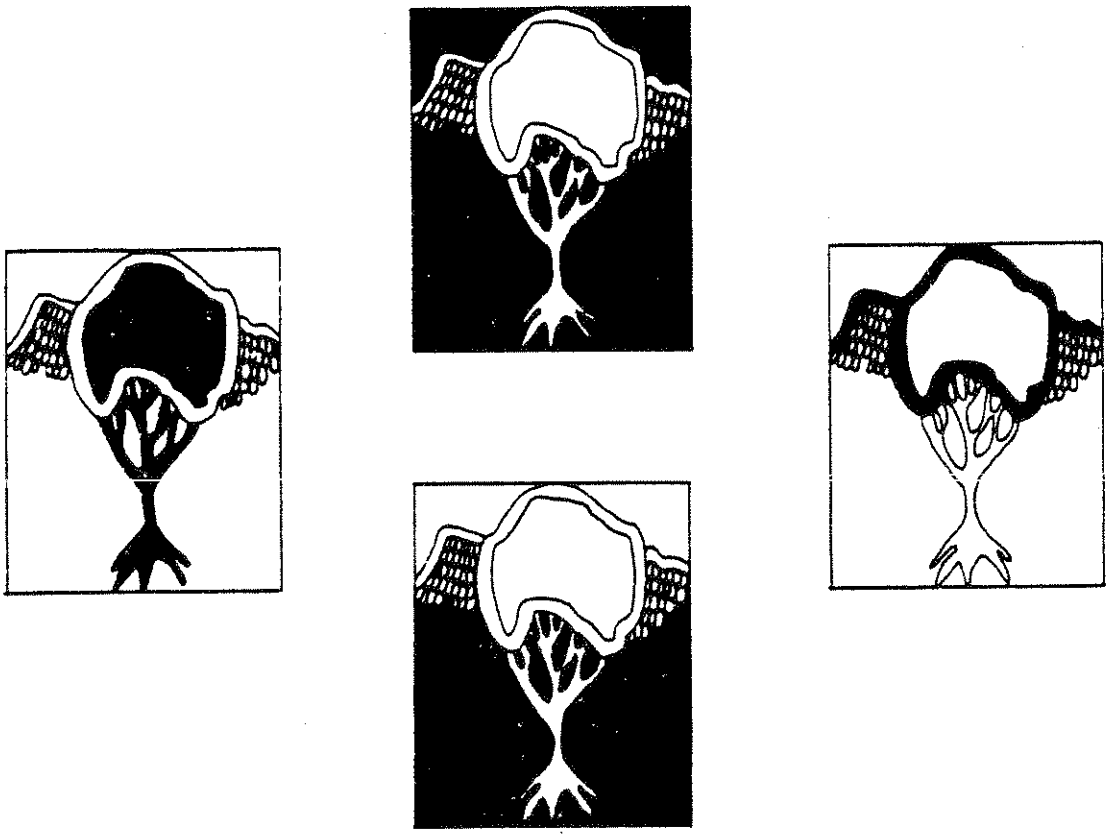
Yields for Natural Stands of Loblolly Pine



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YIELDS FOR NATURAL STANDS OF LOBLOLLY PINE

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INTRODUCTION

Loblolly pine (Pinus taeda L.) is one of the most important commercial species to the forest industries in the South, with a range extending from Maryland through the Southeastern and Southern States to eastern Texas. Although there is a great deal of published information on the growth and yield of loblolly pine, much of the data for these studies has been collected in the southeastern part of the natural loblolly pine range. Published results from past yield studies have generally involved only volume units such as board feet, cubic feet, or cords. Consequently, a cooperative yield study between the Division of Forestry and Wildlife Resources at Virginia Polytechnic Institute and State University and several industrial forestry organizations was initiated to gather yield information which would be primarily applicable to the Virginia area. The scope of this study included per-tree and per-acre data for various volume units and for green and dry weight. This paper presents the per-acre yields for natural stands of loblolly pine.

DATA COLLECTION AND SUMMARIZATION

Study area. Data for this study were collected by field crews from several industrial forestry organizations. Natural stands were sampled in the Piedmont and Coastal Plain of Virginia and in the Coastal Plain of North Carolina. One hundred and eleven of the sample plots were from Coastal Plain sites and 10 were from the Piedmont. The geographic distribution of the 121 sample plots is shown in Figure 1.

Plot selection. Temporary .1-acre, circular sample plots were randomly located in selected stands. Natural stands that were unthinned, even-aged, unaffected by severe insect or disease damages, were unburned and unpruned, and that contained at least 75 percent of their total basal area in loblolly pine, were sampled.

Plot measurements. On each .1-acre plot, dbh was recorded to the nearest .1 inch for all trees in the 1-inch dbh class and above. Each tree in the 8-inch dbh class and above was classed as qualifying or not qualifying for sawtimber. A sawtimber tree was defined as being in the 8-inch dbh class or larger and having at least one 16-foot sawlog to a 6-inch top diameter, inside bark. The total height was recorded for at least one, but usually two trees per dbh class. Six to eight dominant and codominant trees were selected as site sample trees and the total age of the stand was determined from increment borings or from ring counts at the stump of the felled specimens.

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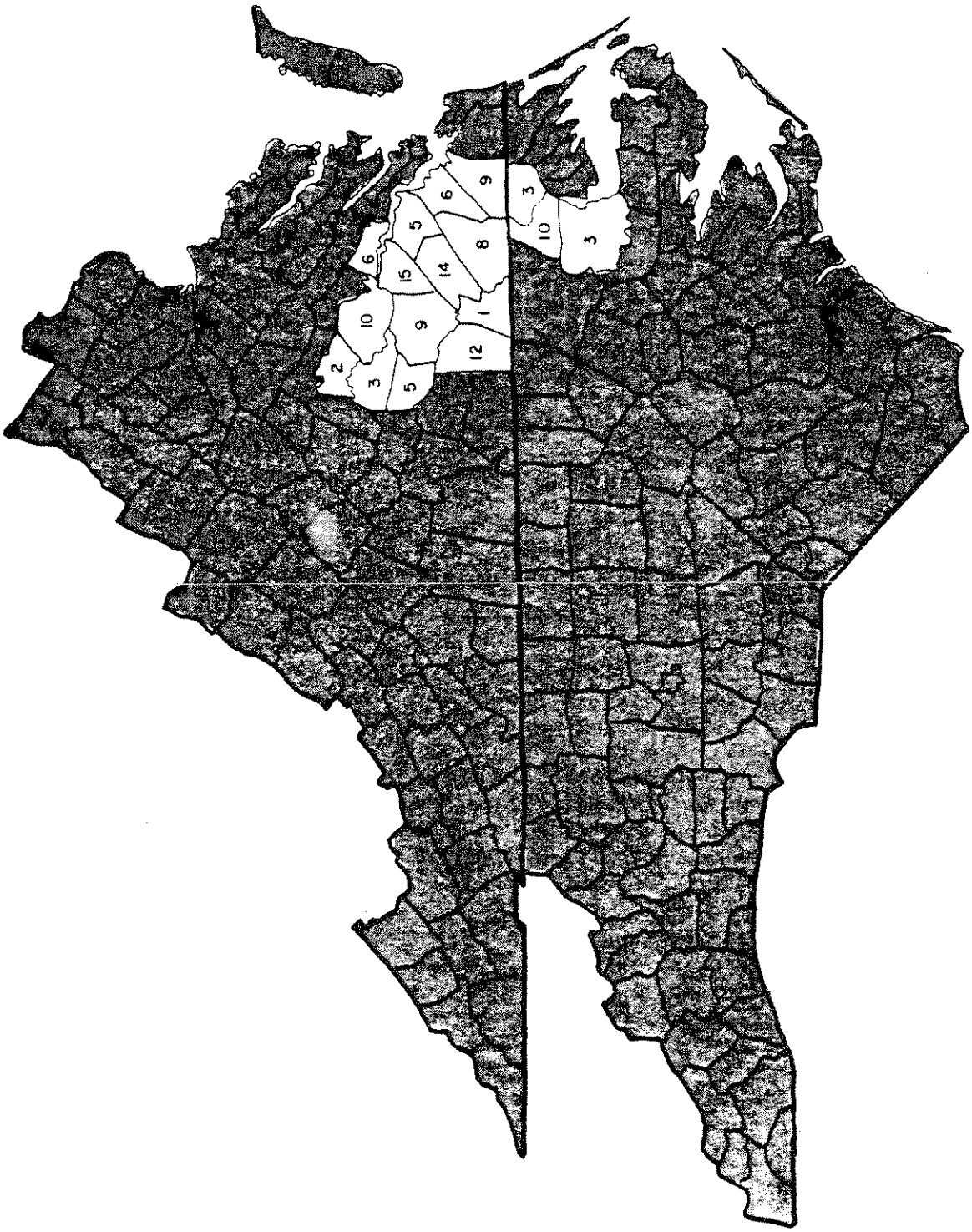

Figure 1. Distribution of loblolly pine natural stand sample plots by county in Virginia and North Carolina.

On each plot two trees (the 10th and 20th trees measured) were felled and cut into 4-foot sections for detailed measurements. The following data were recorded for each felled sample tree:

1. Dbh to the nearest .1 inch.

2. Total tree height to the nearest .1 foot.

3. Total age of the tree (age at the top of each 4-foot bolt was also recorded for dominants and codominants).

4. Diameters (inside and outside bark) at the stump and at 4-foot intervals up the stem to an approximate 2-inch top diameter (outside bark).

5. Green weight (with and without bark) of each disk approximately 1 to 1-1/2 inches in thickness cut from the top of each bolt. The disks were labeled and taken to the laboratory for specific gravity determination.

Data summarization. Using the felled tree data, per-tree cubic-foot, cordwood, board foot, green weight and dry weight equations were computed. Topwood equations in cubic feet and cords were also computed for the sawtimber trees. The resulting equations, which are listed in Table 1, were used when calculating all plot volumes and weights.

For each plot, a regression of the form

$$\log_{10} H = b_0 + b_1(1/D)$$

where H = total tree height in feet

D = dbh in inches

was fitted to the measured height-dbh pairs on that plot. Substitution of the measured tree diameters into the appropriate height-diameter equation produced total height estimates for each tree on the sample plot. The measured dbh and predicted height values were then substituted into the various per-tree volume and weight equations (all based on dbh and total height with the exception of dry weight which also employs age) and the predicted tree contents were summed to obtain plot values. The number of trees per acre, basal area per acre and average height of the dominant and codominant site-sample trees were also calculated. The sample plots ranged in age from 13 to 77 years, in site index (base age 50) from 53 to 92, and in basal area from 35 to 217 square feet per acre. Table 2 shows the distribution of sample plots by age, site index and basal area per acre classes.

Table 1. Equations used to compute per-tree values when summarizing plot volumes and weights.[a]

BOLEWOOD VOLUME AND WEIGHT EQUATIONS

Cubic Feet

Total stem

$$CV_{Ob} = 0.27611 + 0.00253(D^2H), \quad CV_{ib} = 0.00828 + 0.00205(D^2H)$$

Top diameter 3.0 inches outside bark

$$CV_{Ob} = 0.03767 + 0.00253(D^2H), \quad CV_{ib} = -0.35192 + 0.00205(D^2H)$$

Top diameter 4.0 inches outside bark

$$CV_{Ob} = -0.56843 + 0.00253(D^2H), \quad CV_{ib} = -0.84210 + 0.00205(D^2H)$$

Standard Cords

Standard cords (with bark) to 3- and 4-inch top diameters outside bark were obtained for individual trees by dividing the predicted cubic-foot volume outside bark to a 3- and 4-inch top outside bark by the following conversion factors:

D (inches)	Conversion Factor	D (inches)	Conversion Factor	D (inches)	Conversion Factor
5	84	8	90	11	93
6	85	9	91	12	94
7	87	10	92	13+	95

Green Weight -- Pounds

Total Stem

$$GW_{Ob} = -18.45183 + 0.14439(D^2H), \quad GW_{ib} = -21.99532 + 0.13161(D^2H)$$

Top diameter 3.0 inches outside bark

$$GW_{Ob} = -33.88370 + 0.14439(D^2H), \quad GW_{ib} = -35.62469 + 0.13161(D^2H)$$

Top diameter 4.0 inches outside bark

$$GW_{Ob} = -64.22742 + 0.14439(D^2H), \quad GW_{ib} = -62.42195 + 0.13161(D^2H)$$

Dry Weight -- Pounds

Dry weight (pounds) of wood per tree was calculated as the predicted unextracted wood specific gravity (oven-dry weight, green volume basis) times 62.4 times the green cubic-foot volume inside bark. Specific gravity prediction equations used:

Table 1. Continued

Total stem

$SG_{ib} = 0.54042 - 1.93924(1/A)$

Top diameter 3.0 inches outside bark

$SG_{ib} = 0.54165 - 1.89207(1/A)$

Top diameter 4.0 inches outside bark

$SG_{ib} = 0.54328 - 1.80232(1/A)$

Board Feet -- International 1/4-inch

Top diameter 6.0 inches inside bark

$BF = -23.67532 + 0.01102(D^2H)$

TOPWOOD VOLUME EQUATIONS

Topwood volume equations were calculated under the assumption that all volume for 3- and 4-inch merchantable tops outside bark above the sawlog portion to these top limits would be utilized.

Cubic Feet

Top diameter 3.0 inches outside bark

$TCV_{0b} = 0.67191 + 3.55599(H/D^2)$, $TCV_{ib} = 0.47717 + 3.10885(H/D^2)$

Top diameter 4.0 inches outside bark

$TCV_{0b} = 0.66772 + 3.11017(H/D^2)$, $TCV_{ib} = 0.49314 + 2.70888(H/D^2)$

Standard Cords

The outside bark cubic-foot topwood equations were converted to standard cords (with bark) by assuming a constant factor of 86 cubic feet of wood and bark per standard cord. The converted equations are:

Top diameter 3.0 inches outside bark

$TCD_{0b} = 0.007813 + 0.041349(H/D^2)$

Top diameter 4.0 inches outside bark

$TCD_{0b} = 0.007764 + 0.036165(H/D^2)$

[a]Throughout this table, D denotes diameter at breast height in inches, H denotes total tree height in feet, and A denotes total tree age in years.

Table 2. Natural stand sample plot distribution by age, site index (base age 50), and basal area per acre (of loblolly pine).

Age Class (years)	Site Index Class	Basal Area Per Acre in Square Feet <41	41-80	81-120	121-160	161-200	>200	Total
		---Number of sample plots---						
13-15	50							
	60							
	70		2		1			3
	80				1	1		2
	90							
	Total		2		2	1		5
16-30	50	1	1					2
	60		1	4	3	1		9
	70		2	8	12	3		25
	80			1	17	5	2	25
	90				1	4	2	7
	Total	1	4	13	33	13	4	68
31-45	50							
	60		1	1	1	2		5
	70			3	10	2		15
	80			1	9	7	1	18
	90							
	Total		1	5	20	11	1	38
46-60	50							
	60							
	70			3	1			4
	80					1		1
	90			1				1
	Total			4	1	1		6
61-75	50							
	60			1				1
	70							
	80			2				2
	90							
	Total			3				3
76-77	50							
	60							
	70			1				1
	80							
	90							
	Total			1				1
Grand Total		1	7	26	56	26	5	121

SITE INDEX CURVES

Site index curves (base age 50) were constructed using data from 721 site sample trees measured on the yield plots. Site sample trees were restricted to those that had been dominants or codominants throughout the life of the stand and were free of damage. The data were stratified into a "low", "medium" or "high" site category according to an initial predicted site index from an independent prediction equation.[2] This stratification was completed to allow separate guide curves to be constructed for each site category. All trees with a predicted site index (from Gaiser's equation) less than 75 were classified as "low" in site index, those from 75 to 85 were classed "medium", and greater than 85 were classed "high". For each site-class stratum the following model was fitted:

$$\log_{10}H = b_0 + b_1(1/A)$$

where H = total tree height in feet

A = total tree age in years

The site index curves in Figure 2 were generated after rearranging the height prediction equations as

$$\log_{10}H = \log_{10}SI - 6.93220(1/A - 1/50)$$

for trees with an initial site prediction of less than 75 feet,

$$\log_{10}H = \log_{10}SI - 6.91444(1/A - 1/50)$$

for trees with an initial prediction of 75 to 85, and

$$\log_{10}H = \log_{10}SI - 5.98935(1/A - 1/50)$$

for trees with an initial prediction of greater than 85

where H = average height of the dominants and codominants in feet

SI = site index (base age 50)

A = total stand age in years.

YIELD EQUATIONS

It was desired to predict yield from the independent variables age, basal area per acre, average height of the dominant stand (defined as the average height of the dominants and codominants), and a composition variable, since not all stands were pure loblolly pine. Although site index is commonly used as an independent variable in yield equations for natural stands, it was decided to use dominant stand height because it is a measured variable

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[2] Gaiser, R. N. 1950. Relation between soil characteristics and site index of loblolly pine in the coastal plain region of Virginia and the Carolinas. J. Forest. 48:271-275.

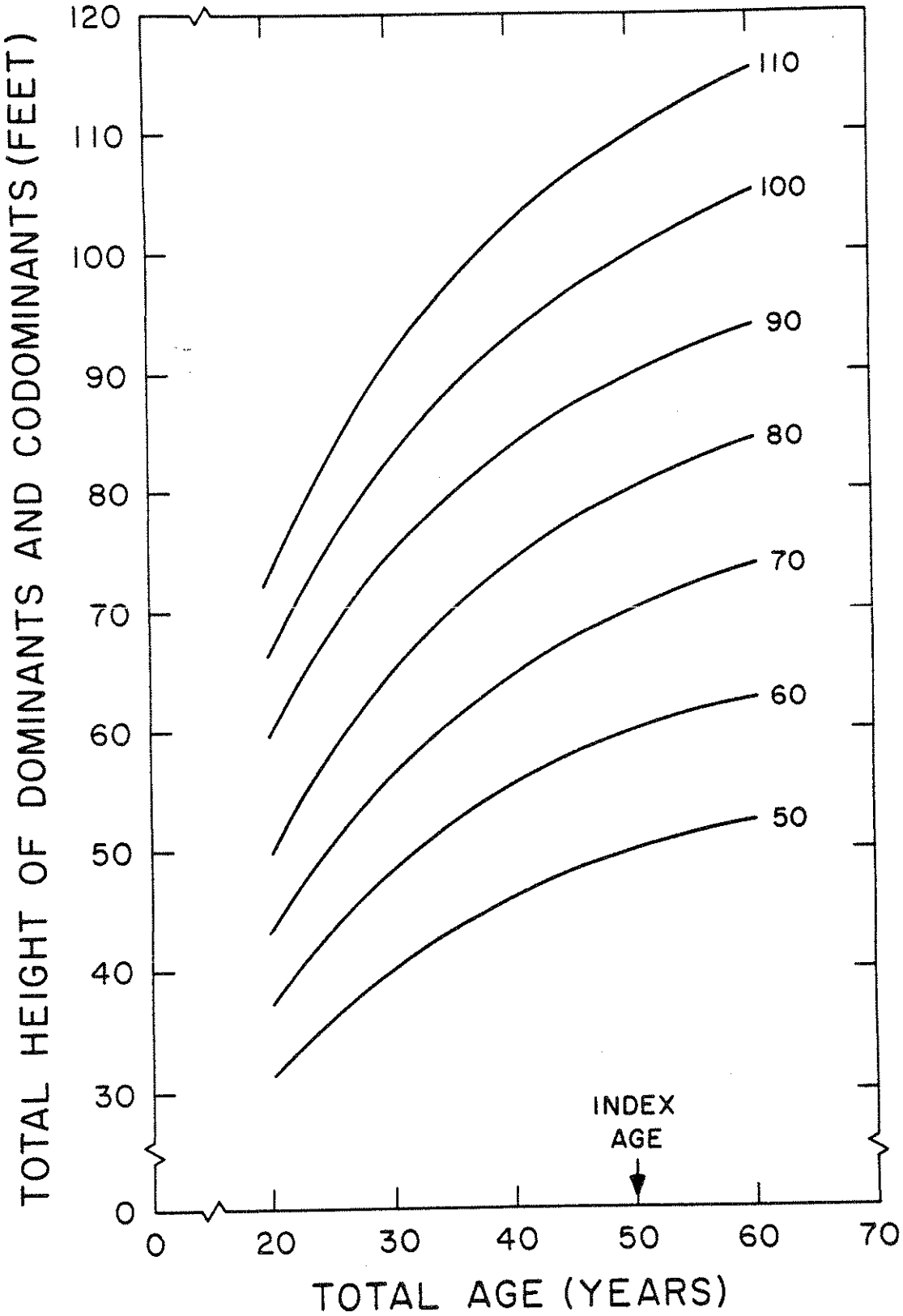

Figure 2. Site index curves (base age 50) for natural stands of loblolly pine.

and thus more nearly satisfies the assumption of regression that the concomitant information is measured without error than does the predicted variable site index. With age and site index specified, the average height of the dominant stand is determined and yields can be computed based on the height-age relationships (site index curves) presented in this paper or those that the user feels most appropriate to his situation.

Using the above-mentioned independent variables and various transformations of them, the following model was selected to predict cubic-foot volume:

$$\log_{10}Y = b_0 + b_1(1/A) + b_2(H/A) + b_3(\log_{10}BA_t) + b_4(A)(\log_{10}BA_t) + b_5(BA_1/BA_t) \quad (1)$$

where Y = cubic-foot volume per acre

A = total stand age in years

H = average height of the dominants and codominants in feet

BA_t = total basal area per acre in square feet

BA_1 = basal area per acre of loblolly pine in square feet.

The model was selected because of the good fit to the data [in terms of a high coefficient of determination (R^2) and a low standard error of estimate ($S_{y \cdot x}$)] and because the resulting yield estimates were consistent with other published results of cubic foot yield development in natural stands of loblolly pine. Data from all 121 plots were used when fitting model (1) for the natural stands. Total cubic volumes per acre included all stems in the 1-inch class and above, whereas merchantable cubic volumes to 3- and 4-inch tops included the 5-inch dbh class and above.

Coefficients for model (1) were also solved for the following units:

1. Standard cords with bark per acre to a 3- and 4-inch top diameter (outside bark).

2. Green weight with and without bark in 1,000 pounds per acre for the total stem and to 3- and 4-inch top diameters (outside bark).

3. Dry weight of wood only in 1,000 pounds per acre for the total stem and to 3- and 4-inch top diameters (outside bark).

4. Board foot volume per acre for all stems in the 8-inch dbh class and above that qualify (i.e. contain at least one 16-foot sawlog to a 6-inch top diameter, inside bark).

Computations for standard cords and for green and dry weight yields included the same dbh classes as did the analogous computations for cubic-foot volume yields. For the board foot yield equation, all plots with observed board foot volume of zero or very near zero were eliminated, leaving 101 plots for analysis. Coefficients for all of the resulting equations, with the associated R^2 and standard error of estimate values, are listed in Table 3. Assuming pure stands of loblolly pine, yield tables were generated using the site index curves presented in this paper and the equations in Table 3; these yield tables are presented as Appendix Tables 1 through 18. It should be noted that for a given unit of measure (e.g. cubic feet), the equations for different merchantable top limits may cross as the upper bounds in the range of observed site index and age values are approached.

Although several different composition variables were tested, the ratio of the basal area of loblolly to the total stand basal area was found most successful (i.e., its inclusion in the model resulted in the greatest reduction in residual sum of squares after removing the effect due to the other variables). The composition variable (BA_1/BA_t) was significant at the .01 level for all regressions except board foot volume, where the F ratio was less than 1 and it was omitted. The natural stand equations in Table 3, especially the board foot prediction equation, should be applied only to stands that contain at least 75 percent of their total basal area in loblolly pine.

The equations for cubic-foot and cordwood volume were solved assuming that the entire stand would be utilized for a single product. However, integrated operations for pulpwood and sawtimber are common throughout the range of loblolly pine and it is often advantageous to be able to predict the amount of pulpwood that can be harvested in addition to the board foot volume. This additional pulpwood volume includes trees less than the threshold diameter for sawtimber (8-inch dbh class) but greater than a minimum size for pulpwood (5-inch dbh class), plus the trees above the threshold diameter for sawtimber but not qualifying due to form or quality, plus the pulpwood volume in the tops of those trees utilized for sawtimber. A prediction equation for pulpwood in addition to board foot volume must satisfy the constraints that it always be less than or equal to the volume for all stems above the pulpwood threshold diameter and that the two be equal when board foot volume is zero. Data plots indicated a good linear relationship between the logarithm of cubic-foot volume of all stems in the 5-inch dbh class and above minus the cubic-foot volume in addition to board foot volume and the logarithm of board foot volume. This relationship suggested the model

$$\log_{10}(CV_1 - CV_2) = b_0 + b_1(\log_{10}BF) \qquad (2)$$

where CV_1 = cubic-foot volume per acre for all stems in the 5-inch dbh class and above

CV_2 = cubic-foot volume per acre in addition to board foot volume per acre

BF = International 1/4-inch board foot volume per acre.

Table 3. Yield equations for natural stands of loblolly pine.[a]

Equation:[b]	b_0	b_1	b_2	b_3	b_4	b_5	Coefficient of Determination (R^2)	Standard Error of Estimate ($S_{y.x}$)
Cubic Feet per Acre								
Total stem, outside bark	0.90099	-7.19583	0.16497	0.93605	0.00175	0.46452	0.9852	0.0219
Total stem, inside bark	0.81129	-8.23404	0.18782	0.91938	0.00191	0.46069	0.9848	0.0228
Outside bark to 3-in. top (ob)	1.09894	-10.65329	0.23675	0.82303	0.00195	0.43976	0.9703	0.0325
Inside bark to 3-in. top (ob)	0.97153	-12.22892	0.27149	0.81208	0.00224	0.43596	0.9682	0.0357
Outside bark to 4-in. top (ob)	1.05155	-12.73563	0.28245	0.80904	0.00232	0.43500	0.9674	0.0368
Inside bark to 4-in. top (ob)	0.91458	-14.78118	0.32578	0.79943	0.00263	0.43238	0.9638	0.0418
Standard Cords per Acre								
Outside bark to 3-in. top (ob)	-0.86665	-9.83844	0.21349	0.84393	0.00159	0.45212	0.9721	0.0305
Outside bark to 4-in. top (ob)	-0.91362	-11.91054	0.25910	0.83009	0.00197	0.44522	0.9704	0.0340
Green Weight, 1000 Pounds per Acre								
Total stem, outside bark	-0.33595	-9.72976	0.22006	0.89634	0.00212	0.45562	0.9832	0.0250
Total stem, inside bark	-0.37380	-10.22765	0.23060	0.88892	0.00218	0.45399	0.9825	0.0259
Outside bark to 3-in top (ob)	-0.19443	-12.83394	0.28456	0.80858	0.00234	0.43485	0.9673	0.0371
Inside bark to 3-in top (ob)	-0.24276	-13.19926	0.29240	0.80660	0.00240	0.43417	0.9667	0.0379
Outside bark to 4-in. top (ob)	-0.24703	-15.20935	0.33468	0.79787	0.00268	0.43201	0.9630	0.0429
Inside bark to 4-in. top (ob)	-0.29591	-15.59714	0.34265	0.79664	0.00273	0.43188	0.9622	0.0439
Dry Weight, 1000 Pounds per Acre								
Total stem, inside bark	-0.64948	-10.19236	0.18813	0.92095	0.00184	0.45978	0.9867	0.0227
Inside bark to 3-in. top (ob)	-0.48877	-14.12292	0.27178	0.81344	0.00218	0.43518	0.9721	0.0356
Inside bark to 4-in. top (ob)	-0.54577	-16.55751	0.32603	0.80073	0.00257	0.43162	0.9678	0.0417
Board Feet per Acre, Int. 1/4-inch								
To 6-in. top (ib)	0.65136	-44.05023	0.86790	1.00569	0.00758	-------	0.7515	0.2180

[a]Predictions involving the total stem include all trees in the 1-inch dbh class and above; predictions for merchantable volume to 3- and 4-inch tops include all trees in the 5-inch dbh class and above; predicted board foot volume is for all stems in the 8-inch dbh class and above that qualify for sawtimber by containing at least one 16-ft. sawlog to a 6-inch top diamter, inside bark.

[b]Equation: $\log_{10}Y = b_0 + b_1(1/A) + b_2(H/A) + b_3(\log_{10}BA_t) + b_4\ (A)(\log_{10}BA_t) + b_5\ (BA_1/BA_t)$ where A is total stand age in years, H is average height of the dominants and codominants in feet, BA_t is the total basal area per acre of the stand in square feet (1-inch dbh class and above), and BA_1 is the basal area per acre of loblolly pine in square feet (1-inch dbh class and above).

The above equation may be rewritten with CV_2 on the left-hand side as

$$CV_2 = CV_1 - 10^{b0}BF^{b1} \quad (3)$$

Note that this equation satisfies the logical conditions that CV_2 must always be less than or equal to CV_1 and that CV_2 equals CV_1 when the board foot volume (BF) is equal to zero. Coefficients for model (2) were solved using standard linear regression techniques for cubic-foot volume inside and outside bark to 3- and 4-inch tops (outside bark) and for standard cords with bark to 3- and 4-inch tops (outside bark). In these solutions observed plot values for cubic feet, standard cords and board feet were used. Resulting equations for the various units of measure and merchantability limits for model (2) are tabulated in Table 4.

Multiple-product yield tables (pulpwood and sawtimber) are tabulated as Appendix Tables 19 through 24. When predicting the cubic-foot or cordwood volume in addition to board foot volume, the appropriate equation (in terms of unit of measure and merchantability limit) for model (1) must be used to predict the pulpwood volume for the entire stand. The board foot volume must then be predicted and these two predicted values substituted into the appropriate model (3) equation to obtain an estimate of pulpwood volume in addition to sawtimber volume. A note of caution: if these multiple-product equations are applied at the extremes of the observed data where board foot predictions are the largest, negative predicted values for the pulpwood volume in addition to sawtimber volume can result.

DISCUSSION

The equations presented here are based on temporary plot data and are intended to predict yield at a given point in time under various stand density and site quality conditions. However, some users may wish to predict yield at two different points in time and to obtain growth rates by differencing. If current stand parameters are known (or assumed) and growth projections are desired, it will be necessary to project stand density. Although it was not possible to construct a basal area projection equation from the present data, such equations exist in the literature (e.g. Clutter 1963)[3] and the user should select the equation best suited to his particular circumstances.

When making projections, it is generally reasonable to assume that site quality does not change; thus, the same height-age curve can be used for all points in time.

It should be noted that plots in this study were selected at random within stands meeting the sampling criteria, and thus, hopefully, the yield equations represent average conditions for the types of stands included.

In summary, the equations presented should perform adequately for predicting yields of natural stands of loblolly pine within the geographic area that the data were collected and within the range of observed data. Care must be exercised to project basal area when the equations are used for growth projection purposes.

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

Table 4. Equations to predict pulpwood volume in addition to sawtimber volume for natural stands of loblolly pine.

Equation:[a]	b_0	b_1	Coefficient of Determination (r^2)	Standard Error Estimate ($S_{y.x}$)
Cubic Feet per Acre				
Outside bark to 3-in. top (ob)	-0.15109	0.89579	0.9887	0.0412
Inside bark to 3-in. top (ob)	-0.42904	0.93793	0.9640	0.0781
Outside bark to 4-in. top (ob)	-0.19531	0.90473	0.9910	0.0372
Inside bark to 4-in. top (ob)	-0.47387	0.94709	0.9714	0.0700
Standard Cords per Acre				
Outside bark to 3-in. top (ob)	-2.11416	0.89306	0.9875	0.0433
Outside bark to 4-in. top (ob)	-2.16224	0.90306	0.9902	0.0387

[a]Equation: $\log_{10}(Y_1 - Y_2) = b_0 + b_1(\log_{10}BF)$ where Y_1 is the volume of all stems in the 5-inch dbh class and above, Y_2 is the volume in stems of the 5-, 6-, and 7-inch dbh classes plus all larger stems not qualifying for sawtimber plus the topwood of trees utilized for sawtimber, BF is the board foot volume per acre, International 1/4-inch rule, of all stems in the 8-inch dbh class and above that qualify by containing at least one 16-ft. sawlog to a 6-inch top diameter, inside bark.

APPENDIX

Table 1. Cubic-foot yield of wood and bark for the total stem of unthinned, pure, natural stands of loblolly pine.

Table 2. Cubic-foot yield of wood only for the total stem of unthinned, pure, natural stands of loblolly pine.

Table 3. Cubic-foot yield of wood and bark to a 3-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 4. Cubic-foot yield of wood only to a 3-inch top diameter outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 5. Cubic-foot yield of wood and bark to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 6. Cubic-foot yield of wood only to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 7. Standard cord yield of wood and bark to a 3-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 8. Standard cord yield of wood and bark to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 9. Green weight yield of wood and bark for the total stem of unthinned, pure, natural stands of loblolly pine.

Table 10. Green weight yield of wood only for the total stem of unthinned, pure, natural stands of loblolly pine.

Table 11. Green weight yield of wood and bark to a 3-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 12. Green weight yield of wood only to a 3-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 13. Green weight yield of wood and bark to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 14. Green weight yield of wood only to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 15. Dry weight yield of wood only for the total stem of unthinned, pure, natural stands of loblolly pine.

Table 16. Dry weight yield of wood only to a 3-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 17. Dry weight yield of wood only to a 4-inch top diameter, outside bark, for unthinned, pure, natural stands of loblolly pine.

Table 18. Board foot yield, International 1/4-inch, to a 6-inch top diameter, inside bark, for unthinned, pure, natural stands of loblolly pine.

Table 19. Multiple-product yields of pulpwood in cubic feet of wood and bark to a 3-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

Table 20. Multiple-product yields of pulpwood in cubic feet of wood only to a 3-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

Table 21. Multiple-product yields of pulpwood in cubic feet of wood and bark to a 4-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

Table 22. Multiple-product yields of pulpwood in cubic feet of wood only to a 4-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

Table 23. Multiple-product yields of pulpwood in standard cords of wood and bark to a 3-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

Table 24. Multiple-product yields of pulpwood in standard cords of wood and bark to a 4-inch top diameter, outside bark, and sawtimber in board feet, International 1/4-inch, for unthinned, pure, natural stands of loblolly pine.

APPENDIX TABLE 1. CUBIC-FOOT YIELD OF WOOD AND BARK FOR THE TOTAL STEM OF UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	836	1065	1292	1517	1742	1964
20	1130	1442	1752	2060	2368	2674
25	1334	1707	2078	2447	2816	3183
30	1485	1904	2322	2739	3155	3571
35	1605	2063	2520	2976	3433	3889
40	1707	2198	2690	3182	3675	4168
45	1799	2321	2845	3371	3898	4426
	SITE INDEX 60					
15	943	1201	1457	1711	1964	2215
20	1271	1622	1971	2318	2663	3007
25	1490	1906	2320	2733	3144	3555
30	1646	2110	2573	3034	3496	3956
35	1765	2267	2770	3272	3774	4275
40	1864	2400	2937	3474	4012	4550
45	1951	2518	3087	3657	4229	4801
	SITE INDEX 70					
15	1064	1355	1643	1930	2215	2498
20	1429	1824	2217	2607	2996	3383
25	1664	2129	2591	3052	3511	3970
30	1823	2337	2850	3361	3872	4382
35	1940	2492	3045	3597	4148	4700
40	2034	2620	3206	3792	4379	4967
45	2117	2732	3349	3967	4588	5209
	SITE INDEX 80					
15	1202	1531	1857	2181	2502	2823
20	1610	2054	2496	2936	3374	3810
25	1860	2379	2896	3411	3924	4436
30	2020	2590	3158	3725	4291	4857
35	2133	2741	3348	3955	4561	5168
40	2221	2860	3500	4140	4781	5423
45	2297	2964	3633	4304	4977	5651
	SITE INDEX 90					
15	1518	1934	2346	2755	3162	3566
20	1942	2479	3012	3542	4071	4597
25	2169	2774	3377	3978	4577	5174
30	2298	2946	3593	4238	4882	5525

APPENDIX TABLE 2. CUBIC-FOOT YIELD OF WOOD ONLY FOR THE TOTAL STEM OF UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	588	746	903	1058	1211	1364
20	828	1053	1276	1498	1718	1936
25	1000	1275	1548	1820	2090	2359
30	1129	1443	1755	2066	2376	2685
35	1231	1578	1923	2268	2611	2954
40	1319	1694	2069	2443	2817	3191
45	1397	1799	2201	2604	3007	3410
	SITE INDEX 60					
15	674	856	1035	1213	1389	1564
20	947	1204	1459	1712	1964	2214
25	1134	1446	1756	2064	2370	2675
30	1268	1621	1972	2322	2670	3017
35	1372	1757	2142	2526	2908	3291
40	1457	1872	2286	2699	3113	3526
45	1533	1974	2415	2857	3299	3741
	SITE INDEX 70					
15	773	981	1187	1391	1593	1794
20	1082	1377	1668	1958	2245	2531
25	1286	1640	1991	2340	2688	3033
30	1425	1821	2216	2609	3000	3390
35	1528	1957	2386	2813	3239	3665
40	1610	2068	2526	2983	3440	3896
45	1682	2166	2650	3135	3620	4105
	SITE INDEX 80					
15	889	1128	1364	1598	1830	2061
20	1239	1576	1910	2241	2571	2898
25	1459	1861	2260	2656	3050	3443
30	1602	2048	2491	2932	3372	3811
35	1702	2181	2658	3134	3609	4083
40	1780	2286	2791	3296	3801	4306
45	1846	2377	2908	3440	3972	4504
	SITE INDEX 90					
15	1160	1472	1780	2086	2389	2689
20	1534	1952	2365	2776	3183	3589
25	1739	2217	2692	3164	3634	4101
30	1855	2371	2885	3396	3905	4413

APPENDIX TABLE 3. CUBIC-FOOT YIELD OF WOOD AND BARK TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	597	739	877	1011	1142	1271
20	919	1141	1357	1567	1772	1974
25	1162	1447	1723	1993	2258	2518
30	1346	1680	2005	2323	2635	2943
35	1492	1867	2232	2591	2943	3290
40	1615	2025	2426	2821	3209	3592
45	1723	2166	2601	3028	3450	3866
	SITE INDEX 60					
15	709	878	1042	1202	1358	1510
20	1088	1351	1606	1855	2098	2337
25	1361	1695	2019	2335	2646	2951
30	1559	1946	2322	2690	3052	3408
35	1709	2138	2557	2968	3371	3769
40	1831	2297	2752	3199	3639	4073
45	1937	2435	2923	3404	3878	4346
	SITE INDEX 70					
15	843	1044	1238	1428	1613	1795
20	1288	1599	1902	2196	2484	2767
25	1595	1986	2366	2736	3100	3457
30	1806	2253	2689	3116	3535	3947
35	1958	2449	2929	3399	3862	4317
40	2077	2605	3121	3628	4127	4620
45	2177	2737	3286	3826	4359	4885
	SITE INDEX 80					
15	1004	1244	1476	1701	1922	2138
20	1527	1897	2255	2604	2946	3282
25	1871	2329	2775	3210	3636	4055
30	2093	2612	3117	3611	4097	4575
35	2244	2807	3356	3895	4425	4948
40	2356	2954	3540	4115	4681	5240
45	2447	3077	3694	4301	4900	5491
	SITE INDEX 90					
15	1404	1739	2064	2380	2688	2991
20	2000	2483	2952	3410	3857	4297
25	2333	2905	3460	4002	4534	5057
30	2518	3142	3751	4346	4930	5505

APPENDIX TABLE 4. CUBIC-FOOT YIELD OF WOOD ONLY TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	382	473	560	645	728	809
20	627	778	924	1066	1205	1342
25	822	1022	1216	1406	1592	1775
30	973	1213	1447	1676	1901	2122
35	1095	1369	1637	1900	2158	2413
40	1199	1504	1802	2095	2384	2668
45	1292	1625	1952	2273	2591	2904
	SITE INDEX 60					
15	466	576	683	786	887	986
20	761	944	1122	1294	1463	1629
25	985	1225	1459	1686	1909	2128
30	1151	1436	1713	1984	2250	2512
35	1279	1600	1913	2220	2522	2819
40	1385	1737	2082	2420	2754	3083
45	1477	1858	2232	2599	2962	3321
	SITE INDEX 70					
15	568	702	832	958	1082	1202
20	924	1146	1361	1571	1776	1977
25	1182	1470	1749	2022	2290	2552
30	1362	1699	2027	2348	2663	2972
35	1495	1870	2236	2595	2947	3295
40	1600	2007	2405	2796	3181	3561
45	1689	2125	2552	2972	3387	3797
	SITE INDEX 80					
15	694	858	1017	1171	1322	1470
20	1124	1394	1655	1910	2159	2403
25	1419	1765	2100	2428	2749	3065
30	1613	2012	2401	2780	3153	3520
35	1748	2186	2614	3033	3445	3852
40	1849	2319	2779	3231	3676	4115
45	1932	2430	2918	3399	3874	4342
	SITE INDEX 90					
15	1020	1261	1494	1721	1943	2159
20	1531	1898	2254	2601	2941	3274
25	1827	2273	2705	3127	3541	3947
30	1995	2488	2968	3438	3899	4352

APPENDIX TABLE 5. CUBIC-FOOT YIELD OF WOOD AND BARK TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	438	541	641	738	833	926
20	734	910	1080	1246	1408	1568
25	971	1208	1437	1662	1881	2097
30	1158	1444	1723	1995	2262	2525
35	1310	1638	1958	2272	2581	2885
40	1439	1805	2163	2515	2862	3204
45	1555	1957	2350	2738	3120	3498
	SITE INDEX 60					
15	538	665	788	907	1024	1138
20	898	1113	1321	1524	1723	1917
25	1174	1459	1737	2007	2272	2533
30	1380	1721	2053	2377	2695	3009
35	1540	1926	2303	2672	3035	3393
40	1672	2098	2514	2923	3325	3723
45	1788	2250	2702	3148	3587	4022
	SITE INDEX 70					
15	661	817	968	1115	1258	1398
20	1098	1361	1616	1864	2107	2345
25	1418	1763	2098	2425	2745	3060
30	1644	2050	2446	2832	3212	3585
35	1811	2265	2708	3142	3569	3990
40	1943	2438	2921	3396	3864	4326
45	2056	2586	3107	3619	4124	4624
	SITE INDEX 80					
15	815	1007	1193	1374	1550	1723
20	1346	1668	1981	2285	2583	2874
25	1715	2133	2538	2933	3321	3701
30	1960	2445	2916	3377	3830	4275
35	2131	2665	3186	3697	4199	4694
40	2258	2833	3395	3947	4491	5027
45	2364	2974	3572	4161	4742	5316
	SITE INDEX 90					
15	1216	1503	1780	2050	2313	2571
20	1856	2301	2732	3151	3562	3964
25	2232	2775	3302	3817	4321	4816
30	2445	3049	3637	4212	4776	5331

APPENDIX TABLE 6. CUBIC-FOOT YIELD OF WOOD ONLY TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CUBIC FEET PER ACRE					
	SITE INDEX 50					
15	266	328	389	447	504	560
20	484	599	711	820	926	1030
25	669	832	989	1143	1294	1442
30	820	1022	1219	1412	1601	1787
35	945	1182	1414	1641	1864	2084
40	1053	1322	1585	1844	2099	2350
45	1151	1450	1743	2032	2318	2600
	SITE INDEX 60					
15	337	417	493	567	639	710
20	610	756	897	1034	1168	1299
25	832	1034	1230	1422	1609	1793
30	1003	1251	1493	1728	1960	2188
35	1139	1425	1704	1978	2247	2513
40	1252	1572	1885	2193	2496	2795
45	1352	1703	2048	2387	2722	3053
	SITE INDEX 70					
15	428	528	625	719	811	900
20	770	954	1131	1304	1474	1639
25	1035	1286	1530	1768	2001	2230
30	1228	1532	1827	2116	2399	2678
35	1373	1718	2055	2385	2709	3029
40	1489	1869	2241	2607	2967	3323
45	1589	2001	2405	2804	3197	3586
	SITE INDEX 80					
15	544	672	795	915	1032	1146
20	973	1206	1431	1649	1863	2073
25	1289	1602	1906	2202	2492	2778
30	1505	1876	2238	2592	2939	3280
35	1656	2072	2478	2876	3268	3653
40	1771	2223	2666	3101	3529	3952
45	1866	2350	2825	3293	3756	4213
	SITE INDEX 90					
15	864	1066	1262	1452	1637	1818
20	1410	1747	2073	2390	2700	3003
25	1746	2171	2582	2984	3377	3763
30	1941	2421	2887	3343	3791	4232

APPENDIX TABLE 7. STANDARD CORD YIELD OF WOOD AND BARK TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CORDS PER ACRE					
	SITE INDEX 50					
15	7.4	9.2	10.9	12.6	14.3	16.0
20	11.0	13.7	16.3	18.9	21.4	23.8
25	13.6	16.9	20.2	23.5	26.6	29.7
30	15.5	19.4	23.2	26.9	30.6	34.2
35	17.0	21.3	25.5	29.6	33.7	37.7
40	18.2	22.9	27.4	31.9	36.4	40.7
45	19.3	24.3	29.1	34.0	38.7	43.4
	SITE INDEX 60					
15	8.6	10.7	12.8	14.8	16.7	18.6
20	12.8	15.9	19.0	22.0	24.9	27.8
25	15.7	19.6	23.3	27.1	30.7	34.3
30	17.7	22.1	26.5	30.7	34.9	39.0
35	19.2	24.1	28.8	33.5	38.1	42.7
40	20.4	25.6	30.7	35.8	40.7	45.6
45	21.4	27.0	32.4	37.7	43.0	48.3
	SITE INDEX 70					
15	10.1	12.5	14.9	17.3	19.5	21.8
20	14.9	18.5	22.1	25.6	29.0	32.3
25	18.1	22.6	26.9	31.2	35.4	39.6
30	20.2	25.3	30.2	35.1	39.9	44.6
35	21.7	27.2	32.6	37.9	43.1	48.2
40	22.9	28.7	34.4	40.1	45.6	51.1
45	23.8	30.0	36.0	41.9	47.8	53.6
	SITE INDEX 80					
15	11.8	14.7	17.5	20.2	22.9	25.5
20	17.3	21.6	25.8	29.8	33.8	37.7
25	20.9	26.0	31.1	36.0	40.9	45.7
30	23.1	28.9	34.5	40.1	45.5	50.9
35	24.5	30.8	36.9	42.8	48.7	54.5
40	25.6	32.2	38.6	44.9	51.1	57.3
45	26.4	33.3	40.0	46.6	53.1	59.6
	SITE INDEX 90					
15	16.0	19.9	23.7	27.4	31.0	34.5
20	22.1	27.6	32.8	38.0	43.1	48.1
25	25.5	31.8	37.9	44.0	49.9	55.7
30	27.3	34.1	40.8	47.3	53.8	60.1

APPENDIX TABLE 8. STANDARD CORD YIELD OF WOOD AND BARK TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	CORDS PER ACRE					
	SITE INDEX 50					
15	5.4	6.7	8.0	9.2	10.4	11.6
20	8.7	10.9	13.0	15.0	17.0	18.9
25	11.3	14.1	16.9	19.5	22.1	24.7
30	13.3	16.6	19.9	23.1	26.2	29.3
35	14.9	18.7	22.4	26.0	29.5	33.1
40	16.2	20.4	24.4	28.5	32.4	36.3
45	17.4	21.9	26.3	30.7	35.0	39.3
	SITE INDEX 60					
15	6.5	8.1	9.6	11.1	12.6	14.0
20	10.5	13.1	15.6	18.0	20.4	22.7
25	13.5	16.8	20.1	23.2	26.3	29.4
30	15.6	19.5	23.4	27.1	30.8	34.4
35	17.3	21.7	25.9	30.1	34.3	38.4
40	18.6	23.4	28.1	32.7	37.2	41.7
45	19.7	24.9	29.9	34.9	39.8	44.6
	SITE INDEX 70					
15	7.9	9.8	11.7	13.5	15.2	16.9
20	12.7	15.7	18.7	21.7	24.5	27.4
25	16.0	20.0	23.8	27.6	31.3	35.0
30	18.4	23.0	27.4	31.8	36.2	40.4
35	20.0	25.1	30.1	35.0	39.8	44.5
40	21.4	26.8	32.2	37.5	42.7	47.8
45	22.4	28.3	34.0	39.6	45.2	50.7
	SITE INDEX 80					
15	9.6	11.9	14.1	16.3	18.4	20.5
20	15.2	19.0	22.6	26.1	29.6	33.0
25	19.1	23.8	28.4	32.9	37.3	41.6
30	21.6	27.0	32.3	37.4	42.5	47.5
35	23.3	29.2	34.9	40.6	46.2	51.7
40	24.5	30.8	37.0	43.0	49.0	54.9
45	25.5	32.1	38.6	45.1	51.4	57.6
	SITE INDEX 90					
15	13.8	17.2	20.4	23.5	26.6	29.6
20	20.5	25.5	30.3	35.1	39.7	44.3
25	24.3	30.3	36.2	41.9	47.5	53.0
30	26.4	33.0	39.5	45.8	52.0	58.2

APPENDIX TABLE 9. GREEN WEIGHT YIELD OF WOOD AND BARK FOR THE TOTAL STEM OF UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	34.03	42.96	51.76	60.44	69.03	77.53
20	50.82	64.35	77.68	90.87	103.94	116.90
25	63.38	80.46	97.34	114.07	130.67	147.15
30	72.94	92.84	112.57	132.15	151.61	170.96
35	80.65	102.92	125.06	147.07	168.98	190.80
40	87.24	111.63	135.92	160.13	184.27	208.35
45	93.18	119.55	145.87	172.16	198.41	224.63
	SITE INDEX 60					
15	39.94	50.44	60.76	70.95	81.03	91.02
20	59.46	75.28	90.89	106.32	121.60	136.76
25	73.44	93.22	112.79	132.17	151.40	170.50
30	83.61	106.43	129.03	151.48	173.78	195.97
35	91.50	116.78	141.89	166.86	191.72	216.48
40	98.06	125.48	152.79	180.00	207.13	234.20
45	103.87	133.27	162.62	191.92	221.19	250.42
	SITE INDEX 70					
15	46.89	59.21	71.33	83.30	95.13	106.85
20	69.56	88.07	106.33	124.38	142.27	160.00
25	85.09	108.02	130.68	153.14	175.43	197.56
30	95.84	121.99	147.91	173.64	199.21	224.64
35	103.81	132.49	160.98	189.32	217.52	245.62
40	110.23	141.05	171.74	202.33	232.83	263.25
45	115.80	148.57	181.29	213.95	246.58	279.17
	SITE INDEX 80					
15	55.19	69.68	83.95	98.03	111.95	125.74
20	81.51	103.20	124.59	145.75	166.70	187.48
25	98.69	125.28	151.57	177.62	203.46	229.13
30	109.93	139.92	169.65	199.16	228.48	257.65
35	117.83	150.38	182.71	214.87	246.88	278.77
40	123.93	158.58	193.09	227.48	261.77	295.97
45	129.10	165.64	202.12	238.54	274.91	311.24
	SITE INDEX 90					
15	75.38	95.18	114.67	133.90	152.92	171.76
20	104.71	132.57	160.05	187.23	214.15	240.85
25	121.16	153.81	186.08	218.06	249.79	281.31
30	130.56	166.19	201.49	236.54	271.37	306.01

APPENDIX TABLE 10. GREEN WEIGHT YIELD OF WOOD ONLY FOR THE TOTAL STEM OF UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	29.09	36.67	44.13	51.47	58.73	65.91
20	44.31	56.02	67.54	78.93	90.20	101.36
25	55.84	70.78	85.53	100.13	114.61	128.97
30	64.68	82.20	99.56	116.76	133.85	150.83
35	71.81	91.53	111.09	130.53	149.86	169.10
40	77.92	99.59	121.14	142.59	163.97	185.28
45	83.44	106.92	130.35	153.71	177.03	200.31
	SITE INDEX 60					
15	34.42	43.39	52.20	60.89	69.47	77.97
20	52.23	66.03	79.62	93.04	106.32	119.48
25	65.16	82.59	99.81	116.84	133.73	150.49
30	74.62	94.85	114.87	134.72	154.43	174.03
35	81.97	104.47	126.80	148.99	171.06	193.02
40	88.09	112.57	136.93	161.19	185.35	209.44
45	93.50	119.82	146.07	172.25	198.38	224.47
	SITE INDEX 70					
15	40.72	51.33	61.75	72.03	82.19	92.24
20	61.57	77.83	93.85	109.67	125.33	140.84
25	76.03	96.38	116.46	136.34	156.05	175.61
30	86.10	109.44	132.53	155.44	178.19	200.79
35	93.57	119.25	144.74	170.07	195.26	220.33
40	99.57	127.25	154.79	182.20	209.52	236.74
45	104.78	134.28	163.69	193.03	222.31	251.55
	SITE INDEX 80					
15	48.29	60.88	73.24	85.44	97.48	109.40
20	72.70	91.90	110.81	129.49	147.97	166.29
25	88.81	112.57	136.04	159.26	182.28	205.13
30	99.40	126.35	153.01	179.46	205.72	231.82
35	106.84	136.17	165.28	194.20	222.96	251.59
40	112.58	143.87	175.01	206.00	236.88	267.67
45	117.43	150.48	183.45	216.33	249.15	281.91
	SITE INDEX 90					
15	66.95	84.41	101.55	118.46	135.15	151.68
20	94.52	119.48	144.06	168.35	192.38	216.20
25	110.11	139.57	168.66	197.46	226.00	254.32
30	119.04	151.30	183.24	214.91	246.35	277.61

APPENDIX TABLE 11. GREEN WEIGHT YIELD OF WOOD AND BARK TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	24.65	30.47	36.10	41.56	46.89	52.11
20	41.47	51.41	61.04	70.41	79.58	88.57
25	55.02	68.41	81.41	94.10	106.53	118.75
30	65.68	81.91	97.70	113.15	128.31	143.23
35	74.35	93.00	111.20	129.03	146.57	163.85
40	81.77	102.58	122.94	142.94	162.63	182.08
45	88.43	111.26	133.65	155.69	177.45	198.95
	SITE INDEX 60					
15	30.33	37.50	44.41	51.14	57.70	64.13
20	50.80	62.98	74.77	86.26	97.49	108.51
25	66.56	82.76	98.49	113.85	128.89	143.66
30	78.36	97.72	116.57	135.00	153.09	170.89
35	87.54	109.49	130.92	151.91	172.56	192.91
40	95.12	119.33	143.01	166.27	189.19	211.80
45	101.77	128.04	153.82	179.19	204.22	228.97
	SITE INDEX 70					
15	37.32	46.14	54.65	62.92	71.00	78.90
20	62.23	77.15	91.60	105.67	119.42	132.92
25	80.52	100.13	119.16	137.73	155.93	173.80
30	93.49	116.59	139.07	161.06	182.65	203.88
35	103.06	128.91	154.14	178.86	203.16	227.12
40	110.65	138.81	166.36	193.42	220.08	246.39
45	117.12	147.36	177.02	206.22	235.03	263.52
	SITE INDEX 80					
15	46.07	56.55	67.46	77.67	87.64	97.40
20	76.38	94.70	112.43	129.70	146.59	163.15
25	97.54	121.29	144.34	166.84	188.88	210.53
30	111.62	139.21	166.05	192.31	218.08	243.44
35	121.40	151.85	181.55	210.67	239.31	267.52
40	128.75	161.52	193.57	225.06	256.08	286.69
45	134.81	169.61	203.76	237.36	270.52	303.31
	SITE INDEX 90					
15	68.95	85.24	100.96	116.25	131.16	145.77
20	105.59	130.92	155.43	179.31	202.66	225.56
25	127.17	158.13	188.19	217.52	246.26	274.49
30	139.43	173.89	207.42	240.22	272.41	304.08

APPENDIX TABLE 12. GREEN WEIGHT YIELD OF WOOD ONLY TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	21.33	26.35	31.21	35.93	40.53	45.04
20	36.40	45.12	53.56	61.78	69.82	77.70
25	48.68	60.53	72.03	83.24	94.24	105.03
30	58.40	72.84	86.88	100.61	114.09	127.36
35	66.35	82.99	99.23	115.15	130.80	146.23
40	73.16	91.79	110.02	127.92	145.56	162.97
45	79.28	99.77	119.87	139.66	159.19	178.50
	SITE INDEX 60					
15	26.39	32.61	38.62	44.46	50.16	55.74
20	44.84	55.59	65.98	76.11	86.01	95.72
25	59.21	73.61	87.60	101.24	114.61	127.74
30	70.02	87.32	104.16	120.62	136.79	152.69
35	78.47	98.15	117.36	136.18	154.70	172.94
40	85.46	107.22	128.51	149.43	170.03	190.37
45	91.60	115.27	138.49	161.36	183.92	206.23
	SITE INDEX 70					
15	32.66	40.36	47.80	55.02	62.07	68.98
20	55.24	68.47	81.28	93.76	105.95	117.92
25	72.01	89.53	106.53	123.13	139.38	155.35
30	83.95	104.69	124.88	144.62	163.99	183.05
35	92.80	116.08	138.80	161.06	182.95	204.53
40	99.83	125.25	150.12	174.55	198.62	222.37
45	105.83	133.18	160.01	186.42	212.49	238.26
	SITE INDEX 80					
15	40.55	50.11	59.34	68.31	77.07	85.64
20	68.19	84.53	100.34	115.74	130.79	145.56
25	87.68	109.02	129.73	149.93	169.73	189.17
30	100.72	125.61	149.83	173.52	196.77	219.64
35	109.80	137.35	164.22	190.57	216.47	242.00
40	116.64	146.35	175.40	203.95	232.07	259.83
45	122.28	153.88	184.89	215.41	245.53	275.30
	SITE INDEX 90					
15	61.36	75.84	89.81	103.38	116.63	129.60
20	95.11	117.90	139.96	161.44	182.44	203.03
25	115.16	143.18	170.38	196.92	222.92	248.45
30	126.59	157.87	188.31	218.08	247.29	276.04

APPENDIX TABLE 13. GREEN WEIGHT YIELD OF WOOD AND BARK TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	17.66	21.80	25.79	29.67	33.45	37.15
20	32.65	40.44	47.98	55.31	62.48	69.50
25	45.58	56.65	67.39	77.86	88.12	98.19
30	56.15	70.02	83.51	96.71	109.66	122.41
35	64.96	81.27	97.20	112.81	128.16	143.29
40	72.60	91.14	109.30	127.14	144.72	162.08
45	79.54	100.19	120.46	140.44	160.17	179.68
	SITE INDEX 60					
15	22.54	27.82	32.92	37.87	42.69	47.41
20	41.45	51.34	60.91	70.22	79.32	88.24
25	57.03	70.87	84.31	97.41	110.24	122.85
30	69.11	86.18	102.79	119.03	134.97	150.65
35	78.71	98.48	117.77	136.69	155.29	173.63
40	86.74	108.89	130.58	151.89	172.89	193.63
45	93.83	118.19	142.12	165.68	188.95	211.97
	SITE INDEX 70					
15	28.77	35.51	42.01	48.33	54.49	60.51
20	52.63	65.19	77.33	89.15	100.70	112.03
25	71.35	88.67	105.47	121.87	137.92	153.69
30	85.06	106.06	126.51	146.50	166.12	185.42
35	95.37	119.33	142.71	165.63	188.17	210.39
40	103.62	130.09	156.00	181.46	206.55	231.32
45	110.70	139.44	167.66	195.46	222.91	250.07
	SITE INDEX 80					
15	36.85	45.49	53.82	61.91	69.80	77.52
20	66.97	82.95	98.41	113.45	128.15	142.57
25	89.39	111.09	132.15	152.69	172.81	192.56
30	104.78	130.66	155.84	180.47	204.63	228.41
35	115.62	144.67	173.01	200.80	228.13	255.06
40	123.83	155.46	186.42	216.85	246.83	276.44
45	130.61	164.52	197.81	230.62	263.01	295.05
	SITE INDEX 90					
15	59.21	73.09	86.48	99.48	112.15	124.55
20	98.02	121.41	144.04	166.05	187.57	208.66
25	122.12	151.77	180.54	208.60	236.08	263.07
30	136.11	169.73	202.44	234.43	265.82	296.71

APPENDIX TABLE 14. GREEN WEIGHT YIELD OF WOOD ONLY TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	15.27	18.85	22.30	25.65	28.91	32.11
20	28.67	35.51	42.12	48.56	54.85	61.01
25	40.36	50.15	59.66	68.93	78.01	86.93
30	49.96	62.31	74.32	86.07	97.60	108.95
35	58.00	72.58	86.81	100.76	114.48	128.01
40	64.99	81.61	97.88	113.87	129.63	145.19
45	71.35	89.89	108.11	126.06	143.79	161.32
	SITE INDEX 60					
15	19.60	24.20	28.63	32.92	37.12	41.22
20	36.60	45.34	53.78	62.00	70.03	77.90
25	50.76	63.08	75.04	86.70	98.12	109.34
30	61.80	77.07	91.93	106.46	120.72	134.75
35	70.60	88.35	105.67	122.65	139.35	155.82
40	77.97	97.91	117.43	136.61	155.52	174.19
45	84.50	106.47	128.04	149.30	170.30	191.07
	SITE INDEX 70					
15	25.16	31.06	36.75	42.26	47.65	52.91
20	46.74	57.89	68.67	79.16	89.42	99.47
25	63.84	79.34	94.38	109.05	123.42	137.53
30	76.44	95.32	113.70	131.67	149.31	166.67
35	85.94	107.54	128.62	149.30	169.63	189.67
40	93.55	117.47	140.88	163.90	186.58	208.98
45	100.08	126.10	151.65	176.83	201.70	226.30
	SITE INDEX 80					
15	32.43	40.02	47.35	54.46	61.40	68.18
20	59.82	74.09	87.89	101.32	114.45	127.31
25	80.42	99.94	118.89	137.37	155.46	173.24
30	94.63	118.01	140.76	163.01	184.85	206.34
35	104.67	130.97	156.65	181.83	206.59	231.00
40	112.27	140.97	169.07	196.70	223.92	250.80
45	118.55	149.37	179.63	209.46	238.91	268.05
	SITE INDEX 90					
15	52.70	65.04	76.95	88.50	99.77	110.80
20	88.35	109.43	129.81	149.65	169.04	188.04
25	110.68	137.56	163.63	189.06	213.97	238.44
30	123.69	154.25	183.99	213.08	241.62	269.71

APPENDIX TABLE 15. DRY WEIGHT YIELD OF WOOD ONLY FOR THE TOTAL STEM OF UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	15.09	19.15	23.17	27.15	31.09	35.01
20	22.87	29.09	35.25	41.37	47.45	53.49
25	28.85	36.79	44.66	52.49	60.28	68.04
30	33.50	42.82	52.08	61.31	70.50	79.66
35	37.29	47.76	58.21	68.62	79.01	89.38
40	40.52	52.02	63.52	75.00	86.47	97.93
45	43.41	55.86	68.33	80.80	93.28	105.77
	SITE INDEX 60					
15	17.31	21.97	26.57	31.14	35.66	40.16
20	26.15	33.27	40.31	47.31	54.26	61.17
25	32.72	41.72	50.66	59.54	68.37	77.17
30	37.65	48.12	58.53	68.90	79.23	89.52
35	41.54	53.21	64.84	76.44	88.02	99.57
40	44.78	57.50	70.20	82.88	95.56	108.23
45	47.63	61.30	74.98	88.67	102.37	116.07
	SITE INDEX 70					
15	19.85	25.20	30.48	35.71	40.90	46.06
20	29.90	38.04	46.10	54.10	62.05	69.95
25	37.11	47.32	57.46	67.53	77.55	87.53
30	42.31	54.08	65.78	77.43	89.04	100.61
35	46.27	59.27	72.23	85.16	98.05	110.92
40	49.49	63.54	77.58	91.60	105.61	119.61
45	52.27	67.27	82.28	97.30	112.33	127.37
	SITE INDEX 80					
15	22.82	28.96	35.03	41.05	47.01	52.94
20	34.24	43.56	52.79	61.95	71.05	80.10
25	42.13	53.72	65.22	76.65	88.03	99.35
30	47.57	60.80	73.96	87.06	100.11	113.12
35	51.56	66.05	80.49	94.89	109.26	123.60
40	54.70	70.23	85.75	101.25	116.73	132.21
45	57.37	73.82	90.30	106.78	123.28	139.78
	SITE INDEX 90					
15	29.79	37.81	45.73	53.59	61.38	69.11
20	42.42	53.96	65.40	76.75	88.02	99.23
25	50.20	64.01	77.72	91.35	104.90	118.40
30	55.11	70.43	85.67	100.85	115.97	131.04

APPENDIX TABLE 16. DRY WEIGHT YIELD OF WOOD ONLY TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	9.91	12.26	14.53	16.74	18.89	21.00
20	17.48	21.68	25.75	29.71	33.59	37.39
25	23.87	29.69	35.34	40.86	46.26	51.57
30	29.06	36.24	43.23	50.07	56.78	63.38
35	33.36	41.71	49.87	57.86	65.71	73.46
40	37.05	46.46	55.66	64.70	73.60	82.38
45	40.36	50.74	60.93	70.95	80.84	90.61
	SITE INDEX 60					
15	12.08	14.95	17.71	20.40	23.03	25.60
20	21.22	26.32	31.25	36.07	40.77	45.39
25	28.64	35.62	42.39	49.01	55.49	61.86
30	34.40	42.90	51.18	59.27	67.21	75.03
35	38.98	48.75	58.28	67.62	76.80	85.85
40	42.81	53.68	64.31	74.75	85.04	95.18
45	46.15	58.03	69.68	81.14	92.45	103.62
	SITE INDEX 70					
15	14.73	18.22	21.60	24.87	28.08	31.21
20	25.76	31.95	37.94	43.78	49.49	55.10
25	34.35	42.72	50.85	58.79	66.56	74.20
30	40.72	50.78	60.57	70.15	79.55	88.81
35	45.56	56.98	68.12	79.03	89.77	100.34
40	49.46	62.02	74.31	86.37	98.25	109.98
45	52.78	66.37	79.69	92.80	105.73	118.51
	SITE INDEX 80					
15	18.01	22.28	26.41	30.41	34.33	38.17
20	31.32	38.85	46.14	53.25	60.19	67.01
25	41.25	51.31	61.07	70.60	79.93	89.11
30	48.23	60.15	71.75	83.10	94.23	105.19
35	53.27	66.62	79.65	92.41	104.96	117.32
40	57.16	71.68	85.87	99.82	113.55	127.10
45	60.37	75.91	91.15	106.14	120.93	135.54
	SITE INDEX 90					
15	26.48	32.75	38.81	44.70	50.46	56.10
20	42.68	52.94	62.87	72.55	82.01	91.30
25	53.15	66.10	78.68	90.96	102.98	114.80
30	59.65	74.39	88.74	102.77	116.54	130.09

APPENDIX TABLE 17. DRY WEIGHT YIELD OF WOOD ONLY TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	THOUSAND POUNDS PER ACRE					
	SITE INDEX 50					
15	7.02	8.67	10.26	11.81	13.32	14.79
20	13.65	16.91	20.06	23.13	26.13	29.08
25	19.65	24.42	29.05	33.57	37.99	42.33
30	24.71	30.81	36.74	42.54	48.24	53.84
35	29.00	36.27	43.37	50.33	57.17	63.91
40	32.76	41.11	49.28	57.31	65.22	73.02
45	36.17	45.54	54.73	63.78	72.72	81.56
	SITE INDEX 60					
15	8.91	11.00	13.02	14.98	16.89	18.76
20	17.22	21.34	25.32	29.19	32.98	36.69
25	24.44	30.38	36.14	41.75	47.26	52.66
30	30.25	37.71	44.98	52.08	59.05	65.91
35	34.96	43.73	52.29	60.68	68.93	77.06
40	38.95	48.88	58.60	68.15	77.55	86.84
45	42.49	53.49	64.29	74.93	85.43	95.81
	SITE INDEX 70					
15	11.30	13.95	16.51	18.99	21.42	23.79
20	21.73	26.92	31.95	36.83	41.61	46.29
25	30.40	37.79	44.95	51.94	58.78	65.50
30	37.03	46.17	55.06	63.76	72.29	80.68
35	42.16	52.73	63.05	73.17	83.11	92.91
40	46.32	58.13	69.69	81.04	92.23	103.27
45	49.91	62.84	75.52	88.02	100.35	112.55
	SITE INDEX 80					
15	14.38	17.75	21.01	24.17	27.26	30.28
20	27.49	34.05	40.40	46.58	52.62	58.54
25	37.87	47.07	55.99	64.69	73.22	81.59
30	45.37	56.57	67.46	78.12	88.57	98.86
35	50.85	63.61	76.06	88.26	100.26	112.08
40	55.10	69.15	82.90	96.40	109.71	122.84
45	58.64	73.82	88.73	103.40	117.89	132.22
	SITE INDEX 90					
15	22.82	28.18	33.35	38.37	43.27	48.06
20	39.84	49.35	58.55	67.51	76.27	84.85
25	51.32	63.78	75.88	87.67	99.22	110.57
30	58.54	72.98	87.04	100.79	114.28	127.55

APPENDIX TABLE 18. BOARD FOOT YIELD, INTERNATIONAL 1/4 INCH, TO A 6-INCH TOP DIAMETER, INSIDE BARK, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

	BASAL AREA PER ACRE					
	70	90	110	130	150	170
AGE	BOARD FEET PER ACRE					
	SITE INDEX 50					
15	14	19	24	28	33	38
20	85	113	143	174	205	237
25	227	307	390	476	564	655
30	424	578	740	910	1085	1266
35	659	908	1171	1448	1737	2037
40	926	1287	1674	2083	2512	2959
45	1225	1718	2252	2820	3419	4047
	SITE INDEX 60					
15	27	36	44	54	63	72
20	157	211	266	322	380	440
25	406	548	696	850	1009	1172
30	726	990	1268	1559	1859	2170
35	1085	1493	1927	2383	2859	3352
40	1469	2042	2655	3304	3984	4694
45	1881	2638	3457	4329	5249	6213
	SITE INDEX 70					
15	50	67	84	101	118	136
20	292	391	493	599	706	816
25	725	980	1245	1520	1804	2095
30	1245	1697	2173	2670	3186	3717
35	1785	2457	3171	3921	4703	5514
40	2331	3238	4211	5240	6320	7444
45	2887	4050	5307	6645	8058	9537
	SITE INDEX 80					
15	96	127	159	192	225	259
20	546	731	922	1118	1320	1525
25	1302	1758	2234	2728	3237	3759
30	2138	2914	3732	4586	5471	6384
35	2942	4049	5225	6461	7750	9086
40	3699	5140	6684	8318	10031	11817
45	4433	6219	8149	10205	12374	14646
	SITE INDEX 90					
15	328	435	544	656	770	886
20	1467	1962	2475	3003	3544	4096
25	2923	3948	5018	6126	7269	8442
30	4213	5743	7355	9038	10782	12582

APPENDIX TABLE 19. MULTIPLE-PRODUCT YIELDS OF PULPWOOD IN CUBIC FEET OF WOOD AND BARK TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, AND SAWTIMBER IN BOARD FEET, INTERNATIONAL 1/4 INCH, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

SITE INDEX 50				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	597	14	589
15	90	739	19	729
15	110	877	24	865
15	130	1011	28	997
15	150	1142	33	1126
15	170	1271	38	1252
20	70	919	85	881
20	90	1141	113	1092
20	110	1357	143	1296
20	130	1567	174	1495
20	150	1772	205	1689
20	170	1974	237	1880
25	70	1162	227	1071
25	90	1447	307	1327
25	110	1723	390	1575
25	130	1993	476	1817
25	150	2258	564	2052
25	170	2518	655	2283
30	70	1346	424	1187
30	90	1680	578	1469
30	110	2005	740	1742
30	130	2323	910	2007
30	150	2635	1085	2265
30	170	2943	1266	2518
35	70	1492	659	1255
35	90	1867	908	1551
35	110	2232	1171	1836
35	130	2591	1448	2112
35	150	2943	1737	2379
35	170	3290	2037	2640
40	70	1615	926	1294
40	90	2025	1287	1594
40	110	2426	1674	1881
40	130	2821	2083	2157
40	150	3209	2512	2424
40	170	3592	2959	2683
45	70	1723	1225	1311
45	90	2166	1718	1608
45	110	2601	2252	1889
45	130	3028	2820	2158
45	150	3450	3419	2416
45	170	3866	4047	2664

APPENDIX TABLE 19. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	709	27	696
15	90	878	36	861
15	110	1042	44	1021
15	130	1202	54	1177
15	150	1358	63	1329
15	170	1510	72	1478
20	70	1088	157	1022
20	90	1351	211	1266
20	110	1606	266	1501
20	130	1855	322	1730
20	150	2098	380	1954
20	170	2337	440	2173
25	70	1361	406	1208
25	90	1695	548	1494
25	110	2019	696	1770
25	130	2335	850	2038
25	150	2646	1009	2299
25	170	2951	1172	2555
30	70	1559	726	1301
30	90	1946	990	1605
30	110	2322	1268	1897
30	130	2690	1559	2179
30	150	3052	1859	2453
30	170	3408	2170	2720
35	70	1709	1085	1339
35	90	2138	1493	1646
35	110	2557	1927	1938
35	130	2968	2383	2219
35	150	3371	2859	2490
35	170	3769	3352	2753
40	70	1831	1469	1346
40	90	2297	2042	1645
40	110	2752	2655	1927
40	130	3199	3304	2196
40	150	3639	3984	2453
40	170	4073	4694	2700
45	70	1937	1881	1332
45	90	2435	2638	1615
45	110	2923	3457	1879
45	130	3404	4329	2126
45	150	3878	5249	2359
45	170	4346	6213	2580

APPENDIX TABLE 19. (CONTINUED).

SITE INDEX 70				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	843	50	819
15	90	1044	67	1013
15	110	1238	84	1201
15	130	1428	101	1384
15	150	1613	118	1562
15	170	1795	136	1737
20	70	1288	292	1174
20	90	1599	391	1451
20	110	1902	493	1719
20	130	2196	599	1979
20	150	2484	706	2233
20	170	2767	816	2481
25	70	1595	725	1337
25	90	1986	980	1648
25	110	2366	1245	1947
25	130	2736	1520	2236
25	150	3100	1804	2517
25	170	3457	2095	2791
30	70	1806	1245	1387
30	90	2253	1697	1701
30	110	2689	2173	2000
30	130	3116	2670	2287
30	150	3535	3186	2564
30	170	3947	3717	2833
35	70	1958	1785	1380
35	90	2449	2457	1680
35	110	2929	3171	1962
35	130	3399	3921	2230
35	150	3862	4703	2486
35	170	4317	5514	2731
40	70	2077	2331	1343
40	90	2605	3238	1620
40	110	3121	4211	1875
40	130	3628	5240	2112
40	150	4127	6320	2334
40	170	4620	7444	2543
45	70	2177	2887	1288
45	90	2737	4050	1534
45	110	3286	5307	1753
45	130	3826	6645	1951
45	150	4359	8058	2130
45	170	4885	9537	2293

APPENDIX TABLE 19. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	1004	96	962
15	90	1244	127	1189
15	110	1476	159	1409
15	130	1701	192	1623
15	150	1922	225	1832
15	170	2138	259	2036
20	70	1527	546	1327
20	90	1897	731	1637
20	110	2255	922	1935
20	130	2604	1118	2224
20	150	2946	1320	2505
20	170	3282	1525	2780
25	70	1871	1302	1436
25	90	2329	1758	1760
25	110	2775	2234	2068
25	130	3210	2728	2365
25	150	3636	3237	2652
25	170	4055	3759	2930
30	70	2093	2138	1414
30	90	2612	2914	1715
30	110	3117	3732	1998
30	130	3611	4586	2266
30	150	4097	5471	2521
30	170	4575	6384	2766
35	70	2244	2942	1340
35	90	2807	4049	1604
35	110	3356	5225	1845
35	130	3895	6461	2067
35	150	4425	7750	2273
35	170	4948	9086	2466
40	70	2356	3699	1246
40	90	2954	5140	1464
40	110	3540	6684	1655
40	130	4115	8318	1822
40	150	4681	10031	1969
40	170	5240	11817	2099
45	70	2447	4433	1142
45	90	3077	6219	1310
45	110	3694	8149	1443
45	130	4301	10205	1547
45	150	4900	12374	1627
45	170	5491	14646	1685

APPENDIX TABLE 19. (CONTINUED).

		SITE INDEX 90		
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	1404	328	1277
15	90	1739	435	1576
15	110	2064	544	1864
15	130	2380	656	2144
15	150	2688	770	2416
15	170	2991	886	2682
20	70	2000	1467	1515
20	90	2483	1962	1855
20	110	2952	2475	2178
20	130	3410	3003	2489
20	150	3857	3544	2790
20	170	4297	4096	3081
25	70	2333	2923	1434
25	90	2905	3948	1728
25	110	3460	5018	2002
25	130	4002	6126	2259
25	150	4534	7269	2502
25	170	5057	8442	2733
30	70	2518	4213	1271
30	90	3142	5743	1497
30	110	3751	7355	1697
30	130	4346	9038	1875
30	150	4930	10782	2037
30	170	5505	12582	2183

APPENDIX TABLE 20. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	466	27	458
15	90	576	36	565
15	110	683	44	670
15	130	786	54	771
15	150	887	63	869
15	170	986	72	966
20	70	761	157	719
20	90	944	211	888
20	110	1122	266	1052
20	130	1294	322	1210
20	150	1463	380	1365
20	170	1629	440	1516
25	70	985	406	881
25	90	1225	548	1087
25	110	1459	696	1286
25	130	1686	850	1478
25	150	1909	1009	1665
25	170	2128	1172	1847
30	70	1151	726	971
30	90	1436	990	1195
30	110	1713	1268	1410
30	130	1984	1559	1616
30	150	2250	1859	1816
30	170	2512	2170	2010
35	70	1279	1085	1018
35	90	1600	1493	1247
35	110	1913	1927	1465
35	130	2220	2383	1673
35	150	2522	2859	1873
35	170	2819	3352	2065
40	70	1385	1469	1037
40	90	1737	2042	1264
40	110	2082	2655	1476
40	130	2420	3304	1676
40	150	2754	3984	1867
40	170	3083	4694	2048
45	70	1477	1881	1039
45	90	1858	2638	1256
45	110	2232	3457	1456
45	130	2599	4329	1641
45	150	2962	5249	1814
45	170	3321	6213	1976

APPENDIX TABLE 20. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	466	27	458
15	90	576	36	565
15	110	683	44	670
15	130	786	54	771
15	150	887	63	869
15	170	986	72	966
20	70	761	157	719
20	90	944	211	888
20	110	1122	266	1052
20	130	1294	322	1210
20	150	1463	380	1365
20	170	1629	440	1516
25	70	985	406	881
25	90	1225	548	1087
25	110	1459	696	1286
25	130	1686	850	1478
25	150	1909	1009	1665
25	170	2128	1172	1847
30	70	1151	726	971
30	90	1436	990	1195
30	110	1713	1268	1410
30	130	1984	1559	1616
30	150	2250	1859	1816
30	170	2512	2170	2010
35	70	1279	1085	1018
35	90	1600	1493	1247
35	110	1913	1927	1465
35	130	2220	2383	1673
35	150	2522	2859	1873
35	170	2819	3352	2065
40	70	1385	1469	1037
40	90	1737	2042	1264
40	110	2082	2655	1476
40	130	2420	3304	1676
40	150	2754	3984	1867
40	170	3083	4694	2048
45	70	1477	1881	1039
45	90	1858	2638	1256
45	110	2232	3457	1456
45	130	2599	4329	1641
45	150	2962	5249	1814
45	170	3321	6213	1976

APPENDIX TABLE 20. (CONTINUED).

SITE INDEX 70				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	568	50	553
15	90	702	67	683
15	110	832	84	808
15	130	958	101	930
15	150	1082	118	1049
15	170	1202	136	1165
20	70	924	292	848
20	90	1146	391	1046
20	110	1361	493	1236
20	130	1571	599	1421
20	150	1776	706	1601
20	170	1977	816	1776
25	70	1182	725	1002
25	90	1470	980	1232
25	110	1749	1245	1451
25	130	2022	1520	1663
25	150	2290	1804	1868
25	170	2552	2095	2067
30	70	1362	1245	1064
30	90	1699	1697	1301
30	110	2027	2173	1525
30	130	2348	2670	1738
30	150	2663	3186	1943
30	170	2972	3717	2141
35	70	1495	1785	1077
35	90	1870	2457	1306
35	110	2236	3171	1520
35	130	2595	3921	1721
35	150	2947	4703	1911
35	170	3295	5514	2092
40	70	1600	2331	1064
40	90	2007	3238	1277
40	110	2405	4211	1471
40	130	2796	5240	1649
40	150	3181	6320	1814
40	170	3561	7444	1967
45	70	1689	2887	1034
45	90	2125	4050	1224
45	110	2552	5307	1392
45	130	2972	6645	1540
45	150	3387	8058	1670
45	170	3797	9537	1786

APPENDIX TABLE 20. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	694	96	667
15	90	858	127	823
15	110	1017	159	974
15	130	1171	192	1120
15	150	1322	225	1262
15	170	1470	259	1401
20	70	1124	546	986
20	90	1394	731	1213
20	110	1655	922	1430
20	130	1910	1118	1641
20	150	2159	1320	1844
20	170	2403	1525	2043
25	70	1419	1302	1108
25	90	1765	1758	1353
25	110	2100	2234	1585
25	130	2428	2728	1806
25	150	2749	3237	2019
25	170	3065	3759	2225
30	70	1613	2138	1119
30	90	2012	2914	1351
30	110	2401	3732	1566
30	130	2780	4586	1769
30	150	3153	5471	1959
30	170	3520	6384	2140
35	70	1748	2942	1081
35	90	2186	4049	1286
35	110	2614	5225	1470
35	130	3033	6461	1638
35	150	3445	7750	1790
35	170	3852	9086	1930
40	70	1849	3699	1022
40	90	2319	5140	1193
40	110	2779	6684	1338
40	130	3231	8318	1462
40	150	3676	10031	1567
40	170	4115	11817	1656
45	70	1932	4433	952
45	90	2430	6219	1083
45	110	2918	8149	1183
45	130	3399	10205	1257
45	150	3874	12374	1307
45	170	4342	14646	1336

APPENDIX TABLE 20. (CONTINUED).

SITE INDEX 90				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	1020	328	934
15	90	1261	435	1150
15	110	1494	544	1357
15	130	1721	656	1558
15	150	1943	770	1753
15	170	2159	886	1943
20	70	1531	1467	1183
20	90	1898	1962	1442
20	110	2254	2475	1687
20	130	2601	3003	1921
20	150	2941	3544	2146
20	170	3274	4096	2363
25	70	1827	2923	1164
25	90	2273	3948	1394
25	110	2705	5018	1604
25	130	3127	6126	1800
25	150	3541	7269	1982
25	170	3947	8442	2154
30	70	1995	4213	1060
30	90	2488	5743	1238
30	110	2968	7355	1392
30	130	3438	9038	1526
30	150	3899	10782	1643
30	170	4352	12582	1745

APPENDIX TABLE 21. MULTIPLE-PRODUCT YIELDS OF PULPWOOD IN CUBIC FEET OF WOOD AND BARK TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, AND SAWTIMBER IN BOARD FEET, INTERNATIONAL 1/4 INCH, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

SITE INDEX 50				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	438	14	431
15	90	541	19	532
15	110	641	24	630
15	130	738	28	725
15	150	833	33	818
15	170	926	38	909
20	70	734	85	698
20	90	910	113	864
20	110	1080	143	1023
20	130	1246	174	1178
20	150	1408	205	1330
20	170	1568	237	1478
25	70	971	227	885
25	90	1208	307	1095
25	110	1437	390	1297
25	130	1662	476	1493
25	150	1881	564	1684
25	170	2097	655	1871
30	70	1158	424	1006
30	90	1444	578	1243
30	110	1723	740	1471
30	130	1995	910	1692
30	150	2262	1085	1907
30	170	2525	1266	2116
35	70	1310	659	1083
35	90	1638	908	1335
35	110	1958	1171	1577
35	130	2272	1448	1811
35	150	2581	1737	2037
35	170	2885	2037	2257
40	70	1439	926	1131
40	90	1805	1287	1390
40	110	2163	1674	1637
40	130	2515	2083	1874
40	150	2862	2512	2102
40	170	3204	2959	2322
45	70	1555	1225	1158
45	90	1957	1718	1418
45	110	2350	2252	1662
45	130	2738	2820	1894
45	150	3120	3419	2116
45	170	3498	4047	2328

APPENDIX TABLE 21. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	538	27	526
15	90	665	36	649
15	110	788	44	768
15	130	907	54	884
15	150	1024	63	997
15	170	1138	72	1107
20	70	898	157	836
20	90	1113	211	1032
20	110	1321	266	1222
20	130	1524	322	1406
20	150	1723	380	1585
20	170	1917	440	1760
25	70	1174	406	1028
25	90	1459	548	1268
25	110	1737	696	1499
25	130	2007	850	1722
25	150	2272	1009	1940
25	170	2533	1172	2152
30	70	1380	726	1132
30	90	1721	990	1393
30	110	2053	1268	1643
30	130	2377	1559	1884
30	150	2695	1859	2117
30	170	3009	2170	2343
35	70	1540	1085	1184
35	90	1926	1493	1451
35	110	2303	1927	1705
35	130	2672	2383	1948
35	150	3035	2859	2181
35	170	3393	3352	2407
40	70	1672	1469	1204
40	90	2098	2042	1468
40	110	2514	2655	1715
40	130	2923	3304	1949
40	150	3325	3984	2172
40	170	3723	4694	2385
45	70	1788	1881	1203
45	90	2250	2638	1455
45	110	2702	3457	1688
45	130	3148	4329	1904
45	150	3587	5249	2107
45	170	4022	6213	2297

APPENDIX TABLE 21. (CONTINUED).

		SITE INDEX 70		
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	661	50	639
15	90	817	67	789
15	110	968	84	933
15	130	1115	101	1073
15	150	1258	118	1210
15	170	1398	136	1343
20	70	1098	292	989
20	90	1361	391	1220
20	110	1616	493	1442
20	130	1864	599	1657
20	150	2107	706	1866
20	170	2345	816	2070
25	70	1418	725	1171
25	90	1763	980	1439
25	110	2098	1245	1695
25	130	2425	1520	1943
25	150	2745	1804	2182
25	170	3060	2095	2415
30	70	1644	1245	1241
30	90	2050	1697	1517
30	110	2446	2173	1779
30	130	2832	2670	2029
30	150	3212	3186	2269
30	170	3585	3717	2502
35	70	1811	1785	1253
35	90	2265	2457	1520
35	110	2708	3171	1770
35	130	3142	3921	2005
35	150	3569	4703	2229
35	170	3990	5514	2442
40	70	1943	2331	1233
40	90	2438	3238	1481
40	110	2921	4211	1708
40	130	3396	5240	1918
40	150	3864	6320	2113
40	170	4326	7444	2295
45	70	2056	2887	1194
45	90	2586	4050	1416
45	110	3107	5307	1612
45	130	3619	6645	1786
45	150	4124	8058	1942
45	170	4624	9537	2083

APPENDIX TABLE 21. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	815	96	775
15	90	1007	127	956
15	110	1193	159	1131
15	130	1374	192	1300
15	150	1550	225	1464
15	170	1723	259	1625
20	70	1346	546	1154
20	90	1668	731	1420
20	110	1981	922	1674
20	130	2285	1118	1920
20	150	2583	1320	2158
20	170	2874	1525	2390
25	70	1715	1302	1296
25	90	2133	1758	1582
25	110	2538	2234	1854
25	130	2933	2728	2115
25	150	3321	3237	2365
25	170	3701	3759	2607
30	70	1960	2138	1304
30	90	2445	2914	1576
30	110	2916	3732	1829
30	130	3377	4586	2067
30	150	3830	5471	2293
30	170	4275	6384	2508
35	70	2131	2942	1254
35	90	2665	4049	1494
35	110	3186	5225	1712
35	130	3697	6461	1910
35	150	4199	7750	2093
35	170	4694	9086	2262
40	70	2258	3699	1180
40	90	2833	5140	1381
40	110	3395	6684	1553
40	130	3947	8318	1702
40	150	4491	10031	1831
40	170	5027	11817	1943
45	70	2364	4433	1093
45	90	2974	6219	1248
45	110	3572	8149	1368
45	130	4161	10205	1459
45	150	4742	12374	1526
45	170	5316	14646	1570

APPENDIX TABLE 21. (CONTINUED).

SITE INDEX 90				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	1216	328	1095
15	90	1503	435	1348
15	110	1780	544	1590
15	130	2050	656	1824
15	150	2313	770	2052
15	170	2571	886	2275
20	70	1856	1467	1389
20	90	2301	1962	1693
20	110	2732	2475	1982
20	130	3151	3003	2258
20	150	3562	3544	2524
20	170	3964	4096	2781
25	70	2232	2923	1360
25	90	2775	3948	1631
25	110	3302	5018	1881
25	130	3817	6126	2114
25	150	4321	7269	2334
25	170	4816	8442	2541
30	70	2445	4213	1232
30	90	3049	5743	1443
30	110	3637	7355	1628
30	130	4212	9038	1791
30	150	4776	10782	1937
30	170	5331	12582	2066

APPENDIX TABLE 22. MULTIPLE-PRODUCT YIELDS OF PULPWOOD IN CUBIC FEET OF WOOD ONLY TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, AND SAWTIMBER IN BOARD FEET, INTERNATIONAL 1/4 INCH, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

SITE INDEX 50				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	266	14	262
15	90	328	19	323
15	110	389	24	382
15	130	447	28	439
15	150	504	33	495
15	170	560	38	549
20	70	484	85	461
20	90	599	113	569
20	110	711	143	674
20	130	820	174	775
20	150	926	205	874
20	170	1030	237	971
25	70	669	227	612
25	90	832	307	756
25	110	989	390	894
25	130	1143	476	1028
25	150	1294	564	1158
25	170	1442	655	1286
30	70	820	424	716
30	90	1022	578	884
30	110	1219	740	1044
30	130	1412	910	1199
30	150	1601	1085	1349
30	170	1787	1266	1496
35	70	945	659	788
35	90	1182	908	970
35	110	1414	1171	1143
35	130	1641	1448	1310
35	150	1864	1737	1471
35	170	2084	2037	1627
40	70	1053	926	837
40	90	1322	1287	1026
40	110	1585	1674	1206
40	130	1844	2083	1377
40	150	2099	2512	1541
40	170	2350	2959	1699
45	70	1151	1225	869
45	90	1450	1718	1061
45	110	1743	2252	1241
45	130	2032	2820	1410
45	150	2318	3419	1571
45	170	2600	4047	1724

APPENDIX TABLE 22. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	337	27	330
15	90	417	36	407
15	110	493	44	481
15	130	567	54	552
15	150	639	63	622
15	170	710	72	691
20	70	610	157	570
20	90	756	211	703
20	110	897	266	830
20	130	1034	322	954
20	150	1168	380	1075
20	170	1299	440	1192
25	70	832	406	733
25	90	1034	548	903
25	110	1230	696	1065
25	130	1422	850	1222
25	150	1609	1009	1374
25	170	1793	1172	1522
30	70	1003	726	831
30	90	1251	990	1020
30	110	1493	1268	1201
30	130	1728	1559	1374
30	150	1960	1859	1541
30	170	2188	2170	1702
35	70	1139	1085	887
35	90	1425	1493	1085
35	110	1704	1927	1271
35	130	1978	2383	1448
35	150	2247	2859	1617
35	170	2513	3352	1780
40	70	1252	1469	917
40	90	1572	2042	1114
40	110	1885	2655	1298
40	130	2193	3304	1470
40	150	2496	3984	1633
40	170	2795	4694	1787
45	70	1352	1881	929
45	90	1703	2638	1119
45	110	2048	3457	1293
45	130	2387	4329	1454
45	150	2722	5249	1602
45	170	3053	6213	1739

APPENDIX TABLE 22. (CONTINUED).

SITE INDEX 70				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	428	50	414
15	90	528	67	510
15	110	625	84	603
15	130	719	101	692
15	150	811	118	780
15	170	900	136	865
20	70	770	292	697
20	90	954	391	858
20	110	1131	493	1012
20	130	1304	599	1161
20	150	1474	706	1306
20	170	1639	816	1447
25	70	1035	725	863
25	90	1286	980	1058
25	110	1530	1245	1244
25	130	1768	1520	1422
25	150	2001	1804	1594
25	170	2230	2095	1761
30	70	1228	1245	942
30	90	1532	1697	1147
30	110	1827	2173	1341
30	130	2116	2670	1525
30	150	2399	3186	1701
30	170	2678	3717	1870
35	70	1373	1785	970
35	90	1718	2457	1172
35	110	2055	3171	1360
35	130	2385	3921	1535
35	150	2709	4703	1699
35	170	3029	5514	1855
40	70	1489	2331	970
40	90	1869	3238	1160
40	110	2241	4211	1332
40	130	2607	5240	1488
40	150	2967	6320	1632
40	170	3323	7444	1763
45	70	1589	2887	952
45	90	2001	4050	1124
45	110	2405	5307	1273
45	130	2804	6645	1403
45	150	3197	8058	1516
45	170	3586	9537	1614

APPENDIX TABLE 22. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CU. FT.	SAWTIMBER BD. FT.	PULPWOOD CU. FT.
15	70	544	96	519
15	90	672	127	639
15	110	795	159	754
15	130	915	192	866
15	150	1032	225	975
15	170	1146	259	1081
20	70	973	546	842
20	90	1206	731	1033
20	110	1431	922	1215
20	130	1649	1118	1390
20	150	1863	1320	1560
20	170	2073	1525	1725
25	70	1289	1302	990
25	90	1602	1758	1205
25	110	1906	2234	1407
25	130	2202	2728	1599
25	150	2492	3237	1784
25	170	2778	3759	1961
30	70	1505	2138	1026
30	90	1876	2914	1235
30	110	2238	3732	1427
30	130	2592	4586	1606
30	150	2939	5471	1774
30	170	3280	6384	1932
35	70	1656	2942	1009
35	90	2072	4049	1196
35	110	2478	5225	1363
35	130	2876	6461	1512
35	150	3268	7750	1647
35	170	3653	9086	1769
40	70	1771	3699	967
40	90	2223	5140	1125
40	110	2666	6684	1257
40	130	3101	8318	1368
40	150	3529	10031	1460
40	170	3952	11817	1536
45	70	1866	4433	911
45	90	2350	6219	1034
45	110	2825	8149	1126
45	130	3293	10205	1191
45	150	3756	12374	1232
45	170	4213	14646	1252

APPENDIX TABLE 22. (CONTINUED).

SITE INDEX 90				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CU. FT.	BD. FT.	CU. FT.
15	70	864	328	783
15	90	1066	435	961
15	110	1262	544	1131
15	130	1452	656	1295
15	150	1637	770	1455
15	170	1818	886	1610
20	70	1410	1467	1075
20	90	1747	1962	1306
20	110	2073	2475	1523
20	130	2390	3003	1729
20	150	2700	3544	1927
20	170	3003	4096	2117
25	70	1746	2923	1103
25	90	2171	3948	1315
25	110	2582	5018	1509
25	130	2984	6126	1687
25	150	3377	7269	1852
25	170	3763	8442	2006
30	70	1941	4213	1031
30	90	2421	5743	1200
30	110	2887	7355	1345
30	130	3343	9038	1469
30	150	3791	10782	1576
30	170	4232	12582	1667

APPENDIX TABLE 23. MULTIPLE-PRODUCT YIELDS OF PULPWOOD IN STANDARD CORDS OF WOOD AND BARK TO A 3-INCH TOP DIAMETER, OUTSIDE BARK, AND SAWTIMBER IN BOARD FEET, INTERNATIONAL 1/4 INCH, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

SITE INDEX 50				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	7.4	14	7.3
15	90	9.2	19	9.1
15	110	10.9	24	10.8
15	130	12.6	28	12.5
15	150	14.3	33	14.1
15	170	16.0	38	15.8
20	70	11.0	85	10.6
20	90	13.7	113	13.1
20	110	16.3	143	15.6
20	130	18.9	174	18.1
20	150	21.4	205	20.5
20	170	23.8	237	22.8
25	70	13.6	227	12.6
25	90	16.9	307	15.7
25	110	20.2	390	18.7
25	130	23.5	476	21.6
25	150	26.6	564	24.4
25	170	29.7	655	27.2
30	70	15.5	424	13.8
30	90	19.4	578	17.1
30	110	23.2	740	20.4
30	130	26.9	910	23.5
30	150	30.6	1085	26.6
30	170	34.2	1266	29.7
35	70	17.0	659	14.5
35	90	21.3	908	17.9
35	110	25.5	1171	21.3
35	130	29.6	1448	24.5
35	150	33.7	1737	27.7
35	170	37.7	2037	30.8
40	70	18.2	926	14.8
40	90	22.9	1287	18.3
40	110	27.4	1674	21.6
40	130	31.9	2083	24.9
40	150	36.4	2512	28.0
40	170	40.7	2959	31.1
45	70	19.3	1225	14.9
45	90	24.3	1718	18.3
45	110	29.1	2252	21.6
45	130	34.0	2820	24.7
45	150	38.7	3419	27.7
45	170	43.4	4047	30.6

APPENDIX TABLE 23. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	8.6	27	8.5
15	90	10.7	36	10.6
15	110	12.8	44	12.6
15	130	14.8	54	14.5
15	150	16.7	63	16.4
15	170	18.6	72	18.3
20	70	12.8	157	12.1
20	90	15.9	211	15.0
20	110	19.0	266	17.8
20	130	22.0	322	20.6
20	150	24.9	380	23.3
20	170	27.8	440	26.0
25	70	15.7	406	14.0
25	90	19.6	548	17.4
25	110	23.3	696	20.7
25	130	27.1	850	23.9
25	150	30.7	1009	27.0
25	170	34.3	1172	30.1
30	70	17.7	726	14.9
30	90	22.1	990	18.5
30	110	26.5	1268	21.9
30	130	30.7	1559	25.3
30	150	34.9	1859	28.5
30	170	39.0	2170	31.7
35	70	19.2	1085	15.3
35	90	24.1	1493	18.8
35	110	28.8	1927	22.2
35	130	33.5	2383	25.5
35	150	38.1	2859	28.7
35	170	42.7	3352	31.8
40	70	20.4	1469	15.2
40	90	25.6	2042	18.7
40	110	30.7	2655	22.0
40	130	35.8	3304	25.1
40	150	40.7	3984	28.1
40	170	45.6	4694	31.0
45	70	21.4	1881	15.0
45	90	27.0	2638	18.2
45	110	32.4	3457	21.3
45	130	37.7	4329	24.1
45	150	43.0	5249	26.9
45	170	48.3	6213	29.5

APPENDIX TABLE 23. (CONTINUED).

SITE INDEX 70				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CORDS	SAWTIMBER BD. FT.	PULPWOOD CORDS
15	70	10.1	50	9.8
15	90	12.5	67	12.2
15	110	14.9	84	14.5
15	130	17.3	101	16.8
15	150	19.5	118	19.0
15	170	21.8	136	21.2
20	70	14.9	292	13.6
20	90	18.5	391	16.9
20	110	22.1	493	20.1
20	130	25.6	599	23.2
20	150	29.0	706	26.3
20	170	32.3	816	29.3
25	70	18.1	725	15.3
25	90	22.6	980	19.0
25	110	26.9	1245	22.5
25	130	31.2	1520	25.9
25	150	35.4	1804	29.2
25	170	39.6	2095	32.5
30	70	20.2	1245	15.7
30	90	25.3	1697	19.4
30	110	30.2	2173	22.9
30	130	35.1	2670	26.2
30	150	39.9	3186	29.5
30	170	44.6	3717	32.7
35	70	21.7	1785	15.5
35	90	27.2	2457	19.0
35	110	32.6	3171	22.3
35	130	37.9	3921	25.4
35	150	43.1	4703	28.4
35	170	48.2	5514	31.3
40	70	22.9	2331	15.0
40	90	28.7	3238	18.2
40	110	34.4	4211	21.2
40	130	40.1	5240	24.0
40	150	45.6	6320	26.6
40	170	51.1	7444	29.1
45	70	23.8	2887	14.3
45	90	30.0	4050	17.1
45	110	36.0	5307	19.7
45	130	41.9	6645	22.0
45	150	47.8	8058	24.1
45	170	53.6	9537	26.1

APPENDIX TABLE 23. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CORDS	SAWTIMBER BD. FT.	PULPWOOD CORDS
15	70	11.8	96	11.4
15	90	14.7	127	14.1
15	110	17.5	159	16.8
15	130	20.2	192	19.4
15	150	22.9	225	21.9
15	170	25.5	259	24.4
20	70	17.3	546	15.2
20	90	21.6	731	18.8
20	110	25.8	922	22.3
20	130	29.8	1118	25.8
20	150	33.8	1320	29.1
20	170	37.7	1525	32.4
25	70	20.9	1302	16.2
25	90	26.0	1758	20.0
25	110	31.1	2234	23.6
25	130	36.0	2728	27.0
25	150	40.9	3237	30.4
25	170	45.7	3759	33.7
30	70	23.1	2138	15.8
30	90	28.9	2914	19.3
30	110	34.5	3732	22.6
30	130	40.1	4586	25.8
30	150	45.5	5471	28.8
30	170	50.9	6384	31.7
35	70	24.5	2942	14.9
35	90	30.8	4049	18.0
35	110	36.9	5225	20.8
35	130	42.8	6461	23.4
35	150	48.7	7750	25.8
35	170	54.5	9086	28.2
40	70	25.6	3699	13.8
40	90	32.2	5140	16.3
40	110	38.6	6684	18.6
40	130	44.9	8318	20.5
40	150	51.1	10031	22.3
40	170	57.3	11817	24.0
45	70	26.4	4433	12.6
45	90	33.3	6219	14.5
45	110	40.0	8149	16.1
45	130	46.6	10205	17.4
45	150	53.1	12374	18.4
45	170	59.6	14646	19.2

APPENDIX TABLE 23. (CONTINUED).

SITE INDEX 90				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	16.0	328	14.6
15	90	19.9	435	18.1
15	110	23.7	544	21.5
15	130	27.4	656	24.8
15	150	31.0	770	28.1
15	170	34.5	886	31.2
20	70	22.1	1467	16.9
20	90	27.6	1962	20.8
20	110	32.8	2475	24.6
20	130	38.0	3003	28.2
20	150	43.1	3544	31.7
20	170	48.1	4096	35.1
25	70	25.5	2923	15.9
25	90	31.8	3948	19.3
25	110	37.9	5018	22.4
25	130	44.0	6126	25.4
25	150	49.9	7269	28.3
25	170	55.7	8442	31.1
30	70	27.3	4213	14.0
30	90	34.1	5743	16.6
30	110	40.8	7355	19.0
30	130	47.3	9038	21.1
30	150	53.8	10782	23.1
30	170	60.1	12582	24.9

APPENDIX TABLE 24. MULTIPLE-PRODUCT YIELDS OF PULPWOOD IN STANDARD CORDS OF WOOD AND BARK TO A 4-INCH TOP DIAMETER, OUTSIDE BARK, AND SAWTIMBER IN BOARD FEET, INTERNATIONAL 1/4 INCH, FOR UNTHINNED, PURE, NATURAL STANDS OF LOBLOLLY PINE.

SITE INDEX 50				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	5.4	14	5.3
15	90	6.7	19	6.6
15	110	8.0	24	7.9
15	130	9.2	28	9.1
15	150	10.4	33	10.3
15	170	11.6	38	11.4
20	70	8.7	85	8.4
20	90	10.9	113	10.4
20	110	13.0	143	12.3
20	130	15.0	174	14.3
20	150	17.0	205	16.1
20	170	18.9	237	18.0
25	70	11.3	227	10.4
25	90	14.1	307	12.9
25	110	16.9	390	15.4
25	130	19.5	476	17.7
25	150	22.1	564	20.0
25	170	24.7	655	22.3
30	70	13.3	424	11.7
30	90	16.6	578	14.5
30	110	19.9	740	17.2
30	130	23.1	910	19.9
30	150	26.2	1085	22.4
30	170	29.3	1266	24.9
35	70	14.9	659	12.5
35	90	18.7	908	15.4
35	110	22.4	1171	18.3
35	130	26.0	1448	21.1
35	150	29.5	1737	23.7
35	170	33.1	2037	26.4
40	70	16.2	926	12.9
40	90	20.4	1287	15.9
40	110	24.4	1674	18.8
40	130	28.5	2083	21.6
40	150	32.4	2512	24.3
40	170	36.3	2959	26.9
45	70	17.4	1225	13.1
45	90	21.9	1718	16.1
45	110	26.3	2252	19.0
45	130	30.7	2820	21.7
45	150	35.0	3419	24.3
45	170	39.3	4047	26.8

APPENDIX TABLE 24. (CONTINUED).

SITE INDEX 60				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CORDS	SAWTIMBER BD. FT.	PULPWOOD CORDS
15	70	6.5	27	6.4
15	90	8.1	36	7.9
15	110	9.6	44	9.4
15	130	11.1	54	10.9
15	150	12.6	63	12.3
15	170	14.0	72	13.7
20	70	10.5	157	9.9
20	90	13.1	211	12.2
20	110	15.6	266	14.5
20	130	18.0	322	16.7
20	150	20.4	380	18.9
20	170	22.7	440	21.1
25	70	13.5	406	11.9
25	90	16.8	548	14.8
25	110	20.1	696	17.5
25	130	23.2	850	20.2
25	150	26.3	1009	22.8
25	170	29.4	1172	25.3
30	70	15.6	726	13.0
30	90	19.5	990	16.1
30	110	23.4	1268	19.0
30	130	27.1	1559	21.9
30	150	30.8	1859	24.6
30	170	34.4	2170	27.3
35	70	17.3	1085	13.5
35	90	21.7	1493	16.6
35	110	25.9	1927	19.6
35	130	30.1	2383	22.4
35	150	34.3	2859	25.2
35	170	38.4	3352	27.9
40	70	18.6	1469	13.6
40	90	23.4	2042	16.7
40	110	28.1	2655	19.6
40	130	32.7	3304	22.3
40	150	37.2	3984	24.9
40	170	41.7	4694	27.4
45	70	19.7	1881	13.5
45	90	24.9	2638	16.4
45	110	29.9	3457	19.1
45	130	34.9	4329	21.6
45	150	39.8	5249	24.0
45	170	44.6	6213	26.3

APPENDIX TABLE 24. (CONTINUED).

SITE INDEX 70				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	7.9	50	7.7
15	90	9.8	67	9.5
15	110	11.7	84	11.3
15	130	13.5	101	13.0
15	150	15.2	118	14.7
15	170	16.9	136	16.4
20	70	12.7	292	11.5
20	90	15.7	391	14.2
20	110	18.7	493	16.9
20	130	21.7	599	19.5
20	150	24.5	706	22.0
20	170	27.4	816	24.4
25	70	16.0	725	13.4
25	90	20.0	980	16.5
25	110	23.8	1245	19.6
25	130	27.6	1520	22.5
25	150	31.3	1804	25.3
25	170	35.0	2095	28.1
30	70	18.4	1245	14.1
30	90	23.0	1697	17.3
30	110	27.4	2173	20.3
30	130	31.8	2670	23.3
30	150	36.2	3186	26.1
30	170	40.4	3717	28.9
35	70	20.0	1785	14.1
35	90	25.1	2457	17.2
35	110	30.1	3171	20.1
35	130	35.0	3921	22.9
35	150	39.8	4703	25.5
35	170	44.5	5514	28.0
40	70	21.4	2331	13.8
40	90	26.8	3238	16.7
40	110	32.2	4211	19.3
40	130	37.5	5240	21.8
40	150	42.7	6320	24.1
40	170	47.8	7444	26.2
45	70	22.4	2887	13.3
45	90	28.3	4050	15.8
45	110	34.0	5307	18.1
45	130	39.6	6645	20.1
45	150	45.2	8058	22.0
45	170	50.7	9537	23.7

APPENDIX TABLE 24. (CONTINUED).

SITE INDEX 80				
			MULTIPLE PRODUCTS	
AGE YEARS	BASAL AREA PER ACRE SQ. FT.	ALL TREES AS PULPWOOD CORDS	SAWTIMBER BD. FT.	PULPWOOD CORDS
15	70	9.6	96	9.1
15	90	11.9	127	11.3
15	110	14.1	159	13.4
15	130	16.3	192	15.5
15	150	18.4	225	17.5
15	170	20.5	259	19.5
20	70	15.2	546	13.2
20	90	19.0	731	16.3
20	110	22.6	922	19.3
20	130	26.1	1118	22.2
20	150	29.6	1320	25.1
20	170	33.0	1525	27.8
25	70	19.1	1302	14.6
25	90	23.8	1758	17.9
25	110	28.4	2234	21.1
25	130	32.9	2728	24.2
25	150	37.3	3237	27.1
25	170	41.6	3759	30.0
30	70	21.6	2138	14.6
30	90	27.0	2914	17.7
30	110	32.3	3732	20.7
30	130	37.4	4586	23.5
30	150	42.5	5471	26.1
30	170	47.5	6384	28.7
35	70	23.3	2942	13.9
35	90	29.2	4049	16.7
35	110	34.9	5225	19.3
35	130	40.6	6461	21.6
35	150	46.2	7750	23.8
35	170	51.7	9086	25.8
40	70	24.5	3699	13.0
40	90	30.8	5140	15.3
40	110	37.0	6684	17.4
40	130	43.0	8318	19.2
40	150	49.0	10031	20.7
40	170	54.9	11817	22.1
45	70	25.5	4433	12.0
45	90	32.1	6219	13.8
45	110	38.6	8149	15.2
45	130	45.1	10205	16.3
45	150	51.4	12374	17.2
45	170	57.6	14646	17.9

APPENDIX TABLE 24. (CONTINUED).

SITE INDEX 90				
			MULTIPLE PRODUCTS	
AGE	BASAL AREA PER ACRE	ALL TREES AS PULPWOOD	SAWTIMBER	PULPWOOD
YEARS	SQ. FT.	CORDS	BD. FT.	CORDS
15	70	13.8	328	12.5
15	90	17.2	435	15.5
15	110	20.4	544	18.3
15	130	23.5	656	21.1
15	150	26.6	770	23.8
15	170	29.6	886	26.5
20	70	20.5	1467	15.5
20	90	25.5	1962	19.0
20	110	30.3	2475	22.3
20	130	35.1	3003	25.6
20	150	39.7	3544	28.7
20	170	44.3	4096	31.7
25	70	24.3	2923	15.0
25	90	30.3	3948	18.1
25	110	36.2	5018	21.0
25	130	41.9	6126	23.8
25	150	47.5	7269	26.4
25	170	53.0	8442	28.8
30	70	26.4	4213	13.5
30	90	33.0	5743	16.0
30	110	39.5	7355	18.1
30	130	45.8	9038	20.1
30	150	52.0	10782	21.9
30	170	58.2	12582	23.5