368	466	363	456	353
		9	42	18.6	664	517	661	515	655	510	643	500
		10	40	21.8	781	609	779	606	773	602	761	593
		11	35	23.1	826	645	824	643	818	640	808	632
		12	28	22.0	787	614	765	613	781	610	772	604
		13	19	17.5	627	499	626	488	623	466	617	483
		14	11	11.8	421	328	420	328	418	327	415	325
		15	6	7.4	263	205	263	205	262	205	260	205
		16	3	4.2	150	116	150	116	150	I16	149	I I6
		17	1	1.6	56	44	56	44	56	44	56	44
			312	157.8	5644	4399	5618	4376	5570	4342	5481	4271
			MEAN DIA. 9 6 INCHES WEIBULI PARAMETERS A= .O. B= 10.21. C= 3.53									
40	84	2	I	.0	1	1						
		3	3	.1	6	5						
		4	6	.5	20	15	20	15	18	13	I6	II
		5	I 0	I.4	51	40	50	39	48	37	44	34
		6	14	2.7	104	62	103	81	99	78	93	72
		7	19	5.1	191	152	189	150	186	I46	178	138
		8	24	8.4	316	251	314	249	308	244	297	235
		9	28	12.3	466	371	463	369	457	363	445	352
		10	31	16.9	637	507	634	so4	627	499	614	487
		11	32	24.1	7 %	633	793	631	786	625	n 3	614
		12	29	22.7	858	682	956	680	650	675	838	666
		13	26	23.9	903	718	901	716	695	713	885	705
		14	21	22.4	846	673	844	672	640	669	831	663
		15	15	18.4	694	551	693	550	689	548	683	545
		I6	10	13.9	526	418	525	418	523	417	519	415
		17	6	9.4	357	293	356	263	355	263	352	292
		18	4	7.1	266	212	266	212	265	212	264	21 I
		19	2	3.9	149	118	149	118	148	118	147	118
		20	1	2.2	83	65	83	65	83	65	62	65
			282	192.5	7270	5777	7239	5752	7177	5705	7061	5613
			MEAN DIA. 11.2 INCHES. WEIBULL PARAMETERS A= .0. a- 11.84. c- 3.39									

SI 60

600 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total	All trees, stem	1 4-inch class and greater to o.b. tops of— 2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	O. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
IS	35	1	59	.3	0	0						
		2	109	2.4	0	0						
		3	136	6.7	57	7						
		4	124	10.6	192	109	1 %	104	171	92	142	69
		5	88	12.0	264	171	258	166	243	155	215	134
		6	50	9.8	239	162	234	159	223	151	202	135
		7	23	6.1	158	110	155	108	149	104	136	95
		6	8	2.8	75	53	74	52	70	50	64	45
		9	2	.9	24	17	24	17	23	16	21	15
		10	1	.5	15	11	15	11	14	10	13	9
			600	52.3	1024	640	946	617	693	578	763	502
			MEAN DIA. 4.0 INCHES. WEIBULL PARAMETERS A= .0. B= 4.09. c- 2.26									
20	49	1	7	.0	0	0						
		2	27	.6	0	0						
		3	58	2.8	14	0						
		4	90	7.8	133	69	126	63	109	47	77	17
		5	108	14.6	334	215	324	207	302	188	258	152
		6	103	20.1	520	3 %	510	351	485	333	437	2 %
		7	78	26.7	574	408	565	403	544	389	503	364
		8	46	16.0	462	334	4 %	331	441	323	413	306
		9	20	8.8	262	191	259	190	252	1 %	238	160
		10	7	3.8	115	85	114	84	111	83	106	81
		11	2	1.3	41	30	41	30	39	30	37	29
			546	96.6	2455	1690	2395	1659	2263	1579	2069	1429
			MEAN DIA. 5.7 INCHES. WEIBULL PARAMETERS A= .0. B= 6.01. c- 3.11									
25	60	1	2	.0	0	0						
		2	10	.2	0	0						
		3	24	1.2	17	7						
		4	44	3.8	86	55	63	52	74	43	58	27
		5	66	9.0	238	165	232	160	219	148	193	124
		6	81	15.9	454	325	447	319	430	305	397	277
		7	82	21.9	654	478	646	472	628	456	593	430
		8	70	24.4	749	553	742	548	726	537	694	515
		9	48	21.2	863	492	650	489	646	462	622	466
		10	26	14.2	449	335	446	333	439	330	426	322
		11	11	7.3	232	174	231	173	227	172	221	169
		12	3	2.4	75	57	76	57	75	57	73	56
		13	1	.9	30	22	30	22	29	22	28	23
			466	122.5	3648	2663	3591	2625	3493	2554	3305	2411
			MEAN DIA. 6.9 INCHES. WEIBULL PARAMETERS A= .O. B= 7.34. C= 3.43									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees total stem O. b.	All trees total stem I. b.	4-inch class and greater to o.b. tops of— 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	- - - - - -	- - - -	- - - - *Ft* 3	- - - -	- - - -	- - - -	- - - -	- - - -
30	69	1	1	.0	0	0						
		2	4	.1	2	2						
		3	11	.5	17	12						
		4	22	1.9	61	46	59	44	56	41	48	34
		5	36	4.9	159	120	156	118	150	112	138	100
		6	50	9.8	322	243	318	240	309	232	292	216
		1	60	16.0	529	400	524	396	513	387	492	369
		8	62	21.6	715	542	710	536	699	529	677	512
		9	57	25.1	ear	632	829	629	818	621	797	605
		10	44	23.9	796	604	792	601	784	596	767	584
		II	29	19. I	636	462	634	481	628	477	616	471
		12	16	12.5	418	317	417	316	413	314	407	311
		13	7	6.4	215	163	214	163	213	162	210	161
		14	2	2.1	71	54	71	a	71	54	70	53
		15	1	1.2	41	31	41	31	41	31	40	31
			402	145.3	4816	3646	4765	3611	4695	3556	4554	3447
		MEAN DIA. 8.1 INCHES. WEIBULL PARAMETERS A= .0. B= 8.63. C= 3.52										
35	77	2	2	.0	1	1						
		3	6	.3	II	8						
		4	12	1.0	37	29	36	26	34	26	29	21
		5	20	2.7	97	76	95	74	92	71	84	63
		6	29	5.7	202	157	200	155	194	150	164	141
		7	37	9.8"	352	274	349	271	342	265	329	253
		8	44	15.3	546	425	543	422	535	415	519	401
		9	46	20.2	722	563	719	560	710	552	69'1	536
		10	45	24.4	672	679	868	676	860	670	844	657
		11	39	25.6	915	712	912	710	904	704	889	694
		12	30	23.5	638	652	835	650	830	647	818	640
		13	20	18.4	655	510	653	509	650	507	642	502
		14	12	12.8	456	355	455	355	453	353	446	351
		15	6	7.3	261	203	261	203	260	203	256	2C2
		16	3	4.2	149	115	149	I15	148	115	147	115
		17	1	1.6	56	44	56	44	56	44	56	43
			352	172.8	6170	4803	6131	4772	6068	4722	5940	462 I
		MEAN DIA. 9.5 INCHES. WEIBULL PARAMETERS A = .0.B= 10.05. c- 3.47										
CO	84	2	1	.0	1	1						
		3	4	.2	6	6						
		4	7	.6	23	18	22	17	20	15	17	11
		5	12	1.6	61	49	60	48	56	44	S0	37
		6	17	3.3	126	100	124	90	119	93	109	64
		7	22	5.9	221	176	219	173	213	167	201	155
		6	20	9.7	368	292	365	289	357	291	341	267
		9	32	14.1	532	422	528	419	519	411	502	396
		10	34	18.5	697	554	693	551	684	543	665	527
		11	33	21.7	819	650	815	647	806	639	787	625
		12	32	25.1	945	751	941	748	932	741	914	727
		13	28	25.7	970	771	967	769	959	763	945	753
		14	22	23.5	884	702	881	700	875	697	863	689
		15	16	19.6	736	586	736	565	732	583	724	570
		16	II	15.3	577	459	576	456	573	456	568	453
		17	7	11.0	415	330	414	330	412	329	408	327
		18	4	7.0	265	211	265	211	264	211	262	210
		19	2	3.9	148	117	148	117	147	117	146	117
		20	1	2.2	62	65	62	65	62	65	81	65
			313	209.0	7880	6260	7836	6225	7750	6155	7503	6021
		MEAN DIA. 11.1 INCHES. WEIBULL PARAMETERS A= .0. B= 11.71. C= 3.35										

SI 70

100 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total	All trees, stem	4-inch class and greater to o.b. tops of— 2 inches		3 inches		4 inches	
					O. b.	I. b.	0. b.	I. b.	O. b.	I.b.	O. b.	I. b.
Yrs	Ft	In	No.	Ft2	Ft 3							
15	41	2	1	.0	0	0						
		3	3	.I	0	0						
		4	8	.7	3	0	3	0	2	0	0	0
		5	15	2.0	30	12	29	II	26	9	21	5
		6	El	4.1	83	48	81	47	78	44	71	38
		7	23	6.2	145	93	143	92	139	89	131	63
		8	17.	5.9	154	103	152	102	149	100	141	96
		9	9	4.0	109	76	108	76	106	74	102	72
		10	3	1.6	46	32	46	32	45	32	44	32
			100	24.8	570	364	562	360	545	348	510	326
			MEAN DIA. 6.7 INCHES, WEIBULL PARAMETERS A= .0. B= 7.16. C- 4.31									
20	57	3	1	.0	0	0						
		4	3	.3	5	2	5	' 2	5	2	4	1
		5	6	.8	19	12	19	12	16	11	17	10
		6	11	2.2	58	39	57	39	56	37	53	35
		7	16	4.3	123	85	122	84	120	82	117	79
		6	19	6.7	199	140	198	139	1 %	137	191	133
		9	19	8.4	259	194	258	163	256	181	251	178
		10	13	7.1	223	160	222	159	220	158	217	155
		II	6	4.0	126	91	126	91	125	90	124	89
		12	2	I.6	59	37	50	37	50	37	49	36
			96	35.3	1062	750	1057	746	1046	735	1023	716
			MEAN DIA. 6.2 INCHES, WEIBULL PARAMETERS A= .0. B= 6.72, C= 4.69									
25	70	4	1	.1	3	2	3	2	3	2	3	2
		5	3	.4	14	10	14	10	14	10	14	10
		6	6	1.2	41	31	41	31	41	31	40	30
		7	10	2.6	93	70	93	70	93	70	92	69
		8	14	4.8	169	127	169	127	169	126	168	125
		9	18	7.6	276	206	276	206	275	206	274	205
		10	16	0.6	303	226	303	226	303	226	302	225
		11	12	7.8	275.	205	275	205	275	205	274	205
		12	7	5.4	191	143	191	143	191	143	190	142
		13	3	2.7	95	72	95	72	95	72	96	71
		14	1	1.1	37	28	37	28	37	28	37	28
			91	42.4	1497	1120	1497	1120	1496	1119	1490	1112
			MEAN DIA. 9.2 INCHES. WEIBULL PARAMETERS A. .0. B= 9.82. c- 4.91									
30	81	4	1	.1	4	2	4	2	4	2	4	2
		5	2	.3	II	9	II	9	11	9	II	9
		6	4	.8	32	24	32	24	32	24	32	24
		7	6	1.6	64	so	64	50	64	50	64	50
		8	9	3.2	125	98	125	98	125	98	125	97
		9	12	5.4	211	164	211	164	211	164	211	164
		10	16	8.8	348	269	348	269	348	269	347	269
		II	13	6.7	342	265	342	265	342	265	342	265
		12	11	8.8	344	267	344	267	344	267	344	267
		13	7	6.5	267	199	257	199	257	199	257	200
		14	4	4.3	.170	132	170	132	170	132	170	132
		15	1	1.2	48	38	48	36	48	36	48	38
			86	49.7	1956	1517	19%	1517	1956	1517	1955	1517
			MEAN DIA. 10.3 INCHES. WEIBULL PARAMETERS A= .0. B= 10.94. C- 4.7;									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					O. b.	1. b.	O. b.	I. b.	O. b.	I. b.	0. b.	I. b.-
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	90	4	I	.I	4	3	4	3	4	3	4	3
		5	I	.1	6	4	6	4	6	4	5	4
		6	3	.6	25	20	25	20	25	20	24	19
		7	4	1.1	46	37	46	37	45	36	44	35
		8	6	2.1	90	72	90	72	90	72	89	71
		9	8	3.6	152	120	152	120	151	120	150	120
		10	IO	5.5	233	187	233	187	232	196	231	185
		11	II	7.3	311	246	311	248	310	247	306	246
		12	II	8.7	370	295	369	295	366	2 %	366	294
		13	IO	9.3	394	314	394	314	393	314	392	313
		14	8	a.7	366	292	366	292	365	292	364	291
		15	5	6.2	262	210	262	210	262	210	261	210
		16	3	4.2	179	144	179	144	179	144	179	I43
		17	1	I.6	67	54	67	54	67	54	67	43
			82	59.2	2505	2000	2504	2000	2497	1997	2484	1987
			MEAN DIA. 11.5 INCHES. WEIBULL PARAMETERS A= .o. B= 12.23. C= 4.41									
40	97	4	1	.I	4	3	4	3	4	3	3	3
		5	I	.I	7	4	7	4	6	4	5	4
		6	2	.4	17	15	17	15	17	I4	16	13
		7	3	.8	36	29	36	29	36	29	35	28
		9	4	I . 4	63	51	63	51	62	50	60	46
		9	5	2.2	100	81	100	81	98	80	96	70
		10	7	3.8	172	140	171	140	170	138	167	136
		11	9	5.3	237	193	237	193	235	191	233	189
		12	9	7.1	319	259	318	258	316	257	313	254
		13	8	7.4	332	270	331	270	330	269	327	267
		14	8	8.6	385	314	384	314	383	312	380	310
		15	7	8.7	367	316	366	316	385	315	382	313
		16	6	6.4	377	307	377	307	375	306	373	305
		17	4	6.4	284	231	284	231	283	231	282	230
		18	3	5.3	239	195	239	195	238	195	237	194
		19	2	4.0	in	I44	177	144	in	144	176	144
		20	I	2.2	99	80	99	60	99	60	98	79
			79	72.4	3235	2.632	3230	2631	3214	2618	3183	2595
			KAN DIA. 13.0 INCHES. WEIBULL PARAMETERS A= .o. B= 13.77. C= 4.07									

SI 70

200 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total	All trees, *stem*	4-inch class and greater to 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.*	*Ft2*				*Ft 3*				
15	41	1	1	.0	0	0						
		2	6	.I	0	0						
		3	16	.8	0	0						
		4	29	2.5	25	4	23	4	20	2	12	0
		5	41	1.6	101	54	99	52	93	47	82	37
		6	42	0.2	187	117	184	115	177	109	163	99
		7	35	9.3	237	1%	234	156	226	152	215	143
		6	20	7.0	189	131	187	130	163	127	175	121
		9	8	3.5	100	70	99	70	97	68	93	66
		10	2	1.1	32	22	32	22	31	22	30	21
			200	36.2	871	5%	6%	549	829	527	770	467
			MEAN DIA. 5.9 INCHES. WEIBULL PARAMETERS A= .O. B= 6.26. C= 3.65									
20	57	2	1	.O	0	0						
		3	4	.2	2	0						
		4	11	1.0	19	11	16	10	17	9	14	6
		5	20	2.1	67	43	66	42	64	40	59	36
		6	31	6. I	167	113	165	112	162	108	154	LO2
		7	39	10.4	303	211	301	209	296	206	267	198
		a	37	12.9	390	275	368	274	363	270	373	263
		9	27	11.9	359	263	366	262	364	259	A 7	254
		10	14	7.6	240	173	239	172	237	171	234	168
		II	5	3.3	105	76	105	76	104	76	103	75
		12	I	.a	25	19	25	19	25	19	25	18
			190	56.8	1687	1184	1675	1176	1652	11%	1606	1120
			MEAN DIA. 7.4 INCHES, WEIBULL PARAMETERS A- .o. B= 7.87, C= 4.21									
25	70	2	I	.O	1	1						
		3	2	.I	3	2						
		4	5	.4	16	II	16	11	16	II	15	10
		5	II	1.5	53	39	53	39	52	38	51	37
		6	18	3.5	i23	92	123	92	122	91	121	a9
		7	26	7.0	243	181	242	181	241	176	239	177
		6	33	11.5	403	300	402	299	401	296	396	295
		9	31	13.7	479	357	478	3 %	477	355	475	352
		10	25	13.7	477	355	477	354	416	353	474	351
		11	15	9.9	346	257	346	257	345	257	344	2%
		12	7	5.5	192	143	192	143	192	143	191	142
		13	2	1.8	64	46	64	40	64	48	64	48
			176	66.7	2400	1766	2393	1780	2386	1773	2372	1757
			MEAN DIA. 8.5 INCHES. WEIBULL PARAMETERS A- .0, B= 8.99, C= 4.38									
30	81	3	I	.0	2	I						
		4	3	.3	10	8	10	8	10	8	10	8
		5	7	1.0	37	29	37	29	37	29	37	29
		6	11	2.2	84	65	84	65	84	65	84	64
		7	17	4.5	177	137	177	137	177	137	176	137
		8	22	7.7	298	231	298	231	298	231	298	231
		9	25	11.0	429	332	429	332	429	332	429	331
		10	26	14.2	550	424	550	424	550	424	550	425
		II	22	14.5	563	435	563	435	563	435	564	435
		12	15	11.8	457	353	457	353	457	353	457	353
		13	9	8.3	322	248	322	248	322	248	322	249
		14	4	4.3	165	128	165	128	165	128	166	126
		15	1	1.2	47	37	47	37	47	37	47	37
			183	80.9	3141	2428	3139	2427	3139	2427	3140	2427
			MEAN DIA. 9.5 INCHES, WEIBULL PARAMETERS A= .0, B= 10.14, C= 4.27									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	O. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
3590		3	1	.0	3	1						
		4	2	.2	6	5	8	5	6	5	6	5
		5	4	.6	23	19	23	19	23	19	23	19
		6	7	1.4	5s	47	5s	47	58	47	58	47
		7	11	3.0	I N	98	124	98	124	96	124	99
		6	14	4.9	206	164	206	164	206	164	206	164
		9	16	6.0	336	266	336	268	336	266	335	267
		10	20	11.0	460	366	460	366	460	366	460	365
		11	22	14.6	613	487	613	487	613	467	612	466
		12	19	15.0	630	500	630	500	630	500	629	500
		13	15	13.9	584	463	564	463	564	463	563	464
		14	10	10.8	452	358	452	358	451	358	450	359
		15	6	7.4	310	246	310	246	310	246	310	247
		16	3	4.2	176	140	176	140	176	140	176	140
		17	1	1.6	66	53	66	53	66	53	66	53
			153	96.7	4049	3215	4046	3214	4045	3214	4040	3215
			MEAN DIA. 10.8 INCHES. WEIBULL PARAMETERS A= .0. B= 11.44. C= 4.04									
40	97	3	1	.0	3	1						
		4	2	.2	8	6	6	6	6	6	6	6
		5	3	.4	19	14	19	14	19	14	19	14
		6	5	1.0	44	36	44	36	44	36	44	35
		7	7	1.9	84	66	84	66	84	68	84	68
		8	9	3.2	141	114	141	114	140	114	139	113
		9	12	5.4	237	193	237	193	237	192	236	191
		10	14	7.7	342	276	342	276	341	276	340	276
		11	1s	10.0	443	359	443	359	443	359	442	356
		12	16	12.7	562	456	562	456	561	456	560	455
		13	15	14.0	619	501	619	501	616	s o l	617	501
		14	14	15.2	670	543	670	543	670	543	669	543
		15	11	13.7	603	490	603	490	603	4S0	602	469
		16	6	11.3	500	405	500	405	500	405	4 %	404
		17	6	9.6	423	343	423	343	423	343	422	344
		18	3	s.4	237	193	237	193	237	193	237	192
		19	2	4.0	176	143	176	143	176	143	176	143
		20	1	2.2	98	79	98	79	98	79	97	79
			144	117.9	5209	4220	5206	4219	5202	4218	5191	4211
			MEAN DIA. 12.3 INCHES. WEIBULL PARAMETERS A= .0. B= 13.00. C= 3.79									

SI 70

300 **trees per acre**

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total	All trees, stem	4-inch class and greater to o.b. tops of— 2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	41	1	4	.O	0	0						
		2	15	.3	0	0						
		3	34	1.7	0	0						
		4	55	4.8	63	23	86	21	54	15	41	3
		4	66	9.0	182	105	178	102	169	95	151	81
		6	59	11.6	290	179	276	176	265	170	245	157
		7	40	10.7	293	190	280	188	272	163	256	174
		8	19	6.6	185	127	163	126	179	124	170	120
		9	7	3.1	90	83	69	63	87	62	83	60
		10	I	.5	17	11	17	II	16	11	15	II
			300	48.5	1100	696	1663	667	1042	660	961	606
			MEAN DIA. 5.4 INCHES. WEIBULL PARAMETERS A= .0. B= 5.75. C= 3.28									
20	57	I	I	.0	0	0						
		2	3	.I	0	0						
		3	11	.5	6	I						
		4	23	2.0	42	24	41	23	38	20	32	15
		5	39	5.3	135	89	133	87	128	62	118	73
		6	52	10.2	295	1 %	282	193	275	167	262	175
		7	56	14.9	442	309	439	306	431	300	415	288
		8	46	16.7	512	362	509	360	MI	355	467	345
		9	30	13.2	414	296	412	295	407	291	397	285
		10	14	7.6	242	174	241	173	239	172	234	169
		11	4	2.6	84	61	84	61	83	61	62	60
		12	I	.8	25	19	25	19	25	19	25	18
			262	74.0	2167	1531	2166	1517	2127	1487	2052	1428
			MEAN DIA. 6.9 INCHES. WEIBULL PARAMETERS A= .0. B= 7.37. C= 3.92									
25	70	2	I	.0	I	I						
		3	5	.2	6	6						
		4	II	1.0	33	25	33	25	32	24	31	23
		5	21	2.9	100	74	99	73	98	72	95	69
		6	33	6.5	225	167	224	166	222	164	217	160
		7	42	11.2	390	289	389	288	386	285	380	260
		6	48	16.7	581	431	580	430	517	427	571	422
		9	41	16.1	628	466	627	465	625	463	621	459
		10	29	15.8	548	407	547	406	546	405	543	402
		11	16	10.6	366	272	366	272	365	271	363	269
		12	6	4.7	164	122	164	122	164	121	163	120
		13	2	I.8	64	47	64	47	64	47	64	47
			255	69.5	3106	2307	3093	2294	3079	2279	3048	2251
			MEAN DIA. 6.0 INCHES. WEIBULL PARAMETERS A= .0. B= 8.52. c- 4.08									
30	81	2	I	.0	I	I						
		3	3	.I	6	5						
		4	7	.6	24	16	24	18	24	18	23	18
		5	I2	1.6	63	49	63	49	63	49	63	49
		6	20	3.9	153	I17	153	117	152	117	151	117
		7	27	7.2	279	216	279	216	279	215	279	214
		8	34	11.9	460	355	460	355	460	354	459	353
		9	36	16.0	616	476	616	476	616	475	616	473
		10	34	16.6	719	554	719	554	719	554	716	553
		11	2-l	17.9	691	533	691	533	691	533	691	532
		12	17	13.4	517	399	517	399	517	399	518	398
		13	9	6.3	322	246	322	246	322	248	322	247
		14	4	4.3	166	126	166	128	166	126	166	127
		15	I	1.2	47	37	47	37	47	37	47	37
			232	105.2	4064	3136	4057	3130	4056	3127	4053	3118
			MEAN DIA. 9.1 INCHES. WEIBULL PARAMETERS A- .0. B= 9.69. C- 4.03									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	*In*	No.	Ft 2	Ft 3							
35	90	2	1	.0	1	1						
		3	2	.I	4	3						
		4	4	.4	15	12	15	12	15	12	15	12
		5	7	1.0	40	32	40	32	40	32	40	32
		6	12	2.4	99	76	99	78	99	78	98	78
		7	17	4.6	190	150	190	150	190	150	190	150
		8	22	7.7	321	254	321	254	321	254	322	255
		9	26	11.6	480	381	480	381	480	381	481	381
		10	30	16.5	685	543	685	543	685	543	686	543
		II	27	17.9	746	592	746	592	746	592	747	592
		12	24	19.0	789	626	709	626	789	626	790	625
		13	18	16.7	695	551	695	551	695	551	695	nil
		14	12	12.9	537	426	537	426	537	426	538	426
		IS	7	6.6	360	285	360	285	360	285	360	285
		16	3	4.2	175	138	175	138	175	138	175	138
		17	1	1.6	66	53	66	53	66	53	66	53
			213	125.1	5203	4125	5198	4121	5198	4121	5203	4121
			MEAN DIA. 10.4 INCHES. WEIBULL PARAMETERS A= .o. B= 11.02. C= 3.66									
40	97	3	1	.0	3	1						
		4	3	.3	12	10	12	10	12	10	12	10
		5	5	.7	39	24	30	24	30	24	30	24
		6	8	1.6	69	57	69	57	es	57	69	57
		7	11	3.0	129	105	129	105	129	105	129	105
		8	14	4.9	216	174	216	174	216	174	216	174
		9	16	8.0	352	284	352	284	352	284	A 1	284
		10	M	11.0	461	389	481	389	481	389	481	389
		11	22	14.6	641	518	641	518	641	518	641	518
		12	23	18.1	797	644	797	644	797	644	798	644
		13	M	18.5	813	656	613	656	813	656	814	657
		14	17	18.3	801	648	801	646	801	648	602	648
		15	14	17.3	758	613	758	613	758	613	759	613
		16	10	14.0	616	498	616	498	616	496	616	496
		17	6	9.5	417	337	417	337	417	337	417	337
		18	4	7. I	311	252	311	252	311	252	311	252
		19	2	4.0	174	140	174	140	174	140	174	140
		20	1	2.2	97	78	97	70	97	78	97	78
			199	152.9	6717	5428	6714	5427	6714	5427	6717	5428
			MEAN DIA. '1.9 INCHES. WEIBULL PARAMETERS A= .0. B= 12.59. C= 3.64									

SI 70

400 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total o.b.	All trees, total i.b.	All trees, stem o.b.	All trees, stem i.b.	4-inch class and greater to o.b. tops of— 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	Ft 3									
15	41	1	8	.0	0	0								
		2	29	.6	0	0								
		3	56	2.8	5	0								
		4	81	7.1	108	48	104	45	9s	36	76	20		
		5	67	11.8	254	153	249	149	237	139	213	121		
		6	69	13.5	336	218	331	215	319	207	296	192		
		7	42	11.2	302	203	298	201	289	196	272	187		
		8	19	6.6	187	128	185	127	180	125	171	120		
		9	6	2.6	77	53	76	53	74	52	71	51		
		10	1	.5	16	11	16	11	16	11	15	11		
			400	56.9	1295	814	1259	801	1210	766	1114	702		
			MEAN DIA. 5.1 INCHES. WEIBULL PARAMETERS A= .0. B= 5.38. C= 3.03											
20	5-1	1	1	.0	0	0								
		2	7	.2	0	0								
		3	19	.9	11	3								
		4	38	3.3	72	42	70	40	64	35	54	26		
		5	59	8.0	208	137	205	134	197	127	181	113		
		6	73	14.2	405	279	401	275	390	266	369	248		
		7	71	18.9	563	396	5 %	392	547	384	526	367		
		8	55	19.1	587	417	583	414	575	408	558	396		
		9	31	13.6	428	306	426	305	420	301	410	295		
		10	13	7.0	224	162	223	161	221	160	217	157		
		11	4	2.6	85	61	85	61	84	60	82	59		
		12	1	.8	25	19	25	19	25	19	25	18		
			372	88.6	2608	1822	2576	1801	2523	1760	2422	1679		
			MEAN DIA. 6.6 INCHES. WEIBULL PARAMETERS A = .08= 7.01. C- 3.69											
25	70	2	3	.1	2	2								
		3	9	.4	15	11								
		4	19	1.7	57	43	56	42	55	40	52	3-1		
		5	32	4.4	150	112	149	111	147	108	142	103		
		6	47	9.2	318	236	316	235	313	231	306	224		
		7	57	15.2	526	390	524	388	519	384	510	375		
		8	59	20.6	711	527	709	525	705	521	696	513		
		9	48	21.2	732	542	731	541	727	537	720	531		
		10	32	17.4	603	446	602	445	600	443	595	439		
		11	16	10.5	364	270	364	270	362	269	360	267		
		12	6	4.7	163	121	163	121	162	120	161	119		
		13	2	1.8	63	47	63	47	63	47	64	4.7		
			330	107.2	3704	2747	3677	2725	3653	2700	3606	2655		
			MEAN DIA. 7.7 INCHES. WEIBULL PARAMETERS A= .O. B= 8.20. C= 3.89											
30	81	2	2	.0	1	1								
		3	5	.2	9	7								
		4	10	.9	33	26	33	26	33	26	32	25		
		5	18	2.5	95	73	95	73	94	72	93	710		
		6	28	5.5	212	163	211	162	210	161	206	159		
		7	38	10.2	391	301	391	300	389	299	387	296		
		8	45	15.7	604	465	604	464	602	463	600	460		
		9	46	20.3	781	602	781	601	780	600	778	597		
		10	40	21.8	839	645	839	645	838	644	637	643		
		11	30	19.8	762	585	762	505	761	565	760	584		
		12	19	14.9	574	442	574	442	574	441	573	440		
		13	9	8.3	319	246	319	246	319	246	319	245		
		14	4	4.3	164	127	164	127	164	127	165	126		
		15	1	1.2	47	36	47	36	47	36	47	37		
			295	125.6	4831	3719	4820	3707	4811	3700	4799	3683		
			MEAN DIA. E.6 INCHES. WEIBULL PARAMETERS A- .o, B= 9.39. C= 3.87											

Age	Av. dom. ht.	Stems D.b.h.	per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0: b.	I. b.	0. b.	I. b.	0. b.	I. b.	O. b.	I. b.
Yrs	Ft	In	No.	Ft 2	---		------		---- Ft 3		-------	
35	so	2	1	.O	1	1						
		3	3	.1	6	5						
		4	6	.5	22	17	22	17	22	17	21	17
		5	11	1.5	63	50	63	50	83	50	62	49
		6	17	3.4	140	110	140	110	140	110	139	109
		7	23	6.2	257	204	257	204	257	204	257	203
		8	30	10.6	43s	347	436	347	438	347	438	346
		9	34	15.2	629	497	629	497	629	497	628	4 %
		10	37	20.4	644	668	644	668	844	66s	644	667
		11	33	22.0	911	720	911	720	91 1	720	91 1	720
		12	27	21.4	886	702	886	702	6 %	702	888	701
		13	20	16.6	771	610	771	610	771	610	772	609
		14	13	14.0	581	460	581	460	581	460	562	459
		15	7	6.7	360	284	360	284	360	284	359	284
		16	3	4.2	175	138	175	138	175	138	175	138
		17	1	1.6	66	53	66	53	66	53	66	53
			266	148.4	6150	4666	6143	4860	6143	4860	6142	4851
			MEAN DIA. 10.1 INCHES. WEIBULL PARAMETERS A= .0. B= 10.73. C= 3.73									
40	97	2	1	.0	1	1						
		3	2	.1	4	3						
		4	4	.4	16	13	16	13	16	13	16	13
		5	7	1.0	42	34	42	34	42	34	42	34
		6	10	2.0	86	69	86	69	66	69	86	69
		7	15	4.0	176	143	176	143	176	142	in	141
		8	19	6.7	293	236	293	236	293	236	292	235
		9	23	10.2	448	362	448	362	448	362	448	361
		10	26	14.3	625	504	625	504	625	504	624	503
		11	26	17.3	757	610	757	610	757	610	756	609
		12	26	20.6	sol	726	901	726	sol	726	900	725
		13	24	22.3	975	767	975	767	975	767	975	786
		14	20	21.5	942	760	942	760	942	760	942	759
		15	16	19.6	665	698	865	698	865	6 %	866	698
		16	11	15.5	677	547	677	547	677	547	676	546
		17	7	11.1	466	393	4 %	393	486	393	487	392
		18	4	7.1	311	251	311	251	311	251	311	252
		19	2	4.0	174	140	174	140	174	140	174	140
		20	1	2.2	97	76	97	78	97	76	97	78
			244	180.0	7876	6355	7671	6351	7671	6350	7671	6341
			MEAN DIA. 11.6 INCHES. WEIBULL PARAMETERS A= .0. B= 12.33. C= 3 . 5 4									

SI 70

500 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to 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	Ft 3							
15	41	1	16	.I	0	0						
		2	47	I .o	0	0						
		3	64	4.1	19	0						
		4	107	9.3	156	76	151	74	139	63	115	43
		5	103	14.1	315	194	309	169	294	178	266	157
		6	76	14.9	380	250	375	246	361	237	336	219
		7	43	11.5	314	213	310	211	301	205	263	194
		8	18	6.3	179	124	177	123	172	120	163	115
		9	5	2.2	64	46	64	46	62	45	60	43
		10	I	.5	16	II	16	II	16	II	15	II
		i	500	64. I	1443	916	1402	900	1345	859	1238	762
			MEAN DIA. 4.6 INCHES. WEIBULL PARAMETERS A= .o. B= 5.08, c- 2.63									
20	57	I	2	.O	0	0						
		2	12	.3	0	0						
		3	30	1.5	20	7						
		4	55	4.8	107	65	104	62	96	54	80	40
		5	79	10.6	285	190	280	185	268	175	245	154
		6	92	16.0	518	358	512	353	498	341	470	318
		7	63	22.1	666	469	660	465	647	454	621	434
		6	59	20.6	636	453	632	450	622	443	603	429
		9	32	14.1	446	320	444	318	438	315	427	307
		10	12	6.5	209	151	208	150	206	149	201	146
		II	3	2.0	64	46	64	46	63	46	62	45
		12	I	.8	25	19	25	19	25	19	25	18
			460	101.5	2976	2078	2929	2048	2863	1996	2734	1891
			MEAN DIA. 6 . 4 INCHES. WEIBULL PARAMETERS A= .O. B= 6.74. C= 3.51									
25	70	I	I	.0	0	0						
		2	4	.I	3	2						
		3	13	.6	22	16						
		4	27	2.4	81	60	80	59	77	56	72	51
		5	44	6.0	207	153	205	151	201	147	192	139
		6	61	12.0	413	305	411	303	405	297	393	286
		7	72	19.2	664	491	661	488	654	481	640	468
		8	68	23.7	818	605	et5	603	809	597	797	566
		9	54	23.9	822	608	820	606	815	602	806	594
		IO	34	18.5	639	473	636	472	635	469	629	464
		11	16	IO.6	364	270	363	269	362	268	359	265
		12	6	4.5	163	121	163	121	162	120	161	119
		13	t	.9	32	23	32	23	32	23	32	23
			401	122.6	4226	3127	4188	3095	4152	3060	4081	2995
			MEAN OIA. 7.5 INCHES. WEIBULL PARAMETERS A= .0. B= 7.95. C= 3.74									
30	81	2	2	.O	I	t						
		3	7	.3	14	II						
		4	14	1.2	47	36	47	36	46	35	45	33
		5	25	3.4	131	101	130	100	129	98	126	95
		6	37	7.3	279	214	276	213	276	211	272	207
		7	47	12.6	462	370	481	369	479	367	475	362
		8	55	19.2	737	567	736	566	733	563	728	557
		9	53	23.4	899	691	898	690	896	688	892	663
		10	45	24.6	942	724	941	723	940	721	937	718
		II	33	21.6	836	642	836	642	835	640	933	636
		12	19	14.9	572	440	572	440	572	439	572	438
		13	9	a.3	319	245	319	245	319	245	318	244
		14	4	4.3	164	127	164	127	164	127	164	126
		15	I	1.2	47	36	47	36	47	36	47	36
			351	t42.6	5470	4205	5449	4187	5436	4170	5409	4137
			MEAN DIA. 6 . 6 INCHES. WEIBULL PARAMETERS A= .o. B= 9.16. C- 3.75									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inch&	
					0. b.	I. b.	O. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
35	90	2	I	.O	I	I						
		3	4	.2	9	7						
		4	8	.7	30	23	30	23	29	23	28	22
		5	14	1.9	79	62	79	62	79	62	78	61
		6	21	4.1	171	135	171	135	170	134	169	133
		7	29	7.8	321	254	321	253	320	252	319	250
		e	36	12.6	521	411	521	411	520	410	518	408
		9	40	17.7	733	579	733	578	732	577	733	575
		10	45	24.6	1018	804	1018	803	1017	802	1015	800
		11	3-I	24.5	1013	800	1013	800	1012	799	1011	797
		12	30	23.6	977	772	977	772	977	771	977	769
		13	22	20.4	841	665	841	665	841	664	841	662
		14	14	15.0	621	491	621	491	621	490	620	489
		15	7	8.6	357	281	357	281	357	281	3%	282
		16	3	4.2	173	137	173	137	173	137	IN	137
		17	I	1.6	65	52	65	52	65	52	65	52
			312	167.7	6930	5474	6920	5463	6913	5454	6901	5437
			MEAN DIA. 9.9 INCHES. WEIBULL PARAMETERS A= .0. e= 10.53. C= 3.64									
40	97	2	I	.O	I	I						
		3	3	.1	7	6						
		4	5	.4	20	16	20	16	19	15	18	14
		5	9	1.2	54	44	54	44	53	43	52	42
		6	13	2.6	113	90	113	90	112	90	110	89
		7	18	4.9	212	171	212	171	21 I	170	210	168
		8	23	8.1	355	285	355	285	354	284	352	282
		9	27	12.1	x 6	424	526	424	525	422	524	420
		10	30	16.5	722	582	722	581	721	580	719	577
		11	31	20.7	903	727	903	727	902	725	900	723
		12	so	23.8	1040	838	IWO	838	1039	836	1038	834
		13	27	25.2	10%	886	1098	885	1096	e m	1097	882
		14	22	23.8	1038	836	1038	836	1038	835	1037	834
		15	17	21.1	921	741	921	741	921	741	920	740
		16	12	16.9	739	5 %	739	5 %	739	595	739	594
		17	7	11.2	467	393	467	393	487	393	487	392
		18	4	7.1	311	251	311	251	311	251	312	250
		19	2	4.0	174	140	174	140	174	140	175	140
		20	I	2.2	97	78	97	78	97	78	96	78
			282	202.0	8818	7105	8810 7 0 %		8801	7082	8786	7059
			MEAN DIA. 11.5 INCHES. WEIBULL PARAMETERS A- -0. B= 12.14. C= 3.48									

SI 70

600 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	1. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
15	41	1	26	.1	0	0						
		2	69	1.5	0	0						
		3	112	5.5	36	0						
		4	130	11.4	203	108	197	103	182	90	154	66
		5	117	16.0	368	232	361	226	345	213	314	188
		6	80	15.7	406	271	400	267	367	256	361	236
		7	43	11.5	316	217	312	214	304	208	287	195
		8	17	5.9	170	118	166	117	164	114	155	109
		9	5	2.2	65	46	64	46	63	44	60	42
		10	1	.5	16	11	16	11	16	11	15	11
			600	70.4	1582	1003	1518	984	1461	936	1346	847
			MEAN DIA. 4.6 INCHES. WEIBULL PARAMETERS A- .0, B= 4.64. C= 2.67									
20	57	1	4	.0	0	0						
		2	17	.4	0	0						
		3	42	2.1	30	12						
		4	73	6.3	145	69	140	65	129	74	108	54
		5	99	13.4	360	242	354	236	336	222	309	195
		6	108	21.1	611	423	604	417	566	402	552	374
		7	93	24.7	748	527	741	522	725	510	694	466
		8	62	21.5	669	417	664	474	653	466	632	450
		9	32	14.1	445	319	443	317	437	314	425	306
		10	12	6.3	209	150	208	149	205	148	200	145
		11	3	2.0	64	46	64	46	63	46	61	45
		12	1	.8	26	19	26	19	26	19	25	18
			546	112.9	3307	2304	3244	2265	3162	220 1	3006	2073
			MEAN DIA. 6.2 INCHES. WEIBULL PARAMETERS A- .O. B= 6.52, C= 3 . 3 7									
25	70	1	1	.0	0	0						
		2	6	.1	4	3						
		3	18	.9	31	22						
		4	35	3.0	105	77	103	75	99	72	91	64
		5	56	7.6	261	193	258	191	252	185	240	173
		6	75	14.7	505	373	501	370	493	362	416	346
		7	84	22.4	770	569	766	565	756	557	738	540
		8	77	26.8	921	681	916	676	910	670	694	6 %
		9	58	25.5	876	649	676	647	670	641	858	631
		10	35	19.0	655	463	65'	482	650	479	643	474
		11	16	10.5	362	268	361	267	360	266	357	263
		12	6	4.7	162	120	162	120	161	119	160	118
		13	1	.9	32	23	32	23	32	23	32	23
			466	136.3	4666	3461	4631	3418	4563	3374	4489	3288
			MEAN DIA. 7.3 INCHES. WEIBULL PARAMETERS A- .0, B= 7.75, C- 3.62									
30	81	1	1	.0	0	0						
		2	3	.1	2	2						
		3	9	.4	17	13						
		4	18	1.6	60	47	59	46	58	44	55	41
		5	31	4.2	163	124	162	123	160	121	155	117
		6	44	0.7	332	254	331	253	327	249	321	243
		7	56	15.0	575	442	574	440	570	436	563	428
		8	63	22.1	645	650	843	646	840	643	632	634
		9	60	26.6	1019	782	1017	760	1014	777	1007	769
		10	49	26.6	1027	769	1026	788	1024	764	1019	778
		11	35	23.2	888	661	887	660	885	679	882	676
		12	20	15.8	604	463	604	463	603	462	602	460
		13	9	6.3	319	245	319	245	318	245	317	244
		14	3	3.2	123	95	123	95	123	95	123	94
		15	1	1.2	47	36	47	36	47	36	47	37
			402	157.4	6021	4623	5992	4597	5969	4571	5923	4521
			MEAN DIA. 8.5 INCHES. WEIBULL PARAMETERS A= .0, B= 8.99. C= 3.66									

SI 70

700 trees per acre

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	I. b.	0. b.	I. b.
Yrs	*Ft*	In	No.	*Ft* 2	*Ft* 3							
15	41	1	39	.2	0	0						
		2	93	2.0	0	0						
		3	140	6.9	60	4						
		4	153	13.3	251	139	244	133	226	119	196	91
		5	127	17.3	408	260	401	254	364	240	351	213
		6	63	16.3	425	285	419	280	406	270	381	249
		7	42	11.2	310	213	307	210	299	204	263	192
		8	17	5.9	170	119	168	118	164	115	156	109
		9	5	2.2	64	46	64	46	62	44	60	42
		10	1	.5	16	12	16	12	16	12	15	11
			700	76.0	1704	1078	1619	1053	1559	1004	1442	907
			MEAN DIA. 4.5 INCHES. WEIBULL PARAMETERS A= .o. B= 4.63. C= 2.54									
20	57	1	6	.0	0	0						
		2	24	.5	0	0						
		3	55	2.7	41	18						
		4	91	7.9	184	115	178	109	164	96	137	70
		5	119	16.1	436	294	430	267	411	270	373	237
		6	122	23.6	694	482	685	475	664	458	624	424
		7	101	26.9	815	575	607	569	789	556	754	529
		9	65	22.6	704	502	699	498	686	489	662	472
		9	32	14.1	446	321	443	319	437	315	424	307
		10	11	6.0	191	138	190	137	166	136	184	133
		11	3	2.0	64	46	64	46	63	46	62	45
		12	1	.8	26	19	26	19	26	19	25	18
			630	123.3	3603	2510	3522	2459	3428	2365	3245	2235
			MEAN DIA. 6.0 INCHES. WEIBULL PARAMETERS A= .o. B= 6.33. C= 3.26									
25	70	1	2	.0	0	0						
		2	9	.2	7	5						
		3	23	1.1	39	28						
		4	44	3.9	132	98	130	96	124	90	113	79
		5	68	9.3	320	235	316	231	307	223	289	207
		6	88	17.3	595	440	590	436	579	425	55-1	404
		7	95	25.5	674	646	069	641	858	630	635	609
		8	84	29.4	1010	746	1006	742	995	733	975	715
		9	61	27.0	926	685	925	662	918	676	904	664
		10	35	19.2	656	485	656	484	652	460	644	474
		11	16	10.6	364	269	363	266	361	267	358	264
		12	5	3.9	135	100	135	100	134	100	133	99
		13	1	.9	32	23	32	23	32	23	32	23
			531	146.4	5094	3760	5022	3703	4960	3647	4640	3538
			MEAN DIA. 7.2 INCHES. WEIBULL PARAMETERS A= .o. B= 7.59. c- 3.53									

Age	Av. dom. ht.	D.b.h.	Stems per acre	Basal area	All trees, total stem		4-inch class and greater to o.b. tops of—					
							2 inches		3 inches		4 inches	
					0. b.	I. b.	0. b.	I. b.	0. b.	1. b.	0. b.	I. b.
Yrs	Ft	In	No.	Ft 2	Ft 3							
30	81	1	1	.0	0	0						
		2	4	.1	3	2						
		3	11	.5	20	16						
		4	22	1.9	74	56	73	n	71	53	66	46
		5	36	4.9	189	145	187	143	184	140	176	132
		6	52	10.3	391	301	389	299	384	294	375	284
		7	64	17.2	656	504	654	502	646	4%	639	464
		8	71	24.9	951	730	949	,727	943	721	932	709
		9	6s	28.8	1101	64s	1099	843	1094	638	1085	828
		10	53	29.0	1109	851	1107	849	1104	845	1097	637
		11	38	23.9	911	699	910	6 %	908	696	904	691
		12	20	15.8	603	462	603	462	601	460	599	458
		13	9	6.3	318	244	316	244	316	244	317	243
		14	3	3.2	123	9s	123	95	123	95	I22	94
		IS	1	1.2	47	36	47	36	47	36	47	37
			448	170. I	64%	4986	6459	4953	6425	4918	6358	4845
			KAN DIA. 8.3 INCHES. WEIBULL PARAMETERS A= . O . B= 8.8s. C= 3.59									
35	90	2	2	.0	I	I						
		3	6	.3	12	9						
		4	12	1.o	43	34	42	34	41	33	39	31
		S	20	2.7	113	69	112	8s	110	86	107	63
		6	29	5.7	23s	185	234	184	232	182	227	178
		7	39	10.4	431	340	430	339	426	335	420	328
		8	46	16.1	663	522	662	520	659	517	653	510
		9	51	22.6	930	733	929	731	92s	726	919	729
		10	so	27.3	1125	888	1124	887	1121	683	1116	676
		11	44	29. I	1197	945	11%	944	1194	941	1191	936
		12	3s	27.5	1134	694	1133	893	1132	891	1129	888
		13	24	22.2	912	720	912	719	911	718	909	71s
		14	IS	16. I	662	s22	662	S22	661	521	660	519
		15	8	9.6	405	319	405	319	405	319	404	318
		16	3	4.2	172	136	172	136	172	136	173	136
		17	1	1.6	65	52	65	52	65	52	6s	51
			385	196.7	8100	6389	8079	6368	8054	6342	8012	6269
			MEAN DIA. 9.7 INCHES. WEIBULL PARAMETERS A= .O. B= 10.26. C= 3.53									
40	97	2	1	.0	1	1						
		3	4	.2	9	7						
		4	7	.6	27	21	26	21	2s	20	23	18
		5	11	1.s	66	53	65	52	64	51	61	48
		6	17	3.4	147	118	I46	117	144	115	140	110
		7	23	6.2	269	217	2 %	216	265	213	260	207
		8	29	10.2	442	357	441	356	438	352	432	345
		9	33	14.7	636	513	636	512	633	508	626	501
		10	36	19.9	859	691	858	689	854	686	649	678
		11	38	25.2	1098	883	10%	881	1093	8-n	1085	669
		12	35	27.7	1203	968	1202	966	1199	963	1193	9 %
		13	31	28.7	1251	1006	1250	1005	1248	1002	1243	997
		14	25	26.9	1169	942	1169	941	1167	939	1165	934
		15	19	23.5	1020	621	1020	620	1019	619	1017	616
		16	13	18.3	794	639	794	639	794	636	793	636
		17	8	12.7	551	443	551	443	551	443	550	443
		18	4	7.1	309	249	309	249	309	249	309	249
		19	2	4.0	173	139	173	139	173	139	172	138
		20	1	2.2	96	7-1	96	n	96	n	9s	n
			337	232.7	10122	8145	10100	8123	10072	8091	10012	8022
			MEAN DIA. 11.3 INCHES. WEIBULL PARAMETERS A - .0 B= 11.91. C= 3.40									