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TOTAL-TREE WEIGHT, STEM WEIGHT, AND VOLUME TABLES FOR HARDWOOD SPECIES IN THE SOUTHEAST

By

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TOTAL-TREE WEIGHT, STEM WEIGHT, AND VOLUME TABLES FOR HARDWOOD SPECIES IN THE SOUTHEAST

BY

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INTRODUCTION

Most hardwood pulpwood harvested in the South is weight scaled rather than stick scaled to determine cord volume. Hardwoods chipped for fuel or fiber are also weight scaled. Tree-length hardwood logs processed for solid products and fiber are increasingly weight scaled.

Total-tree and tree-component weight and volume tables are available for the major southern pines in Georgia (Saucier and others 1981) but tables for hardwood species are not. Thus, the USDA Forest Service, Southeastern Forest Experiment Station in cooperation with the Georgia Forestry Commission conducted a study to develop reliable weight and volume equations and tables for the commercially important hardwoods in the Southeast.

The weight and volume equations and tables developed as a result of this cooperative research are presented in this paper. Tables for estimating the green weight of wood and bark and volume of wood excluding bark in the total tree, stem to 4-inch d.o.b. (diameter outside bark) top, and stem to saw-log top are presented for yellow-poplar (*Liriodendron tulipifera* L.), sweetgum (*Liquidambar styraciflua* L.), blackgum (*Nyssa sylvatica* var. *biflora* (Walt.) Sarg.), white oak (*Quercus alba* L.), red oak species (southern red oak (*Q.* spp.) and scarlet oak (*Q. cocinea* Muenchh.)) combined, water oak (*Q. nigra* L.) and laurel oak (*Q. laurifolia* Michx.) combined, and hickory species (*Carya* spp.). Tables are also included for the combined soft hardwood and hard hardwood species. Since different organizations and individuals tally trees to different heights when collecting tree cruise data, tables are presented based on d.b.h. (diameter at breast height) and total height, d.b.h. and height to 4-inch d.o.b. top, and d.b.h. and saw-log merchantable height.

METHODS

Sample Tree Selection

The tree data used to develop the equations and tables presented here were collected in a number of individual studies over a period of several years. These studies were conducted by the Southeastern Forest Experiment Station in cooperation with the Georgia Forestry Commission, members of the North Carolina State Hardwood Research Cooperative, Tennessee Valley Authority, and Region 8 of the USDA Forest Service.

Sampling procedures relative to sample tree selection varied among studies. In some studies, sample trees were selected by the stratified random sampling technique to ensure uniform sample number across all diameter classes; in other studies, sampling was done on an area basis where all trees in a given area constituted the sample. In either case, the sample tree data collection was the same. The study locations are shown in Figure 1. A tabulation of sample trees by d.b.h. (diameter at breast height) size classes, and of means and ranges of tree measurements is given in Table 163.

Field Data Collection

Each tree was felled and measured for d.o.b. at the butt, to the saw-log top, 9-, 7-, 4-, and 2-inch d.o.b. top were also recorded. Cross-sectional disks of wood and bark were removed from along the stem and branches of sample trees for laboratory determination of specific gravity, moisture content, and percentage of bark. Foliage weight was estimated from randomly selected sample branches for each tree sampled during the foliage season.

The branches of each tree were cut from the stem and weighed. The stems of pulpwood-size trees (trees 5.0 to 10.9 inches d.b.h.) were weighed to a 7-, 4-, and 2-inch d.o.b. top. The stems of sawtimber-size trees (trees $\geq$ 11.0 inches d.b.h. with a minimum of one 16-foot grade 3 log) were weighed to a saw-log top, 9-, 7-, 4-, and 2-inch d.o.b. top. Stems of saplings (trees 1.0 to 4.9 inches d.b.h.) were weighed in one piece to the tip.

Laboratory Data Collection

Disks collected from each tree were processed in the laboratory to determine the percentage of bark and the moisture content and specific gravity of wood and bark, separately. These determinations provide data necessary for computing green and dry weight per cubic foot of branch wood and bark.

With diameter inside bark (d.i.b.) prediction equations developed from d.o.b. and d.i.b. stem-disk measurements and the d.o.b. and height measurements taken at 4-foot intervals up the stem of each tree, the volume of wood in the stem to the saw-log, 9-, 7-, 4-, and 2-inch d.o.b. top, and tip were calculated by Smalian's formula. Green weight per cubic foot of branch wood was calculated from weighted values for branch wood specific

Figure 1.--Location of stands where hardwood (*) trees were sampled for species equations.

gravity and moisture content. Cubic-foot volume of branch wood was computed by dividing branch green weight by its green weight per cubic foot. Cubic-foot volume of total tree wood was computed by adding the volume of wood in branches to the volume of wood in the stem.

Data Analysis

Regression equations were developed to predict green weight of wood and bark and volume of wood in the total tree above stump, stem from butt to tip, and saw-log stem to a variable top. Independent variables were: diameter at breast height (D), total height (Th), height to a 4-inch d.o.b. top (H4), and saw-log merchantable height (Mh).

A logarithmic transformation (base 10) was used to obtain a relatively homogeneous variance, which is assumed in regression analysis. Thus, regression equations for estimating weight and volume were calculated by using the models:

$$\log Y = a + b \log X + \varepsilon \quad (1)$$
$$\log Y = a + b \log X_1 + c \log X_2 + \varepsilon \quad (2)$$

where: Y = predicted component weight or volume

$X = D^2$ D^2Th, D^2H4, or D^2Mh

$X_1 = D^2$

X_2 = Th, H4, or Mh

ε = experimental error

a, b, c = regression coefficients

Plots of residuals showed that equations (1) and (2) underestimated total-tree and total-stem weight and volume of hardwood trees $\geq$ 14 inches d.b.h. when one equation was used for trees 1 inch and larger (Clark and others 1985). When equation (2) was used with D^2+Mh for sawtimber trees $\geq$ 11 inches the residuals indicated good predictability. Thus, equation (2) was the equation selected for use with d.b.h. and saw-log merchantable height. Two equations were developed for d.b.h. and total height, and d.b.h. and height to 4-inch top--equation (3) for trees < 11.0 inches d.b.h. and equation (4) for trees $\geq$ 11.0 d.b.h. The 11-inch point was not the optimum point to shift from one equation to the other for all species or tree components but it was the more desirable from a practical standpoint. Hardwood trees < 11 inches in diameter are classified as sapling or poletimber and trees $\geq$ 11 inches are classified as sawtimber.

The procedure outlined in Draper and Smith (1981) for fitting two linear equations with known point of intersection was used to develop the following equations:

$$\log Y_p = a + b \log X + \varepsilon \quad (3)$$
$$\log Y_s = a + b \log (11^2H) + c \log (D^2/11^2) + \varepsilon \quad (4)$$

where: Y_p = predicted component weight or volume for trees < 11.0 inches d.b.h

Y_s = predicted component weight or volume for trees $\geq$ 11.0 inches d.b.h.

$X = D^2$, D^2Th, or D^2H4

H = Th or H4

D = d.b.h.

ε = experimental error

a, b, c = regression coefficients

When logarithmic estimates are converted back to original units, they are biased downward because the antilogarithm of an estimated mean gives the geometric rather than the arithmetic mean (Cunia 1964). To adjust for this bias, a correction factor was computed and applied to each model by using Baskerville's (1972) procedure. The final equations including correction factors were simplified to:

$$Y_s = a(D^2)^b (Mh)^c \quad (5)$$
$$Y_p = a(D^2H)^b \quad (6)$$
$$Y_s = a (D^2)^b (H)^c \quad (7)$$

The following exponential ratio equation was used to estimate the proportion of predicted total-stem weight or volume to a specified top d.o.b.:

$$Y_R = e^a (d^b D^c) \quad (8)$$

where: Y_R = predicted ratio of stem weight or volume to top d.o.b./total-stem weight or volume

d = specified stem top diameter in inches

D = tree diameter at breast height in inches

a,b,c = regression coefficients

e = base of natural log = 2.71828

The exponential ratio model shown below was developed to estimate a ratio for expanding saw-log stem weight or volume to any d.o.b. top above the saw-log top.

$$Y_R = e^{a(Mh)^b [(1.0 - d^2/0.6084D^2)^2)]^c} \quad (9)$$

where: Y_R = predicted ratio of stem weight or volume to top d.o.b./saw-log stem weight or volume

Mh = saw-log merchantable height in feet

d = specified top diameter in inches

D = tree diameter at breast height in inches

0.6084 = constant based on average form class--$(0.78)^2$

a,b,c = regression coefficients

e = base of natural log

Weight and Volume Tables

Equations for weight and volume were developed by using d.b.h. in combination with total height, height to 4-inch d.o.b., and saw-log merchantable height. A series of equations were developed to predict the weight of wood and bark in pounds, and volume of wood in cubic feet in the total tree and stem from butt to tip by using d.b.h. and total height, and d.b.h. and height to 4-inch d.o.b. top, and equations (6) and (7). Ratio equation (8) was used to estimate the proprotional amount of the total stem that is in the stem to a 9- and 4-inch d.o.b. top. Equation (5) was used to predict the weight and volume of the total tree and stem to a 9-inch d.o.b. top or where a number 3 saw log stopped for trees $\geq$ 11.0 inches d.b.h. Ratio equation (9) was used to expand the saw-log stem to a 4-inch d.o.b. top.

These equations were used to develop tables showing predicted weight and volume of the total tree, stem to 4-inch d.o.b. top, and stem to a 9-inch or saw-log top for each combination of d.b.h. and height and species or species groups sampled. The tables based on d.b.h. and total height or height to 4-inch top show weight and volume by 1-inch d.b.h. classes and 10-foot height intervals. The tables based on d.b.h. and saw-log merchantable height show weight and volume by 1-inch d.b.h. classes and ½-log intervals.

The various weight and volume tables are presented in series for each species or species group by the d.b.h. and height combinations.

Estimates of pulpwood in sawtimber-size trees can be made by subtracting predicted stem weight or volume to the merchantable saw-log top or 9-inch top from the predicted stem weight or volume to the 4-inch top. Likewise, crown weight or volume can be estimated by subtracting predicted stem values to the 4-inch top from predicted total-tree weight or volume.

All tables are good predictors of tree weight and volume, but tables based on d.b.h. and height to the 4-inch d.o.b. top are the best predictors of stem weight or volume to the 4-inch top. Tables based on d.b.h. and saw-log merchantable height are the best estimators of the saw-log merchantable stem since tables based on total height and height to a 4-inch top estimate the stem to a fixed 9-inch top rather than to where a number 3 log stopped.

Similar-size trees may vary in weight and volume because of differences in crown size and stem taper. Therefore, the tables presented here should be applied to trees growing in fully stocked natural stands.

Table 1.--Predicted green weight of total tree (wood and bark) for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	3	5	6							
2	12	19	25							
3	28	42	55	69	82					
4	49	73	98	122	146					
5		114	152	189	227	264	302			
6		164	218	272	325	379	433			
7		222	296	369	442	514	587	660		
8		290	385	480	575	670	765	859		
9			486	606	726	846	966	1085	1204	
10			599	747	895	1042	1190	1337	1484	
11				902	1081	1259	1437	1615	1792	1969
12				1082	1295	1509	1722	1935	2148	2361
13				1278	1531	1783	2035	2287	2538	2789
14				1491	1786	2081	2375	2668	2962	3255
15				1722	2062	2402	2742	3081	3419	3758
16				1969	2359	2748	3136	3524	3912	4299
17					2676	3118	3558	3998	4438	4877
18					3015	3512	4008	4504	4999	5494
19					3374	3931	4486	5041	5595	6149
20						4374	4992	5609	6226	6842
21						4842	5526	6210	6892	7574
22						5334	6088	6841	7594	8345
23						5852	6679	7505	8330	9155
24						6394	7298	8201	9103	10004

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.16258\ (D^2Th)^{0.99008}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.12701\ (D^2)^{1.04157}\ (Th)^{0.99008}$

Table 2.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	59	79	99	119	139	159			
6	111	148	185	222	260	297			
7	169	226	282	339	396	453	510		
8	233	312	390	469	548	626	705		
9		407	510	612	715	818	921	1024	
10		512	641	770	899	1028	1158	1287	
11			784	942	1101	1259	1417	1576	1735
12			934	1122	1310	1499	1687	1876	2065
13			1094	1315	1535	1756	1977	2198	2420
14			1266	1521	1776	2032	2288	2544	2800
15			1449	1741	2033	2326	2619	2911	3205
16			1644	1975	2306	2638	2970	3302	3634
17				2222	2595	2968	3342	3715	4089
18				2483	2899	3316	3734	4152	4570
19				2757	3220	3683	4147	4610	5075
20					3556	4068	4580	5092	5605
21					3908	4470	5033	5596	6159
22					4276	4891	5507	6123	6739
23					4660	5330	6001	6672	7344
24					5059	5787	6515	7244	7973

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.12543\ (D^2Th)^{0.00643}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.15400\ (D^2)^{0.96364}\ (Th)^{1.00643}$

$Y_R = e^{(-1.53812\ (d)^{3.76032}\ (D)^{-3.93009})}$

Table 3.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 50	60	70	80	90	100	110
	Pounds 3/						
11	496	596	696	796	896	996	1097
12	674	810	946	1082	1218	1354	1491
13	863	1036	1210	1385	1559	1733	1908
14	1060	1273	1487	1701	1915	2129	2344
15	1266	1520	1776	2031	2287	2542	2798
16	1480	1778	2076	2375	2673	2972	3272
17		2045	2388	2732	3076	3420	3764
18		2324	2714	3104	3495	3886	4277
19		2613	3052	3491	3930	4370	4810
20			3404	3894	4384	4874	5365
21			3770	4312	4855	5398	5941
22			4149	4746	5344	5941	6540
23			4544	5197	5851	6506	7161
24			4952	5664	6377	7091	7805

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.15400\ (D^2)^{0.96364}\ (Th)^{1.00643}$

$Y_R = e^{(-1.53812\ (d)^{3.76032}\ (D)^{-3.93009})}$

Table 4.--Predicted green weight of total tree (wood and bark) for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	114	191	258	319	376					
6	149	250	338	418	493					
7		314	425	526	620	710				
8		383	518	641	756	866				
9		456	616	763	901	1031	1156			
10		534	721	892	1053	1206	1352			
11			830	1028	1213	1389	1557	1719		
12			1002	1240	1463	1675	1878	2074		
13				1473	1739	1991	2232	2464	2690	
14				1729	2040	2335	2618	2891	3155	
15				2006	2367	2710	3038	3355	3661	3959
16				2305	2720	3114	3492	3855	4208	4550
17					3100	3549	3979	4394	4795	5185
18					3506	4014	4501	4969	5423	5864
19					3940	4510	5057	5584	6094	6589
20					4400	5037	5648	6236	6806	7359
21					4888	5596	6274	6928	7560	8175
22					5403	6186	6936	7658	8358	9037
23					5947	6808	7633	8428	9198	9946
24					6518	7462	8366	9238	10082	10902

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.89466\ (D^2H_4)^{0.74208}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.37910\ (D^2)^{1.07758}\ (H_4)^{0.74208}$

Table 5.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	59	100	136	169	199					
6	101	171	231	287	340					
7		241	327	405	480	550				
8		311	422	524	620	711				
9		382	519	644	762	874	982			
10		456	618	768	908	1042	1170			
11			721	896	1059	1215	1365	1509		
12			864	1073	1269	1456	1635	1808		
13				1265	1497	1717	1928	2132	2330	
14				1473	1742	1998	2244	2481	2711	
15				1694	2004	2299	2582	2855	3120	3377
16				1931	2285	2621	2943	3254	3556	3849
17					2583	2962	3327	3679	4020	4351
18					2898	3325	3734	4129	4511	4884
19					3232	3708	4164	4604	5031	5446
20					3584	4111	4617	5105	5578	6039
21					3954	4535	5093	5632	6154	6662
22					4341	4980	5593	6184	6757	7315
23					4747	5445	6115	6762	7389	7998
24					5171	5931	6661	7365	8048	8712

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.54341\ (D^2H_4)^{0.75268}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.46653\ (D^2)^{1.00215}\ (H_4)^{0.75268}$

$Y_R = e^{(-1.53812\ (d)^{3.76032}\ (D)^{-3.93009})}$

Table 6.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	456	566	670	768	863	954		
12	624	775	917	1051	1181	1306		
13		998	1180	1354	1520	1681	1837	
14		1233	1458	1673	1878	2077	2270	
15		1480	1750	2008	2255	2493	2724	2949
16		1739	2057	2359	2649	2929	3201	3465
17			2377	2727	3062	3386	3700	4005
18			2713	3112	3495	3864	4222	4571
19			3064	3514	3947	4364	4769	5162
20			3431	3935	4419	4887	5340	5780
21			3813	4374	4913	5432	5935	6425
22			4213	4832	5427	6001	6557	7098
23			4629	5309	5963	6593	7204	7799
24			5061	5806	6520	7210	7878	8528

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.46653\ (D^2)^{1.00215}\ (H_4)^{0.75268}$

$Y_R = e^{(-1.53812\ (d)^{3.76032}\ (D)^{-3.93009})}$

Table 7.--Predicted green weight of total tree (wood and bark) for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1272	1382	1467	1537	1597				
12	1544	1678	1781	1866	1938				
13		2006	2129	2230	2317	2392	2460		
14		2366	2511	2631	2733	2822	2902		
15		2759	2929	3068	3187	3291	3384	3469	
16		3186	3382	3542	3679	3800	3907	4005	
17		3647	3871	4055	4212	4349	4473	4584	
18		4142	4397	4605	4784	4940	5080	5207	5323
19			4959	5195	5396	5573	5731	5874	6005
20			5560	5824	6050	6247	6424	6585	6732
21			6198	6493	6744	6965	7162	7341	7505
22			6875	7202	7481	7726	7944	8143	8324
23				7952	8260	8530	8772	8991	9191
24				8743	9082	9379	9644	9885	10105

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 3.35498\ (D^2)^{1.11411}\ (Mh)^{0.21081}$

Table 8.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1038	1082	1187	1307	1431				
12	1258	1301	1422	1563	1709				
13		1539	1677	1840	2011	2182	2353		
14		1795	1952	2139	2335	2533	2730		
15		2070	2247	2460	2684	2910	3136	3358	
16		2363	2562	2802	3056	3313	3568	3821	
17		2675	2897	3167	3452	3740	4028	4313	
18		3006	3251	3552	3871	4193	4515	4834	5148
19			3626	3960	4313	4672	5030	5384	5733
20			4020	4389	4779	5176	5572	5963	6350
21			4434	4839	5269	5705	6141	6572	6998
22			4868	5311	5782	6260	6737	7210	7676
23				5805	6318	6840	7360	7876	8386
24				6320	6878	7445	8011	8572	9126

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.63331\ (D^2)^{0.99081}\ (Mh)^{0.72345}$

$Y_R = e^{28.49039\ (Mh)^{-1.29879}\ [(1.0-d^2/0.6084D^2)^2]^{0.36858}}$

Table 9.--Predicted green weight of stem wood and bark to saw-log top for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	565	752	922	1081	1232				
12	671	893	1096	1285	1464				
13		1047	1284	1506	1715	1916	2108		
14		1212	1487	1744	1987	2219	2442		
15		1390	1705	1999	2278	2544	2800	3047	
16		1579	1938	2272	2589	2891	3182	3462	
17		1781	2185	2562	2919	3260	3588	3904	
18		1994	2447	2869	3269	3651	4018	4373	4717
19			2724	3194	3639	4064	4472	4867	5250
20			3015	3535	4028	4499	4951	5388	5812
21			3321	3894	4437	4955	5453	5935	6402
22			3642	4270	4865	5434	5980	6508	7020
23				4664	5313	5934	6531	7107	7666
24				5074	5781	6456	7105	7733	8341

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.63331\ (D^2)^{0.99081}\ (Mh)^{0.72345}$

Table 10.--Predicted green weight of total tree (wood and bark) for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	4	6	8	10						
2	16	23	31	38						
3	34	51	67	82	98					
4	60	88	115	142	169					
5		134	176	218	259	300	341			
6		190	249	308	367	425	482			
7		254	334	414	492	570	647	724		
8		328	431	533	634	735	834	933		
9		410	540	667	794	919	1044	1168	1291	
10		502	660	816	970	1124	1276	1428	1578	
11			791	978	1163	1347	1530	1712	1892	2072
12			966	1194	1421	1645	1868	2090	2310	2530
13			1160	1435	1707	1977	2245	2511	2776	3040
14			1375	1701	2024	2343	2661	2977	3291	3604
15			1611	1993	2371	2745	3118	3488	3856	4222
16			1869	2311	2749	3184	3616	4045	4471	4896
17				2656	3160	3659	4155	4648	5139	5627
18				3028	3602	4172	4738	5300	5859	6416
19				3428	4078	4723	5364	6000	6633	7264
20				3857	4588	5313	6034	6750	7462	8171
21				4314	5132	5943	6749	7550	8346	9139
22				4800	5710	6612	7509	8400	9287	10169
23				5315	6323	7323	8316	9302	10284	11261
24				5861	6972	8074	9169	10257	11339	12417

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.24512\ (D^2Th)^{0.95220}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.09605\ (D^2)^{1.14754}\ (Th)^{0.95220}$

Table 11.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	64	85	105	125	145	165			
6	128	169	209	249	289	328			
7	198	260	322	384	445	506	566		
8	272	358	443	528	612	695	778		
9	352	463	573	683	791	899	1006	1113	
10	438	576	714	850	985	1119	1253	1386	
11		699	865	1030	1194	1357	1519	1680	1840
12		839	1039	1237	1434	1629	1823	2017	2210
13		991	1227	1461	1693	1924	2154	2382	2610
14		1155	1430	1702	1973	2242	2510	2776	3041
15		1331	1647	1962	2274	2584	2892	3199	3504
16		1519	1880	2239	2595	2949	3301	3651	4000
17			2128	2534	2937	3338	3736	4133	4527
18			2392	2848	3301	3751	4198	4644	5088
19			2671	3180	3685	4188	4688	5185	5680
20			2965	3530	4091	4649	5204	5756	6306
21			3274	3898	4518	5134	5747	6357	6964
22			3599	4285	4967	5644	6318	6988	7656
23			3940	4691	5437	6178	6915	7649	8380
24			4296	5115	5928	6736	7540	8340	9137

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.21158\ (D^2Th)^{0.95726}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.16050\ (D^2)^{1.01487}\ (Th)^{0.95726}$

$Y_R = e^{(-2.21104\ (d)^{4.17214}\ (D)^{-4.38596})}$

Table 12.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	402	497	592	686	780	873	966	1058
12	575	712	847	982	1116	1249	1382	1514
13	759	940	1119	1297	1474	1650	1825	2000
14	953	1180	1405	1628	1850	2071	2290	2509
15	1154	1429	1702	1972	2241	2509	2775	3040
16	1365	1689	2012	2331	2649	2966	3280	3594
17		1961	2335	2706	3075	3442	3807	4171
18		2244	2672	3097	3519	3939	4357	4773
19		2539	3024	3504	3982	4457	4930	5401
20		2848	3391	3930	4466	4999	5529	6057
21		3169	3774	4374	4970	5564	6154	6742
22		3505	4173	4837	5497	6153	6805	7456
23		3855	4590	5319	6045	6766	7484	8199
24		4219	5023	5822	6616	7405	8191	8973

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.16050\ (D^2)^{1.01487}\ (Th)^{0.95726}$

$Y_R = e^{(-2.21104\ (d)^{4.17214}\ (D)^{-4.38596})}$

Table 13.—Predicted green weight of total tree (wood and bark) for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	132	217	290	356	418					
6	172	282	376	462	542					
7		351	469	576	676	770				
8		425	568	697	818	931				
9		503	672	825	967	1102	1230			
10		585	781	959	1124	1281	1430			
11			895	1099	1288	1467	1638	1802		
12			1099	1350	1583	1803	2013	2214		
13			1328	1631	1913	2179	2432	2676	2911	
14			1583	1944	2280	2597	2899	3189	3469	
15			1864	2289	2684	3057	3413	3755	4084	4403
16			2172	2667	3127	3562	3976	4374	4758	5130
17				3078	3610	4112	4590	5049	5492	5921
18				3524	4133	4707	5255	5781	6288	6779
19				4005	4697	5350	5972	6570	7146	7704
20				4522	5303	6041	6743	7418	8069	8699
21					5953	6780	7569	8326	9056	9764
22					6646	7569	8450	9295	10111	10900
23					7383	8409	9388	10327	11232	12110
24					8165	9301	10383	11421	12423	13393

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.57119\ (D^2H_4)^{0.71392}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.27047\ (D^2)^{1.18349}\ (H_4)^{0.71392}$

Table 14.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	62	102	138	170	200					
6	113	188	253	312	367					
7		270	363	447	527	602				
8		349	469	579	681	779				
9		428	575	710	836	955	1068			
10		508	683	842	992	1133	1268			
11			793	978	1151	1315	1472	1623		
12			955	1178	1387	1584	1773	1954		
13			1131	1395	1642	1876	2100	2315	2523	
14			1321	1630	1919	2192	2454	2705	2948	
15			1527	1883	2217	2533	2835	3125	3406	3678
16			1746	2155	2536	2897	3243	3575	3896	4208
17				2444	2877	3287	3679	4056	4420	4774
18				2753	3240	3701	4142	4567	4977	5375
19				3079	3624	4141	4634	5109	5568	6013
20				3425	4031	4605	5154	5682	6193	6688
21					4460	5095	5702	6286	6851	7399
22					4911	5610	6279	6922	7544	8147
23					5384	6151	6884	7589	8271	8932
24					5879	6717	7517	8288	9032	9755

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.02923\ (D^2H_4)^{0.73043}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.47558\ (D^2)^{1.03296}\ (H_4)^{0.73043}$

$Y_R = e^{(-2.21104\ (d)^{4.17214}\ (D)^{-4.38596})}$

Table 15.—Predicted green weight of stem wood and bark to 9-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	456	562	662	756	846	933		
12	654	807	950	1085	1215	1339		
13	867	1069	1259	1438	1609	1774	1933	
14	1090	1345	1583	1809	2024	2232	2432	
15	1324	1634	1923	2197	2459	2711	2955	3191
16	1569	1936	2279	2603	2914	3212	3501	3781
17		2252	2650	3028	3389	3736	4072	4397
18		2582	3039	3472	3886	4284	4669	5043
19		2928	3446	3937	4406	4858	5294	5718
20		3290	3872	4424	4951	5458	5948	6424
21			4317	4932	5520	6085	6632	7163
22			4782	5463	6115	6741	7347	7934
23			5268	6018	6735	7425	8092	8740
24			5774	6597	7383	8139	8870	9580

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.47558\ (D^2)^{1.03296}\ (H_4)^{0.73043}$

$Y_R = e^{(-2.21104\ (d)^{4.17214}\ (D)^{-4.38596})}$

Table 16.—Predicted green weight of total tree (wood and bark) for sweetgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1341	1489	1605	1701					
12	1625	1805	1945	2062					
13	1939	2154	2321	2461	2581				
14	2284	2537	2734	2898	3040				
15	2660	2954	3184	3375	3541	3687			
16	3068	3407	3672	3893	4083	4252			
17		3896	4199	4451	4668	4861	5035		
18		4420	4764	5050	5297	5516	5713		
19		4981	5368	5690	5969	6215	6437	6640	
20		5578	6012	6373	6685	6961	7210	7437	
21			6696	7099	7446	7753	8030	8283	8516
22			7421	7867	8252	8593	8900	9180	9438
23			8187	8679	9104	9479	9818	10127	10412
24			8994	9535	10001	10414	10786	11125	11438

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 3.17628\ (D^2)^{1.10466}\ (Mh)^{0.26498}$

Table 17.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1105	1223	1387	1563					
12	1322	1451	1638	1842					
13	1554	1694	1907	2140	2378				
14	1801	1952	2192	2456	2727				
15	2062	2225	2493	2790	3096	3404			
16	2337	2513	2811	3143	3485	3830			
17		2815	3145	3513	3893	4277	4660		
18		3132	3494	3901	4321	4746	5170		
19		3462	3859	4306	4768	5235	5702	6166	
20		3807	4240	4728	5235	5746	6257	6765	
21			4636	5168	5719	6277	6834	7389	7939
22			5047	5624	6223	6828	7434	8036	8634
23			5473	6097	6745	7400	8055	8707	9354
24			5914	6586	7285	7992	8698	9402	10100

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.81626\ (D^2)^{0.89616}\ (Mh)^{0.82118}$

$$Y_R = e^{21.09416\ (Mh)^{-1.18642}\ [(1.0-d^2/0.6084D^2)^2]^{0.44838}}$$

Table 18.—Predicted green weight of stem wood and bark to saw-log top for sweetgum in the Southeast, based on d.b.h and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	609	843	1063	1273					
12	712	985	1242	1488					
13	821	1137	1434	1718	1992				
14	938	1298	1637	1962	2275				
15	1062	1469	1853	2220	2574	2918			
16	1192	1649	2080	2492	2890	3276			
17		1838	2319	2778	3221	3652	4071		
18		2037	2569	3078	3569	4046	4511		
19		2244	2830	3391	3932	4457	4969	5470	
20		2460	3103	3717	4311	4887	5448	5997	
21			3386	4057	4705	5333	5946	6545	7133
22			3681	4410	5114	5797	6463	7114	7753
23			3986	4776	5538	6278	6999	7704	8396
24			4302	5154	5977	6775	7554	8315	9061

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.81626\ (D^2)^{0.89616}\ (Mh)^{0.82118}$

Table 19.—Predicted green weight of total tree (wood and bark) for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	4	6	9							
2	16	24	32							
3	36	52	69	85						
4	61	90	118	146						
5		137	181	223	265	307	348			
6		194	255	315	375	434	492			
7		260	342	422	502	581	660	737		
8		335	440	544	647	749	850	950		
9		419	551	680	809	936	1062	1188	1313	
10		512	672	831	988	1143	1297	1451	1603	
11			806	995	1183	1369	1554	1738	1921	2102
12			977	1208	1436	1662	1886	2109	2330	2551
13			1168	1443	1715	1985	2253	2519	2784	3047
14			1377	1701	2022	2341	2657	2971	3283	3593
15			1605	1983	2357	2729	3097	3463	3827	4189
16			1853	2289	2721	3149	3574	3997	4417	4835
17				2619	3114	3604	4090	4573	5054	5532
18				2974	3535	4092	4644	5193	5738	6281
19				3354	3987	4614	5237	5856	6471	7083
20				3759	4468	5171	5869	6563	7253	7939
21				4189	4980	5764	6542	7315	8083	8848
22				4646	5522	6391	7254	8111	8964	9811
23				5128	6096	7055	8007	8954	9894	10830
24				5637	6700	7755	8802	9842	10876	11905

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.25820\ (D^2Th)^{0.94824}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.11816\ (D^2)^{1.11125}\ (Th)^{0.94824}$

Table 20.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	71	93	114	135	156	177			
6	133	174	214	254	294	333			
7	199	261	322	382	441	500	558		
8	270	354	436	518	598	678	757		
9	347	454	560	664	767	869	971	1072	
10	429	562	692	821	949	1076	1201	1326	
11		678	835	991	1145	1298	1450	1600	1750
12		816	1006	1194	1380	1564	1746	1927	2108
13		967	1192	1415	1635	1853	2069	2284	2497
14		1131	1394	1654	1911	2166	2419	2670	2919
15		1307	1611	1911	2209	2503	2795	3086	3374
16		1496	1844	2188	2528	2865	3200	3532	3862
17			2093	2483	2869	3252	3632	4009	4383
18			2358	2797	3232	3664	4091	4516	4938
19			2639	3131	3618	4100	4579	5055	5527
20			2936	3484	4025	4562	5095	5624	6150
21			3250	3856	4455	5050	5639	6225	6807
22			3580	4247	4908	5563	6212	6857	7498
23			3927	4659	5383	6101	6814	7521	8224
24			4290	5089	5881	6665	7444	8217	8985

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.24174\ (D^2Th)^{0.93772}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.14975\ (D^2)^{1.03758}\ (Th)^{0.93772}$

$$Y_R = e^{(-1.61064\ (d)^{4.20298}\ (D)^{-4.31053})}$$

Table 21.—Predicted green weight of stem wood and bark to 9-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	404	498	591	682	773	864	954	1043
12	572	705	836	967	1095	1223	1350	1477
13	752	927	1100	1271	1440	1608	1775	1941
14	941	1161	1377	1591	1803	2014	2223	2431
15	1141	1406	1668	1928	2185	2440	2693	2945
16	1349	1663	1974	2281	2585	2887	3186	3484
17		1933	2294	2650	3004	3355	3703	4049
18		2216	2629	3038	3443	3846	4245	4642
19		2512	2981	3444	3904	4360	4813	5262
20		2823	3349	3870	4386	4899	5407	5913
21		3148	3735	4316	4891	5463	6030	6593
22		3488	4138	4782	5419	6052	6681	7305
23		3843	4559	5268	5971	6668	7361	8049
24		4213	4999	5776	6547	7311	8071	8825

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.14975\ (D^2)^{1.03758}\ (Th)^{0.93772}$

$Y_R = e^{(-1.61064\ (d)^{4.20298}\ (D)^{-4.31053})}$

Table 22.—Predicted green weight of total tree (wood and bark) for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	129	213	286	352	414					
6	168	278	372	458	538					
7		347	465	572	673	767				
8		421	564	694	816	930				
9		499	669	823	967	1103	1233			
10		581	778	958	1126	1284	1436			
11			893	1100	1292	1474	1648	1815		
12			1078	1327	1559	1779	1989	2190		
13			1282	1578	1854	2115	2364	2603	2835	
14			1504	1852	2176	2482	2774	3055	3327	
15			1746	2150	2526	2881	3220	3547	3862	4167
16			2007	2471	2903	3312	3702	4077	4439	4791
17				2817	3310	3776	4221	4648	5061	5461
18				3187	3745	4272	4775	5259	5726	6179
19				3582	4209	4802	5367	5911	6436	6945
20				4002	4702	5364	5996	6603	7190	7759
21					5225	5961	6663	7338	7989	8621
22					5778	6591	7367	8113	8834	9533
23					6360	7255	8110	8931	9725	10494
24					6973	7954	8891	9792	10661	11504

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.39497\ (D^2H_4)^{0.72242}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.43036\ (D^2)^{1.08034}\ (H_4)^{0.72242}$

Table 23.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	66	108	145	178	209					
6	114	187	251	308	362					
7		263	352	433	508	579				
8		336	450	554	650	741				
9		410	548	674	791	902	1007			
10		484	648	796	935	1065	1190			
11			749	921	1082	1233	1377	1516		
12			898	1104	1296	1477	1650	1816		
13			1058	1301	1527	1741	1945	2141	2330	
14			1232	1514	1777	2026	2263	2491	2711	
15			1417	1742	2045	2331	2604	2866	3119	3365
16			1616	1986	2332	2658	2969	3268	3556	3835
17				2246	2636	3005	3357	3695	4021	4337
18				2521	2959	3373	3768	4147	4513	4868
19				2812	3301	3763	4203	4626	5034	5430
20				3119	3661	4173	4662	5131	5584	6022
21					4040	4605	5144	5661	6161	6645
22					4437	5058	5650	6218	6767	7299
23					4853	5532	6179	6801	7401	7983
24					5287	6027	6733	7410	8064	8698

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.11805\ (D^2H_4)^{0.71813}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.53222\ (D^2)^{1.00613}\ (H_4)^{0.71813}$

$Y_R = e^{(-1.61064\ (d)^{4.20298}\ (D)^{-4.31053})}$

Table 24.—Predicted green weight of stem wood and bark to 9-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	447	549	644	735	821	903		
12	629	773	908	1035	1156	1272		
13	823	1011	1187	1353	1512	1664	1811	
14	1025	1261	1480	1687	1884	2074	2257	
15	1237	1521	1785	2035	2273	2502	2723	2937
16	1458	1792	2103	2398	2678	2948	3208	3460
17		2075	2435	2776	3101	3413	3714	4006
18		2370	2781	3171	3542	3898	4242	4576
19		2677	3143	3582	4002	4404	4793	5170
20		2999	3520	4012	4482	4933	5368	5790
21			3913	4460	4982	5484	5968	6437
22			4323	4927	5504	6058	6593	7111
23			4749	5414	6048	6656	7244	7813
24			5193	5920	6613	7279	7921	8544

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.53222\ (D^2)^{1.00613}\ (H_4)^{0.71813}$

$Y_R = e^{(-1.61064\ (d)^{4.20298}\ (D)^{-4.31053})}$

Table 25.--Predicted green weight of total tree (wood and bark) for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1171	1384	1560	1712					
12	1392	1645	1854	2034					
13	1631	1928	2173	2385	2574	2745			
14	1890	2234	2517	2763	2981	3180			
15		2561	2887	3168	3419	3647	3857		
16		2912	3281	3601	3886	4146	4384		
17		3284	3701	4062	4383	4676	4945	5196	
18		3678	4145	4550	4910	5237	5539	5820	
19			4615	5065	5466	5831	6167	6479	6772
20			5110	5608	6052	6456	6828	7174	7498
21			5629	6178	6668	7112	7522	7903	8261
22			6174	6776	7313	7800	8250	8668	9060
23				7401	7987	8520	9011	9467	9896
24				8054	8691	9271	9805	10302	10768

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 3.04228\ (D^2)^{0.99253}\ (Mh)^{0.42279}$

Table 26.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	852	1061	1257	1443					
12	1015	1259	1489	1706					
13	1189	1471	1736	1987	2228	2459			
14	1375	1697	1999	2287	2561	2826			
15		1936	2279	2604	2915	3216	3506		
16		2188	2573	2939	3289	3626	3953		
17		2454	2883	3291	3682	4058	4423	4778	
18		2732	3208	3660	4094	4511	4916	5309	
19			3548	4047	4524	4985	5432	5866	6289
20			3903	4450	4974	5480	5970	6446	6910
21			4272	4870	5443	5995	6530	7050	7558
22			4656	5306	5929	6530	7113	7679	8231
23				5759	6434	7086	7717	8330	8929
24				6228	6958	7661	8343	9006	9652

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.85293\ (D^2)^{0.90659}\ (Mh)^{0.77323}$

$$Y_R = e^{3.07492\ (Mh)^{-0.65386}\ [(1.0-d^2/0.6084D^2)^{2.2}]^{0.51846}}$$

Table 27.--Predicted green weight of stem wood and bark to saw-log top for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	584	793	987	1170					
12	684	929	1156	1370					
13	791	1074	1336	1584	1821	2049			
14	905	1228	1528	1812	2083	2344			
15		1392	1732	2053	2361	2656	2943		
16		1565	1947	2308	2654	2986	3308		
17		1747	2173	2577	2962	3333	3693	4042	
18		1937	2411	2858	3285	3697	4096	4483	
19			2659	3152	3624	4078	4518	4945	5362
20			2918	3459	3977	4475	4958	5427	5885
21			3188	3779	4345	4889	5417	5929	6429
22			3469	4112	4727	5320	5893	6451	6995
23				4457	5124	5766	6388	6993	7582
24				4815	5535	6229	6901	7554	8190

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.85293\ (D^2)^{0.90659}\ (Mh)^{0.77323}$

Table 28.--Predicted green weight of total tree (wood and bark) for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	4	6	8	10						
2	16	23	31	38						
3	34	50	66	81	96					
4	59	86	113	139	165					
5		131	171	211	251	290	328			
6		184	241	297	353	408	462			
7		246	322	397	471	545	617	690		
8		316	414	510	606	700	793	886		
9		394	516	637	755	873	990	1105	1220	
10		480	629	776	921	1064	1206	1347	1487	
11			752	928	1101	1272	1442	1611	1778	1945
12			915	1128	1339	1547	1754	1959	2163	2365
13			1096	1351	1603	1853	2100	2345	2589	2832
14			1294	1596	1894	2188	2481	2771	3059	3345
15			1511	1864	2211	2556	2897	3236	3572	3906
16			1747	2155	2557	2955	3349	3741	4130	4516
17				2469	2930	3386	3839	4287	4733	5176
18				2808	3332	3851	4365	4875	5382	5886
19				3171	3763	4348	4929	5505	6078	6647
20				3558	4223	4880	5532	6178	6821	7459
21				3971	4712	5446	6173	6895	7612	8324
22				4409	5232	6046	6854	7655	8451	9242
23				4872	5782	6682	7574	8460	9339	10213
24				5362	6362	7353	8335	9309	10277	11239

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.26153\ (D^2Th)^{0.93871}$

Table 29.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	65	85	105	124	144	163			
6	123	161	199	236	273	310			
7	186	244	301	357	413	468	523		
8	253	332	410	487	563	639	714		
9	326	428	528	627	725	822	919	1015	
10	405	531	655	778	900	1021	1140	1260	
11		642	792	941	1088	1234	1379	1523	1666
12		774	955	1134	1312	1488	1663	1836	2009
13		917	1132	1345	1555	1764	1971	2177	2382
14		1073	1324	1573	1819	2063	2305	2546	2786
15		1240	1531	1818	2103	2385	2665	2944	3221
16		1420	1753	2082	2408	2731	3052	3371	3688
17			1990	2363	2733	3100	3464	3826	4186
18			2242	2663	3080	3493	3904	4312	4717
19			2510	2981	3447	3910	4370	4826	5280
20			2793	3317	3836	4351	4863	5371	5876
21			3092	3672	4247	4817	5383	5945	6505
22			3406	4045	4678	5306	5930	6550	7166
23			3736	4437	5132	5821	6505	7184	7860
24			4082	4848	5607	6359	7107	7849	8588

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.21881\ (D^2Th)^{0.94339}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.13896\ (D^2)^{1.03807}\ (Th)^{0.94339}$

$Y_R = e^{(-1.76819\ (d)^{4.00759}\ (D)^{-4.17139})}$

Table 31.--Predicted green weight of total tree (wood and bark) for soft hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	131	214	285	348	408					
6	170	276	368	450	527					
7		343	457	560	655	744				
8		415	551	675	790	898				
9		489	651	797	933	1060	1182			
10		568	755	925	1082	1230	1371			
11			863	1057	1237	1407	1568	1722		
12			1052	1288	1507	1714	1910	2099		
13			1262	1545	1808	2056	2291	2517	2735	
14			1493	1828	2139	2432	2711	2978	3236	
15			1746	2138	2502	2845	3171	3483	3785	4076
16			2022	2476	2897	3294	3671	4033	4382	4719
17				2841	3324	3780	4213	4628	5028	5416
18				3235	3785	4304	4797	5270	5725	6166
19				3657	4280	4866	5424	5958	6473	6972
20				4109	4808	5467	6093	6694	7273	7833
21					5372	6107	6807	7478	8125	8750
22					5970	6788	7566	8312	9030	9725
23					6604	7509	8369	9194	9989	10758
24					7274	8270	9218	10127	11003	11850

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.69201\ (D^2H_4)^{0.70400}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.34019\ (D^2)^{1.13533}\ (H_4)^{0.70400}$

Table 30.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	384	474	563	651	738	825	911	997
12	541	668	793	918	1041	1163	1285	1406
13	710	877	1041	1204	1366	1526	1686	1844
14	889	1097	1303	1507	1710	1911	2110	2309
15	1077	1330	1579	1827	2072	2315	2557	2798
16	1275	1574	1869	2162	2452	2740	3027	3312
17		1830	2174	2514	2852	3187	3520	3851
18		2099	2493	2884	3271	3655	4037	4417
19		2381	2828	3271	3710	4146	4579	5010
20		2677	3179	3677	4171	4661	5148	5632
21		2986	3547	4102	4653	5200	5743	6283
22		3310	3932	4547	5157	5763	6366	6965
23		3649	4333	5012	5684	6352	7016	7676
24		4002	4753	5497	6234	6967	7695	8419

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.13896\ (D^2)^{1.03807}\ (Th)^{0.94339}$

$Y_R = e^{(-1.76819\ (d)^{4.00759}\ (D)^{-4.17139})}$

Table 32.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	65	106	141	173	202					
6	113	184	245	300	352					
7		259	345	422	495	563				
8		331	441	541	633	721				
9		403	537	659	771	878	979			
10		476	635	778	911	1036	1156			
11			734	899	1053	1198	1336	1469		
12			887	1087	1273	1449	1616	1776		
13			1055	1293	1514	1723	1921	2112	2295	
14			1237	1516	1775	2020	2253	2476	2691	
15			1433	1757	2057	2341	2611	2869	3119	3360
16			1644	2016	2361	2686	2996	3293	3579	3856
17				2293	2686	3056	3408	3746	4071	4387
18				2589	3032	3450	3848	4229	4597	4953
19				2904	3401	3869	4315	4743	5155	5554
20				3237	3791	4313	4810	5287	5747	6192
21					4203	4782	5334	5862	6372	6866
22					4638	5277	5885	6469	7031	7576
23					5095	5797	6466	7107	7724	8323
24					5575	6343	7074	7776	8452	9106

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.26261\ (D^2H_4)^{0.70784}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.42747\ (D^2)^{1.05531}\ (H_4)^{0.70784}$

$Y_R = e^{(-1.76819\ (d)^{4.00759}\ (D)^{-4.17138})}$

Table 33.—Predicted green weight of stem wood and bark to 9-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	439	538	630	717	800	879	955	1029
12	621	761	891	1014	1131	1243	1351	1455
13	817	1001	1172	1334	1488	1635	1777	1915
14	1025	1256	1471	1674	1867	2052	2230	2403
15	1245	1526	1787	2033	2268	2493	2709	2919
16	1477	1810	2120	2412	2690	2957	3214	3463
17		2109	2470	2811	3135	3445	3745	4035
18		2424	2839	3230	3602	3960	4304	4637
19		2755	3227	3671	4094	4500	4891	5270
20		3103	3633	4134	4611	5068	5508	5935
21			4060	4620	5152	5663	6155	6632
22			4508	5129	5720	6287	6834	7363
23			4976	5662	6314	6940	7544	8128
24			5466	6219	6936	7623	8286	8927

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.42747\ (D^2)^{1.05531}\ (H_4)^{0.70784}$

$$Y_R = e^{(-1.76819\ (d)^{4.00759}\ (D)^{-4.17138})}$$

Table 34.—Predicted green weight of total tree (wood and bark) for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1349	1457	1540	1608	1666				
12	1632	1763	1863	1945	2015				
13	1943	2100	2219	2317	2400	2472			
14	2285	2469	2609	2724	2822	2907			
15	2657	2871	3034	3167	3281	3380	3469		
16	3060	3306	3493	3647	3778	3892	3995		
17		3774	3988	4164	4313	4444	4560	4666	
18		4276	4519	4718	4887	5035	5167	5287	
19		4813	5086	5310	5500	5667	5816	5950	
20		5384	5689	5940	6153	6339	6505	6656	
21			6330	6608	6845	7053	7238	7405	7558
22			7007	7315	7578	7807	8012	8197	8367
23			7722	8062	8351	8604	8830	9034	9221
24			8475	8848	9165	9443	9690	9915	10120

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 4.11428\ (D^2)^{1.09284}\ (Mh)^{0.19551}$

Table 35.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1048	1133	1268	1416	1567				
12	1258	1349	1504	1676	1852				
13	1484	1581	1757	1954	2158	2362			
14	1725	1829	2028	2252	2484	2717			
15	1982	2092	2315	2568	2830	3094	3357		
16	2253	2370	2618	2902	3197	3494	3790		
17	2539	2663	2939	3254	3583	3915	4245	4574	4898
18	2839	2972	3275	3625	3989	4357	4724	5089	5450
19		3295	3628	4013	4415	4821	5227	5629	6027
20		3633	3997	4419	4860	5306	5752	6194	6632
21			4382	4843	5325	5813	6300	6783	7262
22			4782	5284	5809	6340	6870	7397	7919
23			5199	5742	6312	6888	7463	8035	8601
24			5631	6218	6833	7456	8079	8697	9309

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.74064\ (D^2)^{0.92519}\ (Mh)^{0.78413}$

$$Y_R = e^{23.7621\ (Mh)^{-1.22036}\ [(1.0-d^2/0.6084D^2)^2]^{0.41272}}$$

Table 36.—Predicted green weight of stem wood and bark to saw-log top for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	572	780	973	1157	1333				
12	672	916	1144	1359	1565				
13	779	1062	1326	1576	1815	2046			
14	894	1219	1521	1808	2082	2347			
15	1015	1385	1728	2054	2366	2666	2958		
16	1144	1560	1947	2314	2666	3005	3333		
17		1745	2178	2589	2982	3361	3729	4087	
18		1940	2421	2878	3315	3736	4145	4543	
19		2144	2676	3180	3663	4129	4581	5021	
20		2358	2943	3497	4028	4541	5037	5521	
21			3221	3828	4409	4970	5513	6043	6560
22			3510	4172	4805	5416	6009	6586	7150
23			3811	4529	5217	5881	6524	7151	7762
24			4123	4900	5644	6362	7059	7737	8398

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.74064\ (D^2)^{0.92519}\ (Mh)^{0.78413}$

Table 37.--Predicted green weight of total tree (wood and bark) for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	5	8	10	13						
2	20	29	38	47						
3	43	62	82	101	120					
4	73	107	140	173	205					
5		163	213	263	312	361				
6		229	301	371	440	508				
7			402	495	588	679	770	860		
8			516	636	755	873	989	1105		
9			644	794	942	1089	1235	1379	1522	
10			785	968	1148	1327	1505	1681	1855	
11			939	1157	1374	1588	1800	2010	2219	2427
12			1152	1420	1685	1948	2208	2466	2723	2978
13			1390	1714	2034	2351	2665	2977	3287	3595
14			1655	2040	2422	2799	3173	3544	3913	4279
15				2400	2848	3292	3732	4168	4602	5032
16				2793	3315	3831	4343	4851	5356	5857
17					3823	4418	5008	5594	6176	6754
18					4372	5054	5729	6399	7064	7726
19					4965	5739	6505	7266	8022	8773
20					5602	6474	7339	8198	9050	9898
21					6282	7261	8231	9194	10150	11101
22					7009	8100	9183	10257	11324	12384
23					7781	8993	10194	11387	12571	13748
24					8600	9939	11267	12585	13894	15195

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.32489\ (D^2Th)^{0.93918}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.10455\ (D^2)^{1.17560}\ (Th)^{0.93918}$

Table 39.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	492	608	723	837	950	1063	1174	1285
12	661	817	972	1125	1277	1427	1577	1727
13	842	1041	1238	1432	1626	1818	2009	2199
14	1034	1278	1520	1759	1996	2232	2467	2700
15		1529	1817	2104	2388	2670	2950	3229
16		1793	2131	2467	2800	3131	3460	3787
17			2462	2850	3234	3617	3997	4375
18			2809	3252	3691	4127	4561	4992
19			3174	3674	4170	4663	5153	5640
20			3557	4117	4673	5225	5774	6320
21			3957	4580	5199	5813	6424	7032
22			4376	5065	5749	6429	7104	7776
23			4814	5571	6324	7071	7814	8554
24			5270	6099	6923	7741	8555	9364

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.16884\ (D^2)^{1.02043}\ (Th)^{0.94848}$

$Y_R = e^{(-1.93644\ (d)^{3.48353}\ (D)^{-3.83486})}$

Table 38.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	77	101	124	148	171				
6	140	184	227	270	312				
7		275	340	404	468	531	594		
8		375	463	551	637	723	809		
9		483	597	710	821	932	1042	1152	
10		600	742	882	1021	1159	1296	1432	
11		727	899	1068	1236	1403	1569	1734	1898
12		875	1081	1285	1487	1688	1887	2086	2283
13		1035	1278	1520	1759	1997	2233	2467	2701
14		1207	1492	1774	2053	2330	2605	2879	3152
15			1721	2046	2369	2688	3006	3322	3636
16			1967	2338	2707	3072	3435	3796	4155
17				2650	3067	3481	3892	4301	4708
18				2980	3449	3915	4378	4838	5296
19				3330	3854	4375	4892	5406	5917
20				3700	4282	4860	5435	6006	6574
21				4089	4732	5371	6006	6637	7265
22				4497	5205	5908	6607	7301	7992
23				4926	5701	6471	7236	7996	8753
24				5374	6220	7060	7894	8724	9549

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.23841\ (D^2Th)^{0.94848}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.16884\ (D^2)^{1.02043}\ (Th)^{0.94848}$

$Y_R = e^{(-1.93644\ (d)^{3.48353}\ (D)^{-3.83486})}$

Table 40.--Predicted green weight of total tree (wood and bark) for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	150	250	337	416	491					
6	196	327	441	544	641					
7		410	553	683	805	920				
8		499	673	831	979	1120				
9		594	800	988	1164	1331	1491			
10		693	934	1154	1359	1554	1741			
11			1074	1327	1564	1788	2003	2209		
12			1321	1632	1923	2199	2462	2717		
13			1597	1973	2325	2659	2978	3285	3582	
14			1905	2353	2773	3170	3551	3917	4272	
15			2244	2772	3266	3735	4183	4615	5032	5437
16			2615	3231	3807	4353	4876	5379	5865	6338
17				3732	4397	5028	5631	6212	6774	7319
18				4274	5036	5758	6449	7115	7758	8383
19				4859	5726	6547	7333	8090	8821	9532
20				5489	6468	7395	8283	9137	9964	10767
21					7262	8304	9300	10260	11188	12089
22					8110	9274	10387	11458	12495	13501
23					9013	10306	11543	12734	13886	15004
24					9972	11402	12771	14088	15362	16600

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.59217\ (D^2H_4)^{0.73525}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.29655\ (D^2)^{1.18732}\ (H_4)^{0.73525}$

Table 41.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	71	118	160	198	233					
6	120	200	270	334	395					
7		281	380	470	555	636				
8		362	490	606	716	819				
9		445	601	744	879	1006	1128			
10		530	716	886	1046	1197	1342			
11			833	1032	1218	1394	1563	1726		
12			1004	1243	1467	1680	1884	2080		
13			1190	1474	1739	1991	2233	2465	2691	
14			1392	1723	2033	2328	2610	2882	3146	
15			1609	1991	2350	2691	3017	3331	3636	3931
16			1841	2279	2690	3079	3453	3812	4161	4499
17				2586	3052	3494	3918	4326	4721	5105
18				2913	3438	3936	4413	4873	5318	5750
19				3259	3846	4404	4938	5452	5950	6434
20				3626	4279	4899	5492	6065	6619	7157
21					4734	5420	6077	6710	7323	7919
22					5213	5969	6692	7390	8065	8721
23					5716	6544	7338	8102	8843	9562
24					6243	7147	8014	8849	9657	10443

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.94643\ (D^2H_4)^{0.74223}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.48349\ (D^2)^{1.03263}\ (H_4)^{0.74223}$

$Y_R = e^{(-1.93644\ (d)^{3.48353}\ (D)^{-3.83486})}$

Table 42.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	564	699	824	944	1058	1169		
12	760	940	1110	1271	1425	1573		
13	969	1200	1416	1621	1818	2007	2191	
14	1192	1476	1742	1995	2236	2469	2695	
15	1429	1769	2087	2390	2679	2958	3229	3491
16	1678	2077	2452	2807	3147	3475	3792	4101
17		2403	2836	3247	3641	4020	4387	4744
18		2746	3241	3710	4160	4594	5013	5421
19		3107	3666	4198	4706	5197	5672	6133
20		3486	4113	4709	5280	5830	6363	6881
21			4582	5246	5882	6495	7088	7665
22			5073	5808	6512	7190	7847	8486
23			5586	6395	7171	7918	8641	9344
24			6122	7009	7858	8677	9470	10240

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.48349\ (D^2)^{1.03263}\ (H_4)^{0.74223}$

$Y_R = e^{(-1.93644\ (d)^{3.48353}\ (D)^{-3.83486})}$

Table 43.--Predicted green weight of total tree (wood and bark) for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1482	1581	1657	1718					
12	1865	1990	2085	2163					
13	2304	2460	2577	2672	2753	2823			
14	2803	2992	3135	3251	3349	3434			
15	3364	3591	3762	3901	4019	4121	4212		
16	3990	4259	4462	4627	4767	4888	4996		
17	4683	4999	5238	5431	5595	5738	5865	5979	
18	5447	5815	6092	6317	6508	6674	6821	6954	
19	6285	6708	7028	7288	7508	7700	7870	8023	8163
20	7197	7682	8049	8347	8599	8818	9013	9188	9348
21		8740	9157	9496	9783	10032	10254	10453	10635
22		9884	10356	10739	11063	11345	11596	11821	12027
23			11647	12078	12443	12760	13042	13296	13527
24			13035	13516	13924	14280	14595	14879	15138

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 1.64162\ (D^2)^{1.32195}\ (Mh)^{0.16494}$

Table 44.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1071	1167	1302	1447					
12	1315	1423	1584	1756					
13	1584	1706	1893	2097	2303	2507			
14	1879	2015	2232	2469	2710	2949			
15	2199	2350	2600	2873	3152	3429	3703		
16	2545	2713	2998	3310	3630	3948	4262		
17	2917	3103	3425	3780	4143	4505	4863	5215	
18	3316	3521	3883	4283	4693	5102	5506	5904	
19	3741	3966	4371	4820	5279	5738	6192	6639	7078
20	4193	4440	4890	5390	5903	6415	6921	7420	7910
21		4942	5440	5994	6563	7131	7693	8247	8792
22		5472	6021	6633	7261	7889	8510	9122	9724
23			6633	7306	7997	8687	9370	10044	10706
24			7277	8014	8770	9527	10275	11013	11739

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.45494\ (D^2)^{1.07859}\ (Mh)^{0.72839}$

$Y_R = e^{18.93660\ (Mh)^{-1.19902}\ [(1.0-d^2/0.6084D^2)^2]^{0.36967}}$

Table 45.--Predicted green weight of stem wood and bark to saw-log top for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	627	836	1027	1205					
12	756	1008	1239	1454					
13	898	1198	1472	1728	1971	2203			
14	1054	1406	1727	2028	2312	2584			
15	1223	1632	2005	2353	2683	2999	3303		
16	1406	1875	2304	2705	3084	3447	3796		
17	1602	2137	2626	3083	3515	3929	4327	4711	
18	1813	2418	2970	3487	3976	4444	4894	5330	
19	2037	2717	3338	3918	4468	4994	5500	5989	6463
20	2275	3035	3728	4377	4991	5578	6143	6690	7220
21		3372	4142	4863	5545	6197	6825	7432	8021
22		3727	4580	5376	6130	6852	7546	8216	8867
23			5040	5917	6747	7541	8305	9043	9760
24			5525	6486	7396	8266	9104	9913	10698

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.45494\ (D^2)^{1.07859}\ (Mh)^{0.72839}$

Table 46.--Predicted green weight of total tree (wood and bark) for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	4	6	7							
2	15	23	30							
3	34	52	69	86						
4	61	92	123	155						
5		145	194	243	292	341				
6		209	280	351	421	493				
7		286	382	479	576	673	770			
8		374	500	627	754	881	1008			
9		475	635	795	956	1118	1279	1441		
10		587	786	984	1183	1383	1582	1782		
11			952	1193	1435	1676	1918	2161	2404	
12			1152	1444	1736	2028	2321	2615	2908	
13			1373	1720	2068	2417	2766	3116	3466	3816
14			1615	2024	2433	2843	3254	3665	4076	4488
15			1879	2354	2830	3307	3784	4262	4741	5221
16			2164	2711	3259	3809	4359	4910	5461	6013
17				3096	3722	4350	4978	5607	6237	6867
18				3509	4219	4930	5642	6355	7069	7783
19				3950	4749	5549	6351	7154	7957	8762
20				4420	5314	6209	7106	8004	8903	9803
21				4918	5913	6910	7908	8907	9907	10909
22				5446	6547	7651	8756	9862	10970	12079
23				6003	7217	8433	9651	10871	12092	13314
24				6589	7922	9257	10594	11933	13273	14615

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.18018\ (D^2Th)^{1.01038}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.11999\ (D^2)^{1.09515}\ (Th)^{1.01038}$

Table 47.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	68	90	113	135	157				
6	135	180	223	267	311				
7	209	278	345	413	481	548			
8	289	384	478	571	664	757			
9	376	499	621	743	864	985	1106		
10	471	624	777	929	1081	1232	1383		
11		760	947	1132	1317	1501	1685	1869	
12		901	1121	1341	1560	1778	1996	2214	
13		1051	1308	1565	1820	2075	2329	2583	2836
14		1211	1507	1803	2097	2391	2683	2976	3268
15		1381	1719	2055	2391	2726	3060	3393	3726
16		1560	1942	2323	2702	3081	3458	3835	4210
17			2178	2605	3030	3455	3878	4300	4722
18			2426	2902	3376	3848	4320	4790	5260
19			2687	3213	3738	4261	4783	5304	5824
20			2959	3539	4117	4693	5268	5842	6415
21			3244	3879	4513	5144	5775	6404	7031
22			3540	4234	4925	5615	6302	6989	7674
23			3849	4603	5354	6104	6852	7598	8343
24			4169	4986	5800	6612	7422	8230	9037

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.18795\ (D^2Th)^{0.98124}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.23147\ (D^2)^{0.93781}\ (Th)^{0.98124}$

$Y_R = e^{(-2.99057\ (d)^{3.85392}\ (D)^{-4.31541})}$

Table 48.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	492	612	732	851	970	1089	1208	
12	668	831	994	1156	1318	1479	1640	
13	850	1058	1265	1472	1678	1884	2089	2294
14	1038	1292	1545	1798	2049	2300	2551	2801
15	1231	1533	1833	2133	2431	2729	3026	3323
16	1431	1781	2130	2478	2825	3171	3516	3861
17		2038	2437	2835	3232	3628	4023	4417
18		2303	2754	3204	3653	4100	4547	4993
19		2578	3083	3587	4089	4590	5090	5589
20		2863	3424	3983	4540	5097	5652	6206
21		3158	3777	4393	5008	5622	6234	6845
22		3463	4142	4818	5493	6166	6837	7508
23		3780	4520	5258	5994	6729	7462	8193
24		4107	4911	5713	6513	7311	8108	8902

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.23147\ (D^2)^{0.93781}\ (Th)^{0.98124}$

$Y_R = e^{(-2.99057\ (d)^{3.85392}\ (D)^{-4.31541})}$

Table 49.—Predicted green weight of total tree (wood and bark) for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	154	258	349	432	510					
6	202	338	458	567	669					
7		426	576	713	842	965				
8		519	702	870	1028	1178				
9		619	837	1037	1225	1403	1574			
10		724	980	1214	1433	1642	1842			
11			1129	1399	1652	1893	2123	2345		
12			1372	1700	2008	2300	2580	2850		
13			1641	2034	2401	2751	3086	3409	3721	
14			1937	2400	2835	3247	3643	4024	4393	
15			2261	2801	3308	3789	4251	4695	5126	5545
16			2612	3236	3822	4378	4911	5425	5923	6407
17				3707	4377	5014	5625	6213	6783	7337
18				4213	4975	5699	6392	7061	7709	8339
19				4754	5614	6432	7215	7969	8701	9411
20				5333	6297	7214	8092	8939	9759	10556
21					7024	8046	9026	9970	10885	11774
22					7795	8929	10016	11064	12079	13066
23					8610	9863	11064	12221	13343	14433
24					9470	10849	12169	13443	14676	15875

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.51059\ (D^2H_4)^{0.74524}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.41819\ (D^2)^{1.11898}\ (H_4)^{0.74524}$

Table 50.—Predicted green weight of stem wood and bark to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	72	119	160	197	232					
6	131	216	289	356	419					
7		308	413	509	598	682				
8		398	533	657	772	881				
9		487	653	804	945	1078	1205			
10		577	774	953	1120	1278	1429			
11			897	1105	1299	1482	1657	1825		
12			1067	1314	1545	1763	1971	2171		
13			1250	1539	1809	2064	2308	2542	2768	
14			1445	1779	2091	2386	2668	2939	3200	
15			1653	2035	2392	2729	3052	3361	3660	3951
16			1873	2307	2711	3094	3459	3810	4149	4478
17				2594	3049	3479	3890	4285	4666	5036
18				2897	3405	3886	4344	4785	5211	5624
19				3216	3780	4313	4822	5312	5785	6243
20				3551	4173	4762	5324	5864	6386	6892
21					4584	5231	5849	6442	7016	7572
22					5014	5722	6397	7046	7674	8282
23					5462	6233	6969	7676	8359	9022
24					5929	6765	7564	8331	9073	9792

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.42448\ (D^2H_4)^{0.72389}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.77846\ (D^2)^{0.96078}\ (H_4)^{0.72389}$

$Y_R = e^{(-2.99057\ (d)^{3.85392}\ (D)^{-4.31541})}$

Table 51.—Predicted green weight of stem wood and bark to 9-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	580	714	839	958	1071	1180		
12	791	974	1145	1306	1460	1609		
13	1011	1245	1463	1669	1866	2056	2239	
14	1238	1525	1792	2045	2287	2519	2743	
15	1474	1815	2133	2434	2722	2998	3265	3523
16	1718	2115	2486	2837	3172	3494	3805	4106
17		2427	2852	3255	3639	4008	4365	4711
18		2750	3232	3688	4124	4542	4947	5339
19		3086	3627	4139	4627	5097	5551	5991
20		3435	4037	4607	5151	5674	6178	6668
21			4463	5093	5694	6272	6830	7372
22			4906	5598	6259	6894	7507	8102
23			5364	6121	6844	7539	8210	8860
24			5840	6664	7451	8207	8937	9646

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.77846\ (D^2)^{0.96078}\ (H_4)^{0.72389}$

$Y_R = e^{(-2.99057\ (d)^{3.85392}\ (D)^{-4.31541})}$

Table 52.—Predicted green weight of total tree (wood and bark) for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1764	1801	1827	1848					
12	2142	2187	2219	2244					
13	2561	2614	2652	2683	2708				
14	3022	3084	3129	3165	3195				
15	3525	3597	3650	3692	3726	3756	3782		
16	4071	4155	4216	4264	4304	4338	4367		
17	4660	4756	4826	4881	4927	4966	5000	5030	
18	5294	5403	5483	5545	5597	5641	5680	5714	
19	5973	6096	6186	6256	6315	6365	6408	6447	6482
20	6698	6836	6936	7015	7081	7137	7185	7229	7268
21		7622	7734	7822	7895	7957	8012	8060	8104
22		8455	8580	8677	8759	8828	8888	8942	8990
23			9474	9582	9672	9748	9815	9874	9928
24			10418	10537	10635	10719	10793	10858	10917

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 7.23956\ (D^2)^{1.11566}\ (Mh)^{0.05157}$

Table 53.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1226	1310	1435	1568					
12	1471	1564	1708	1864					
13	1737	1838	2004	2184	2367				
14	2021	2132	2321	2527	2737				
15	2325	2446	2659	2894	3132	3369	3601		
16	2648	2780	3019	3284	3553	3820	4082		
17	2991	3134	3401	3697	3998	4298	4592	4880	
18	3352	3508	3803	4133	4468	4802	5130	5452	
19	3733	3901	4227	4591	4963	5333	5697	6053	6402
20	4132	4314	4672	5073	5483	5891	6292	6685	7069
21		4746	5138	5577	6027	6474	6914	7346	7768
22		5197	5624	6104	6596	7084	7565	8037	8499
23			6132	6654	7189	7721	8244	8758	9260
24			6660	7226	7806	8383	8951	9508	10053

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 1.09220\ (D^2)^{0.96170}\ (Mh)^{0.65956}$

$$Y_R = e^{14.49691\ (Mh)^{-1.10454}\ [(1.0-d^2/0.6084D^2)^2]^{0.31657}}$$

Table 54.--Predicted green weight of stem wood and bark to saw-log top for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	707	918	1106	1279					
12	836	1085	1307	1512					
13	975	1266	1525	1763	1986				
14	1124	1460	1759	2033	2290				
15	1284	1667	2008	2322	2615	2892	3156		
16	1454	1887	2274	2629	2961	3275	3574		
17	1633	2120	2555	2954	3327	3680	4016	4337	
18	1823	2367	2852	3297	3714	4107	4482	4842	
19	2023	2626	3164	3659	4121	4557	4973	5372	5756
20	2233	2898	3492	4038	4548	5030	5489	5929	6353
21		3184	3836	4435	4995	5525	6029	6513	6978
22		3482	4195	4851	5463	6042	6593	7122	7631
23			4569	5283	5951	6581	7182	7758	8312
24			4959	5734	6458	7143	7795	8420	9021

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 1.09220\ (D^2)^{0.96170}\ (Mh)^{0.65956}$

Table 55.--Predicted green weight of total tree (wood and bark) for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	6	9	12	14						
2	22	32	42	52						
3	47	69	90	110	131					
4	80	117	153	188	223					
5		177	232	285	338	390	441			
6		249	325	400	474	547	620			
7		332	433	533	632	729	825	921		
8		425	555	683	810	934	1058	1180		
9		529	691	851	1008	1163	1317	1469	1620	
10		644	841	1035	1226	1415	1602	1787	1971	
11			1004	1235	1463	1689	1912	2133	2353	2571
12			1211	1490	1766	2038	2307	2574	2839	3102
13			1439	1771	2098	2422	2742	3059	3374	3686
14			1689	2078	2462	2841	3217	3589	3958	4325
15			1960	2412	2857	3297	3733	4165	4594	5019
16			2253	2772	3284	3790	4291	4787	5280	5769
17			2567	3159	3743	4319	4890	5456	6017	6575
18			2904	3574	4234	4886	5532	6172	6807	7438
19			3263	4016	4757	5490	6216	6935	7649	8358
20				4485	5314	6133	6943	7747	8544	9335
21				4983	5904	6813	7714	8606	9492	10371
22				5509	6527	7532	8528	9515	10494	11466
23				6064	7184	8290	9386	10472	11550	12620
24				6647	7874	9088	10289	11479	12660	13833

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.37688\ (D^2Th)^{0.92961}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.18456\ (D^2)^{1.07849}\ (Th)^{0.92961}$

Table 56.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
5		89	117	143	170	196	222			
6		166	216	266	315	364	412			
7		245	320	394	466	538	609	680		
8		329	429	528	626	722	817	912		
9		418	546	672	796	919	1040	1160	1280	
10		515	672	827	980	1130	1280	1428	1574	
11			808	994	1177	1358	1538	1715	1892	2067
12			958	1178	1395	1610	1823	2034	2243	2450
13			1118	1376	1630	1881	2129	2375	2619	2862
14			1291	1588	1881	2170	2457	2741	3023	3302
15			1474	1813	2148	2479	2806	3130	3452	3772
16			1669	2053	2432	2806	3176	3544	3908	4270
17			1874	2306	2732	3152	3568	3981	4390	4796
18			2092	2573	3048	3517	3982	4442	4899	5352
19			2320	2854	3381	3901	4416	4927	5433	5936
20				3149	3730	4304	4872	5435	5994	6549
21				3457	4095	4725	5349	5967	6580	7190
22				3779	4476	5165	5847	6523	7193	7859
23				4114	4873	5623	6366	7101	7831	8556
24				4463	5286	6100	6905	7704	8496	9282

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.30888\ (D^2Th)^{0.92877}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.27161\ (D^2)^{0.95559}\ (Th)^{0.92877}$

$$Y_R = e^{(-1.45710\ (d)^{4.72751}\ (D)^{-4.75858})}$$

Table 57.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	484	595	705	814	921	1028	1133	1238
12	682	840	994	1148	1299	1449	1598	1746
13	887	1092	1293	1492	1689	1885	2078	2271
14	1097	1349	1598	1844	2088	2329	2569	2807
15	1311	1613	1911	2205	2496	2784	3071	3355
16	1531	1883	2231	2574	2914	3251	3585	3917
17	1757	2162	2561	2955	3345	3732	4116	4497
18	1991	2450	2902	3348	3790	4229	4663	5095
19	2233	2748	3255	3755	4251	4743	5230	5714
20		3056	3620	4177	4729	5275	5818	6356
21		3376	3999	4615	5224	5828	6427	7022
22		3708	4392	5068	5737	6400	7058	7711
23		4051	4799	5538	6269	6993	7712	8426
24		4407	5221	6024	6820	7608	8390	9167

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.27161\ (D^2)^{0.95559}\ (Th)^{0.92877}$

$$Y_R = e^{(-1.45710\ (d)^{4.72751}\ (D)^{-4.75858})}$$

Table 58.--Predicted green weight of total tree (wood and bark) for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	153	255	345	427	503					
6	200	334	452	559	659					
7		420	568	702	829	949				
8		512	692	856	1010	1156				
9		610	824	1019	1203	1377	1543			
10		713	963	1192	1406	1609	1804			
11			1109	1373	1619	1854	2078	2294		
12			1338	1655	1953	2236	2506	2767		
13			1589	1967	2320	2656	2978	3287	3587	
14			1864	2307	2722	3116	3493	3856	4208	
15			2163	2677	3158	3615	4052	4473	4881	5278
16			2485	3076	3629	4154	4656	5140	5609	6065
17				3504	4135	4733	5305	5857	6391	6910
18				3963	4676	5353	6000	6624	7228	7815
19				4453	5253	6013	6741	7442	8121	8780
20				4973	5867	6716	7528	8311	9069	9806
21					6517	7460	8362	9232	10074	10892
22					7203	8245	9243	10205	11135	12040
23					7927	9074	10172	11230	12254	13249
24					8688	9944	11148	12307	13430	14520

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.55235\ (D^2H_4)^{0.74103}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.51050\ (D^2)^{1.07662}\ (H_4)^{0.74103}$

Table 59.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	75	126	171	212	251					
6	131	219	297	369	436					
7		307	416	516	610	699				
8		393	532	660	780	894				
9		479	649	805	951	1090	1224			
10		567	769	953	1127	1291	1449			
11			892	1107	1308	1499	1683	1860		
12			1056	1310	1548	1774	1991	2201		
13			1232	1528	1805	2069	2322	2567	2803	
14			1419	1760	2080	2384	2676	2957	3230	
15			1618	2007	2372	2719	3052	3373	3684	3986
16			1830	2270	2682	3075	3451	3814	4165	4507
17				2547	3010	3450	3872	4279	4673	5057
18				2838	3355	3845	4316	4769	5209	5636
19				3145	3717	4260	4781	5284	5771	6245
20				3466	4096	4695	5270	5824	6361	6883
21					4493	5150	5780	6388	6976	7549
22					4907	5624	6312	6976	7619	8244
23					5337	6118	6867	7588	8288	8968
24					5785	6631	7443	8225	8983	9721

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.95081\ (D^2H_4)^{0.74867}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.75786\ (D^2)^{0.94583}\ (H_4)^{0.74867}$

$$Y_R = e^{(-1.45710\ (d)^{4.72751}\ (D)^{-4.75858})}$$

Table 60.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	535	663	784	898	1008	1114		
12	753	933	1103	1265	1419	1568		
13	977	1212	1432	1642	1843	2036	2224	
14	1206	1496	1768	2026	2274	2513	2745	
15	1440	1786	2110	2419	2715	3000	3277	3546
16	1679	2082	2461	2821	3166	3499	3821	4135
17		2387	2822	3234	3630	4011	4381	4741
18		2702	3194	3661	4108	4540	4959	5366
19		3028	3578	4101	4603	5087	5556	6012
20		3364	3976	4557	5115	5653	6174	6681
21			4388	5030	5645	6238	6814	7373
22			4815	5519	6194	6845	7476	8090
23			5256	6025	6762	7473	8162	8832
24			5713	6549	7350	8123	8872	9600

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.75786\ (D^2)^{0.94583}\ (H_4)^{0.74867}$

$$Y_R = e^{(-1.45710\ (d)^{4.72751}\ (D)^{-4.75858})}$$

Table 61.--Predicted green weight of total tree (wood and bark) for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1557	1772	1943	2087					
12	1873	2131	2337	2511					
13	2220	2526	2770	2976	3157				
14	2598	2956	3242	3484	3695				
15	3008	3423	3754	4033	4278	4496	4695		
16	3450	3926	4305	4626	4906	5157	5385		
17		4465	4897	5261	5580	5865	6124	6363	
18		5041	5528	5940	6300	6622	6915	7184	
19		5655	6201	6663	7067	7428	7756	8058	8338
20			6915	7430	7880	8283	8649	8985	9297
21			7670	8241	8740	9187	9593	9966	10312
22			8466	9096	9648	10141	10589	11001	11383
23				9997	10603	11145	11637	12090	12510
24				10943	11606	12199	12738	13233	13693

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 3.81016\ (D^2)^{1.06177}\ (Mh)^{0.32638}$

Table 62.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1063	1290	1510	1721					
12	1265	1529	1785	2031					
13	1481	1784	2079	2362	2636				
14	1710	2055	2391	2715	3028				
15	1953	2343	2723	3089	3443	3786	4120		
16	2210	2646	3072	3483	3881	4266	4642		
17		2965	3439	3898	4341	4771	5190	5598	
18		3299	3824	4332	4824	5301	5764	6217	
19		3648	4227	4787	5329	5854	6365	6864	7352
20			4647	5261	5855	6432	6992	7540	8075
21			5085	5755	6403	7033	7645	8243	8827
22			5539	6268	6973	7658	8324	8974	9609
23				6800	7564	8306	9028	9732	10420
24				7351	8176	8977	9757	10517	11260

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 1.01066\ (D^2)^{0.90432}\ (Mh)^{0.77494}$

$$Y_R = e^{4.53631}\ (Mh)^{-0.75623}\ [(1.0-d^2/0.6084D^2)^2]^{0.43200}$$

Table 63.--Predicted green weight of stem wood and bark to saw-log top for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	688	935	1164	1380					
12	805	1094	1362	1616					
13	931	1265	1574	1867	2147				
14	1064	1446	1800	2135	2455				
15	1206	1638	2039	2419	2781	3131	3469		
16	1355	1841	2292	2718	3126	3518	3899		
17		2054	2558	3033	3488	3926	4351	4763	
18		2278	2836	3364	3868	4354	4824	5282	
19		2512	3127	3709	4265	4801	5320	5825	6317
20			3431	4070	4680	5268	5837	6391	6931
21			3748	4445	5112	5754	6376	6980	7570
22			4077	4835	5560	6259	6935	7593	8235
23				5240	6026	6783	7516	8229	8924
24				5659	6508	7326	8117	8887	9638

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 1.01066\ (D^2)^{0.90432}\ (Mh)^{0.77494}$

Table 64.--Predicted green weight of total tree (wood and bark) for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	5	7	9	11						
2	18	26	34	42						
3	38	55	72	89	105					
4	65	94	123	152	180					
5		143	187	231	273	316				
6		201	263	324	384	444				
7			351	432	513	592	671	749		
8			450	555	658	760	861	961		
9			561	692	820	947	1073	1198	1322	
10			684	842	998	1153	1306	1458	1609	
11				1006	1193	1378	1561	1743	1923	2102
12				1261	1495	1727	1957	2184	2410	2635
13				1552	1841	2126	2408	2689	2967	3243
14				1882	2231	2577	2919	3259	3596	3931
15				2251	2669	3082	3492	3898	4301	4702
16				2661	3155	3644	4129	4609	5086	5560
17				3115	3693	4265	4832	5394	5953	6507
18				3613	4284	4948	5605	6257	6905	7548
19					4929	5693	6450	7200	7945	8685
20					5631	6504	7368	8225	9077	9922
21					6392	7382	8363	9336	10302	11262
22					7212	8329	9436	10534	11624	12707
23					8094	9348	10590	11823	13046	14261
24					9039	10440	11827	13204	14570	15927

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.29431\ (D^2Th)^{0.93446}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.05151\ (D^2)^{1.29786}\ (Th)^{0.93446}$

Table 65.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	63	82	101	120	138				
6	126	164	202	239	275				
7		253	311	368	424	480	536		
8		347	426	505	583	659	735		
9		447	550	651	751	850	949	1046	
10		555	683	808	932	1055	1177	1298	
11			824	976	1126	1275	1422	1568	1712
12			1014	1201	1385	1567	1748	1928	2106
13			1224	1449	1672	1892	2110	2327	2542
14			1455	1723	1988	2250	2509	2767	3022
15			1708	2023	2333	2641	2945	3248	3548
16			1983	2348	2709	3066	3420	3771	4119
17			2281	2701	3116	3527	3934	4338	4738
18			2603	3082	3555	4024	4488	4949	5406
19				3490	4027	4557	5083	5605	6122
20				3927	4531	5128	5719	6306	6889
21				4393	5068	5736	6398	7054	7706
22				4889	5640	6383	7119	7850	8575
23				5414	6246	7069	7884	8693	9496
24				5969	6886	7794	8693	9585	10470

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.26372\ (D^2Th)^{0.92704}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.09269\ (D^2)^{1.14508}\ (Th)^{0.92704}$

$Y_R = e^{(-2.48316\ (d)^{3.86525}\ (D)^{-4.15246})}$

Table 66.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 50	60	70	80	90	100	110
	Pounds 3/						
11	476	564	650	736	821	905	989
12	692	819	945	1069	1192	1315	1436
13	930	1101	1271	1438	1604	1769	1932
14	1189	1408	1625	1839	2051	2261	2470
15	1468	1738	2005	2269	2531	2791	3049
16	1766	2092	2413	2731	3046	3358	3669
17	2085	2469	2848	3223	3595	3964	4330
18	2424	2871	3311	3748	4180	4609	5035
19		3298	3804	4306	4802	5295	5784
20		3751	4328	4898	5463	6023	6580
21		4232	4882	5525	6163	6795	7423
22		4740	5468	6189	6903	7611	8314
23		5277	6087	6889	7684	8473	9255
24		5842	6740	7628	8508	9381	10248

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.09269\ (D^2)^{1.14508}\ (Th)^{0.92704}$

$Y_R = e^{(-2.48316\ (d)^{3.86525}\ (D)^{-4.15246})}$

Table 67.--Predicted green weight of total tree (wood and bark) for hickory in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	120	206	282	353	421					
6	159	273	375	470	559					
7		348	478	598	712	821				
8		429	588	737	877	1011				
9		515	707	886	1054	1216	1371			
10		607	834	1044	1243	1433	1617			
11			968	1212	1443	1664	1877	2083		
12			1187	1487	1770	2041	2302	2555		
13			1433	1794	2136	2463	2778	3084	3381	
14			1705	2135	2542	2931	3306	3670	4024	
15			2005	2511	2989	3447	3888	4316	4732	5138
16			2333	2922	3478	4011	4524	5022	5506	5979
17				3369	4010	4625	5217	5791	6349	6894
18				3853	4587	5289	5966	6623	7261	7884
19				4374	5208	6005	6774	7519	8244	8952
20				4934	5875	6774	7641	8482	9300	10098
21					6588	7597	8569	9512	10429	11324
22					7348	8474	9559	10610	11633	12631
23					8157	9406	10610	11778	12913	14021
24					9015	10395	11726	13016	14271	15495

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.59843\ (D^2H_4)^{0.78151}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.24293\ (D^2)^{1.17435}\ (H_4)^{0.78151}$

Table 68.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	57	95	129	160	189					
6	106	178	241	299	353					
7		259	351	435	515	590				
8		339	460	570	674	772				
9		420	569	705	833	955	1072			
10		502	679	843	996	1142	1281			
11			793	984	1163	1333	1496	1653		
12			960	1191	1408	1614	1811	2001		
13			1143	1417	1675	1920	2155	2381	2601	
14			1341	1663	1965	2252	2528	2794	3051	
15			1554	1928	2278	2611	2931	3239	3537	3828
16			1784	2213	2615	2997	3364	3718	4060	4393
17				2518	2975	3410	3828	4230	4620	4999
18				2843	3360	3851	4322	4776	5217	5645
19				3188	3768	4319	4848	5357	5851	6331
20				3555	4201	4815	5404	5973	6523	7058
21					4659	5340	5993	6623	7233	7827
22					5141	5892	6613	7308	7982	8637
23					5648	6473	7265	8029	8769	9489
24					6179	7083	7950	8785	9595	10382

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 1.75926\ (D^2H_4)^{0.74859}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.40424\ (D^2)^{1.05524}\ (H_4)^{0.74859}$

$Y_R = e^{(-2.48316\ (d)^{3.86525}\ (D)^{-4.15246})}$

Table 69.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	458	568	671	770	864	954		
12	655	812	960	1100	1235	1365		
13	868	1077	1273	1459	1638	1810	1977	
14	1096	1359	1606	1841	2066	2283	2494	
15	1336	1657	1958	2244	2519	2784	3040	3290
16	1589	1971	2329	2669	2996	3311	3616	3913
17		2301	2719	3117	3498	3865	4221	4568
18		2648	3129	3587	4026	4449	4859	5258
19		3013	3560	4081	4580	5062	5528	5982
20		3395	4013	4600	5162	5705	6231	6742
21			4487	5143	5773	6379	6967	7539
22			4984	5713	6412	7086	7739	8374
23			5504	6309	7081	7826	8547	9248
24			6048	6932	7780	8598	9391	10161

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.40424\ (D^2)^{1.05524}\ (H_4)^{0.74859}$

$Y_R = e^{(-2.48316\ (d)^{3.86525}\ (D)^{-4.15246})}$

Table 70.--Predicted green weight of total tree (wood and bark) for hickory in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1682	1886	2046	2181					
12	2006	2248	2440	2600					
13	2358	2643	2868	3056	3219	3364			
14	2738	3070	3331	3549	3739	3908			
15	3148	3529	3829	4080	4298	4492	4667		
16	3586	4020	4362	4648	4897	5118	5317		
17	4053	4544	4930	5254	5535	5784	6010	6216	
18	4549	5100	5534	5897	6212	6492	6746	6977	
19		5688	6172	6578	6929	7242	7524	7782	8021
20		6310	6846	7296	7686	8032	8345	8632	8897
21			7555	8051	8482	8864	9210	9526	9819
22			8300	8845	9317	9738	10117	10465	10786
23			9080	9676	10193	10652	11068	11448	11799
24			9895	10544	11108	11609	12061	12476	12859

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 5.86574\ (D^2)^{1.01003}\ (Mh)^{0.28883}$

Table 71.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1216	1312	1468	1642					
12	1468	1569	1749	1950					
13	1739	1846	2051	2283	2524	2769			
14	2030	2143	2373	2638	2914	3194			
15	2339	2458	2717	3015	3328	3646	3966		
16	2666	2792	3081	3416	3768	4126	4485		
17	3012	3145	3465	3839	4232	4632	5035	5436	
18	3376	3517	3869	4284	4720	5165	5612	6059	
19		3907	4294	4751	5233	5725	6219	6713	7205
20		4315	4739	5240	5770	6311	6854	7398	7939
21			5203	5751	6331	6923	7518	8113	8706
22			5687	6284	6916	7561	8210	8859	9505
23			6191	6838	7524	8225	8930	9635	10337
24			6714	7414	8156	8914	9677	10440	11201

Blocked-in area indicates range of data.

Includes 0.5-foot stump allowance.

Trees $\geq$ 11 inches d.b.h. $Y = 0.61963\ (D^2)^{0.93744}\ (Mh)^{0.84010}$

$_R = e^{20.59598\ (Mh)^{-1.12124}\ [(1.0-d^2/0.6084D^2)^2]^{0.39993}}$

Table 72.--Predicted green weight of stem wood and bark to saw-log top for hickory in the Southeast, based on d.b.h. and merchantabale height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	594	829	1051	1264					
12	700	975	1237	1488					
13	813	1133	1437	1729	2012	2287			
14	934	1302	1651	1987	2311	2628			
15	1063	1482	1879	2261	2631	2991	3343		
16	1200	1673	2121	2552	2969	3375	3773		
17	1344	1874	2376	2859	3326	3782	4227	4663	
18	1496	2086	2645	3182	3703	4210	4705	5191	
19		2308	2927	3522	4098	4659	5207	5744	6272
20		2541	3223	3877	4511	5129	5732	6324	6906
21			3531	4249	4944	5620	6282	6930	7567
22			3853	4636	5394	6132	6854	7562	8257
23			4188	5039	5863	6665	7450	8219	8974
24			4536	5457	6350	7219	8069	8902	9720

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.61963\ (D^2)^{0.93744}\ (Mh)^{0.84010}$

Table 73.--Predicted green weight of total tree (wood and bark) for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Pounds 3/									
1	6	9	11	14						
2	22	31	41	50						
3	46	66	86	106	125					
4	77	113	147	180	213					
5		170	221	272	321	370	419			
6		237	309	380	449	518	586			
7		315	411	505	597	688	778	867		
8		403	525	645	763	879	994	1108		
9		501	653	801	948	1092	1235	1377	1517	
10		608	792	973	1151	1326	1500	1671	1841	
11			944	1160	1371	1581	1787	1992	2195	2396
12			1157	1421	1680	1937	2190	2441	2689	2936
13			1395	1713	2026	2335	2640	2942	3242	3539
14			1658	2036	2409	2776	3139	3498	3854	4208
15			1948	2392	2830	3261	3688	4110	4528	4943
16			2265	2782	3290	3791	4287	4778	5265	5748
17				3205	3790	4368	4939	5505	6066	6622
18				3662	4332	4992	5645	6291	6932	7567
19				4155	4914	5664	6404	7138	7865	8586
20				4684	5540	6384	7219	8046	8865	9678
21				5249	6208	7155	8091	9017	9935	10846
22				5852	6921	7976	9019	10052	11075	12091
23				6492	7678	8848	10006	11151	12287	13414
24				7170	8480	9773	11051	12317	13571	14815

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.38315\ (D^2Th)^{0.92045}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.11710\ (D^2)^{1.16763}\ (Th)^{0.92045}$

Table 74.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Pounds 3/								
5	82	107	131	155	179	203			
6	149	195	240	284	327	370			
7	222	290	357	422	487	551	615		
8	300	392	482	571	658	745	831		
9	384	502	617	730	842	953	1063	1172	
10	475	620	762	902	1041	1178	1314	1448	
11		747	918	1087	1254	1419	1583	1745	1906
12		897	1102	1305	1506	1704	1901	2095	2289
13		1059	1303	1542	1779	2013	2245	2476	2704
14		1235	1519	1798	2074	2347	2618	2886	3153
15		1424	1751	2073	2391	2706	3018	3327	3635
16		1626	1999	2367	2730	3090	3446	3799	4150
17			2263	2680	3091	3499	3902	4302	4699
18			2544	3013	3475	3933	4386	4836	5282
19			2842	3365	3881	4392	4899	5401	5900
20			3156	3736	4310	4877	5440	5998	6551
21			3486	4127	4761	5388	6009	6626	7237
22			3833	4538	5235	5924	6607	7285	7958
23			4196	4969	5732	6486	7234	7976	8712
24			4577	5419	6251	7074	7890	8699	9502

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.29370\ (D^2Th)^{0.92650}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.19022\ (D^2)^{1.01708}\ (Th)^{0.92650}$

$Y_R = e^{(-1.75060\ (d)^{3.82455}\ (D)^{-4.06792})}$

Table 75.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Pounds 3/							
11	484	595	705	813	920	1026	1132	1236
12	662	814	963	1111	1257	1402	1546	1689
13	851	1046	1238	1429	1617	1803	1988	2171
14	1050	1291	1529	1763	1996	2226	2454	2680
15	1259	1549	1834	2115	2394	2670	2943	3215
16	1479	1819	2154	2484	2812	3136	3457	3777
17		2103	2490	2872	3250	3625	3996	4365
18		2400	2842	3278	3710	4137	4562	4983
19		2712	3211	3704	4191	4675	5154	5630
20		3038	3597	4149	4695	5237	5774	6307
21		3379	4001	4615	5223	5825	6422	7015
22		3735	4423	5102	5773	6439	7099	7755
23		4107	4863	5609	6348	7080	7806	8527
24		4494	5322	6139	6947	7748	8542	9331

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.19022\ (D^2)^{1.01708}\ (Th)^{0.92650}$

$Y_R = e^{(-1.75060\ (d)^{3.82455}\ (D)^{-4.06792})}$

Table 76.--Predicted green weight of total tree (wood and bark) for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	155	257	345	425	500					
6	203	335	449	554	651					
7		419	562	692	814	929				
8		508	682	841	988	1128				
9		603	809	997	1172	1338	1497			
10		703	943	1162	1366	1559	1744			
11			1083	1334	1569	1790	2002	2206		
12			1324	1631	1918	2189	2448	2697		
13			1593	1963	2308	2634	2946	3246	3535	
14			1891	2330	2739	3126	3496	3852	4196	
15			2218	2733	3213	3667	4101	4518	4921	5312
16			2575	3172	3730	4257	4761	5245	5713	6167
17				3649	4291	4897	5477	6034	6572	7094
18				4165	4897	5589	6250	6886	7500	8096
19				4719	5549	6333	7083	7803	8499	9174
20				5313	6247	7130	7974	8785	9569	10329
21					6993	7982	8926	9834	10711	11562
22					7787	8888	9939	10950	11927	12875
23					8629	9850	11015	12136	13218	14268
24					9521	10868	12154	13390	14585	15743

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.83167\ (D^2H_4)^{0.72545}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.35954\ (D^2)^{1.15578}\ (H_4)^{0.72545}$

Table 77.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Pounds 3/									
5	74	123	166	205	241					
6	126	210	282	348	410					
7		294	396	489	576	658				
8		377	508	627	739	845				
9		461	621	767	903	1033	1156			
10		547	737	910	1072	1225	1372			
11			855	1057	1244	1423	1593	1757		
12			1025	1266	1491	1704	1908	2105		
13			1208	1492	1758	2009	2250	2481	2705	
14			1406	1736	2045	2337	2617	2887	3147	
15			1617	1997	2353	2689	3012	3322	3621	3912
16			1843	2277	2681	3065	3432	3786	4127	4459
17				2573	3031	3465	3880	4279	4666	5041
18				2888	3402	3889	4355	4803	5236	5657
19				3221	3794	4337	4856	5356	5840	6309
20				3571	4207	4809	5385	5939	6475	6996
21					4641	5305	5941	6552	7143	7718
22					5096	5826	6523	7195	7844	8475
23					5573	6370	7133	7868	8578	9267
24					6070	6939	7770	8570	9344	10095

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 2.13309\ (D^2H_4)^{0.73374}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.58604\ (D^2)^{1.00313}\ (H_4)^{0.73374}$

$Y_R = e^{(-1.75060\ (d)^{3.82455}\ (D)^{-4.06792})}$

Table 78.--Predicted green weight of stem wood and bark to 9-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Pounds 3/							
11	555	685	807	923	1033	1140		
12	756	934	1100	1258	1408	1553		
13	970	1198	1411	1613	1806	1992	2172	
14	1195	1476	1738	1987	2225	2454	2676	
15	1431	1767	2081	2379	2664	2938	3203	3461
16	1677	2072	2440	2789	3124	3445	3756	4058
17		2391	2816	3219	3604	3976	4334	4683
18		2724	3209	3668	4108	4531	4939	5336
19		3073	3620	4138	4634	5111	5572	6020
20		3438	4050	4629	5184	5717	6234	6735
21			4498	5142	5758	6351	6924	7481
22			4966	5677	6357	7011	7644	8259
23			5454	6235	6981	7700	8395	9070
24			5961	6815	7631	8416	9176	9914

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.58604\ (D^2)^{1.00313}\ (H_4)^{0.73374}$

$Y_R = e^{(-1.75060\ (d)^{3.82455}\ (D)^{-4.06792})}$

Table 79.--Predicted green weight of total tree (wood and bark) for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1589	1709	1800	1874	1937				
12	1953	2100	2211	2303	2380				
13	2360	2537	2673	2783	2876	2958	3031		
14	2812	3024	3185	3316	3428	3525	3612		
15	3311	3560	3750	3904	4036	4150	4252	4345	
16	3857	4147	4368	4548	4701	4835	4954	5061	
17	4452	4787	5042	5250	5426	5581	5718	5842	5955
18	5096	5480	5772	6010	6212	6389	6546	6688	6818
19	5792	6228	6560	6830	7060	7261	7439	7601	7748
20	6539	7031	7406	7711	7971	8197	8399	8582	8748
21		7892	8312	8655	8946	9201	9427	9632	9818
22		8810	9279	9662	9987	10271	10524	10752	10961
23			10308	10733	11095	11410	11691	11945	12176
24			11400	11871	12270	12619	12930	13210	13466

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 3.25325\ (D^2)^{1.18300}\ (Mh)^{0.18359}$

Table 80.--Predicted green weight of stem wood and bark to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	1154	1246	1382	1528	1675				
12	1402	1504	1663	1835	2009				
13	1673	1785	1968	2168	2372	2575	2774		
14	1966	2089	2299	2530	2765	3000	3231		
15	2281	2416	2655	2918	3188	3457	3723	3984	
16	2619	2767	3035	3335	3641	3947	4249	4547	
17	2979	3140	3441	3778	4124	4469	4810	5146	5477
18	3362	3537	3873	4250	4637	5024	5406	5783	6154
19	3767	3957	4329	4749	5180	5611	6037	6458	6871
20	4194	4400	4811	5275	5753	6230	6703	7169	7628
21		4867	5319	5830	6356	6883	7404	7918	8424
22		5357	5851	6412	6989	7568	8140	8705	9260
23			6410	7022	7653	8285	8911	9529	10136
24			6993	7659	8347	9035	9718	10390	11053

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.66727\ (D^2)^{1.01255}\ (Mh)^{0.72001}$

$Y_R = e^{17.51233\ (Mh)^{-1.15061}\ [(1.0-d^2/0.6084D^2)^2]^{0.37111}}$

Table 81.--Predicted green weight of stem wood and bark to saw-log top for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Pounds 3/								
11	654	869	1065	1248	1421				
12	780	1037	1271	1489	1695				
13	917	1219	1494	1751	1994	2225	2448		
14	1066	1417	1736	2034	2316	2586	2844		
15	1225	1629	1997	2340	2664	2973	3271	3558	
16	1396	1856	2275	2666	3036	3389	3728	4055	
17	1579	2099	2573	3014	3432	3831	4215	4585	4944
18	1773	2356	2888	3384	3853	4301	4732	5147	5550
19	1978	2629	3223	3776	4299	4799	5279	5743	6193
20	2194	2917	3575	4189	4770	5324	5857	6372	6870
21		3220	3947	4624	5265	5877	6465	7033	7584
22		3538	4336	5081	5786	6458	7104	7728	8333
23		3871	4745	5560	6330	7066	7773	8456	9118
24		4220	5172	6060	6900	7702	8473	9217	9939

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.66727\ (D^2)^{1.01255}\ (Mh)^{0.72001}$

Table 82.--Predicted volume of total tree (wood only) for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.06	0.08	0.11							
2	0.21	0.32	0.42							
3	0.47	0.69	0.91	1.12	1.34					
4	0.81	1.20	1.58	1.95	2.33					
5		1.84	2.42	3.00	3.57	4.14	4.52			
6		2.61	3.43	4.25	5.07	5.88	6.68			
7		3.50	4.62	5.72	6.81	7.90	8.98	10.06		
8		4.53	5.97	7.39	8.81	10.21	11.61	13.00		
9			7.48	9.27	11.04	12.80	14.55	16.29	18.03	
10			9.16	11.35	13.52	15.67	17.82	19.95	22.07	
11			10.99	13.61	16.22	18.80	21.37	23.93	26.48	29.02
12				16.30	19.42	22.52	25.60	28.66	31.71	34.75
13				19.24	22.93	26.58	30.22	33.84	37.44	41.02
14				22.44	26.73	31.00	35.24	39.45	43.65	47.84
15				25.89	30.84	35.76	40.65	45.52	50.36	55.19
16				29.60	35.26	40.88	46.47	52.03	57.57	63.09
17					39.98	46.35	52.69	59.00	65.28	71.54
18					45.01	52.18	59.32	66.42	73.49	80.53
19					50.34	58.37	66.36	74.30	82.21	90.08
20						64.92	73.80	82.63	91.43	100.19
21						71.83	81.65	91.43	101.16	110.85
22						79.10	89.92	100.68	111.40	122.07
23						86.73	98.60	110.40	122.15	133.85
24						94.73	107.69	120.58	133.41	146.20

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00319\ (D^2Th)^{0.96001}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00221\ (D^2)^{1.03636}\ (Th)^{0.96001}$

Table 83.--Predicted volume of stem wood to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	0.94	1.24	1.54	1.85	2.14	2.44			
6	1.78	2.36	2.94	3.51	4.08	4.64			
7	2.72	3.60	4.47	5.34	6.21	7.07	7.94		
8	3.73	4.94	6.14	7.34	8.53	9.72	10.91		
9		6.41	7.97	9.52	11.06	12.60	14.14	15.67	
10		8.01	9.95	11.89	13.82	15.75	17.66	19.58	
11			12.10	14.46	16.81	19.15	21.48	23.81	26.13
12			14.42	17.23	20.03	22.81	25.59	28.36	31.13
13			16.91	20.21	23.49	26.76	30.02	33.27	36.51
14			19.58	23.40	27.19	30.98	34.75	38.52	42.27
15			22.43	26.80	31.15	35.48	39.81	44.12	48.42
16			25.46	30.41	35.35	40.27	45.18	50.07	54.95
17				34.24	39.80	45.34	50.87	56.37	61.87
18				38.29	44.50	50.70	56.87	63.03	69.18
19				42.54	49.45	56.34	63.20	70.04	76.87
20					54.65	62.26	69.84	77.40	84.95
21					60.09	68.46	76.80	85.12	93.41
22					65.79	74.95	84.07	93.18	102.26
23					71.73	81.71	91.67	101.59	111.50
24					77.92	88.76	99.57	110.36	121.11

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00252\ (D^2Th)^{0.97593}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00259\ (D^2)^{0.97014}\ (Th)^{0.97593}$

$Y_R = e^{(-2.00944\ (d)^{3.85290}\ (D)^{-4.13388})}$

Table 84.--Predicted volume of stem wood to 9-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 50	60	70	80	90	100	110
	Cubic feet 3/						
11	7.70	9.20	10.70	12.19	13.67	15.15	16.63
12	10.52	12.57	14.61	16.64	18.67	20.69	22.71
13	13.48	16.11	18.72	21.33	23.93	26.52	29.11
14	16.57	19.80	23.02	26.22	29.41	32.60	35.78
15	19.79	23.64	27.48	31.30	35.11	38.92	42.71
16	23.12	27.63	32.11	36.58	41.04	45.48	49.92
17		31.78	36.94	42.08	47.20	52.31	57.41
18		36.09	41.95	47.79	53.61	59.42	65.21
19		40.58	47.17	53.74	60.28	66.81	73.33
20			52.60	59.92	67.22	74.50	81.77
21			58.25	66.36	74.44	82.50	90.54
22			64.12	73.04	81.94	90.81	99.66
23			70.21	79.98	89.72	99.44	109.13
24			76.53	87.18	97.80	108.39	118.96

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00259\ (D^2)^{0.97014}\ (Th)^{0.97593}$

$Y_R = e^{(-2.00944\ (d)^{3.85298}\ (D)^{-4.13388})}$

Table 85.--Predicted volume of total tree (wood only) for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.85	3.04	4.06	4.99	5.85					
6	2.40	3.94	5.27	6.48	7.60					
7		4.92	6.57	8.08	9.48	10.80				
8		5.95	7.96	9.78	11.48	13.08				
9		7.05	9.42	11.58	13.58	15.48	17.28			
10		8.20	10.96	13.46	15.80	18.00	20.10			
11			12.55	15.42	18.09	20.62	23.02	25.33		
12			15.13	18.59	21.82	24.86	27.76	30.54		
13				22.09	25.91	29.53	32.97	36.28	39.47	
14				25.90	30.39	34.63	38.67	42.55	46.29	
15				30.05	35.25	40.17	44.85	49.36	53.70	57.91
16				34.52	40.50	46.15	51.53	56.70	61.69	66.53
17					46.14	52.57	58.71	64.60	70.28	75.79
18					52.17	59.45	66.39	73.05	79.48	85.71
19					58.61	66.78	74.57	82.06	89.28	96.27
20					65.44	74.57	83.27	91.63	99.69	107.50
21					72.68	82.82	92.48	101.76	110.72	119.39
22					80.33	91.53	102.21	112.47	122.37	131.96
23					88.39	100.71	112.47	123.75	134.64	145.19
24					96.86	110.37	123.25	135.61	147.55	159.11

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03547\ (D^2H_4)^{0.71606}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00633\ (D^2)^{1.07526}\ (H_4)^{0.71606}$

Table 86.--Predicted volume of stem wood to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.95	1.57	2.11	2.60	3.06					
6	1.65	2.73	3.67	4.52	5.31					
7		3.85	5.17	6.37	7.49	8.55				
8		4.95	6.65	8.19	9.63	10.99				
9		6.05	8.12	10.01	11.77	13.44	15.03			
10		7.17	9.63	11.86	13.95	15.93	17.81			
11			11.16	13.75	16.17	18.46	20.65	22.75		
12			13.39	16.51	19.41	22.16	24.78	27.30		
13				19.49	22.92	26.16	29.26	32.23	35.11	
14				22.70	26.70	30.48	34.08	37.55	40.91	
15				26.16	30.76	35.11	39.27	43.26	47.13	50.87
16				29.85	35.09	40.06	44.81	49.37	53.77	58.05
17					39.71	45.33	50.70	55.86	60.85	65.69
18					44.62	50.93	56.96	62.76	68.36	73.80
19					49.80	56.85	63.58	70.06	76.31	82.38
20					55.27	63.10	70.57	77.75	84.69	91.43
21					61.03	69.67	77.92	85.85	93.51	100.95
22					67.07	76.56	85.63	94.35	102.77	110.94
23					73.40	83.79	93.71	103.25	112.47	121.41
24					80.01	91.34	102.15	112.55	122.60	132.35

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02968\ (D^2H_4)^{0.72602}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00753\ (D^2)^{1.01189}\ (H_4)^{0.72602}$

$Y_R = e^{(-2.00944\ (d)^{3.85290}\ (D)^{-4.13388})}$

Table 87.--Predicted volume of stem wood to 9-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	7.10	8.75	10.29	11.75	13.14	14.48		
12	9.77	12.04	14.16	16.16	18.08	19.92		
13		15.54	18.27	20.85	23.32	25.70	27.99	
14		19.22	22.60	25.79	28.85	31.78	34.62	
15		23.07	27.13	30.97	34.64	38.16	41.57	44.88
16		27.11	31.88	36.39	40.70	44.85	48.85	52.73
17			36.85	42.07	47.05	51.84	56.47	60.96
18			42.06	48.01	53.70	59.16	64.45	69.57
19			47.51	54.23	60.65	66.83	72.79	78.58
20			53.20	60.73	67.92	74.84	81.52	88.00
21			59.15	67.53	75.52	83.21	90.64	97.84
22			65.37	74.62	83.45	91.95	100.16	108.12
23			71.84	82.01	91.72	101.06	110.08	118.83
24			78.59	89.71	100.33	110.55	120.42	129.99

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00753\ (D^2)^{1.01189})\ (H_4)^{0.72602}$

$Y_R = e^{(-2.00944\ (d)^{3.85290}\ (D)^{-4.13388})}$

Table 88.--Predicted volume of total tree (wood only) for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	17.46	19.66	21.41	22.88	24.16				
12	21.07	23.73	25.84	27.61	29.15				
13		28.21	30.72	32.83	34.66	36.29	37.77		
14		33.11	36.06	38.53	40.68	42.60	44.33		
15		38.44	41.86	44.72	47.22	49.44	51.46	53.30	
16		44.19	48.12	51.42	54.29	56.84	59.16	61.28	
17		50.38	54.86	58.62	61.89	64.80	67.44	69.86	
18		57.00	62.07	66.32	70.03	73.32	76.31	79.04	81.58
19			69.76	74.54	78.71	82.41	85.77	88.84	91.69
20			77.94	83.28	87.93	92.07	95.82	99.25	102.43
21			86.61	92.54	97.71	102.31	106.47	110.29	113.83
22			95.77	102.33	108.04	113.13	117.74	121.96	125.86
23				112.65	118.94	124.54	129.61	134.25	138.56
24				123.50	130.40	136.54	142.09	147.19	151.90

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.04190\ (D^2)^{1.08057}\ (Mh)^{0.30125}$

Table 89.--Predicted volume of stem wood to 4-inch d.o.b. top for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	14.20	15.61	17.65	19.85	22.08				
12	17.13	18.70	21.07	23.65	26.28				
13		22.04	24.78	27.77	30.82	33.89	36.92		
14		25.63	28.76	32.19	35.71	39.24	42.74		
15		29.48	33.02	36.93	40.94	44.97	48.97	52.93	
16		33.58	37.56	41.97	46.51	51.07	55.60	60.09	
17		37.92	42.37	47.32	52.42	57.54	62.64	67.68	
18		42.52	47.46	52.98	58.67	64.39	70.08	75.71	81.29
19			52.83	58.95	65.26	71.60	77.92	84.18	90.37
20			58.47	65.22	72.18	79.19	86.16	93.07	99.91
21			64.38	71.79	79.44	87.14	94.80	102.40	109.92
22			70.57	78.67	87.04	95.46	103.85	112.16	120.39
23				85.85	94.97	104.14	113.29	122.35	131.32
24				93.33	103.23	113.20	123.13	132.97	142.72

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00819\ (D^2)^{0.97410}\ (Mh)^{0.79168}$

$$Y_R = e^{23.93738\ (Mh)^{-1.27076}\ [(1.0-d^2/0.6084D^2)^2]^{0.37283}}$$

Table 90.--Predicted volume of stem wood to saw-log top for yellow-poplar in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.17	11.17	13.98	16.64	19.19				
12	9.68	13.24	16.56	19.71	22.74				
13		15.47	19.35	23.04	26.57	29.99	33.30		
14		17.88	22.36	26.62	30.70	34.65	38.48		
15		20.45	25.58	30.45	35.12	39.63	44.01	48.28	
16		23.19	29.00	34.53	39.82	44.94	49.91	54.75	
17		26.10	32.64	38.85	44.81	50.57	56.16	61.61	
18		29.17	36.48	43.43	50.09	56.53	62.78	68.87	74.82
19			40.54	48.25	55.66	62.81	69.75	76.52	83.13
20			44.80	53.33	61.51	69.41	77.08	84.56	91.87
21			49.26	58.64	67.64	76.33	84.77	92.99	101.03
22			53.94	64.21	74.06	83.57	92.81	101.82	110.61
23				70.01	80.76	91.13	101.21	111.03	120.62
24				76.07	87.74	99.01	109.96	120.62	131.05

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00819\ (D^2)^{0.97410}\ (Mh)^{0.79168}$

Table 91.--Predicted volume of total tree (wood only) for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.06	0.09	0.11	0.14						
2	0.22	0.32	0.42	0.52						
3	0.47	0.69	0.90	1.12	1.33					
4	0.81	1.19	1.56	1.93	2.29					
5		1.81	2.38	2.94	3.50	4.05	4.60			
6		2.56	3.37	4.16	4.95	5.73	6.51			
7		3.43	4.51	5.58	6.64	7.68	8.72	9.75		
8		4.43	5.82	7.19	8.55	9.90	11.24	12.57		
9		5.54	7.28	9.00	10.70	12.38	14.06	15.72	17.38	
10		6.76	8.89	10.99	13.07	15.13	17.18	19.21	21.23	
11			10.64	13.15	15.64	18.10	20.55	22.98	25.40	27.81
12			13.03	16.10	19.15	22.17	25.17	28.15	31.11	34.06
13			15.69	19.40	23.07	26.71	30.32	33.92	37.49	41.04
14			18.65	23.06	27.42	31.74	36.04	40.30	44.55	48.77
15			21.90	27.08	32.20	37.28	42.32	47.33	52.31	57.27
16			25.46	31.47	37.42	43.32	49.18	55.01	60.80	66.56
17				36.24	43.09	49.89	56.64	63.35	70.02	76.66
18				41.40	49.23	57.00	64.71	72.37	79.99	87.57
19				46.95	55.84	64.64	73.39	82.08	90.72	99.32
20				52.91	62.92	72.85	82.70	92.49	102.23	111.92
21				59.28	70.49	81.61	92.65	103.63	114.54	125.39
22				66.06	78.56	90.95	103.26	115.48	127.64	139.74
23				73.27	87.13	100.87	114.52	128.08	141.57	154.98
24				80.90	96.21	111.38	126.45	141.43	156.32	171.13

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00336\ (D^2Th)^{0.95017}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00120\ (D^2)^{1.16449}\ (Th)^{0.95017}$

Table 92.--Predicted volume of stem wood to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	0.93	1.23	1.52	1.81	2.09	2.38			
6	1.83	2.40	2.97	3.54	4.10	4.66			
7	2.78	3.66	4.52	5.38	6.23	7.08	7.92		
8	3.79	4.98	6.17	7.34	8.50	9.65	10.80		
9	4.87	6.41	7.93	9.44	10.94	12.42	13.90	15.37	
10	6.05	7.96	9.84	11.71	13.56	15.41	17.24	19.06	
11		9.59	11.87	14.12	16.36	18.58	20.79	22.98	25.17
12		11.54	14.28	16.99	19.68	22.36	25.01	27.66	30.29
13		13.66	16.90	20.12	23.30	26.46	29.61	32.74	35.86
14		15.96	19.75	23.50	27.22	30.91	34.59	38.24	41.88
15		18.44	22.81	27.14	31.44	35.71	39.95	44.17	48.38
16		21.09	26.09	31.05	35.96	40.85	45.70	50.53	55.34
17			29.60	35.22	40.80	46.34	51.85	57.33	62.78
18			33.33	39.66	45.94	52.18	58.38	64.55	70.70
19			37.29	44.37	51.40	58.38	65.32	72.22	79.09
20			41.48	49.35	57.17	64.93	72.65	80.33	87.97
21			45.89	54.61	63.26	71.85	80.39	88.88	97.34
22			50.54	60.14	69.66	79.12	88.52	97.88	107.19
23			55.41	65.94	76.38	86.75	97.07	107.32	117.54
24			60.52	72.02	83.42	94.75	106.01	117.22	128.37

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00299\ (D^2Th)^{0.95364}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00202\ (D^2)^{1.03482}\ (Th)^{0.95364}$

$$Y_R = e^{(-1.93256\ (d)^{4.48008}\ (D)^{-4.61717})}$$

Table 93.—Predicted volume of stem wood to 9-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	5.53	6.84	8.14	9.43	10.71	11.98	13.25	14.51
12	7.98	9.88	11.75	13.61	15.46	17.30	19.13	20.95
13	10.59	13.10	15.59	18.06	20.51	22.95	25.37	27.79
14	13.32	16.48	19.61	22.71	25.80	28.86	31.91	34.95
15	16.16	19.99	23.79	27.56	31.30	35.02	38.73	42.41
16	19.13	23.66	28.16	32.61	37.04	41.45	45.83	50.19
17		27.49	32.71	37.89	43.04	48.15	53.24	58.31
18		31.49	37.47	43.41	49.30	55.16	60.99	66.80
19		35.68	42.45	49.18	55.85	62.49	69.10	75.67
20		40.06	47.66	55.21	62.71	70.16	77.58	84.96
21		44.63	53.11	61.52	69.87	78.18	86.44	94.67
22		49.42	58.80	68.11	77.36	86.56	95.71	104.81
23		54.41	64.74	75.00	85.18	95.31	105.38	115.41
24		59.62	70.94	82.18	93.34	104.43	115.47	126.46

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00202\ (D^2)^{1.03482}\ (Th)^{0.95364}$

$Y_R = e^{(-1.93256\ (d)^{4.48008}\ (D)^{-4.61717})}$

Table 94.—Predicted volume of total tree (wood only) for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.73	2.86	3.84	4.74	5.57					
6	2.26	3.73	5.01	6.17	7.26					
7		4.67	6.26	7.72	9.08	10.36				
8		5.66	7.60	9.37	11.02	12.58				
9		6.72	9.02	11.12	13.07	14.92	16.69			
10		7.83	10.51	12.96	15.24	17.39	19.45			
11			12.08	14.89	17.50	19.98	22.35	24.62		
12			14.84	18.28	21.50	24.54	27.45	30.24		
13			17.93	22.09	25.97	29.65	33.16	36.54	39.80	
14			21.36	26.32	30.94	35.32	39.51	43.53	47.42	
15			25.14	30.98	36.42	41.58	46.50	51.24	55.81	60.25
16			29.28	36.08	42.42	48.43	54.16	59.68	65.01	70.17
17				41.63	48.96	55.89	62.51	68.87	75.02	80.98
18				47.66	56.04	63.97	71.54	78.83	85.86	92.69
19				54.15	63.67	72.68	81.29	89.57	97.56	105.32
20				61.13	71.88	82.05	91.77	101.11	110.14	118.89
21					80.66	92.08	102.98	113.46	123.59	133.42
22					90.03	102.77	114.94	126.65	137.95	148.92
23					100.00	114.15	127.67	140.67	153.23	165.41
24					110.58	126.23	141.18	155.55	169.44	182.91

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03142\ (D^2H_4)^{0.72605}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00354\ (D^2)^{1.18139}\ (H_4)^{0.72605}$

Table 95.—Predicted volume of stem wood to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.86	1.44	1.95	2.41	2.85					
6	1.57	2.62	3.53	4.37	5.16					
7		3.73	5.03	6.23	7.34	8.41				
8		4.80	6.48	8.02	9.46	10.83				
9		5.87	7.93	9.81	11.58	13.25	14.85			
10		6.97	9.41	11.64	13.73	15.72	17.62			
11			10.92	13.52	15.95	18.26	20.46	22.59		
12			13.15	16.27	19.19	21.97	24.62	27.18		
13			15.56	19.26	22.72	26.01	29.15	32.18	35.11	
14			18.18	22.50	26.54	30.38	34.05	37.59	41.02	
15			21.00	25.99	30.66	35.09	39.33	43.42	47.38	51.22
16			24.02	29.73	35.07	40.14	44.99	49.67	54.20	58.60
17				33.72	39.78	45.54	51.04	56.35	61.49	66.48
18				37.98	44.80	51.28	57.48	63.46	69.24	74.86
19				42.49	50.12	57.37	64.31	71.00	77.47	83.76
20				47.26	55.75	63.81	71.53	78.97	86.17	93.16
21					61.69	70.61	79.15	87.38	95.34	103.08
22					67.94	77.76	87.16	96.22	105.00	113.52
23					74.49	85.26	95.57	105.51	115.13	124.47
24					81.36	93.12	104.39	115.24	125.74	135.95

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02559\ (D^2H_4)^{0.74068}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00624\ (D^2)^{1.03499}\ (H_4)^{0.74068}$

$Y_R = e^{(-1.93256\ (d)^{4.48008}\ (D)^{-4.61717})}$

Table 96.—Predicted volume of stem wood to 9-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	6.30	7.79	9.19	10.52	11.79	13.02		
12	9.09	11.25	13.27	15.19	17.03	18.80		
13	12.06	14.93	17.61	20.15	22.59	24.94	27.21	
14	15.17	18.77	22.15	25.35	28.41	31.37	34.23	
15	18.41	22.78	26.87	30.76	34.48	38.07	41.54	44.91
16	21.79	26.96	31.80	36.40	40.81	45.05	49.15	53.14
17		31.32	36.95	42.29	47.41	52.34	57.11	61.74
18		35.88	42.33	48.45	54.31	59.96	65.42	70.73
19		40.65	47.96	54.89	61.53	67.93	74.12	80.14
20		45.64	53.84	61.63	69.08	76.26	83.21	89.97
21			60.00	68.67	76.98	84.98	92.73	100.25
22			66.43	76.03	85.23	94.09	102.66	111.00
23			73.14	83.72	93.84	103.60	113.04	122.22
24			80.15	91.73	102.83	113.52	123.87	133.92

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00624\ (D^2)^{1.03499}\ (H_4)^{0.74068}$

$Y_R = e^{(-1.93256\ (d)^{4.48008}\ (D)^{-4.61717})}$

Table 97.—Predicted volume of total tree (wood only) for sweetgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	17.75	19.91	21.61	23.04					
12	21.51	24.13	26.19	27.92					
13	25.67	28.79	31.26	33.32	35.11				
14	30.23	33.91	36.81	39.24	41.35				
15	35.21	39.50	42.87	45.70	48.16	50.34			
16	40.61	45.55	49.44	52.71	55.54	58.06			
17		52.07	56.53	60.26	63.50	66.38	68.98		
18		59.08	64.14	68.37	72.04	75.31	78.26		
19		66.58	72.27	77.04	81.18	84.86	88.19	91.24	
20		74.56	80.94	86.28	90.92	95.04	98.77	102.18	
21			90.15	96.10	101.27	105.86	110.01	113.81	117.32
22			99.91	106.50	112.23	117.32	121.91	126.13	130.02
23			110.22	117.49	123.81	129.42	134.49	139.14	143.43
24			121.08	129.07	136.01	142.18	147.75	152.85	157.57

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.03918\ (D^2)^{1.10443}\ (Mh)^{0.29037}$

Table 98.—Predicted volume of stem wood to 4-inch d.o.b. top for sweetgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	14.83	16.54	18.91	21.45					
12	17.74	19.62	22.34	25.28					
13	20.85	22.91	26.00	29.37	32.84				
14	24.15	26.40	29.89	33.72	37.67				
15	27.66	30.10	34.01	38.33	42.78	47.26			
16	31.35	34.00	38.36	43.19	48.17	53.20			
17		38.10	42.93	48.30	53.84	59.44	65.03		
18		42.40	47.72	53.65	59.79	65.98	72.18		
19		46.89	52.72	59.25	66.00	72.82	79.65	86.44	
20		51.58	57.94	65.08	72.48	79.96	87.44	94.89	
21			63.38	71.16	79.23	87.39	95.55	103.68	111.76
22			69.03	77.47	86.24	95.11	103.98	112.82	121.60
23			74.88	84.02	93.51	103.11	112.72	122.29	131.80
24			80.95	90.80	101.04	111.40	121.77	132.10	142.37

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01037\ (D^2)^{0.90199}\ (Mh)^{0.83978}$

$$Y_R = e^{24.11877}\ (Mh)^{-1.25089}\ [(1.0-d^2/0.6084D^2)^2]^{0.44005}$$

Table 99.—Predicted volume of stem wood to saw-log top for sweetgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.39	11.69	14.82	17.83					
12	9.81	13.68	17.34	20.86					
13	11.33	15.80	20.03	24.10	28.04				
14	12.96	18.06	22.90	27.55	32.05				
15	14.67	20.45	25.93	31.20	36.30	41.27			
16	16.49	22.98	29.14	35.05	40.78	46.36			
17		25.63	32.50	39.10	45.49	51.72	57.80		
18		28.42	36.03	43.35	50.44	57.34	64.08		
19		31.33	39.72	47.79	55.60	63.21	70.65	77.94	
20		34.37	43.58	52.42	60.99	69.34	77.50	85.49	
21			47.59	57.25	66.61	75.72	84.63	93.36	101.94
22			51.75	62.26	72.44	82.35	92.04	101.53	110.86
23			56.07	67.46	78.48	89.22	99.72	110.01	120.12
24			60.55	72.84	84.75	96.34	107.68	118.79	129.70

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01037\ (D^2)^{0.90199}\ (Mh)^{0.83978}$

Table 100.—Predicted volume of total tree (wood only) for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.07	0.11	0.14							
2	0.27	0.39	0.51							
3	0.56	0.82	1.07	1.31						
4	0.96	1.39	1.81	2.22						
5		2.09	2.73	3.35	3.96	4.56	5.16			
6		2.93	3.81	4.68	5.54	6.38	7.21			
7		3.89	5.06	6.22	7.35	8.47	9.58	10.67		
8		4.97	6.47	7.95	9.40	10.83	12.24	13.64		
9		6.17	8.04	9.87	11.67	13.45	15.20	16.94	18.67	
10		7.49	9.76	11.98	14.17	16.32	18.45	20.57	22.66	
11			11.60	14.24	16.84	19.41	21.94	24.45	26.94	29.41
12			14.12	17.34	20.50	23.63	26.71	29.77	32.79	35.80
13			16.92	20.78	24.57	28.31	32.01	35.67	39.30	42.90
14			20.01	24.57	29.05	33.47	37.84	42.17	46.46	50.72
15			23.39	28.71	33.95	39.12	44.23	49.29	54.30	59.27
16			27.06	33.22	39.28	45.26	51.17	57.03	62.83	68.58
17				38.10	45.05	51.91	58.69	65.40	72.05	78.65
18				43.35	51.26	59.07	66.78	74.42	81.99	89.50
19				48.98	57.92	66.74	75.46	84.09	92.65	101.13
20				55.01	65.04	74.95	84.74	94.43	104.03	113.56
21				61.42	72.63	83.68	94.61	105.44	116.16	126.80
22				68.23	80.68	92.96	105.10	117.12	129.04	140.86
23				75.44	89.20	102.79	116.21	129.50	142.68	155.74
24				83.05	98.21	113.16	127.94	142.58	157.08	171.47

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00476\ (D^2Th)^{0.91940}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00173\ (D^2)^{1.13000}\ (Th)^{0.91940}$

Table 101.—Predicted volume of stem wood to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	1.86	2.42	2.96	3.49	4.02	4.54			
6	2.60	3.38	4.14	4.88	5.62	6.34			
7	3.45	4.48	5.48	6.47	7.44	8.40	9.35		
8	4.40	5.71	6.99	8.25	9.49	10.72	11.93		
9	5.45	7.08	8.66	10.23	11.76	13.28	14.78	16.26	
10	6.60	8.57	10.49	12.38	14.25	16.08	17.90	19.69	
11		10.17	12.46	14.70	16.91	19.09	21.24	23.37	25.49
12		12.24	14.99	17.70	20.35	22.98	25.57	28.14	30.68
13		14.52	17.79	20.99	24.14	27.26	30.33	33.38	36.40
14		17.01	20.83	24.58	28.28	31.92	35.52	39.09	42.63
15		19.70	24.13	28.48	32.76	36.98	41.15	45.29	49.38
16		22.61	27.69	32.68	37.59	42.43	47.23	51.97	56.67
17			31.51	37.19	42.78	48.29	53.74	59.14	64.49
18			35.60	42.01	48.32	54.55	60.71	66.80	72.84
19			39.95	47.14	54.22	61.21	68.12	74.96	81.74
20			44.56	52.59	60.49	68.29	76.00	83.63	91.19
21			49.45	58.35	67.12	75.77	84.33	92.79	101.18
22			54.60	64.43	74.12	83.67	93.12	102.47	111.73
23			60.03	70.84	81.48	91.99	102.37	112.65	122.84
24			65.73	77.57	89.22	100.73	112.10	123.35	134.51

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00459\ (D^2Th)^{0.90818}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00215\ (D^2)^{1.06591}\ (Th)^{0.90818}$

$Y_R = e^{(-1.04441\ (d)^{1.01532}\ (D)^{-4.01211})}$

Table 102.—Predicted volume of stem wood to 9-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	10.17	12.45	14.69	16.90	19.08	21.23	23.37	25.48
12	12.24	14.99	17.69	20.35	22.97	25.57	28.13	30.68
13	14.52	17.78	20.98	24.14	27.25	30.33	33.37	36.39
14	17.01	20.83	24.58	28.27	31.92	35.52	39.09	42.62
15	19.70	24.13	28.47	32.75	36.98	41.15	45.28	49.38
16	22.61	27.69	32.68	37.59	42.43	47.22	51.96	56.66
17		31.51	37.18	42.77	48.29	53.74	59.13	64.48
18		35.59	42.00	48.32	54.55	60.70	66.80	72.84
19		39.94	47.14	54.22	61.21	68.12	74.96	81.74
20		44.56	52.58	60.49	68.28	75.99	83.62	91.19
21		49.44	58.35	67.12	75.77	84.32	92.79	101.18
22		54.60	64.43	74.11	83.67	93.12	102.47	111.73
23		60.03	70.84	81.48	91.99	102.37	112.65	122.84
24		65.73	77.57	89.22	100.72	112.10	123.35	134.50

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00215\ (D^2)^{1.06591}\ (Th)^{0.90818}$

$Y_R = e^{(-1.04441\ (d)^{1.01532}\ (D)^{-4.01211})}$

Table 103.—Predicted volume of total tree (wood only) for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.89	3.10	4.15	5.10	5.99					
6	2.45	4.03	5.39	6.63	7.78					
7		5.03	6.73	8.27	9.71	11.06				
8		6.09	8.15	10.02	11.75	13.40				
9		7.21	9.65	11.86	13.92	15.86	17.72			
10		8.39	11.22	13.80	16.19	18.45	20.61			
11			12.87	15.82	18.56	21.15	23.63	26.00		
12			15.54	19.10	22.41	25.54	28.53	31.40		
13			18.48	22.71	26.66	30.38	33.94	37.35	40.64	
14			21.70	26.67	31.30	35.68	39.85	43.85	47.72	
15			25.20	30.97	36.35	41.43	46.27	50.92	55.41	59.77
16			28.98	35.62	41.81	47.65	53.22	58.57	63.73	68.74
17				40.62	47.67	54.34	60.69	66.79	72.68	78.39
18				45.98	53.96	61.50	68.69	75.60	82.26	88.72
19				51.69	60.67	69.15	77.23	85.00	92.49	99.75
20				57.77	67.80	77.27	86.31	94.99	103.36	111.48
21					75.36	85.89	95.94	105.58	114.89	123.91
22					83.35	95.00	106.11	116.78	127.07	137.05
23					91.78	104.61	116.84	128.59	139.92	150.91
24					100.65	114.71	128.13	141.01	153.44	165.49

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03594\ (D^2H_4)^{0.71741}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00621\ (D^2)^{1.08348}\ (H_4)^{0.71741}$

Table 104.—Predicted volume of stem wood to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.09	1.78	2.38	2.92	3.43					
6	1.76	2.89	3.86	4.73	5.55					
7		3.96	5.28	6.49	7.60	8.66				
8		5.01	6.69	8.21	9.63	10.96				
9		6.08	8.11	9.95	11.67	13.29	14.83			
10		7.16	9.56	11.73	13.75	15.66	17.47			
11			11.04	13.55	15.88	18.08	20.18	22.19		
12			13.25	16.26	19.06	21.71	24.22	26.64		
13			15.65	19.21	22.52	25.65	28.62	31.48	34.23	
14			18.25	22.40	26.26	29.90	33.37	36.70	39.91	
15			21.04	25.83	30.28	34.47	38.47	42.31	46.02	49.60
16			24.03	29.50	34.58	39.37	43.94	48.32	52.55	56.65
17				33.41	39.16	44.59	49.77	54.73	59.52	64.16
18				37.56	44.03	50.14	55.95	61.54	66.92	72.13
19				41.96	49.19	56.01	62.51	68.74	74.76	80.58
20				46.61	54.63	62.21	69.43	76.35	83.03	89.50
21					60.37	68.74	76.71	84.36	91.75	98.89
22					66.39	75.59	84.37	92.78	100.90	108.76
23					72.70	82.78	92.39	101.60	110.49	119.10
24					79.31	90.30	100.78	110.83	120.53	129.92

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03279\ (D^2H_4)^{0.71211}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00750\ (D^2)^{1.01968}\ (H_4)^{0.71211}$

$Y_R = e^{(-1.04440\ (d)^{4.01532}\ (D)^{-4.01211})}$

Table 105.--Predicted volume of stem wood to 9-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	7.02	8.62	10.10	11.50	12.84	14.12	15.36	16.55
12	9.63	11.82	13.86	15.78	17.61	19.37	21.06	22.70
13	12.42	15.25	17.87	20.35	22.71	24.98	27.16	29.28
14	15.37	18.87	22.11	25.18	28.10	30.91	33.61	36.23
15	18.47	22.67	26.58	30.26	33.78	37.15	40.40	43.54
16	21.73	26.68	31.27	35.61	39.74	43.70	47.52	51.23
17		30.88	36.19	41.21	45.99	50.58	55.01	59.29
18		35.28	41.36	47.09	52.55	57.80	62.85	67.75
19		39.90	46.77	53.25	59.43	65.36	71.08	76.62
20		44.73	52.44	59.71	66.63	73.28	79.69	85.90
21			58.36	66.45	74.16	81.56	88.70	95.61
22			64.56	73.51	82.03	90.22	98.11	105.76
23			71.02	80.87	90.25	99.25	107.93	116.34
24			77.76	88.54	98.81	108.66	118.17	127.38

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00750\ (D^2)^{1.01968}\ (H_4)^{0.71211}$

$$Y_R = e^{(-1.04440\ (d)^{4.01211}\ (D)^{-4.01211})}$$

Table 106.--Predicted volume of total tree (wood only) for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	16.04	19.61	22.64	25.31					
12	18.97	23.19	26.77	29.94					
13	22.13	27.06	31.24	34.93	38.28	41.37			
14	25.53	31.21	36.03	40.30	44.16	47.72			
15		35.65	41.16	46.03	50.44	54.51	58.31		
16		40.38	46.61	52.13	57.13	61.74	66.03		
17		45.38	52.39	58.59	64.21	69.39	74.22	78.76	
18		50.67	58.50	65.42	71.69	77.47	82.87	87.94	
19			64.92	72.60	79.57	85.99	91.97	97.60	102.93
20			71.67	80.15	87.84	94.92	101.53	107.74	113.63
21			78.74	88.05	96.50	104.28	111.54	118.37	124.83
22			86.13	96.32	105.55	114.07	122.01	129.48	136.55
23				104.93	115.00	124.28	132.93	141.06	148.77
24				113.91	124.83	134.90	144.29	153.12	161.49

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.03759\ (D^2)^{0.96393}\ (Mh)^{0.50801}$

Table 107.--Predicted volume of stem wood to 4-inch d.o.b. top for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	11.94	15.54	18.94	22.21					
12	14.11	18.29	22.26	26.05					
13	16.40	21.22	25.77	30.14	34.37	38.47			
14	18.83	24.31	29.49	34.46	39.27	43.94			
15		27.56	33.41	39.02	44.44	49.71	54.85		
16		30.98	37.53	43.80	49.87	55.76	61.52		
17		34.56	41.83	48.80	55.54	62.10	68.50	74.76	
18		38.30	46.33	54.03	61.47	68.71	75.78	82.70	
19			51.01	59.47	67.65	75.60	83.36	90.96	98.42
20			55.87	65.12	74.06	82.76	91.25	99.56	107.71
21			60.92	70.98	80.72	90.19	99.42	108.47	117.35
22			66.14	77.06	87.61	97.87	107.89	117.70	127.32
23				83.33	94.74	105.82	116.65	127.24	137.64
24				89.81	102.09	114.03	125.68	137.09	148.29

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01235\ (D^2)^{0.86759}\ (Mh)^{0.84637}$

$$Y_R = e^{2.47014\ (Mh)^{-0.62586}\ [(1.0-d^2/0.6084D^2)^2]^{0.53201}}$$

Table 108.--Predicted volume of stem wood to saw-log top for blackgum in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.62	12.05	15.31	18.45					
12	10.03	14.02	17.81	21.45					
13	11.52	16.11	20.46	24.65	28.71	32.67			
14	13.10	18.32	23.27	28.03	32.65	37.16			
15		20.64	26.22	31.59	36.80	41.88	46.85		
16		23.09	29.33	35.34	41.16	46.84	52.40		
17		25.65	32.59	39.26	45.73	52.04	58.21	64.27	
18		28.33	35.98	43.35	50.50	57.47	64.28	70.97	
19			39.52	47.62	55.46	63.12	70.60	77.95	85.17
20			43.20	52.05	60.63	68.99	77.18	85.21	93.10
21			47.02	56.65	65.98	75.09	83.99	92.73	101.32
22			50.97	61.41	71.53	81.40	91.06	100.53	109.84
23				66.33	77.27	87.93	98.36	108.59	118.65
24				71.42	83.19	94.67	105.90	116.91	127.74

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01235\ (D^2)^{0.86759}\ (Mh)^{0.84637}$

Table 109.--Predicted volume of total tree (wood only) for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.07	0.10	0.13	0.16						
2	0.25	0.36	0.47	0.58						
3	0.53	0.76	1.00	1.23	1.45					
4	0.89	1.30	1.70	2.09	2.48					
5		1.97	2.57	3.16	3.74	4.32	4.89			
6		2.76	3.60	4.43	5.25	6.05	6.85			
7		3.67	4.80	5.90	6.98	8.05	9.11	10.16		
8		4.71	6.14	7.55	8.94	10.31	11.67	13.02		
9		5.85	7.64	9.39	11.12	12.83	14.52	16.19	17.85	
10		7.11	9.29	11.42	13.52	15.59	17.65	19.68	21.70	
11			11.05	13.59	16.09	18.56	21.00	23.42	25.82	28.20
12			13.40	16.47	19.50	22.50	25.46	28.39	31.30	34.19
13			15.99	19.66	23.28	26.85	30.39	33.89	37.37	40.82
14			18.84	23.17	27.43	31.64	35.80	39.93	44.02	48.09
15			21.95	26.99	31.95	36.86	41.71	46.52	51.29	56.02
16			25.32	31.13	36.86	42.51	48.11	53.66	59.16	64.62
17			28.95	35.60	42.15	48.62	55.02	61.36	67.65	73.89
18			32.86	40.40	47.83	55.17	62.44	69.63	76.77	83.86
19			37.03	45.53	53.91	62.18	70.37	78.48	86.53	94.51
20			41.48	51.00	60.39	69.66	78.83	87.91	96.93	105.87
21			46.21	56.82	67.27	77.60	87.81	97.93	107.97	117.94
22			51.22	62.98	74.57	86.01	97.33	108.55	119.68	130.73
23			56.51	69.49	82.27	94.90	107.39	119.77	132.05	144.24
24			62.09	76.35	90.40	104.27	118.00	131.60	145.09	158.48

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00428\ (D^2Th)^{0.92624}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00180\ (D^2)^{1.10631}\ (Th)^{0.92624}$

Table 110.--Predicted volume of stem wood and bark to 4-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	1.03	1.35	1.66	1.97	2.27	2.58			
6	1.92	2.51	3.10	3.67	4.24	4.80			
7	2.87	3.76	4.63	5.49	6.34	7.18	8.01		
8	3.89	5.08	6.26	7.42	8.57	9.71	10.84		
9	4.97	6.51	8.02	9.50	10.97	12.43	13.88	15.31	
10	6.15	8.04	9.90	11.74	13.56	15.36	17.15	18.92	
11		9.71	11.96	14.18	16.37	18.54	20.70	22.84	24.97
12		11.66	14.36	17.03	19.67	22.28	24.87	27.44	29.99
13		13.78	16.98	20.13	23.24	26.33	29.39	32.43	35.45
14		16.08	19.80	23.48	27.11	30.71	34.28	37.83	41.35
15		18.54	22.84	27.08	31.27	35.43	39.54	43.63	47.70
16		21.18	26.09	30.94	35.73	40.47	45.18	49.85	54.49
17		24.00	29.56	35.05	40.48	45.85	51.18	56.48	61.73
18			33.25	39.42	45.52	51.57	57.57	63.52	69.43
19			37.15	44.05	50.87	57.63	64.33	70.98	77.59
20			41.28	48.94	56.52	64.03	71.47	78.86	86.20
21			45.63	54.09	62.47	70.77	78.99	87.16	95.28
22			50.19	59.51	68.72	77.85	86.90	95.89	104.81
23			54.98	65.18	75.28	85.27	95.19	105.03	114.81
24			59.99	71.12	82.14	93.05	103.86	114.60	125.27

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00357\ (D^2Th)^{0.93387}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00233\ (D^2)^{1.02316}\ (Th)^{0.93387}$

$Y_R = e^{(-1.50803\ (d)^{4.24933}\ (D)^{-4.32578})}$

Table 111.--Predicted volume of stem wood to 9-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	5.78	7.12	8.44	9.75	11.05	12.33	13.61	14.87
12	8.17	10.06	11.93	13.78	15.61	17.43	19.23	21.02
13	10.72	13.20	15.65	18.08	20.48	22.86	25.22	27.57
14	13.39	16.50	19.56	22.59	25.59	28.56	31.52	34.45
15	16.19	19.95	23.65	27.31	30.94	34.54	38.11	41.65
16	19.12	23.55	27.92	32.25	36.53	40.78	44.99	49.18
17		27.32	32.39	37.41	42.38	47.30	52.20	57.05
18		31.26	37.07	42.81	48.49	54.13	59.73	65.29
19		35.39	41.96	48.45	54.89	61.27	67.61	73.90
20		39.70	47.07	54.36	61.58	68.74	75.84	82.90
21		44.21	52.41	60.53	68.57	76.54	84.45	92.31
22		48.91	57.99	66.97	75.86	84.68	93.44	102.14
23		53.82	63.81	73.69	83.48	93.18	102.82	112.39
24		58.93	69.87	80.69	91.41	102.04	112.59	123.07

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00233\ (D^2)^{1.02316}\ (Th)^{0.93387}$

$Y_R = e^{(-1.50803\ (d)^{4.24933}\ (D)^{-4.32578})}$

Table 112.--Predicted volume of total tree (wood only) for soft hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.87	3.06	4.10	5.04	5.91					
6	2.42	3.98	5.32	6.54	7.67					
7		4.96	6.64	8.16	9.57	10.91				
8		6.01	8.04	9.88	11.59	13.21				
9		7.12	9.51	11.69	13.72	15.63	17.46			
10		8.27	11.06	13.60	15.95	18.18	20.30			
11			12.69	15.59	18.29	20.85	23.28	25.62		
12			15.35	18.86	22.13	25.22	28.16	30.99		
13			18.28	22.47	26.36	30.04	33.55	36.92	40.17	
14			21.50	26.42	31.00	35.33	39.45	43.41	47.24	
15			25.00	30.72	36.05	41.08	45.88	50.48	54.93	59.24
16			28.79	35.38	41.52	47.31	52.83	58.14	63.26	68.22
17				40.40	47.40	54.02	60.33	66.38	72.23	77.89
18				45.78	53.71	61.21	68.36	75.22	81.85	88.26
19				51.52	60.46	68.89	76.94	84.67	92.12	99.34
20				57.64	67.64	77.07	86.07	94.72	103.06	111.14
21					75.25	85.75	95.77	105.38	114.66	123.66
22					83.31	94.94	106.03	116.67	126.95	136.90
23					91.82	104.63	116.85	128.59	139.91	150.88
24					100.78	114.84	128.25	141.13	153.56	165.60

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03569\ (D^2H_4)^{0.71651}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00585\ (D^2)^{1.09363}\ (H_4)^{0.71651}$

Table 113.—Predicted volume of stem wood to 4-inch d.o.b. top for soft hardwoods on the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.97	1.60	2.15	2.64	3.11					
6	1.68	2.77	3.71	4.56	5.36					
7		3.87	5.19	6.39	7.50	8.55				
8		4.95	6.63	8.16	9.59	10.93				
9		6.03	8.08	9.94	11.67	13.31	14.88			
10		7.12	9.54	11.74	13.79	15.73	17.58			
11			11.05	13.60	15.97	18.21	20.35	22.41		
12			13.26	16.32	19.17	21.86	24.43	26.90		
13			15.67	19.28	22.65	25.83	28.87	31.78	34.60	
14			18.27	22.48	26.40	30.11	33.65	37.05	40.34	
15			21.06	25.91	30.44	34.71	38.79	42.71	46.50	50.17
16			24.05	29.59	34.76	39.64	44.30	48.78	53.10	57.29
17				33.51	39.36	44.89	50.17	55.24	60.13	64.88
18				37.67	44.25	50.47	56.40	62.10	67.60	72.94
19				42.08	49.43	56.37	63.00	69.37	75.52	81.48
20				46.74	54.90	62.61	69.97	77.04	83.87	90.49
21					60.65	69.18	77.31	85.12	92.66	99.98
22					66.70	76.07	85.02	93.61	101.90	109.95
23					73.04	83.30	93.10	102.50	111.59	120.40
24					79.67	90.87	101.55	111.81	121.72	131.33

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03046\ (D^2H_4)^{0.72102}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00728\ (D^2)^{1.01957}\ (H_4)^{0.72102}$

$Y_R = e^{(-1.50803\ (d)^{4.24933}\ (D)^{-4.32578})}$

Table 114.--Predicted volume of stem wood to 9-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	6.58	8.10	9.51	10.85	12.12	13.35		
12	9.30	11.44	13.43	15.32	17.12	18.85		
13	12.18	14.99	17.61	20.08	22.45	24.71	26.91	
14	15.22	18.73	22.00	25.09	28.04	30.87	33.61	
15	18.39	22.63	26.58	30.32	33.88	37.30	40.61	43.82
16	21.71	26.71	31.37	35.78	39.98	44.03	47.93	51.71
17		30.97	36.38	41.49	46.36	51.05	55.58	59.96
18		35.43	41.61	47.45	53.03	58.39	63.57	68.59
19		40.08	47.08	53.69	60.01	66.07	71.93	77.60
20		44.95	52.80	60.21	67.29	74.09	80.66	87.03
21			58.77	67.02	74.90	82.47	89.78	96.87
22			65.00	74.13	82.85	91.22	99.31	107.14
23			71.50	81.55	91.13	100.34	109.24	117.86
24			76.27	89.27	99.76	109.85	119.58	129.02

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00728\ (D^2)^{1.01957}\ (H_4)^{0.72102}$

$Y_R = e^{(-1.50803\ (d)^{4.24933}\ (D)^{-4.32578})}$

Table 115.--Predicted volume of total tree (wood only) for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	18.84	20.55	21.85	22.93	23.85				
12	22.82	24.88	26.47	27.77	28.89				
13	27.21	29.67	31.56	33.12	34.45	35.62			
14	32.03	34.92	37.15	38.98	40.55	41.92			
15	37.28	40.65	43.24	45.37	47.19	48.80	50.23		
16	42.97	46.85	49.83	52.29	54.39	56.24	57.89		
17		53.53	56.94	59.75	62.15	64.26	66.15	67.86	
18		60.70	64.57	67.76	70.48	72.87	75.01	76.96	
19		68.37	72.73	76.31	79.38	82.08	84.49	86.68	
20		76.54	81.42	85.43	88.86	91.88	94.58	97.03	
21			90.64	95.11	98.93	102.29	105.30	108.02	110.52
22			100.41	105.36	109.59	113.31	116.64	119.66	122.43
23			110.72	116.18	120.85	124.96	128.63	131.96	135.01
24			121.59	127.59	132.71	137.22	141.25	144.91	148.26

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.05204\ (D^2)^{1.09994}\ (Mh)^{0.21861}$

Table 116.—Predicted volume of stem wood to 4-inch d.o.b. top for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	14.86	16.21	18.30	20.57	22.89				
12	17.87	19.34	21.74	24.39	27.10				
13	21.11	22.70	25.44	28.49	31.64	34.79			
14	24.58	26.30	29.41	32.89	36.49	40.10			
15	28.28	30.13	33.63	37.57	41.65	45.76	49.86	53.93	
16	32.20	34.19	38.10	42.53	47.13	51.76	56.38	60.97	
17	36.34	38.48	42.83	47.78	52.91	58.10	63.27	68.40	73.49
18	40.69	43.00	47.81	53.30	59.01	64.77	70.52	76.24	81.90
19		47.74	53.04	59.10	65.41	71.78	78.14	84.46	90.73
20		52.71	58.52	65.17	72.11	79.12	86.12	93.08	99.98
21			64.24	71.52	79.11	86.79	94.46	102.08	109.64
22			70.20	78.14	86.42	94.79	103.16	111.47	119.72
23			76.42	85.03	94.02	103.12	112.21	121.25	130.21
24			82.87	92.19	101.92	111.77	121.61	131.40	141.11

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.00944\ (D^2)^{0.94078}\ (Mh)^{0.80392}$

$Y_R = e^{26.15349\ (Mh)^{-1.27853}\ [(1.0-d^2/0.6084D^2)^2]^{0.40621}}$

Table 117.--Predicted volume of stem wood to saw-log top for soft hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.31	11.42	14.33	17.11	19.78				
12	9.79	13.45	16.88	20.15	23.29				
13	11.38	15.64	19.63	23.43	27.08	30.62			
14	13.08	17.98	22.56	26.93	31.13	35.20			
15	14.89	20.47	25.69	30.67	35.45	40.08	44.58		
16	16.82	23.11	29.01	34.62	40.02	45.25	50.34		
17		25.90	32.51	38.81	44.86	50.72	56.42	61.98	
18		28.85	36.21	43.21	49.95	56.48	62.83	69.02	
19		31.94	40.08	47.84	55.30	62.53	69.55	76.41	
20		35.17	44.14	52.69	60.91	68.86	76.60	84.15	
21			48.39	57.76	66.76	75.48	83.96	92.24	100.34
22			52.81	63.04	72.87	82.39	91.65	100.68	109.52
23			57.42	68.54	79.23	89.58	99.64	109.46	119.07
24			62.21	74.25	85.83	97.04	107.95	118.59	129.00

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00944\ (D^2)^{0.94078}\ (Mh)^{0.80392}$

Table 118.--Predicted volume of total tree (wood only) for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.06	0.09	0.12	0.15						
2	0.23	0.34	0.45	0.55						
3	0.50	0.74	0.97	1.21	1.44					
4	0.87	1.28	1.69	2.10	2.50					
5		1.97	2.60	3.22	3.83	4.45				
6		2.80	3.69	4.57	5.44	6.31				
7			4.96	6.14	7.31	8.48	9.64	10.79		
8			6.40	7.93	9.45	10.96	12.46	13.95		
9			8.03	9.95	11.85	13.74	15.62	17.48	19.35	
10			9.83	12.18	14.50	16.82	19.12	21.40	23.68	
11			11.83	14.65	17.45	20.23	23.00	25.75	28.49	31.22
12			14.51	17.98	21.41	24.83	28.22	31.60	34.96	38.31
13			17.52	21.70	25.85	29.97	34.07	38.15	42.20	46.25
14			20.85	25.83	30.77	35.68	40.55	45.41	50.24	55.05
15				30.38	36.19	41.96	47.70	53.40	59.09	64.75
16				35.36	42.12	48.84	55.51	62.16	68.77	75.36
17					48.57	56.32	64.02	71.68	79.31	86.91
18					55.56	64.42	73.23	81.99	90.72	99.41
19					63.09	73.15	83.16	93.11	103.02	112.88
20					71.18	82.53	93.82	105.04	116.22	127.36
21					79.83	92.56	105.22	117.81	130.35	142.84
22					89.06	103.27	117.39	131.43	145.42	159.35
23					98.88	114.64	130.32	145.92	161.44	176.91
24					109.28	126.71	144.04	161.28	178.44	195.53

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00343\ (D^2Th)^{0.95978}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00122\ (D^2)^{1.17575}\ (Th)^{0.95978}$

Table 119.--Predicted volume of stem wood to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	0.94	1.25	1.55	1.86	2.16				
6	1.75	2.31	2.87	3.43	3.99				
7		3.49	4.34	5.18	6.02	6.86	7.69		
8		4.78	5.94	7.10	8.25	9.40	10.54		
9		6.19	7.70	9.20	10.69	12.17	13.66	15.13	
10		7.73	9.61	11.48	13.35	15.20	17.05	18.90	
11		9.42	11.71	13.99	16.26	18.52	20.78	23.02	25.27
12		11.35	14.11	16.86	19.59	22.32	25.03	27.74	30.44
13		13.45	16.72	19.98	23.22	26.44	29.66	32.87	36.07
14		15.73	19.55	23.35	27.14	30.91	34.67	38.42	42.16
15			22.59	26.98	31.36	35.72	40.07	44.40	48.72
16			25.85	30.88	35.89	40.88	45.85	50.81	55.76
17				35.04	40.72	46.38	52.03	57.66	63.27
18				39.47	45.87	52.24	58.60	64.94	71.26
19				44.16	51.32	58.46	65.57	72.66	79.74
20				49.12	57.09	65.02	72.94	80.83	88.70
21				54.35	63.17	71.95	80.71	89.44	98.14
22				59.86	69.56	79.24	88.88	98.49	108.08
23				65.63	76.28	86.88	97.45	107.99	118.51
24				71.68	83.31	94.89	106.43	117.95	129.43

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00246\ (D^2Th)^{0.97487}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00186\ (D^2)^{1.03349}\ (Th)^{0.97487}$

$Y_R = e^{(-2.10001\ (d)^{3.56848}\ (D)^{-3.96144})}$

Table 120.--Predicted volume of stem wood to 9-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	6.46	8.03	9.59	11.15	12.69	14.24	15.78	17.32
12	8.69	10.80	12.90	14.99	17.08	19.15	21.22	23.29
13	11.07	13.76	16.44	19.10	21.76	24.41	27.05	29.68
14	13.60	16.90	20.19	23.47	26.73	29.98	33.22	36.46
15		20.23	24.16	28.08	31.98	35.87	39.75	43.62
16		23.73	28.35	32.94	37.52	42.09	46.64	51.18
17			32.76	38.07	43.36	48.64	53.90	59.15
18			37.40	43.47	49.51	55.54	61.54	67.54
19			42.29	49.14	55.98	62.79	69.58	76.35
20			47.41	55.10	62.76	70.40	78.02	85.61
21			52.79	61.35	69.88	78.39	86.86	95.32
22			58.42	67.90	77.34	86.75	96.13	105.49
23			64.31	74.74	85.13	95.49	105.82	116.12
24			70.46	81.89	93.27	104.62	115.94	127.23

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00186\ (D^2)^{1.03349}\ (Th)^{0.97487}$

$Y_R = e^{(-2.10001\ (d)^{3.56848}\ (D)^{-3.96144})}$

Table 121.--Predicted volume of total tree (wood only) for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.81	3.05	4.14	5.14	6.08					
6	2.39	4.02	5.45	6.76	8.00					
7		5.06	6.87	8.52	10.08	11.56				
8		6.19	8.39	10.42	12.32	14.13				
9		7.39	10.02	12.43	14.70	16.86	18.93			
10		8.65	11.74	14.57	17.23	19.76	22.18			
11			13.53	16.80	19.87	22.78	25.58	28.28		
12			16.64	20.66	24.43	28.01	31.45	34.77		
13			20.13	24.98	29.54	33.88	38.04	42.06	45.95	
14			24.00	29.79	35.23	40.40	45.36	50.15	54.79	
15			28.28	35.10	41.50	47.60	53.44	59.08	64.55	69.87
16			32.96	40.91	48.38	55.48	62.30	68.87	75.25	81.44
17				47.25	55.88	64.08	71.95	79.54	86.90	94.06
18				54.12	64.00	73.40	82.41	91.11	99.54	107.74
19				61.54	72.77	83.46	93.71	103.60	113.18	122.50
20				69.51	82.20	94.27	105.85	117.02	127.85	138.38
21					92.31	105.86	118.86	131.40	143.56	155.38
22					103.09	118.23	132.74	146.75	160.33	173.54
23					114.57	131.39	147.53	163.10	178.19	192.87
24					126.76	145.37	163.22	180.45	197.14	213.39

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02864\ (D^2H_4)^{0.75135}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00353\ (D^2)^{1.18775}\ (H_4)^{0.75135}$

Table 122.--Predicted volume of stem wood to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.87	1.48	2.01	2.51	2.97					
6	1.49	2.53	3.44	4.29	5.08					
7		3.57	4.87	6.06	7.19	8.26				
8		4.63	6.30	7.85	9.30	10.69				
9		5.70	7.77	9.67	11.46	13.17	14.82			
10		6.81	9.27	11.55	13.69	15.73	17.69			
11			10.84	13.50	16.01	18.40	20.69	22.91		
12			13.09	16.31	19.33	22.21	24.98	27.66		
13			15.55	19.36	22.95	26.38	29.67	32.85	35.93	
14			18.21	22.68	26.88	30.89	34.74	38.47	42.08	
15			21.08	26.25	31.12	35.76	40.22	44.54	48.72	52.80
16			24.17	30.10	35.68	41.00	46.11	51.05	55.85	60.52
17				34.20	40.55	46.59	52.41	58.02	63.47	68.78
18				38.58	45.74	52.56	59.11	65.45	71.60	77.59
19				43.23	51.25	58.89	66.24	73.33	80.23	86.94
20				48.15	57.08	65.60	73.78	81.68	89.36	96.83
21					63.24	72.68	81.74	90.50	99.00	107.29
22					69.73	80.13	90.13	99.79	109.16	118.29
23					76.55	87.97	98.94	109.54	119.83	129.86
24					83.70	96.18	108.18	119.77	131.02	141.98

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02139\ (D^2H_4)^{0.76243}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00548\ (D^2)^{1.04659}\ (H_4)^{0.76243}$

$Y_R = e^{(-2.10001\ (d)^{3.56848}\ (D)^{-3.96144})}$

Table 123.--Predicted volume of stem wood to 9-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	7.43	9.25	10.97	12.61	14.18	15.70		
12	10.02	12.48	14.79	17.00	19.12	21.17		
13	12.80	15.93	18.89	21.71	24.41	27.03	29.57	
14	15.75	19.61	23.25	26.71	30.05	33.27	36.39	
15	18.88	23.51	27.86	32.02	36.01	39.87	43.62	47.27
16	22.18	27.63	32.75	37.63	42.33	46.86	51.27	55.55
17		31.98	37.91	43.56	48.99	54.24	59.34	64.30
18		36.56	43.35	49.81	56.02	62.03	67.85	73.53
19		41.40	49.07	56.39	63.43	70.22	76.82	83.25
20		46.48	55.10	63.32	71.21	78.85	86.25	93.47
21			61.43	70.59	79.39	87.90	96.16	104.20
22			68.06	78.21	87.97	97.39	106.55	115.46
23			75.01	86.20	96.95	107.34	117.42	127.24
24			82.27	94.54	106.33	117.73	128.79	139.56

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00548\ (D^2)^{1.04659}\ (H_4)^{0.76243}$

$Y_R = e^{(-2.10001\ (d)^{3.56848}\ (D)^{-3.96144})}$

Table 124.--Predicted volume of total tree (wood only) for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	18.38	19.93	21.11	22.08					
12	23.13	25.08	26.57	27.79					
13	28.58	30.98	32.82	34.33	35.62	36.75			
14	34.76	37.68	39.92	41.75	43.32	44.69			
15	41.70	45.21	47.90	50.10	51.98	53.63	55.10		
16	49.45	53.61	56.80	59.41	61.64	63.59	65.34		
17	58.04	62.93	66.66	69.73	72.35	74.64	76.68	78.54	
18	67.50	73.18	77.53	81.09	84.14	86.80	89.18	91.34	
19	77.86	84.41	89.43	93.54	97.05	100.13	102.87	105.36	107.63
20	89.16	96.66	102.41	107.11	111.13	114.65	117.80	120.64	123.25
21		109.96	116.49	121.85	126.42	130.42	134.00	137.24	140.20
22		124.33	131.72	137.78	142.95	147.47	151.52	155.18	158.53
23			148.13	154.94	160.75	165.85	170.39	174.51	178.28
24			165.76	173.38	179.88	185.58	190.67	195.27	199.49

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.01834\ (D^2)^{1.32066}\ (Mh)^{0.20423}$

Table 125.--Predicted volume of stem wood to 4-inch d.o.b. top for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	13.68	15.23	17.24	19.36					
12	16.79	18.57	20.97	23.50					
13	20.21	22.25	25.07	28.07	31.10	34.11			
14	23.97	26.28	29.56	33.06	36.60	40.13			
15	28.05	30.66	34.43	38.48	42.59	46.67	50.71		
16	32.46	35.40	39.71	44.35	49.05	53.74	58.38		
17	37.21	40.50	45.38	50.65	56.01	61.35	66.63	71.84	
18	42.30	45.95	51.45	57.41	63.46	69.49	75.46	81.35	
19	47.73	51.78	57.93	64.61	71.40	78.18	84.88	91.50	98.02
20	53.51	57.97	64.82	72.27	79.85	87.42	94.90	102.29	109.58
21		64.53	72.13	80.39	88.81	97.21	105.52	113.73	121.83
22		71.47	79.85	88.97	98.27	107.56	116.75	125.83	134.77
23			87.99	98.02	108.25	118.47	128.59	138.57	148.42
24			96.55	107.54	118.75	129.95	141.04	151.98	162.78

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00525\ (D^2)^{1.08164}\ (Mh)^{0.76721}$

$$Y_R = e^{19.08153\ (Mh)^{-1.21809}\ [(1.0-d^2/0.6084D^2)^2]^{0.36469}}$$

Table 126.--Predicted volume of stem wood to saw-log top for white oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.18	11.08	13.76	16.29					
12	9.87	13.37	16.61	19.67					
13	11.74	15.90	19.75	23.39	26.86	30.19			
14	13.78	18.67	23.19	27.45	31.53	35.44			
15	16.00	21.67	26.92	31.87	36.60	41.15	45.55		
16	18.40	24.92	30.95	36.65	42.08	47.31	52.38		
17	20.97	28.41	35.29	41.78	47.98	53.95	59.72	65.32	
18	23.74	32.15	39.94	47.28	54.30	61.05	67.57	73.92	
19	26.68	36.14	44.89	53.15	61.03	68.62	75.96	83.09	90.04
20	29.81	40.38	50.16	59.39	68.20	76.67	84.87	92.84	100.60
21		44.87	55.74	66.00	75.79	85.21	94.32	103.17	111.80
22		49.63	61.64	72.98	83.81	94.23	104.31	114.10	123.64
23			67.87	80.35	92.27	103.74	114.84	125.61	136.12
24			74.41	88.10	101.17	113.75	125.91	137.73	149.25

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00525\ (D^2)^{1.08164}\ (Mh)^{0.76721}$

Table 127.--Predicted volume of total tree (wood only) for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.05	0.07	0.09							
2	0.19	0.28	0.38							
3	0.43	0.64	0.86	1.07						
4	0.76	1.14	1.53	1.91						
5		1.79	2.40	3.00	3.60	4.21				
6		2.59	3.46	4.33	5.20	6.08				
7		3.53	4.72	5.91	7.10	8.29	9.48			
8		4.62	6.17	7.73	9.29	10.85	12.41			
9		5.86	7.83	9.80	11.77	13.75	15.73	17.71		
10		7.24	9.68	12.11	14.56	17.00	19.45	21.90		
11			11.70	14.65	17.60	20.56	23.52	26.48	29.45	
12			14.20	17.78	21.36	24.95	28.54	32.13	35.73	
13			16.96	21.24	25.52	29.81	34.10	38.39	42.69	46.99
14			20.00	25.04	30.09	35.14	40.20	45.26	50.33	55.40
15			23.32	29.19	35.08	40.97	46.86	52.77	58.67	64.59
16			26.91	33.70	40.49	47.29	54.09	60.91	67.73	74.55
17				38.56	46.33	54.11	61.90	69.69	77.50	85.30
18				43.78	52.60	61.44	70.28	79.14	87.99	96.86
19				49.37	59.32	69.29	79.26	89.24	99.23	109.23
20				55.33	66.49	77.65	88.83	100.02	111.22	122.42
21				61.67	74.10	86.55	99.01	111.48	123.96	136.45
22				68.39	82.18	95.98	109.79	123.62	137.46	151.31
23				75.49	90.71	105.95	121.20	136.46	151.74	167.03
24				82.99	99.71	116.46	133.22	150.00	166.79	183.60

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00228\ (D^2Th)^{1.00713}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00138\ (D^2)^{1.11144}\ (Th)^{1.00713}$

Table 128.--Predicted volume of stem wood to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	0.83	1.10	1.37	1.64	1.91				
6	1.68	2.22	2.77	3.31	3.85				
7	2.60	3.45	4.30	5.14	5.98	6.82			
8	3.60	4.78	5.95	7.11	8.27	9.43			
9	4.69	6.22	7.74	9.25	10.76	12.27	13.77		
10	5.87	7.78	9.68	11.57	13.46	15.35	17.23		
11		9.47	11.79	14.10	16.40	18.69	20.98	23.27	
12		11.28	14.04	16.79	19.53	22.27	24.99	27.71	
13		13.23	16.46	19.69	22.90	26.11	29.30	32.49	35.68
14		15.31	19.06	22.79	26.51	30.22	33.92	37.61	41.29
15		17.53	21.82	26.10	30.36	34.60	38.84	43.07	47.29
16		19.90	24.76	29.61	34.45	39.26	44.07	48.87	53.66
17			27.88	33.34	38.78	44.20	49.61	55.01	60.40
18			31.16	37.27	43.35	49.41	55.46	61.50	67.53
19			34.62	41.40	48.16	54.90	61.62	68.33	75.02
20			38.26	45.75	53.22	60.66	68.09	75.50	82.90
21			42.07	50.30	58.51	66.70	74.87	83.01	91.15
22			46.05	55.06	64.05	73.01	81.95	90.87	99.77
23			50.20	60.03	69.83	79.59	89.34	99.07	108.77
24			54.53	65.20	75.84	86.45	97.04	107.60	118.14

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00235\ (D^2Th)^{0.98069}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00248\ (D^2)^{0.96951}\ (Th)^{0.98069}$

$$Y_R = e^{(-3.44646\ (d)^{3.88427}\ (D)^{-4.40823})}$$

Table 129.--Predicted volume of stem wood to 9-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	6.16	7.66	9.16	10.66	12.15	13.64	15.12	
12	8.41	10.47	12.52	14.56	16.60	18.64	20.66	
13	10.76	13.40	16.02	18.63	21.24	23.84	26.44	29.03
14	13.20	16.42	19.64	22.84	26.04	29.23	32.41	35.59
15	15.71	19.56	23.38	27.20	31.01	34.80	38.59	42.37
16	18.32	22.80	27.27	31.72	36.15	40.58	45.00	49.40
17		26.17	31.29	36.40	41.49	46.57	51.64	56.70
18		29.67	35.48	41.27	47.04	52.80	58.55	64.29
19		33.31	39.83	46.33	52.81	59.28	65.73	72.18
20		37.10	44.36	51.60	58.82	66.02	73.21	80.38
21		41.03	49.07	57.07	65.06	73.02	80.97	88.91
22		45.12	53.96	62.76	71.54	80.30	89.05	97.77
23		49.37	59.04	68.67	78.28	87.86	97.43	106.97
24		53.78	64.31	74.80	85.27	95.71	106.12	116.52

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00248\ (D^2)^{0.96951}\ (Th)^{0.98069}$

$Y_R = e^{(-3.44646\ (d)^{3.88427}\ (D)^{-4.40823})}$

Table 130.--Predicted volume of total tree (wood only) for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.92	3.21	4.32	5.35	6.31					
6	2.51	4.20	5.66	7.00	8.26					
7		5.27	7.11	8.80	10.37	11.87				
8		6.42	8.66	10.71	12.64	14.46				
9		7.64	10.31	12.75	15.04	17.21	19.28			
10		8.93	12.05	14.90	17.57	20.11	22.53			
11			13.88	17.17	20.24	23.16	25.96	28.65		
12			16.92	20.93	24.68	28.24	31.65	34.94		
13			20.31	25.12	29.63	33.90	37.99	41.93	45.74	
14			24.05	29.75	35.08	40.14	44.98	49.65	54.16	
15			28.15	34.81	41.05	46.98	52.64	58.10	63.39	68.52
16			32.61	40.33	47.56	54.42	60.99	67.31	73.43	79.38
17				46.31	54.61	62.49	70.03	77.29	84.32	91.14
18				52.75	62.21	71.18	79.77	88.05	96.05	103.83
19				59.67	70.37	80.52	90.24	99.59	108.65	117.45
20				67.08	79.10	90.51	101.43	111.95	122.13	132.02
21					88.41	101.16	113.36	125.12	136.50	147.55
22					98.30	112.48	126.05	139.12	151.77	164.06
23					108.78	124.47	139.49	153.96	167.96	181.56
24					119.86	137.15	153.70	169.64	185.07	200.05

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03246\ (D^2H_4)^{0.73898}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00475\ (D^2)^{1.13986}\ (H_4)^{0.73898}$

Table 131.--Predicted volume of stem wood to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.89	1.47	1.97	2.42	2.84					
6	1.64	2.70	3.61	4.44	5.21					
7		3.86	5.17	6.36	7.46	8.51				
8		4.98	6.67	8.20	9.63	10.98				
9		6.09	8.16	10.03	11.78	13.43	15.01			
10		7.22	9.66	11.88	13.95	15.90	17.77			
11			11.19	13.76	16.16	18.42	20.58	22.66		
12			13.39	16.47	19.34	22.05	24.63	27.12		
13			15.77	19.40	22.78	25.97	29.01	31.94	34.76	
14			18.33	22.55	26.47	30.18	33.72	37.12	40.40	
15			21.08	25.92	30.43	34.70	38.77	42.67	46.45	50.10
16			24.00	29.52	34.66	39.51	44.15	48.60	52.89	57.06
17				33.34	39.15	44.63	49.87	54.89	59.75	64.45
18				37.39	43.90	50.06	55.92	61.56	67.00	72.28
19				41.67	48.93	55.78	62.32	68.61	74.67	80.55
20				46.18	54.22	61.82	69.06	76.03	82.75	89.26
21					59.78	68.15	76.15	83.82	91.23	98.41
22					65.61	74.80	83.57	91.99	100.13	108.01
23					71.70	81.75	91.33	100.54	109.43	118.04
24					78.07	89.01	99.44	109.47	119.14	128.52

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03139\ (D^2H_4)^{0.71925}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00826\ (D^2)^{0.99759}\ (H_4)^{0.71925}$

$Y_R = e^{(-3.44646\ (d)^{3.88427}\ (D)^{-4.40823})}$

Table 132.--Predicted volume of stem wood to 9-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	7.27	8.95	10.50	11.97	13.38	14.73		
12	9.99	12.28	14.42	16.44	18.37	20.22		
13	12.83	15.78	18.53	21.13	23.61	25.98	28.28	
14	15.80	19.43	22.81	26.01	29.06	31.99	34.82	
15	18.88	23.23	27.27	31.09	34.74	38.24	41.62	44.89
16	22.10	27.18	31.91	36.38	40.65	44.75	48.70	52.53
17		31.30	36.75	41.90	46.81	51.53	56.09	60.50
18		35.60	41.80	47.66	53.24	58.61	63.79	68.81
19		40.09	47.07	53.67	59.96	66.00	71.84	77.49
20		44.78	52.57	59.94	66.96	73.71	80.23	86.55
21			58.31	66.48	74.27	81.76	88.99	95.99
22			64.29	73.30	81.89	90.15	98.12	105.84
23			70.52	80.40	89.82	98.88	107.62	116.09
24			76.99	87.78	98.08	107.96	117.51	126.76

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00826\ (D^2)^{0.99759}\ (H_4)^{0.71925}$

$Y_R = e^{(-3.44646\ (d)^{3.88427}\ (D)^{-4.40823})}$

Table 133.--Predicted volume of total tree (wood only) for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	21.69	22.14	22.48	22.74					
12	26.39	26.95	27.35	27.68					
13	31.61	32.28	32.77	33.15	33.47				
14	37.37	38.16	38.73	39.19	39.56				
15	43.66	44.59	45.26	45.79	46.23	46.60	46.93		
16	50.51	51.57	52.35	52.97	53.47	53.91	54.29		
17	57.91	59.14	60.03	60.73	61.31	61.81	62.25	62.63	
18	65.88	67.28	68.29	69.09	69.75	70.32	70.81	71.25	
19	74.43	76.00	77.15	78.05	78.80	79.44	80.00	80.50	80.95
20	83.56	85.33	86.62	87.63	88.47	89.19	89.82	90.38	90.88
21		95.26	96.70	97.83	98.77	99.57	100.27	100.89	101.45
22		105.80	107.40	108.66	109.70	110.59	111.37	112.06	112.68
23			118.73	120.12	121.27	122.26	123.12	123.88	124.57
24			130.70	132.23	133.50	134.58	135.53	136.37	137.13

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.08347\ (D^2)^{1.12819}\ (Mh)^{0.05294}$

Table 134.--Predicted volume of stem wood to 4-inch d.o.b. top for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	15.09	16.36	18.01	19.73					
12	18.18	19.61	21.54	23.57					
13	21.53	23.14	25.37	27.73	30.08				
14	25.15	26.94	29.50	32.21	34.92				
15	29.02	31.02	33.92	37.01	40.11	43.16	46.14		
16	33.16	35.37	38.65	42.14	45.65	49.11	52.49		
17	37.55	40.00	43.67	47.59	51.54	55.43	59.24	62.96	
18	42.21	44.90	48.98	53.37	57.78	62.13	66.38	70.54	
19	47.12	50.07	54.59	59.46	64.36	69.20	73.93	78.56	83.07
20	52.29	55.51	60.50	65.88	71.29	76.64	81.87	86.99	91.99
21		61.23	66.71	72.62	78.57	84.45	90.22	95.85	101.35
22		67.22	73.21	79.68	86.20	92.64	98.95	105.12	111.15
23			80.00	87.05	94.17	101.20	108.09	114.82	121.40
24			87.09	94.75	102.49	110.13	117.62	124.94	132.10

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01230\ (D^2)^{0.98853}\ (Mh)^{0.65538}$

$$Y_R = e^{12.04162}\ (Mh)^{-1.05809}\ [(1.0-d^2/0.6084D^2)^2]^{0.31122}$$

Table 135.--Predicted volume of stem wood to saw-log top for red oak species in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.95	11.60	13.96	16.13					
12	10.63	13.78	16.58	19.15					
13	12.45	16.14	19.42	22.44	25.25				
14	14.42	18.68	22.49	25.98	29.24				
15	16.53	21.42	25.77	29.77	33.51	37.03	40.39		
16	18.77	24.33	29.28	33.83	38.07	42.08	45.89		
17	21.17	27.43	33.01	38.13	42.92	47.43	51.73	55.85	
18	23.70	30.71	36.96	42.69	48.05	53.11	57.92	62.54	
19	26.37	34.17	41.13	47.51	53.47	59.10	64.46	69.59	74.53
20	29.19	37.82	45.52	52.58	59.18	65.41	71.34	77.02	82.49
21		41.65	50.13	57.91	65.17	72.03	78.56	84.82	90.84
22		45.66	54.96	63.49	71.45	78.97	86.13	92.99	99.59
23			60.01	69.32	78.01	86.22	94.04	101.53	108.74
24			65.27	75.40	84.86	93.79	102.30	110.45	118.29

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01230\ (D^2)^{0.98853}\ (Mh)^{0.65538}$

Table 136.--Predicted volume of total tree (wood only) for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.07	0.11	0.14	0.18						
2	0.27	0.40	0.52	0.64						
3	0.58	0.85	1.11	1.36	1.61					
4	0.99	1.45	1.89	2.33	2.76					
5		2.19	2.87	3.53	4.18	4.83	5.47			
6		3.08	4.03	4.96	5.88	6.78	7.68			
7		4.11	5.37	6.61	7.83	9.04	10.24	11.43		
8		5.27	6.89	8.48	10.05	11.60	13.14	14.66		
9		6.56	8.58	10.56	12.51	14.45	16.36	18.26	20.14	
10		7.98	10.44	12.85	15.23	17.58	19.91	22.22	24.51	
11			12.46	15.34	18.18	20.99	23.77	26.53	29.27	31.98
12			15.09	18.58	22.02	25.43	28.80	32.14	35.45	38.74
13			18.01	22.17	26.27	30.33	34.35	38.34	42.29	46.22
14			21.20	26.10	30.93	35.71	40.45	45.14	49.79	54.42
15			24.68	30.39	36.01	41.58	47.09	52.55	57.97	63.36
16			28.45	35.03	41.52	47.93	54.28	60.58	66.83	73.04
17			32.52	40.04	47.45	54.78	62.04	69.24	76.39	83.48
18			36.89	45.41	53.82	62.14	70.37	78.54	86.64	94.69
19			41.56	51.16	60.64	70.00	79.28	88.48	97.60	106.67
20				57.28	67.89	78.38	88.77	99.07	109.29	119.44
21				63.79	75.60	87.28	98.84	110.31	121.69	132.99
22				70.67	83.76	96.70	109.52	122.22	134.83	147.35
23				77.95	92.38	106.65	120.79	134.80	148.71	162.52
24				85.61	101.47	117.14	132.67	148.06	163.33	178.50

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00459\ (D^2Th)^{0.93189}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00203\ (D^2)^{1.10193}\ (Th)^{0.93189}$

Table 137.--Predicted volume of stem wood to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	1.23	1.60	1.97	2.33	2.69	3.05			
6	2.15	2.81	3.46	4.10	4.73	5.35			
7	3.13	4.08	5.03	5.95	6.87	7.78	8.68		
8	4.17	5.45	6.70	7.94	9.16	10.37	11.57		
9	5.29	6.91	8.51	10.08	11.63	13.16	14.69	16.20	
10	6.50	8.50	10.46	12.39	14.29	16.18	18.06	19.91	
11		10.21	12.56	14.88	17.17	19.44	21.69	23.92	26.14
12		12.15	14.95	17.71	20.44	23.14	25.81	28.47	31.11
13		14.24	17.52	20.76	23.96	27.12	30.26	33.37	36.46
14		16.49	20.29	24.03	27.74	31.40	35.03	38.64	42.22
15		18.89	23.24	27.53	31.78	35.98	40.14	44.27	48.37
16		21.45	26.39	31.26	36.08	40.85	45.57	50.26	54.92
17		24.16	29.73	35.22	40.64	46.01	51.34	56.62	61.86
18		27.03	33.26	39.40	45.47	51.48	57.43	63.34	69.21
19		30.05	36.98	43.81	50.56	57.24	63.86	70.43	76.95
20			40.89	48.44	55.90	63.29	70.61	77.88	85.09
21			44.99	53.30	61.51	69.64	77.70	85.69	93.63
22			49.29	58.39	67.38	76.29	85.11	93.87	102.56
23			53.77	63.70	73.51	83.23	92.85	102.41	111.89
24			58.44	69.24	79.90	90.46	100.92	111.31	121.62

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00388\ (D^2Th)^{0.92945}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00307\ (D^2)^{0.97834}\ (Th)^{0.92945}$

$Y_R = e^{(-0.86052\ (d)^{4.69951}\ (D)^{-4.52696})}$

Table 138.--Predicted volume of stem wood to 9-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	6.22	7.65	9.07	10.46	11.84	13.21	14.57	15.92
12	8.70	10.70	12.68	14.63	16.56	18.48	20.38	22.27
13	11.28	13.88	16.45	18.98	21.49	23.98	26.44	28.89
14	13.96	17.18	20.35	23.48	26.59	29.66	32.72	35.75
15	16.72	20.58	24.38	28.13	31.85	35.54	39.19	42.82
16	19.58	24.10	28.55	32.94	37.30	41.61	45.89	50.14
17	22.55	27.74	32.87	37.93	42.94	47.91	52.84	57.73
18	25.62	31.53	37.35	43.11	48.80	54.45	60.05	65.61
19	28.82	35.47	42.02	48.49	54.90	61.25	67.55	73.80
20		39.56	46.86	54.08	61.23	68.31	75.34	82.32
21		43.81	51.91	59.90	67.82	75.66	83.45	91.18
22		48.24	57.15	65.95	74.66	83.30	91.87	100.38
23		52.83	62.59	72.23	81.78	91.24	100.62	109.94
24		57.60	68.24	78.75	89.16	99.47	109.71	119.87

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00307\ (D^2)^{0.97834}\ (Th)^{0.92945}$

$Y_R = e^{(-0.86052\ (d)^{4.69951}\ (D)^{-4.52696})}$

Table 139.--Predicted volume of total tree (wood only) for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.83	3.09	4.20	5.22	6.17					
6	2.41	4.07	5.53	6.87	8.13					
7		5.14	6.98	8.67	10.26	11.77				
8		6.28	8.54	10.61	12.55	14.41				
9		7.51	10.20	12.67	15.00	17.21	19.33			
10		8.80	11.96	14.86	17.58	20.18	22.67			
11			13.82	17.17	20.32	23.32	26.19	28.97		
12			16.69	20.74	24.54	28.16	31.64	35.00		
13			19.86	24.67	29.20	33.51	37.65	41.64	45.52	
14			23.32	28.98	34.30	39.36	44.22	48.91	53.46	
15			27.09	33.67	39.85	45.73	51.37	56.82	62.10	67.25
16			31.17	38.73	45.84	52.61	59.10	65.37	71.45	77.37
17				44.18	52.29	60.01	67.42	74.57	81.50	88.25
18				50.02	59.20	67.94	76.33	84.42	92.28	99.92
19				56.26	66.58	76.41	85.84	94.94	103.77	112.37
20				62.89	74.43	85.41	95.95	106.13	116.00	125.61
21					82.74	94.96	106.68	117.99	128.97	139.65
22					91.54	105.05	118.02	130.54	142.68	154.49
23					100.82	115.70	129.98	143.77	157.14	170.15
24					110.58	126.90	142.57	157.69	172.36	186.63

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02833\ (D^2H_4)^{0.75503}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00580\ (D^2)^{1.08588}\ (H_4)^{0.75503}$

Table 140.--Predicted volume of stem wood to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.00	1.69	2.31	2.87	3.40					
6	1.65	2.80	3.81	4.74	5.62					
7		3.86	5.26	6.54	7.76	8.91				
8		4.92	6.70	8.34	9.89	11.36				
9		6.00	8.18	10.18	12.06	13.86	15.59			
10		7.12	9.70	12.08	14.31	16.45	18.49			
11			11.29	14.05	16.65	19.13	21.52	23.82		
12			13.38	16.65	19.74	22.68	25.50	28.23		
13			15.62	19.45	23.05	26.48	29.78	32.96	36.06	
14			18.02	22.44	26.59	30.55	34.36	38.03	41.60	
15			20.58	25.62	30.36	34.89	39.23	43.43	47.51	51.47
16			23.30	29.00	34.37	39.49	44.41	49.16	53.77	58.26
17				32.57	38.61	44.36	49.88	55.22	60.40	65.45
18				36.34	43.07	49.49	55.65	61.61	67.39	73.02
19				40.31	47.77	54.89	61.72	68.33	74.74	80.98
20				44.46	52.70	60.54	68.08	75.37	82.44	89.33
21					57.85	66.46	74.74	82.74	90.51	98.07
22					63.23	72.65	81.69	90.44	98.92	107.19
23					68.84	79.09	88.94	98.46	107.69	116.69
24					74.67	85.79	96.47	106.80	116.82	126.58

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02222\ (D^2H_4)^{0.76143}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00880\ (D^2)^{0.95462}\ (H_4)^{0.76143}$

$Y_R = e^{(-0.86052\ (d)^{4.69951}\ (D)^{-4.52696})}$

Table 141.--Predicted volume of stem wood to 9-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Total height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	6.88	8.56	10.15	11.66	13.11	14.51		
12	9.58	11.92	14.13	16.23	18.25	20.21		
13	12.38	15.41	18.26	20.98	23.60	26.12		
14	15.26	19.00	22.52	25.87	29.09	32.20	35.23	
15	18.22	22.68	26.88	30.89	34.74	38.45	42.06	
16	21.27	26.48	31.38	36.06	40.55	44.89	49.10	53.20
17	24.42	30.40	36.03	41.40	46.55	51.53	56.37	61.08
18		34.46	40.84	46.92	52.76	58.41	63.89	69.23
19		38.66	45.82	52.64	59.20	65.53	71.68	77.67
20		43.01	50.98	58.57	65.87	72.92	79.76	86.42
21			56.33	64.72	72.79	80.57	88.13	95.50
22			61.89	71.10	79.96	88.51	96.82	104.91
23			67.64	77.71	87.39	96.74	105.82	114.66
24			73.59	84.55	95.08	105.26	115.14	124.75

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00880\ (D^2)^{0.95462}\ (H_4)^{0.76143}$

$Y_R = e^{(-0.86052\ (d)^{4.69951}\ (D)^{-4.52696})}$

Table 142.--Predicted volume of total tree (wood only) for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	20.02	22.49	24.45	26.08					
12	24.12	27.10	29.45	31.42					
13	28.63	32.17	34.96	37.30	39.33				
14	33.56	37.70	40.97	43.71	46.09				
15	38.90	43.70	47.49	50.67	53.43	55.89	58.11		
16	44.66	50.17	54.53	58.18	61.35	64.17	66.72		
17		57.13	62.09	66.24	69.85	73.06	75.97	78.63	
18		64.57	70.17	74.86	78.94	82.57	85.86	88.86	
19		72.49	78.78	84.05	88.63	92.71	96.39	99.77	102.89
20			87.92	93.81	98.92	103.47	107.58	111.35	114.84
21			97.60	104.14	109.81	114.86	119.43	123.61	127.48
22			107.83	115.04	121.32	126.89	131.94	136.56	140.83
23				126.53	133.43	139.56	145.11	150.19	154.89
24				138.60	146.16	152.88	158.96	164.52	169.67

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.05142\ (D^2)^{1.07052}\ (Mh)^{0.29436}$

Table 143.--Predicted volume of stem wood to 4-inch d.o.b. top for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	13.82	16.51	19.10	21.56					
12	16.52	19.66	22.69	25.58					
13	19.43	23.05	26.54	29.89	33.11				
14	22.53	26.66	30.67	34.51	38.20				
15	25.84	30.51	35.06	39.42	43.61	47.65	51.56		
16	29.34	34.59	39.71	44.62	49.34	53.90	58.31		
17		38.90	44.61	50.11	55.40	60.50	65.44	70.23	
18		43.43	49.78	55.89	61.77	67.44	72.94	78.27	
19		48.18	55.20	61.96	68.46	74.73	80.81	86.71	92.45
20			60.88	68.30	75.46	82.36	89.05	95.54	101.86
21			66.80	74.94	82.77	90.33	97.65	104.76	111.69
22			72.98	81.85	90.39	98.63	106.62	114.38	121.93
23				89.04	98.32	107.27	115.95	124.38	132.59
24				96.51	106.55	116.25	125.64	134.77	143.65

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01312\ (D^2)^{0.93552}\ (Mh)^{0.72780}$

$Y_R = e^{4.49518\ (Mh)^{-0.76624}\ ((1.0-d^2/0.6084D^2)^2)^{0.42743}}$

Table 144.--Predicted volume of stem wood to saw-log top for water oak and laurel oak in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	9.08	12.11	14.88	17.47					
12	10.69	14.25	17.51	20.55					
13	12.42	16.56	20.34	23.87	27.22				
14	14.26	19.02	23.36	27.42	31.27				
15	16.23	21.64	26.58	31.20	35.58	39.76	43.78		
16	18.31	24.42	30.00	35.21	40.14	44.86	49.40		
17		27.35	33.60	39.44	44.97	50.25	55.34	60.25	
18		30.44	37.39	43.89	50.04	55.92	61.58	67.05	
19		33.68	41.37	48.56	55.37	61.88	68.14	74.19	80.07
20			45.54	53.45	60.95	68.11	75.00	81.67	88.13
21			49.89	58.56	66.77	74.62	82.17	89.47	96.56
22			54.43	63.89	72.85	81.41	89.65	97.61	105.34
23				69.43	79.16	88.47	97.42	106.07	114.47
24				75.18	85.72	95.80	105.50	114.87	123.96

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.01312\ (D^2)^{0.93552}\ (Mh)^{0.72780}$

Table 145.--Predicted volume of total tree (wood only) for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.06	0.09	0.11	0.14						
2	0.22	0.32	0.42	0.52						
3	0.47	0.69	0.91	1.12	1.33					
4	0.81	1.19	1.56	1.93	2.30					
5		1.82	2.39	2.95	3.50	4.05				
6		2.57	3.37	4.16	4.94	5.72				
7			4.51	5.57	6.61	7.65	8.68	9.70		
8			5.80	7.17	8.51	9.85	11.18	12.49		
9			7.25	8.95	10.64	12.31	13.96	15.61	17.24	
10			8.85	10.93	12.98	15.02	17.04	19.05	21.04	
11				13.08	15.55	17.98	20.40	22.81	25.20	27.57
12				16.37	19.44	22.49	25.52	28.53	31.51	34.49
13				20.11	23.89	27.64	31.35	35.05	38.72	42.37
14				24.33	28.90	33.44	37.94	42.40	46.85	51.26
15				29.05	34.51	39.93	45.30	50.64	55.94	61.21
16				34.29	40.74	47.14	53.48	59.78	66.04	72.27
17				40.08	47.62	55.09	62.50	69.86	77.18	84.46
18				46.43	55.16	63.81	72.40	80.93	89.40	97.83
19					63.39	73.33	83.20	93.00	102.74	112.43
20					72.32	83.67	94.93	106.11	117.22	128.28
21					81.99	94.86	107.62	120.30	132.89	145.43
22					92.41	106.91	121.30	135.58	149.78	163.91
23					103.60	119.86	135.98	152.00	167.92	183.76
24					115.59	133.72	151.71	169.58	187.34	205.01

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00348\ (D^2Th)^{0.94539}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00068\ (D^2)^{1.28580}\ (Th)^{0.94539}$

Table 146.--Predicted volume of stem wood to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	0.90	1.18	1.45	1.72	1.99				
6	1.68	2.21	2.72	3.23	3.74				
7		3.34	4.12	4.89	5.65	6.40	7.15		
8		4.56	5.62	6.67	7.71	8.74	9.77		
9		5.87	7.24	8.60	9.94	11.27	12.59	13.91	
10		7.29	9.00	10.68	12.35	14.00	15.64	17.27	
11			10.87	12.90	14.91	16.91	18.89	20.86	22.81
12			13.38	15.89	18.37	20.82	23.27	25.69	28.10
13			16.18	19.21	22.20	25.18	28.13	31.06	33.97
14			19.27	22.87	26.44	29.98	33.49	36.98	40.45
15			22.65	26.89	31.08	35.24	39.37	43.47	47.55
16			26.33	31.26	36.14	40.98	45.78	50.55	55.29
17			30.33	36.01	41.63	47.20	52.73	58.22	63.69
18			34.65	41.13	47.55	53.91	60.23	66.51	72.75
19				46.64	53.92	61.13	68.30	75.41	82.49
20				52.53	60.73	68.86	76.93	84.95	92.92
21				58.83	68.01	77.12	86.15	95.13	104.05
22				65.53	75.76	85.90	95.96	105.96	115.90
23				72.64	83.98	95.22	106.38	117.46	128.48
24				80.17	92.68	105.08	117.40	129.63	141.79

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00309\ (D^2Th)^{0.94078}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00110\ (D^2)^{1.15571}\ (Th)^{0.94078}$

$Y_R = e^{(-1.68588\ (d)^{3.77828}\ (D)^{-3.94399})}$

Table 147.--Predicted volume of stem wood to 9-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 50	60	70	80	90	100	110
	Cubic feet 3/						
11	6.55	7.78	8.99	10.19	11.39	12.57	13.75
12	9.35	11.09	12.83	14.54	16.25	17.94	19.62
13	12.45	14.78	17.09	19.38	21.65	23.90	26.14
14	15.84	18.81	21.74	24.65	27.54	30.41	33.27
15	19.51	23.17	26.78	30.37	33.92	37.46	40.97
16	23.46	27.85	32.20	36.51	40.79	45.04	49.26
17	27.70	32.88	38.01	43.10	48.15	53.16	58.15
18	32.22	38.25	44.22	50.14	56.02	61.85	67.65
19		43.98	50.85	57.65	64.41	71.12	77.79
20		50.08	57.89	65.64	73.34	80.98	88.57
21		56.55	65.38	74.13	82.82	91.44	100.02
22		63.41	73.31	83.12	92.86	102.54	112.15
23		70.66	81.69	92.63	103.48	114.26	124.98
24		78.32	90.54	102.66	114.69	126.64	138.52

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00110\ (D^2)^{1.15571}\ (Th)^{0.94078}$

$Y_R = e^{(-1.68588\ (d)^{3.77828}\ (D)^{-3.94399})}$

Table 148.--Predicted volume of total tree (wood only) for hickory in the Southeast, based on d.b.h. and height to 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.58	2.71	3.71	4.64	5.51					
6	2.10	3.59	4.92	6.15	7.32					
7		4.56	6.25	7.82	9.30	10.71				
8		5.62	7.69	9.62	11.44	13.18				
9		6.74	9.24	11.55	13.74	15.83	17.84			
10		7.94	10.88	13.61	16.18	18.65	21.02			
11			12.61	15.76	18.75	21.60	24.35	27.01		
12			15.46	19.34	23.00	26.50	29.87	33.13		
13			18.66	23.34	27.76	31.98	36.05	39.99	43.82	
14			22.21	27.78	33.03	38.06	42.90	47.59	52.15	
15			26.12	32.66	38.85	44.76	50.45	55.97	61.33	66.56
16			30.40	38.01	45.21	52.09	58.71	65.13	71.37	77.46
17				43.83	52.13	60.06	67.70	75.10	82.29	89.31
18				50.13	59.62	68.69	77.43	85.89	94.12	102.15
19				56.92	67.69	77.99	87.92	97.52	106.87	115.98
20				64.21	76.36	87.98	99.17	110.01	120.56	130.84
21					85.64	98.67	111.22	123.38	135.20	146.73
22					95.53	110.06	124.06	137.62	150.81	163.67
23					106.04	122.18	137.72	152.77	167.41	181.69
24					117.20	135.03	152.20	168.84	185.02	200.80

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02166\ (D^2H_4)^{0.77682}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00321\ (D^2)^{1.17468}\ (H_4)^{0.77682}$

Table 149.--Predicted volume of stem wood to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	0.83	1.40	1.90	2.35	2.78					
6	1.46	2.45	3.31	4.11	4.86					
7		3.49	4.72	5.86	6.92	7.94				
8		4.52	6.13	7.60	8.98	10.30				
9		5.57	7.55	9.37	11.07	12.69	14.24			
10		6.65	9.01	11.17	13.21	15.14	16.99			
11			10.50	13.03	15.40	17.65	19.81	21.89		
12			12.75	15.82	18.70	21.43	24.06	26.59		
13			15.22	18.88	22.31	25.58	28.71	31.72	34.65	
14			17.90	22.21	26.25	30.09	33.77	37.32	40.76	
15			20.81	25.82	30.51	34.97	39.25	43.38	47.38	51.27
16			23.95	29.70	35.11	40.24	45.17	49.92	54.52	59.00
17				33.88	40.04	45.90	51.51	56.93	62.18	67.29
18				38.34	45.31	51.94	58.30	64.43	70.37	76.15
19				43.09	50.93	58.38	65.52	72.41	79.09	85.58
20				48.13	56.89	65.21	73.19	80.89	88.35	95.61
21					63.20	72.45	81.32	89.87	98.16	106.21
22					69.87	80.09	89.89	99.35	108.51	117.42
23					76.89	88.14	98.93	109.33	119.41	129.22
24					84.27	96.60	108.42	119.83	130.87	141.62

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02324\ (D^2H_4)^{0.74891}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00488\ (D^2)^{1.07425}\ (H_4)^{0.74891}$

$Y_R = e^{(-1.68588\ (d)^{3.77828}\ (D)^{-3.94399})}$

Table 150.--Predicted volume of stem wood to 9-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	6.33	7.85	9.28	10.64	11.94	13.20		
12	8.91	11.05	13.06	14.97	16.80	18.57		
13	11.71	14.53	17.17	19.68	22.09	24.42	26.67	
14	14.72	18.26	21.59	24.74	27.77	30.69	33.52	
15	17.93	22.24	26.29	30.14	33.82	37.38	40.83	44.18
16	21.34	26.46	31.28	35.85	40.24	44.47	48.58	52.56
17		30.93	36.56	41.91	47.04	51.98	56.78	61.44
18		35.65	42.14	48.30	54.22	59.92	65.44	70.82
19		40.64	48.03	55.05	61.79	68.29	74.59	80.71
20		45.88	54.23	62.16	69.77	77.11	84.22	91.13
21			60.76	69.64	78.17	86.39	94.35	102.10
22			67.61	77.50	86.99	96.13	105.00	113.62
23			74.80	85.74	96.23	106.36	116.16	125.70
24			82.33	94.37	105.92	117.06	127.86	138.35

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00488\ (D^2)^{1.07425}\ (H_4)^{0.74891}$

$Y_R = e^{(-1.68588\ (d)^{3.77828}\ (D)^{-3.94399})}$

Table 151.--Predicted volume of total tree (wood only) for hickory in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	21.39	24.57	27.13	29.31					
12	25.31	29.08	32.10	34.68					
13	29.55	33.94	37.48	40.48	43.12	45.49			
14	34.11	39.17	43.25	46.72	49.77	52.50			
15	38.97	44.77	49.43	53.39	56.87	60.00	62.84		
16	44.15	50.71	55.99	60.48	64.43	67.97	71.20		
17	49.64	57.02	62.96	68.01	72.44	76.42	80.05	83.40	
18	55.45	63.69	70.32	75.95	80.91	85.35	89.41	93.15	
19		70.70	78.07	84.32	89.82	94.76	99.26	103.41	107.27
20		78.08	86.20	93.12	99.19	104.64	109.61	114.19	118.46
21			94.73	102.33	109.00	114.99	120.45	125.49	130.18
22			103.65	111.96	119.26	125.81	131.79	137.30	142.43
23			112.95	122.01	129.96	137.11	143.62	149.63	155.22
24			122.64	132.47	141.11	148.87	155.94	162.46	168.53

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.07716\ (D^2)^{0.96679}\ (Mh)^{0.35037}$

Table 152.--Predicted volume of stem wood to 4-inch d.o.b. top for hickory in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	15.79	17.15	19.10	21.20					
12	19.24	20.73	22.99	25.45					
13	23.00	24.62	27.22	30.08	33.00	35.93			
14	27.06	28.82	31.79	35.07	38.44	41.82			
15	31.43	33.34	36.69	40.44	44.29	48.15	52.00		
16	36.10	38.16	41.94	46.17	50.54	54.92	59.28		
17	41.07	43.30	47.52	52.27	57.19	62.13	67.04	71.91	
18	46.34	48.75	53.44	58.74	64.24	69.77	75.27	80.72	
19		54.51	59.69	65.59	71.69	77.84	83.96	90.03	96.03
20		60.58	66.29	72.80	79.55	86.35	93.13	99.84	106.48
21			73.22	80.37	87.81	95.30	102.76	110.16	117.47
22			80.49	88.32	96.47	104.68	112.86	120.98	129.00
23			88.10	96.64	105.53	114.49	123.43	132.29	141.06
24			96.04	105.33	114.99	124.75	134.47	144.12	153.65

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.00780\ (D^2)^{0.99893}\ (Mh)^{0.77110}$

$Y_R = e^{16.02393\ (Mh)^{-1.06521}\ [(1.0-d^2/0.6084D^2)^2]^{0.41655}}$

Table 153.--Predicted volume of stem wood to saw-log top for hickory in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.27	11.22	13.95	16.53					
12	9.84	13.35	16.60	19.67					
13	11.55	15.67	19.48	23.09	26.53	29.84			
14	13.39	18.17	22.59	26.77	30.76	34.61			
15	15.37	20.85	25.93	30.73	35.31	39.72	43.99		
16	17.49	23.72	29.50	34.95	40.17	45.19	50.05		
17	19.74	26.78	33.30	39.46	45.34	51.01	56.49	61.82	
18	22.13	30.01	37.32	44.23	50.83	57.18	63.32	69.30	
19		33.44	41.58	49.27	56.62	63.70	70.55	77.21	83.70
20		37.05	46.07	54.59	62.73	70.57	78.16	85.54	92.73
21			50.79	60.18	69.16	77.80	86.16	94.29	102.22
22			55.73	66.04	75.89	85.38	94.56	103.48	112.18
23			60.91	72.17	82.94	93.30	103.34	113.09	122.60
24			66.31	78.58	90.30	101.58	112.51	123.12	133.48

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00780\ (D^2)^{0.99893}\ (Mh)^{0.77110}$

Table 154.--Predicted volume of total tree (wood only) for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 20	30	40	50	60	70	80	90	100	110
	Cubic feet 3/									
1	0.08	0.11	0.15	0.18						
2	0.28	0.40	0.52	0.64						
3	0.58	0.84	1.09	1.34	1.59					
4	0.98	1.43	1.86	2.28	2.69					
5		2.15	2.80	3.43	4.05	4.67	5.28			
6		3.00	3.91	4.79	5.66	6.52	7.38			
7		3.98	5.18	6.36	7.52	8.66	9.79	10.90		
8		5.08	6.62	8.12	9.60	11.06	12.50	13.93		
9		6.31	8.22	10.08	11.92	13.73	15.52	17.29	19.04	
10		7.66	9.97	12.23	14.46	16.66	18.83	20.97	23.10	
11			11.84	14.53	17.17	19.78	22.36	24.91	27.43	29.94
12			14.53	17.82	21.07	24.27	27.43	30.56	33.66	36.74
13			17.53	21.52	25.43	29.29	33.11	36.89	40.63	44.34
14			20.87	25.61	30.27	34.87	39.41	43.91	48.37	52.78
15			24.55	30.12	35.60	41.01	46.35	51.64	56.88	62.08
16			28.57	35.06	41.44	47.73	53.95	60.11	66.20	72.25
17				40.43	47.79	55.04	62.22	69.31	76.35	83.32
18				46.24	54.66	62.96	71.16	79.28	87.33	95.31
19				52.51	62.07	71.49	80.81	90.03	99.17	108.22
20				59.24	70.02	80.66	91.17	101.57	111.88	122.10
21				66.44	78.53	90.46	102.25	113.91	125.47	136.94
22				74.12	87.61	100.92	114.07	127.08	139.98	152.76
23				82.28	97.26	112.04	126.63	141.08	155.40	169.59
24				90.94	107.50	123.83	139.96	155.93	171.75	187.44

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00495\ (D^2Th)^{0.91726}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00143\ (D^2)^{1.17556}\ (Th)^{0.91726}$

Table 155.--Predicted volume of stem wood to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 30	40	50	60	70	80	90	100	110
	Cubic feet 3/								
5	1.10	1.44	1.77	2.09	2.42	2.73			
6	1.97	2.57	3.16	3.73	4.31	4.87			
7	2.90	3.78	4.64	5.50	6.34	7.17	7.99		
8	3.89	5.08	6.24	7.38	8.51	9.63	10.74		
9	4.96	6.47	7.96	9.42	10.86	12.28	13.69	15.09	
10	6.12	7.98	9.81	11.60	13.38	15.14	16.88	18.60	
11		9.61	11.81	13.97	16.11	18.22	20.32	22.39	24.45
12		11.58	14.23	16.84	19.41	21.96	24.48	26.99	29.47
13		13.72	16.87	19.96	23.01	26.03	29.03	31.99	34.94
14		16.05	19.73	23.35	26.92	30.45	33.95	37.42	40.86
15		18.56	22.81	27.00	31.13	35.21	39.26	43.27	47.25
16		21.26	26.12	30.91	35.65	40.32	44.96	49.55	54.11
17			29.66	35.10	40.48	45.79	51.05	56.27	61.45
18			33.43	39.57	45.62	51.61	57.54	63.42	69.26
19			37.43	44.30	51.08	57.78	64.42	71.01	77.54
20			41.67	49.31	56.86	64.32	71.71	79.04	86.32
21			46.14	54.60	62.95	71.22	79.40	87.52	95.57
22			50.84	60.17	69.37	78.48	87.50	96.44	105.31
23			55.78	66.01	76.11	86.10	96.00	105.81	115.55
24			60.96	72.14	83.18	94.09	104.91	115.63	126.27

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.00386\ (D^2Th)^{0.92363}$

Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00220\ (D^2)^{1.04104}\ (Th)^{0.92363}$

$Y_R = e^{(-1.41374\ (d)^{3.95184}\ (D)^{-4.10394})}$

Table 156.--Predicted volume of stem wood to 9-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and total height 1/ 2/

D.b.h. class (inches)	Total-tree height (feet) 40	50	60	70	80	90	100	110
	Cubic feet 3/							
11	6.27	7.71	9.12	10.52	11.90	13.27	14.62	15.97
12	8.59	10.56	12.49	14.41	16.30	18.17	20.03	21.87
13	11.07	13.61	16.10	18.57	21.00	23.42	25.81	28.19
14	13.70	16.84	19.93	22.97	25.99	28.98	31.94	34.88
15	16.48	20.25	23.96	27.63	31.25	34.84	38.40	41.94
16	19.40	23.84	28.21	32.53	36.80	41.02	45.22	49.38
17		27.62	32.68	37.69	42.63	47.53	52.39	57.21
18		31.60	37.39	43.11	48.77	54.38	59.94	65.45
19		35.78	42.34	48.82	55.23	61.58	67.87	74.11
20		40.17	47.54	54.81	62.01	69.13	76.20	83.21
21		44.77	52.99	61.09	69.11	77.06	84.93	92.75
22		49.60	58.69	67.67	76.56	85.36	94.08	102.74
23		54.64	64.66	74.56	84.34	94.04	103.65	113.19
24		59.91	70.90	81.75	92.48	103.10	113.64	124.10

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11.0 inches d.b.h. $Y = 0.00220\ (D^2)^{1.04104}\ (Th)^{0.92363}$

$Y_R = e^{(-1.41374\ (d)^{3.95184}\ (D)^{-4.10394})}$

Table 157.--Predicted volume of total tree (wood only) for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.98	3.26	4.37	5.37	6.31					
6	2.58	4.24	5.68	6.99	8.21					
7		5.30	7.09	8.72	10.24	11.68				
8		6.42	8.60	10.57	12.42	14.16				
9		7.61	10.18	12.53	14.71	16.77	18.74			
10		8.85	11.85	14.58	17.12	19.52	21.81			
11			13.59	16.72	19.63	22.38	25.01	27.53		
12			16.66	20.49	24.06	27.43	30.65	33.75		
13			20.09	24.71	29.01	33.08	36.96	40.69	44.29	
14			23.89	29.38	34.50	39.34	43.96	48.39	52.67	
15			28.07	34.53	40.54	46.23	51.66	56.87	61.90	66.78
16			32.64	40.15	47.15	53.76	60.07	66.13	71.98	77.65
17				46.27	54.33	61.95	69.22	76.20	82.95	89.48
18				52.89	62.10	70.81	79.12	87.10	94.81	102.28
19				60.02	70.47	80.36	89.79	98.84	107.59	116.07
20				67.66	79.45	90.60	101.23	111.44	121.30	130.86
21					89.06	101.55	113.46	124.91	135.96	146.68
22					99.29	113.22	126.51	139.27	151.59	163.54
23					110.17	125.62	140.36	154.53	168.20	181.45
24					121.70	138.77	155.05	170.70	185.80	200.44

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.03723\ (D^2H_4)^{0.71982}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00431\ (D^2)^{1.16934}\ (H_4)^{0.71982}$

Table 158.--Predicted volume of stem wood to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 10	20	30	40	50	60	70	80	90	100
	Cubic feet 3/									
5	1.00	1.67	2.24	2.76	3.25					
6	1.67	2.77	3.72	4.58	5.39					
7		3.83	5.15	6.35	7.48	8.54				
8		4.89	6.57	8.10	9.54	10.89				
9		5.95	8.00	9.87	11.61	13.27	14.84			
10		7.04	9.47	11.68	13.74	15.69	17.56			
11			10.97	13.53	15.93	18.19	20.35	22.43		
12			13.20	16.28	19.16	21.89	24.49	26.99		
13			15.63	19.28	22.68	25.91	28.99	31.95	34.82	
14			18.26	22.52	26.49	30.26	33.86	37.32	40.67	
15			21.08	26.01	30.60	34.95	39.11	43.11	46.97	50.72
16			24.12	29.74	35.00	39.98	44.73	49.30	53.73	58.01
17				33.74	39.70	45.34	50.73	55.92	60.94	65.80
18				37.99	44.70	51.05	57.12	62.96	68.61	74.09
19				42.49	50.00	57.10	63.90	70.43	76.74	82.87
20				47.25	55.60	63.50	71.06	78.32	85.34	92.16
21					61.51	70.25	78.61	86.64	94.41	101.95
22					67.72	77.34	86.54	95.39	103.95	112.25
23					74.24	84.79	94.88	104.58	113.95	123.05
24					81.06	92.59	103.60	114.19	124.43	134.37

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees < 11.0 inches d.b.h. $Y = 0.02836\ (D^2H_4)^{0.72908}$

Trees ≥ 11.0 inches d.b.h. $Y = 0.00664\ (D^2)^{1.03183}\ (H_4)^{0.72908}$

$Y_R = e^{(-1.41374\ (d)^{3.95184}\ (D)^{-4.10394})}$

Table 159.--Predicted volume of stem wood to 9-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and height to the 4-inch d.o.b. top 1/ 2/

D.b.h. class (inches)	Tree height to 4-inch d.o.b. (feet) 30	40	50	60	70	80	90	100
	Cubic feet 3/							
11	7.17	8.84	10.40	11.88	13.29	14.65		
12	9.80	12.09	14.22	16.24	18.17	20.03		
13	12.61	15.55	18.30	20.90	23.39	25.78	28.09	
14	15.58	19.22	22.61	25.83	28.90	31.86	34.71	
15	18.71	23.08	27.16	31.02	34.71	38.26	41.69	45.02
16	22.01	27.14	31.94	36.48	40.82	44.99	49.02	52.94
17		31.41	36.96	42.22	47.24	52.07	56.74	61.27
18		35.90	42.24	48.25	53.99	59.51	64.84	70.02
19		40.61	47.78	54.58	61.07	67.31	73.35	79.21
20		45.55	53.60	61.22	68.50	75.50	82.27	88.84
21			59.69	68.17	76.28	84.08	91.62	98.94
22			66.06	75.45	84.43	93.06	101.40	109.50
23			72.72	83.06	92.94	102.44	111.62	120.54
24			79.67	91.00	101.82	112.23	122.29	132.06

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11.0 inches d.b.h. $Y = 0.00664\ (D^2)^{1.03183}\ (H_4)^{0.72908}$

$Y_R = e^{(-1.41374\ (d)^{3.95184}\ (D)^{-4.10394})}$

Table 160.--Predicted volume of total tree (wood only) for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	19.93	21.56	22.81	23.83	24.70				
12	24.47	26.47	28.01	29.26	30.33				
13	29.56	31.98	33.83	35.34	36.63	37.76	38.77		
14	35.21	38.09	40.29	42.10	43.63	44.98	46.18		
15	41.43	44.82	47.42	49.54	51.35	52.93	54.35	55.63	
16	48.25	52.20	55.22	57.69	59.80	61.64	63.29	64.78	
17	55.67	60.23	63.71	66.56	68.99	71.12	73.02	74.74	76.31
18	63.71	68.92	72.91	76.17	78.96	81.39	83.57	85.53	87.33
19	72.38	78.30	82.83	86.54	89.70	92.47	94.94	97.17	99.22
20	81.69	88.38	93.49	97.67	101.24	104.37	107.15	109.67	111.98
21		99.16	104.90	109.59	113.60	117.10	120.23	123.06	125.65
22		110.67	117.07	122.31	126.78	130.69	134.18	137.33	140.23
23			130.01	135.83	140.80	145.14	149.02	152.52	155.73
24			143.75	150.19	155.67	160.47	164.76	168.64	172.19

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees ≥ 11 inches d.b.h. $Y = 0.03965\ (D^2)^{1.17987}\ (Mh)^{0.19897}$

Table 161.--Predicted volume of stem wood to 4-inch d.o.b. top for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	14.68	16.02	17.88	19.85	21.84				
12	17.86	19.37	21.55	23.88	26.24				
13	21.34	23.03	25.56	28.28	31.05	33.79	36.49		
14	25.11	26.99	29.90	33.06	36.26	39.44	42.58		
15	29.18	31.27	34.58	38.20	41.87	45.53	49.14	52.70	
16	33.55	35.85	39.61	43.72	47.90	52.07	56.18	60.24	
17	38.21	40.75	44.97	49.61	54.34	59.05	63.70	68.29	72.79
18	43.17	45.96	50.68	55.88	61.18	66.47	71.70	76.85	81.92
19	48.44	51.49	56.73	62.52	68.44	74.35	80.18	85.93	91.59
20	54.00	57.33	63.13	69.55	76.11	82.67	89.15	95.53	101.81
21		63.49	69.87	76.95	84.20	91.44	98.59	105.64	112.58
22		69.96	76.96	84.74	92.70	100.66	108.53	116.28	123.91
23			84.40	92.91	101.62	110.33	118.95	127.44	135.79
24			92.19	101.46	110.96	120.46	129.86	139.12	148.23

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00788\ (D^2)^{1.02600}\ (Mh)^{0.73065}$

$$Y_R = e^{17.18958}\ (Mh)^{-1.15775}\ [(1.0-d^2/0.6084D^2)^2]^{0.36675}$$

Table 162.--Predicted volume of stem wood to saw-log top for hard hardwoods in the Southeast, based on d.b.h. and merchantable height 1/ 2/

D.b.h. class (inches)	Merchantable saw-log top (16-ft logs) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Cubic feet 3/								
11	8.48	11.33	13.93	16.36	18.66				
12	10.14	13.54	16.65	19.55	22.31				
13	11.95	15.96	19.62	23.04	26.29	29.39	32.38		
14	13.92	18.58	22.84	26.83	30.61	34.22	37.70		
15	16.03	21.41	26.32	30.91	35.26	39.42	43.43	47.30	
16	18.30	24.44	30.04	35.29	40.25	45.01	49.58	54.00	
17	20.73	27.67	34.02	39.96	45.59	50.97	56.15	61.15	66.02
18	23.31	31.12	38.26	44.93	51.26	57.31	63.13	68.76	74.23
19	26.04	34.77	42.75	50.20	57.27	64.03	70.54	76.83	82.94
20	28.93	38.63	47.49	55.78	63.63	71.14	78.37	85.36	92.15
21		42.70	52.49	61.65	70.33	78.63	86.62	94.35	101.85
22		46.97	57.75	67.83	77.38	86.51	95.30	103.80	112.05
23			63.26	74.30	84.77	94.77	104.40	113.71	122.75
24			69.04	81.08	92.50	103.42	113.93	124.09	133.95

1/ Blocked-in area indicates range of data.

2/ Includes 0.5-foot stump allowance.

3/ Trees $\geq$ 11 inches d.b.h. $Y = 0.00788\ (D^2)^{1.02600}\ (Mh)^{0.73065}$

Table 163.--Mean and range of tree measurements, by species and tree-size classes

Tree d.b.h. class size (inches)	Sample trees	D.b.h. Average	D.b.h. Range	Total height Average	Total height Range	Height to 4-inch d.o.b. top Average	Height to 4-inch d.o.b. top Range	Height to saw-log merchantable top Average	Height to saw-log merchantable top Range	D.o.b. at saw-log merchantable top Average	D.o.b. at saw-log merchantable top Range
	Number	Inches		Feet						Inches	
					YELLOW-POPLAR						
All trees	117	12.7	5.2-22.4	82	42-128	--	--	--	--	--	--
$\geq$ 5.0	117	12.7	5.2-22.4	82	42-128	60	17-104	--	--	--	--
$\geq$ 11.0	70	15.9	11.0-22.4	92	70-128	73	54-104	48	17-84	11	8-16
					SWEETGUM						
All trees	263	9.0	1.0-20.7	64	12-108	--	--	--	--	--	--
$\geq$ 5.0	220	10.3	5.0-20.7	70	38-108	46	11-91	--	--	--	--
$\geq$ 11.0	88	15.1	11.3-20.7	85	55-110	67	41-91	40	11-71	10	8-16
					BLACKGUM						
All trees	135	9.9	1.0-19.5	62	17-101	--	--	--	--	--	--
$\geq$ 5.0	75	11.5	5.0-19.5	66	34-101	48	12-85	--	--	--	--
$\geq$ 11.0	63	14.5	11.0-19.5	78	50-101	62	37-85	35	17-56	11	9-14
					SOFT HARDWOODS						
All trees	735	8.5	1.0-22.4	60	11-128	--	--	--	--	--	--
$\geq$ 5.0	534	10.9	5.0-22.4	72	27-128	49	8-104	--	--	--	--
$\geq$ 11.0	237	15.2	11.0-22.4	86	50-128	67	37-104	41	9-84	11	8-16
					WHITE OAK						
All trees	128	12.8	1.1-21.7	74	38-110	--	--	--	--	--	--
$\geq$ 5.0	128	12.8	5.1-21.7	74	38-110	52	28-98	--	--	--	--
$\geq$ 11.0	79	15.7	11.2-21.7	83	52-110	62	34-85	37	19-64	12	8-14
					RED OAK SPECIES (SOUTHERN RED, SCARLET)						
All trees	98	12.1	5.1-22.0	70	48-94	--	--	--	--	--	--
$\geq$ 5.0	98	12.1	5.1-22.0	70	48-94	47	13-70	--	--	--	--
$\geq$ 11.0	55	15.2	11.2-22.0	75	53-94	55	34-70	30	7-66	12	9-19
					WATER OAK AND LAUREL OAK						
All trees	148	7.8	1.0-20.0	54	15-100	--	--	--	--	--	--
$\geq$ 5.0	100	10.6	5.1-20.0	66	37-100	46	16-81	--	--	--	--
$\geq$ 11.0	40	14.9	11.2-20.0	76	48-100	58	32-81	31	7-47	11	9-17
					HICKORY SPECIES						
All trees	64	9.3	1.0-19.4	66	20-108	--	--	--	--	--	--
$\geq$ 5.0	46	12.2	5.1-19.4	81	48-108	59	15-91	--	--	--	--
$\geq$ 11.0	28	14.9	11.6-19.4	89	65-108	70	50-91	38	7-59	11	9-15
					HARD HARDWOODS						
All trees	515	9.9	1.0-22.0	63	10-115	--	--	--	--	--	--
$\geq$ 5.0	416	11.8	5.0-22.0	71	32-115	49	8-94	--	--	--	--
$\geq$ 11.0	225	15.3	11.2-22.0	81	49-115	61	32-94	34	13-66	12	8-17

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