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FOREST STATISTICS
FOR
CENTRAL GEORGIA, 1952

by

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FOREWORD

Through the McSweeney-McNary Act of 1928, Congress authorized the Secretary of Agriculture to conduct a comprehensive survey of the forest resources of the United States. The Forest Survey was organized by the Forest Service to carry out the provisions of the Act through the Regional Forest Experiment Stations. In the Southeastern states the Forest Survey is an activity of the Division of Forest Economics of the Southeastern Forest Experiment Station, Asheville, North Carolina.

The five-fold purpose of the Forest Survey is (1) to make a field inventory of the present supply of standing timber, (2) to ascertain the rate at which this supply is being increased through growth, (3) to determine the rate at which it is being reduced through industrial and domestic uses, fire, and other causes, (4) to determine the present consumption and the probable future trend in requirements for forest products, and (5) to interpret and correlate these finds to aid in the formulation of private and public policies regarding forest land management.

The forest resources of the State of Georgia were first inventoried by the Forest Survey during the period 1934-36, and these findings have been published. Since that time, the effects of timber cutting, forest growth, changes in land use, better management practices, and other factors have caused rapid changes in the growing stock which can only be measured accurately by on-the-ground surveys. A resurvey of the forest resources in Georgia was started in July 1950. This progress report presents area and timber volume statistics compiled from the resurvey for Central Georgia, designated as Survey Unit No. 3, and also includes growth and drain data.

ACKNOWLEDGMENTS

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The Division of Forest Economics is under the direction of James W. Cruikshank. Field inventory work was supervised by L. C. Nix, and photo interpretation was done by R. C. Aldrich. Office compilation of the data was under the direction of Agnes Nichols, assisted by Louise Shuford, Camilla Young, Sammy Wainwright, and Eunice Gamble.

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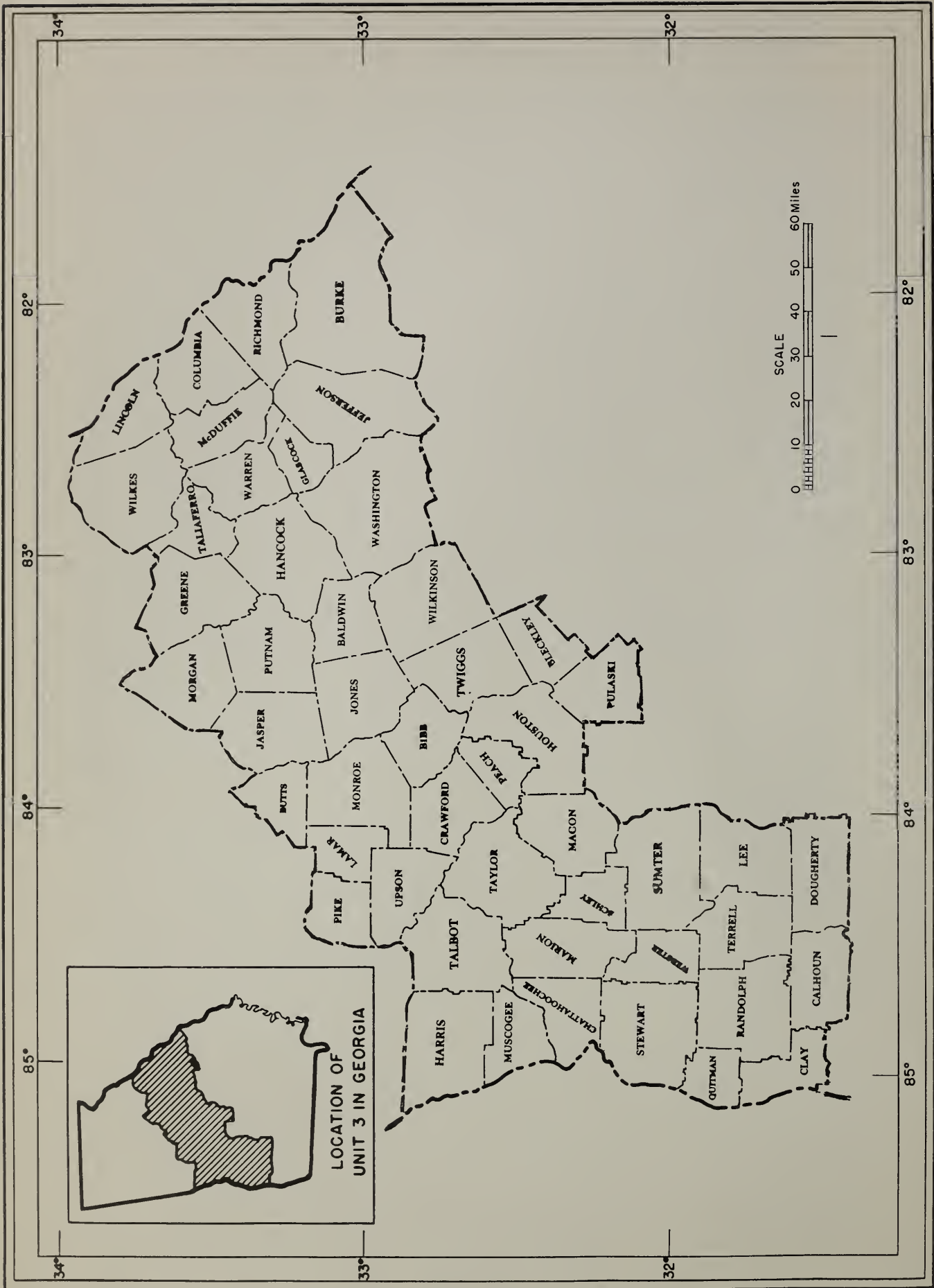


Figure 1.--Counties in Central Georgia included in Survey Unit No. 3

FOREST STATISTICS FOR CENTRAL GEORGIA, 1952

This progress report includes statistical data on forest area, timber volume, growth, and drain for 49 counties in Central Georgia designated as Survey Unit No. 3 (fig. 1). It is one of a series of reports being published as the survey work is completed in each section of the State. The field data were obtained from ground sample plots during the period April 1952 to December 1952. Procedures used in obtaining the estimates of land area and timber volumes are described briefly on page 44.

Central Georgia was covered by the original Forest Survey in 1936. The availability of these earlier statistics makes it possible to compare data for the two surveys and to evaluate changes and trends which have taken place during the past 16 years.

1952 HIGHLIGHTS AND SIGNIFICANT CHANGES

Forest land area increased more than one million acres.--Results of the 1952 survey in Central Georgia show the area of commercial forest land to be nearly 6.7 million acres as compared to 5.6 million in 1936. This amounts to a 20-percent increase in the acreage of forest land during the period between surveys. A corresponding reduction occurred in the acreage of crop and pasture land, indicating that the major shift in land use was from agriculture to forest.

The 49 counties in Central Georgia contain a gross land area of 10.5 million acres. Forests now occupy 6.7 million acres, or 64 percent of the total (fig. 2). Land in agricultural use accounts for 2.8 million acres, or about one-fourth of the gross area. Fields and pastures formerly used for agriculture but now classified as idle make up 700,000 acres, and cities, towns, rights-of-way, and other areas occupy the remaining 3 percent.

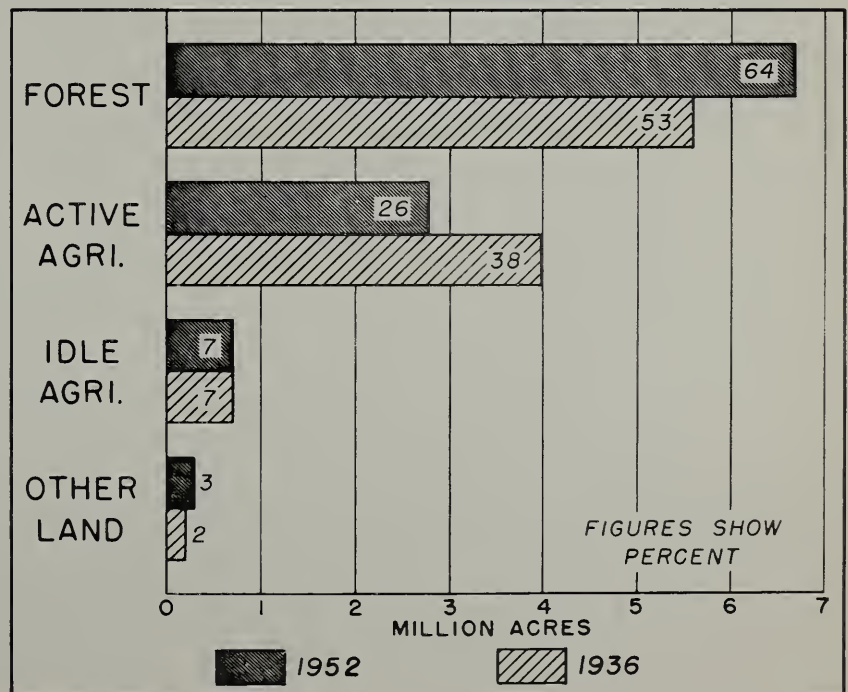


Figure 2.--Land use in Central Georgia, 1952 and 1936

The forest land is predominantly in private farm ownership. Publicly-owned forests account for only 5 percent of the total, with the bulk of this acreage in military reservations and the Clark Hill Dam project. About three-fourths of the forest land is on farms, and 19 percent is owned or operated by other private individuals and corporations.

Hardwood forest types gain in area.--Since 1936, hardwood forest types in Central Georgia increased from 1.3 million to 2.3 million acres, a gain of 77 percent in area. During the same period the more important pine types show a relatively small increase of 64 thousand acres, indicating they have held their own but have not added any substantial acreage. Increases in the area of hardwood types can usually be traced to cutting practices which remove the preferred pine species from the stands, leaving the less desirable hardwoods to occupy the site and serve as a source of seed. Similar trends have been found in recent surveys of other southeastern areas, and they may be expected to continue until control or corrective measures can be applied on a large scale.

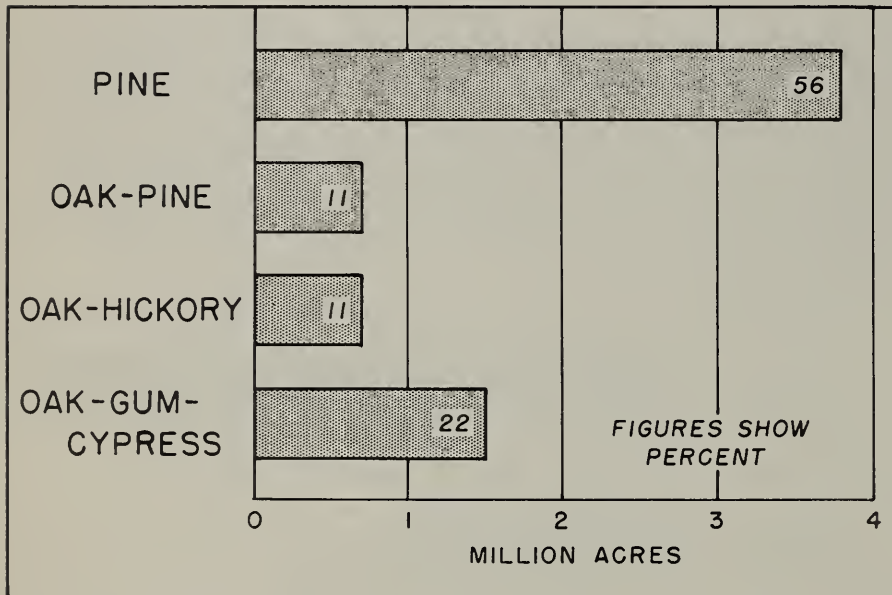


Figure 3.--Commercial forest land by forest type, 1952

Forest type classifications are currently based on cubic volume for all stands except seedlings and saplings, where numbers of stems are used. These classifications show that 67 percent of the forest land in Central Georgia is in pine or pine-hardwood types, and 33 percent is occupied by pure hardwood stands (fig. 3). Cypress stands are found on less than one percent of the area.

Greater number of small trees but fewer large ones.--One of the most revealing comparisons which can be made between two surveys is based on the number of trees found in each diameter class. Such a comparison by tree size and species group appears in table A. The number of saplings and smaller trees through the 10-inch diameter class increased heavily in all groups. These changes reflect over-all improvements in the stocking of young trees which can be attributed largely to better fire protection and natural restocking of abandoned agricultural land.

Table A also shows the effect of heavy demand for trees of larger size and better quality. Sharp decreases are evident in the number of trees in the 12-inch and larger diameter classes. The net effect of these changes has been a reduction in the number of pine and soft-textured hardwood trees of sawtimber size. It will require years of growth before smaller trees can replace the loss of volume in the larger, more valuable trees.

Table A.--Percent change in numbers of sound trees
by species group and diameter class, 1936 to 1952

D.b.h. class (inches)	Yellow pine	Other soft-woods	Soft-textured hardwoods	Hard-textured hardwoods	All species
2	+27	+184	+47	+45	+39
4	+29	+210	+42	+91	+45
6	+27	+ 53	+20	+33	+26
8	+32	+ 29	+13	+32	+28
10	+11	+153	+27	+34	+19
12	-13	+116	+ 7	+28	- 1
14	-32	+211	- 5	+24	-15
16	-58	+ 21	-32	- 4	-40
18	-66	- 58	-40	- 1	-45
20+	-80	- 74	-58	-27	-60
All diameters	+23	+142	+38	+49	+35
All trees 6" and larger	+14	+ 67	+11	+27	+15
All saw-timber trees	-14	+105	-13	+10	-10

Changes shown in the number of pine trees are more significant than for other species groups because pines make up 42 percent of the total. The other softwood group accounts for less than one percent of all trees, making the changes shown for this group relatively unimportant. Soft-textured and hard-textured hardwoods account for 27 and 30 percent of the total number of trees respectively.

The reduction in numbers of large trees has had a widespread effect on stand structure and timber volumes. Seventy percent of the forest area is now in either seedling and sapling or pole-size stands and only 25 percent of the area supports stands of sawtimber.

Sawtimber volume decreases sharply.--The volume of sawtimber in Central Georgia decreased from 13.3 billion board feet in 1936 to 9.2 billion in 1952, a loss of 31 percent. Table B shows the effect of heavy utilization on both pine and hardwood species. The actual increase in cypress sawtimber volume is very minor.

Table B.--Sawtimber volume compared, 1936 and 1952

Species group	1936 ^{1/}	1952	Change
	<u>Million</u> <u>bd. ft.</u>	<u>Million</u> <u>bd. ft.</u>	<u>Percent</u>
Pines	7,756	4,845	-38
Hardwoods	5,443	4,231	-22
Cypress	100	140	+40
All species	13,299	9,216	-31

^{1/} Original survey volumes have been recomputed to allow for differences in standards between the two surveys and to provide a uniform basis for comparison. Thus, they will not agree with volumes previously published.

These changes may seem surprising in view of the large increase in forest area. However, much of the land which has recently reverted to forest supports only stands of seedlings and saplings which, as yet, contain no sawtimber volume. The more widely used pine sawtimber trees have been reduced by 2.9 billion board feet, or 38 percent. Hardwood volume exhibits a similar trend, being down 22 percent. The heavier use of pine usually has the effect of increasing the proportion of hardwoods in remaining stands of timber.

Pine species make up slightly more than half the present sawtimber volume. Loblolly is the most prevalent single species, accounting for two-thirds of the softwood volume. The remainder is mostly shortleaf pine, followed by small amounts of slash, longleaf, and pond pine. Hardwood trees contain 46 percent of the board-foot volume, the most important species being blackgum and sweetgum.

Sixty-nine percent of the sawtimber volume is in stands having an operable volume of 1,500 or more board feet per acre. The balance is scattered throughout stands of poletimber and young trees, making it difficult to harvest this portion. Only 14 percent of the volume is in trees 20 inches or larger in diameter.

Three-fourths of hardwood sawtimber volume poor quality.--All sawlogs in hardwood trees 12 inches or larger in diameter were graded in the 1952 survey, using the Hardwood Log Grades for Standard Lumber developed by the Forest Products Laboratory. Seventy-five percent of the board-foot volume in hardwood sawlogs was classified as grade 3, which will produce mostly low-quality factory lumber or crossties and timbers. Only 9 percent of the volume was classified as select or grade 1, and 16 percent was grade 2. This means that only one-fourth of the lumber produced from the average hardwood sawlog could be expected to make No. 1 common or better.

Softwood sawlogs, if sawn on grade, would yield somewhat better lumber. Modified Crossett Log Grades used in the survey indicate that 70 percent of the board-foot volume is in grade 1 or grade 2 logs and only 30 percent is in grade 3.

Growing stock decreases 14 percent in volume.--The total volume of growing stock is computed in terms of cubic feet of solid wood. It includes the volume of all sound pole-size trees (5.0 to 8.9 inches in diameter for softwoods and 5.0 to 10.9 inches for hardwoods), as well as the volume in sawtimber trees. Trees less than 5.0 inches in diameter at breast height are considered seedlings or saplings and are not assigned volumes for inventory purposes.

The heavy drain on trees of sawtimber size is responsible for an over-all decline of 14 percent in the growing stock. The trends by species group are similar to those for board-foot volume, with pine down 20 percent and hardwoods down 7 percent since 1936.

Table C.--Volume comparison, all live trees 5.0 inches d.b.h. and larger, 1936 and 1952

Species group	Growing stock			Cull trees		
	1936 ^{1/}	1952	Change	1936 ^{1/}	1952	Change
	<u>Million cu. ft.</u>	<u>Million cu. ft.</u>	<u>Percent</u>	<u>Million cu. ft.</u>	<u>Million cu. ft.</u>	<u>Percent</u>
Pines	2,143	1,722	-20	38	293	+671
Hardwoods ^{2/}	1,655	1,535	- 7	404	704	+ 74
Cypress	28	40	+43	2	3	+ 50
All species	3,826	3,297	-14	444	1,000	+125

^{1/} See footnote 1, table B.

^{2/} Excludes limb volume of hardwood sawtimber trees.

Table C also includes the volumes of cull timber and shows changes which have occurred between surveys. The amount of material in cull trees is up sharply for both pine and hardwood species groups. Nearly one-fourth of the total available wood volume is in low-quality trees which are seldom harvested and remain to occupy valuable growing space.

Productive capacity of forest land hampered by poor stocking.--Only one-fifth of the forest land in Central Georgia can be classed as medium or well stocked with sound trees of usable size (5.0 inches and larger in diameter). The remaining area is deficient from a growing-stock standpoint, and this condition will seriously affect the timber-growing capacity of this area during the immediate future. When the smaller seedling- and sapling-size trees are included, the degree of stocking is considerably better, but it will require a number of years before these smaller trees can produce wood suitable for commercial use.

Supply of pine timber continues to diminish.--The amount of drain on pine timber continues to exceed the growth, causing a continuation of

the downward trend which is evident from the survey volume comparisons. In 1952 the net board-foot growth of pine was estimated to be 644 million board feet as compared to 787 million board feet of drain. Drain on the volume of pine growing stock, which includes pole-size trees, also exceeded the growth (fig. 4).

The hardwood species are currently increasing in volume because of a relatively low rate of drain. Growth of hardwood saw-timber amounted to 293 million board feet in 1952 and the volume of drain was 226 million, or about three-fourths of the growth. The excess of growth over drain for hardwood growing stock amounted to 900 thousand cords.

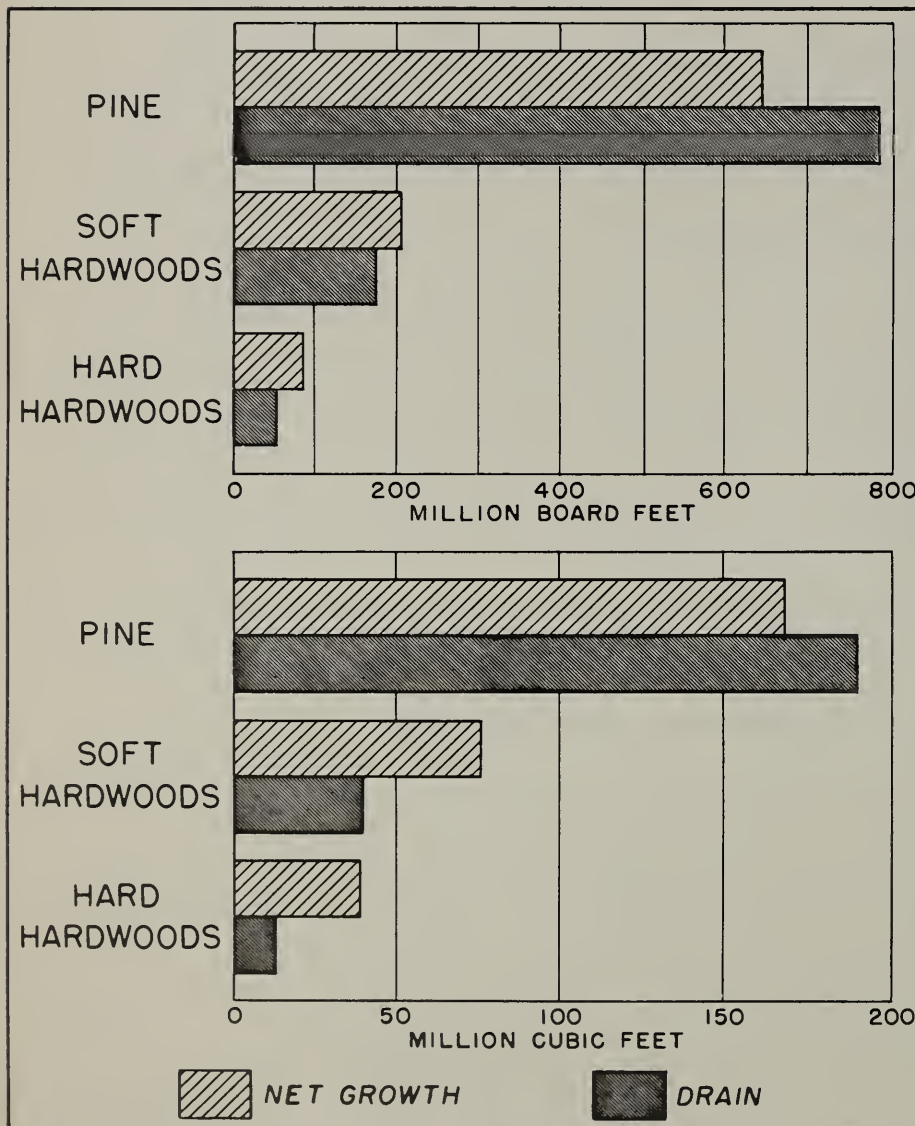


Figure 4.--Timber growth and drain relationship in Central Georgia, 1952

The net growth estimate is composed of the growth on all sound trees of volume size plus the ingrowth created by trees reaching volume size during the year. Mortality, or the loss of volume in trees which die from natural causes, is excluded. The timber drain estimate is based on the measurement and tally of stumps found on ground sample plots. Stumps of all trees cut during the past three-year period were recorded by species groups, and the measurements were converted into tree volume. The average volume of drain for the three-year period was taken as the annual estimate.

The rates of timber growth in Central Georgia are excellent as indicated by the net annual growth percents (tables 22 and 23). Pine sawtimber volume is increasing at the rate of 13 percent per annum, and all pine growing stock at 10 percent. However, in most stands the actual increase in volume per acre is relatively low because of poor stocking conditions. The average volume growth of sawtimber and growing stock per acre is 147 board feet and 0.6 cords respectively. Growth percentages, even though they are high, must be related to current volume before their effect can be evaluated. The forest lands in Central Georgia have the capacity to grow much more timber than they are producing at the present time. The remedy is to build up the growing stock.

Table 1.--Gross area^{1/} by broad use class, 1952

Class of use	Area	
	<u>Thousand acres</u>	<u>Percent</u>
Forest land:		
Commercial	6,687.5	62.9
Noncommercial:		
Reserved from commercial use	--	--
Unproductive for timber use	2.2	(<u>2/</u>)
Total forest	6,689.7	62.9
Nonforest land:		
Agriculture - active	2,081.0	19.6
Agriculture - idle	720.3	6.8
Pasture	669.6	6.3
Marsh	31.8	0.3
Urban and other ^{3/}	312.8	2.9
Total nonforest	3,815.5	35.9
Total land area	10,505.2	98.8
Total water area ^{4/}	128.6	1.2
All classes	10,633.8	100.0

^{1/} From U. S. Bureau of the Census, 1950.

^{2/} Less than 0.05 percent.

^{3/} Includes urban, suburban residential, and rural industrial areas, rights-of-way, cemeteries, schools, etc.

^{4/} Includes 56,400 acres of water according to Survey standards of area classification but defined by the Bureau of Census as land.

Table 2.--Ownership of land, 1952

Class of ownership	All land		Commercial forest land	
	<u>Thousand acres</u>	<u>Percent</u>	<u>Thousand acres</u>	<u>Percent</u>
Public land:				
National forest	4.6	(2/)	4.6	0.1
Indian	--	--	--	--
Other federal	425.7	4.1	311.5	4.6
Total federal	430.3	4.1	316.1	4.7
State	47.7	0.5	34.8	0.5
County and municipal	12.3	0.1	3.3	0.1
Total public	490.3	4.7	354.2	5.3
Private land:				
Farm	(1/)	--	5,054.0	75.6
Other	(1/)	--	1,279.3	19.1
Total private	10,014.9	95.3	6,333.3	94.7
All classes	10,505.2	100.0	6,687.5	100.0

1/ Data not available.

2/ Less than 0.05 percent.

Table 3.--Commercial forest area by forest type and stand-size class, 1952

(In thousand acres)

Forest type ^{1/}	Large sawtimber stands	Small sawtimber stands	Pole- timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	12.9	60.4	120.9	48.4	29.7	272.3
Slash pine	3.0	8.1	12.4	37.3	1.8	62.6
Loblolly pine	91.1	560.9	1,027.2	849.1	86.1	2,614.4
Shortleaf pine	11.6	136.9	429.5	210.8	6.9	795.7
Pond pine	2.0	8.7	2.5	--	--	13.2
Total	120.6	775.0	1,592.5	1,145.6	124.5	3,758.2
Other types:						
Oak-pine	44.9	84.7	257.4	302.8	28.4	718.2
Oak-hickory:						
Upland hdwds.	41.8	37.7	215.8	211.1	19.8	526.2
Scrub oak	--	--	3.5	56.0	152.4	211.9
Oak-gum-cypress:						
Lowland hdwds.	309.5	248.9	547.6	326.3	12.9	1,445.2
Cypress	--	20.8	5.8	--	1.2	27.8
Total	396.2	392.1	1,030.1	896.2	214.7	2,929.3
All types	516.8	1,167.1	2,622.6	2,041.8	339.2	6,687.5
Percent	7.7	17.5	39.2	30.5	5.1	100.0

^{1/} See description of forest types and stand-size classes in appendix.

Table 4.--Net volume^{1/} of sawtimber by species and stand-size class, 1952
(In million board feet)

Species ^{2/}	Large sawtimber stands	Small sawtimber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Softwoods:						
Longleaf pine	69.8	191.4	85.5	37.7	9.6	394.0
Slash pine	13.0	31.4	8.8	6.8	--	60.0
Loblolly pine	480.5	1,796.3	832.5	183.4	17.7	3,310.4
Pond pine	1.2	32.0	3.7	2.3	0.9	40.1
Shortleaf pine	76.8	513.3	362.8	85.1	3.1	1,041.1
Total pine	641.3	2,564.4	1,293.3	315.3	31.3	4,845.6
Cypress	24.3	107.3	3.2	--	--	134.8
Cedar	--	0.6	2.4	2.3	--	5.3
Total softwoods.	665.6	2,672.3	1,298.9	317.6	31.3	4,985.7
Hardwoods:						
Bl. & tupelo gum	465.6	319.6	134.3	45.9	1.8	967.2
Sweetgum	392.1	279.6	270.7	46.7	2.3	991.4
Yellow-poplar	186.2	88.2	92.4	20.6	0.4	387.8
Soft maple	55.7	36.2	31.4	7.7	--	131.0
Other soft hwdws.	35.1	53.7	36.5	3.5	--	128.8
Total	1,134.7	777.3	565.3	124.4	4.5	2,606.2
White & swamp chestnut oaks	100.0	36.7	54.0	3.9	--	194.6
Other white oaks	64.2	34.1	28.1	11.0	--	137.4
No. red & swamp red oaks	27.2	12.0	18.4	1.7	--	59.3
Other red oaks	248.5	157.9	147.9	55.5	1.3	611.1
Hickory	106.7	54.8	92.3	10.8	--	264.6
Ash	46.8	24.2	20.9	1.2	--	93.1
Other hard hwdws.	129.0	70.6	54.2	10.7	--	264.5
Total	722.4	390.3	415.8	94.8	1.3	1,624.6
Total hwdws.	1,857.1	1,167.6	981.1	219.2	5.8	4,230.8
All species	2,522.7	3,839.9	2,280.0	536.8	37.1	9,216.5
Percent	27.4	41.7	24.7	5.8	0.4	100.0

^{1/} Log scale, International 1/4-inch rule.

^{2/} See appendix for species combined with others.

Table 5.--Net volume^{1/} of sawtimber by species and diameter class, 1952

Species	10-12	14-18	20-24	26+	All diameters	
	inches ^{2/}	inches	inches	inches	Million bd. ft.	Percent
Softwoods:						
Longleaf pine	222.6	123.7	47.7	--	394.0	4.3
Slash pine	30.4	29.6	--	--	60.0	0.7
Loblolly pine	1,876.4	1,227.9	170.8	35.3	3,310.4	35.9
Pond pine	21.2	18.9	--	--	40.1	0.4
Shortleaf pine	765.2	254.4	21.5	--	1,041.1	11.3
Total pine	2,915.8	1,654.5	240.0	35.3	4,845.6	52.6
Cypress	62.5	65.1	7.2	--	134.8	1.4
Cedar	2.0	3.3	--	--	5.3	0.1
Total sftwds.	2,980.3	1,722.9	247.2	35.3	4,985.7	54.1
Hardwoods:						
Bl. & tupelo gum	278.5	528.2	132.4	28.1	967.2	10.5
Sweetgum	278.2	564.7	114.2	34.3	991.4	10.8
Yellow-poplar	82.8	198.6	70.4	36.0	387.8	4.2
Soft maple	34.5	81.8	14.7	--	131.0	1.4
Other soft hdwds.	32.5	87.6	2.6	6.1	128.8	1.4
Total	706.5	1,460.9	334.3	104.5	2,606.2	28.3
White & swamp chestnut oaks	28.7	83.8	52.8	29.3	194.6	2.1
Other white oaks	21.4	50.6	17.8	47.6	137.4	1.5
No. red and swamp red oaks	9.3	34.2	15.0	0.8	59.3	0.6
Other red oaks	98.5	299.7	145.1	67.8	611.1	6.6
Hickory	47.5	127.7	71.2	18.2	264.6	2.9
Ash	25.5	50.6	17.0	--	93.1	1.0
Other hard hdwds.	70.1	134.0	45.2	15.2	264.5	2.9
Total	301.0	780.6	364.1	178.9	1,624.6	17.6
Total hdwds.	1,007.5	2,241.5	698.4	283.4	4,230.8	45.9
All species	3,987.8	3,964.4	945.6	318.7	9,216.5	100.0
Percent	43.3	43.0	10.3	3.4	100.0	

^{1/} Log scale, International 1/4-inch rule.

^{2/} Ten-inch hardwoods are not included.

Table 6.--Net volume^{1/} of sawtimber by forest type and stand-size class, 1952

(In million board feet)

Forest type ^{2/}	Large sawtimber stands	Small sawtimber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	51.0	194.9	73.9	16.5	9.1	345.4
Slash pine	13.0	31.8	0.3	2.0	--	47.1
Loblolly pine	474.7	1,869.4	753.9	108.2	20.1	3,226.3
Shortleaf pine	48.1	456.6	353.2	44.8	0.8	903.5
Pond pine	5.0	23.0	0.9	--	--	28.9
Total	591.8	2,575.7	1,182.2	171.5	30.0	4,551.2
Other types:						
Oak-pine	198.6	210.4	267.0	92.8	1.7	770.5
Oak-hickory:						
Upland hdwds.	149.4	109.2	211.9	68.1	--	538.6
Scrub oak	--	--	0.6	5.6	4.3	10.5
Oak-gum-cypress:						
Lowland hdwds.	1,582.9	833.8	615.7	198.8	1.1	3,232.3
Cypress	--	110.8	2.6	--	--	113.4
Total	1,930.9	1,264.2	1,097.8	365.3	7.1	4,665.3
All types	2,522.7	3,839.9	2,280.0	536.8	37.1	9,216.5
Percent	27.4	41.7	24.7	5.8	0.4	100.0

^{1/} Log scale, International 1/4-inch rule.

^{2/} See description of forest types and stand-size classes in appendix.

Table 7.--Net volume^{1/} of all timber by species and stand-size class, 1952

(In thousand cords)

GROWING STOCK

Species	Large sawtimber stands	Small sawtimber stands	Pole- timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Softwoods:						
Longleaf pine	188	721	581	131	41	1,662
Slash pine	33	151	121	25	18	348
Loblolly pine	1,285	7,245	6,299	962	52	15,843
Pond pine	4	108	26	13	3	154
Shortleaf pine	249	2,330	3,158	414	10	6,161
Total pine	1,759	10,555	10,185	1,545	124	24,168
Cypress	67	368	36	--	--	471
Cedar	--	2	11	6	--	19
Total sftwds.	1,826	10,925	10,232	1,551	124	24,658
Hardwoods:						
Bl. & tupelo gum	1,688	1,750	986	174	5	4,603
Sweetgum	1,493	1,634	2,048	312	6	5,493
Yellow-poplar	598	404	622	119	1	1,744
Soft maple	195	224	263	42	--	724
Other soft hwdws.	153	220	229	14	--	616
Total	4,127	4,232	4,148	661	12	13,180
White & swamp chestnut oaks	346	185	387	33	--	951
Other white oaks	204	144	238	41	--	627
No. red & swamp red oaks	74	52	104	15	--	245
Other red oaks	805	671	1,064	242	4	2,786
Hickory	396	237	399	42	11	1,085
Ash	166	110	236	4	--	516
Dogwood, persimmon	52	30	94	21	--	197
Other hard hwdws.	445	348	484	55	--	1,332
Total	2,488	1,777	3,006	453	15	7,739
Total hwdws.	6,615	6,009	7,154	1,114	27	20,919
All species	8,441	16,934	17,386	2,665	151	45,577
Percent	18.5	37.2	38.1	5.9	0.3	100.0

OTHER MATERIAL

Sound culls						
Softwoods	115	831	2,004	943	148	4,041
Hardwoods ^{2/}	1,649	1,470	3,506	1,552	341	8,518
Rotten culls	218	331	447	140	3	1,139
Hardwood limbs	1,263	865	975	287	27	3,417
Total other material	3,245	3,497	6,932	2,922	519	17,115

^{1/} Sound wood and bark.^{2/} Includes noncommercial species.

Table 8.--Net volume^{1/} of all timber by species and diameter class, 1952

(In thousand cords)

GROWING STOCK

Species	Pole trees		Sawtimber trees				All diameters
	6 inches	8 inches	10 inches	12 inches	14-18 inches	20+ inches	
Softwoods:							
Longleaf pine	185	414	384	265	306	108	1,662
Slash pine	106	77	44	45	76	--	348
Loblolly pine	2,455	3,785	3,101	2,815	3,214	473	15,843
Pond pine	6	26	41	28	53	--	154
Shortleaf pine	1,244	1,868	1,419	907	672	51	6,161
Total pine	3,996	6,170	4,989	4,060	4,321	632	24,168
Cypress	40	54	90	101	170	16	471
Cedar	4	--	4	2	9	--	19
Total sftwds.	4,040	6,224	5,083	4,163	4,500	648	24,658
Hardwoods:							
Bl. & tupelo gum	258	586	1,017	876	1,470	396	4,603
Sweetgum	705	934	1,062	870	1,556	366	5,493
Yellow-poplar	144	182	368	252	538	260	1,744
Soft maple	95	164	102	106	220	37	724
Other soft hwdws.	58	83	115	99	239	22	616
Total	1,260	1,949	2,664	2,203	4,023	1,081	13,180
White & swamp chestnut oaks	113	128	180	88	233	209	951
Other white oaks	91	66	95	70	141	164	627
No. red & swamp red oaks	26	16	37	31	94	41	245
Other red oaks	344	411	336	325	830	540	2,786
Hickory	72	136	143	153	354	227	1,085
Ash	64	75	115	80	139	43	516
Dogwood, persimmon	114	22	14	16	31	--	197
Other hard hwdws.	151	150	330	207	345	149	1,332
Total	975	1,004	1,250	970	2,167	1,373	7,739
Total hwdws.	2,235	2,953	3,914	3,173	6,190	2,454	20,919
All species	6,275	9,177	8,997	7,336	10,690	3,102	45,577
Percent	13.8	20.1	19.7	16.1	23.5	6.8	100.0

OTHER MATERIAL

Sound culls							
Softwoods	548	571	1,024	748	980	170	4,041
Hardwoods ^{2/}	1,369	1,245	1,459	918	2,079	1,448	8,518
Rotten culls	67	97	92	90	377	416	1,139
Hardwood limbs	--	--	--	762	1,760	895	3,417
Total other material	1,984	1,913	2,575	2,518	5,196	2,929	17,115

^{1/} Sound wood and bark.^{2/} Includes noncommercial species.

Table 9.--Net volume^{1/} of all timber by species and class of material, 1952
(In thousand cords)

Species	GROWING STOCK				OTHER MATERIAL	
	Sawtimber trees		Pole-timber trees	Total sound trees	Sound culls ^{2/}	Rotten culls
	Sawlog portion	Upper stems				
Softwoods:						
Longleaf pine	854	209	599	1,662	135	1
Slash pine	136	29	183	348	43	--
Loblolly pine	7,781	1,822	6,240	15,843	2,882	54
Pond pine	96	26	32	154	10	--
Shortleaf pine	2,488	561	3,112	6,161	938	1
Total pine	11,355	2,647	10,166	24,168	4,008	56
Cypress	300	77	94	471	23	4
Cedar	11	4	4	19	10	--
Total sftwds.	11,666	2,728	10,264	24,658	4,041	60
Hardwoods:						
Bl. & tupelo gum	2,179	563	1,861	4,603	1,837	268
Sweetgum	2,228	564	2,701	5,493	1,933	279
Yellow-poplar	851	199	694	1,744	578	45
Soft maple	292	71	361	724	953	153
Other soft hdwds.	288	72	256	616	597	57
Total	5,838	1,469	5,873	13,180	5,898	802
White & swamp chestnut oaks	418	112	421	951	356	23
Other white oaks	296	79	252	627	518	20
No. red & swamp red oaks	126	40	79	245	139	7
Other red oaks	1,322	373	1,091	2,786	2,084	261
Hickory	579	155	351	1,085	628	35
Ash	212	50	254	516	345	43
Dogwood, persimmon	38	9	150	197	121	3
Scrub oak ^{3/}	--	--	--	--	923	--
Other hard hdwds.	556	145	631	1,332	755	53
Total	3,547	963	3,229	7,739	5,869	445
Total hdwds.	9,385	2,432	9,102	20,919	11,767	1,247
All species	21,051	5,160	19,366	45,577	15,808	1,307
Percent	46.2	11.3	42.5	100.0	92.4	7.6

^{1/} Sound wood and bark.

^{2/} Includes limb volume of hardwood sawtimber trees.

^{3/} Includes noncommercial species.

Table 10.--Net volume^{1/} of all timber by forest type and stand-size class, 1952

(In thousand cords)

GROWING STOCK						
Forest type	Large sawtimber stands	Small sawtimber stands	Pole- timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	153	744	528	54	38	1,517
Slash pine	33	157	77	22	--	289
Loblolly pine	1,503	8,195	6,653	809	74	17,234
Shortleaf pine	150	1,995	2,777	230	2	5,154
Pond pine	13	83	3	--	--	99
Total	1,852	11,174	10,038	1,115	114	24,293
Other types:						
Oak-pine	617	912	1,680	423	16	3,648
Oak-hickory:						
Upland hdwds.	562	446	1,186	282	--	2,476
Scrub oak	--	--	6	16	18	40
Oak-gum-cypress:						
Lowland hdwds.	5,410	3,946	4,456	829	3	14,644
Cypress	--	456	20	--	--	476
Total	6,589	5,760	7,348	1,550	37	21,284
All types	8,441	16,934	17,386	2,665	151	45,577
Percent	18.5	37.2	38.1	5.9	0.3	100.0

OTHER MATERIAL

Pine types:						
Longleaf pine	49	57	104	21	22	253
Slash pine	--	16	20	15	--	51
Loblolly pine	223	1,071	2,029	902	208	4,433
Shortleaf pine	42	227	669	194	2	1,134
Pond pine	--	8	--	--	--	8
Total	314	1,379	2,822	1,132	232	5,879
Other types:						
Oak-pine	211	258	763	303	15	1,550
Oak-hickory:						
Upland hdwds.	199	203	732	388	18	1,540
Scrub oak	--	--	4	108	186	298
Oak-gum-cypress:						
Lowland hdwds.	2,521	1,570	2,611	991	67	7,760
Cypress	--	87	--	--	1	88
Total	2,931	2,118	4,110	1,790	287	11,236
All types	3,245	3,497	6,932	2,922	519	17,115
Percent	19.0	20.4	40.5	17.1	3.0	100.0

^{1/} Sound wood and bark.

Table 11.--Net volume^{1/} of all timber by species and diameter class, 1952

(In million cubic feet)

GROWING STOCK

Species	Pole trees		Sawtimber trees				All diameters
	6 inches	8 inches	10 inches	12 inches	14-18 inches	20+ inches	
Softwoods:							
Longleaf pine	11.3	27.8	27.8	20.4	24.4	9.0	120.7
Slash pine	6.5	5.2	3.3	3.6	6.0	--	24.6
Loblolly pine	144.0	254.6	226.2	214.8	256.6	40.2	1,136.4
Pond pine	0.3	1.7	3.0	2.0	4.2	--	11.2
Shortleaf pine	72.9	125.6	104.1	69.0	53.2	4.3	429.1
Total pine	235.0	414.9	364.4	309.8	344.4	53.5	1,722.0
Cypress	2.7	4.0	7.0	8.6	14.7	1.5	38.5
Cedar	0.2	--	0.4	0.1	0.8	--	1.5
Total sftwds.	237.9	418.9	371.8	318.5	359.9	55.0	1,762.0
Hardwoods:							
Bl. & tupelo gum	15.8	38.3	70.9	66.9	116.2	32.5	340.6
Sweetgum	42.6	61.2	74.1	66.7	124.1	29.9	398.6
Yellow-poplar	8.6	11.8	25.7	19.7	42.7	21.5	130.0
Soft maple	5.7	10.7	7.0	8.2	17.5	3.0	52.1
Other soft hdwds.	3.6	5.5	8.0	7.7	18.8	1.8	45.4
Total	76.3	127.5	185.7	169.2	319.3	88.7	966.7
White & swamp chestnut oaks	6.9	8.5	12.4	6.8	18.4	17.0	70.0
Other white oaks	5.5	4.3	6.7	5.1	11.2	13.5	46.3
No. red & swamp red oaks	1.7	1.0	2.6	2.2	7.6	3.3	18.4
Other red oaks	20.8	27.1	23.3	23.3	66.0	44.2	204.7
Hickory	4.5	9.0	9.9	11.3	28.0	18.6	81.3
Ash	3.9	4.9	8.0	6.0	11.2	3.5	37.5
Dogwood, persimmon	7.1	1.5	1.0	1.1	2.4	--	13.1
Other hard hdwds.	9.2	9.9	22.9	15.5	27.3	12.5	97.3
Total	59.6	66.2	86.8	71.3	172.1	112.6	568.6
Total hdwds.	135.9	193.7	272.5	240.5	491.4	201.3	1,535.3
All species	373.8	612.6	644.3	559.0	851.3	256.3	3,297.3
Percent	11.3	18.6	19.5	17.0	25.8	7.8	100.0

OTHER MATERIAL

Sound culls							
Softwoods	32.4	38.5	71.4	55.9	77.8	14.9	290.9
Hardwoods ^{2/}	82.9	82.2	101.5	69.7	165.2	118.8	620.3
Rotten culls	3.9	6.5	6.4	7.3	29.7	34.7	88.5
Hardwood limbs	--	--	--	57.2	132.4	73.4	263.0
Total other material	119.2	127.2	179.3	190.1	405.1	241.8	1,262.7

^{1/} Excluding bark.^{2/} Includes noncommercial species.

Table 12.--Net volume^{1/} of all timber by species and class of material, 1952
(In million cubic feet)

Species	GROWING STOCK				OTHER MATERIAL	
	Sawtimber trees		Pole- timber trees	Total sound trees	Sound culls ^{2/}	Rotten culls
	Sawlog portion	Upper stems				
Softwoods:						
Longleaf pine	65.8	15.8	39.1	120.7	9.6	0.1
Slash pine	10.5	2.4	11.7	24.6	3.0	--
Loblolly pine	599.1	138.7	398.6	1,136.4	209.5	4.1
Pond pine	7.5	1.7	2.0	11.2	0.7	--
Shortleaf pine	186.8	43.8	198.5	429.1	65.6	0.1
Total pine	869.7	202.4	649.9	1,722.0	288.4	4.3
Cypress	26.0	5.8	6.7	38.5	1.6	0.4
Cedar	1.0	0.3	0.2	1.5	0.9	--
Total sftwds.	896.7	208.5	655.8	1,762.0	290.9	4.7
Hardwoods:						
Bl. & tupelo gum	173.3	42.3	125.0	340.6	135.7	20.9
Sweetgum	177.0	43.7	177.9	398.6	145.7	21.3
Yellow-poplar	67.5	16.4	46.1	130.0	46.2	3.7
Soft maple	23.2	5.5	23.4	52.1	70.6	12.0
Other soft hwdws.	22.9	5.4	17.1	45.4	43.9	4.4
Total	463.9	113.3	389.5	966.7	442.1	62.3
White & swamp chestnut oaks	33.8	8.4	27.8	70.0	27.0	1.9
Other white oaks	23.9	5.9	16.5	46.3	38.5	1.6
No. red & swamp red oaks	10.5	2.6	5.3	18.4	10.0	0.7
Other red oaks	107.2	26.3	71.2	204.7	156.5	20.6
Hickory	46.6	11.3	23.4	81.3	45.3	2.8
Ash	16.8	3.9	15.8	37.5	24.4	3.3
Dogwood, persimmon	2.9	0.6	9.6	13.1	7.7	0.2
Scrub oak ^{3/}	--	--	--	--	62.4	--
Other hard hwdws.	44.6	10.7	42.0	97.3	55.7	4.1
Total	286.3	69.7	212.6	568.6	427.5	35.2
Total hwdws.	750.2	183.0	602.1	1,535.3	869.6	97.5
All species	1,646.9	391.5	1,258.9	3,297.3	1,160.5	102.2
Percent	49.9	11.9	38.2	100.0	91.9	8.1

^{1/} Excluding bark.

^{2/} Includes limb volume of hardwood sawtimber trees.

^{3/} Includes noncommercial species.

Table 13.--Average volume^{1/} per acre of sawtimber by forest type, species group, and stand-size class, 1952

(In board feet)

Forest type and species group	Large sawtimber stands	Small sawtimber stands	Pole-timber stands	Other stand sizes	All stands
Longleaf pine					
Softwood	3,335	3,138	585	275	1,192
Hardwood	609	93	27	52	76
Slash pine					
Softwood	4,430	3,675	22	35	713
Hardwood	--	230	--	16	40
Loblolly pine					
Softwood	4,467	3,112	653	116	1,122
Hardwood	742	220	80	21	112
Shortleaf pine					
Softwood	2,346	3,219	772	168	1,051
Hardwood	1,810	116	50	42	85
Pond pine					
Softwood	2,521	2,138	370	--	1,865
Hardwood	--	509	--	--	336
Oak-pine					
Softwood	2,274	1,150	507	180	542
Hardwood	2,152	1,334	531	106	531
Upland hdwds.					
Softwood	286	195	111	130	139
Hardwood	3,283	2,702	871	166	884
Scrub oak					
Softwood	--	--	--	44	43
Hardwood	--	--	167	4	6
Lowland hdwds.					
Softwood	182	213	124	244	180
Hardwood	4,932	3,138	1,001	345	2,057
Cypress					
Softwood	--	4,331	340	--	3,312
Hardwood	--	986	110	--	760
All types					
Softwood	1,288	2,290	495	147	746
Hardwood	3,593	1,001	374	94	633

^{1/} Log scale, International 1/4-inch rule.

Table 14.--Average volume^{1/} per acre of all trees by forest type, species group, and stand-size class, 1952

(In standard cords)

Forest type and species group	Large sawtimber stands		Small sawtimber stands		Pole-timber stands		Other stand sizes		All stands	
	Sound ^{2/}	Cull ^{2/}	Sound	Cull	Sound	Cull	Sound	Cull	Sound	Cull
Longleaf pine										
Softwood	9.9	1.0	12.0	0.7	4.2	0.3	1.0	0.1	5.3	0.4
Hardwood	1.9	2.8	0.3	0.3	0.2	0.6	0.2	0.4	0.3	0.6
Slash pine										
Softwood	11.2	--	18.7	1.8	6.2	1.6	0.5	0.1	4.5	0.6
Hardwood	--	--	0.6	0.1	--	--	0.1	0.3	0.1	0.2
Loblolly pine										
Softwood	12.1	0.9	12.9	1.1	5.7	1.4	0.8	0.8	5.7	1.1
Hardwood	4.4	1.6	1.7	0.8	0.8	0.6	0.1	0.4	0.9	0.6
Shortleaf pine										
Softwood	6.7	--	13.7	0.7	6.0	1.0	0.9	0.7	5.9	0.8
Hardwood	6.3	3.6	0.8	0.9	0.5	0.6	0.2	0.2	0.6	0.6
Pond pine										
Softwood	6.5	--	8.1	--	1.2	--	--	--	6.5	--
Hardwood	--	--	1.5	0.9	--	--	--	--	1.0	0.6
Oak-pine										
Softwood	6.2	0.4	4.2	0.3	2.9	0.4	0.7	0.2	2.3	0.3
Hardwood	7.6	4.3	6.6	2.8	3.6	2.6	0.6	0.7	2.8	1.9
Upland hardwoods										
Softwood	1.1	(3/)	0.7	--	0.6	(3/)	0.4	0.1	0.6	0.1
Hardwood	12.3	4.7	11.1	5.4	4.9	3.3	0.8	1.7	4.1	2.9
Scrub oak										
Softwood	--	--	--	--	--	--	0.2	0.1	0.2	0.1
Hardwood	--	--	--	--	1.7	1.1	(3/)	1.3	(3/)	1.3
Lowland hardwoods										
Softwood	0.5	(3/)	0.7	0.1	0.6	(3/)	0.7	0.1	0.6	0.1
Hardwood	17.0	8.1	15.2	6.2	7.5	4.7	1.7	3.0	9.5	5.3
Cypress										
Softwood	--	--	15.3	1.0	3.1	--	--	0.8	12.1	0.8
Hardwood	--	--	6.6	3.2	0.3	--	--	--	5.0	2.4
All types										
Softwood	3.5	0.2	9.4	0.7	3.9	0.8	0.7	0.5	3.7	0.6
Hardwood	12.8	6.1	5.1	2.3	2.7	1.9	0.5	1.0	3.1	1.9

^{1/} Sound wood and bark.

^{2/} Sound trees; cull trees.

^{3/} Less than 0.05 cords per acre.

Table 15.--Number of trees^{1/} by species group, quality class, and tree size,
1952

(In thousands of trees)

Species group and quality class	Sapling-size trees	Pole-size trees	Small sawtimber trees	Large sawtimber trees	All trees
Yellow pines:					
Sound trees	647,431	195,173	68,218	4,635	915,457
Sound culls	143,592	30,225	17,567	1,327	192,711
Rotten culls	879	435	120	25	1,459
Total	791,902	225,833	85,905	5,987	1,109,627
Other softwoods:					
Sound trees	10,942	2,199	1,799	164	15,104
Sound culls	863	312	88	--	1,263
Rotten culls	--	--	58	--	58
Total	11,805	2,511	1,945	164	16,425
Soft-textured hdwds.:					
Sound trees	469,664	86,733	17,918	5,613	579,928
Sound culls	264,151	34,779	5,446	2,411	306,787
Rotten culls	6,234	5,144	1,490	1,074	13,942
Total	740,049	126,656	24,854	9,098	900,657
Hard-textured hdwds.:					
Sound trees	584,662	56,041	9,901	5,055	655,659
Sound culls ^{2/}	610,493	52,998	5,729	2,962	672,182
Rotten culls	6,241	3,551	665	638	11,095
Total	1,201,396	112,590	16,295	8,655	1,338,936
All species	2,745,152	467,590	128,999	23,904	3,365,645

^{1/} All trees 1.0 inch d.b.h. and larger.

^{2/} Includes scrub oak and noncommercial trees.

Table 16.--Area^{1/} of seedling, sapling, and poorly stocked stands by
plantability class, 1952

(In thousands of acres)

Forest type	No planting required ^{2/}	Suitable for machine planting	Hand planting required	All classes
Longleaf pine	66.9	6.6	4.6	78.1
Slash pine	20.8	4.4	13.9	39.1
Loblolly pine	730.2	64.8	140.2	935.2
Shortleaf pine	187.9	10.5	19.3	217.7
Oak-pine	292.9	14.1	24.2	331.2
Upland hwdws.	188.7	27.0	15.2	230.9
Scrub oak	52.5	57.3	98.6	208.4
All types	1,539.9	184.7	316.0	2,040.6
Percent	75.5	9.0	15.5	100.0

^{1/} Acreage of oak-gum-cypress types excluded.

^{2/} Sufficient seed trees present or area is restocking naturally.

Table 17.--Stocking on commercial forest area by forest type and tree-size class, 1952

(In thousands of acres)

GROWING STOCK OF ALL SIZES

Forest type	Non-stocked 0-9%	Poor stocking 10-39%	Medium stocking 40-69%	Good stocking 70-99%	Over-stocked 100+%	Total area
Longleaf pine	27.7	98.5	65.7	36.3	44.1	272.3
Slash pine	1.7	25.2	15.7	17.2	2.8	62.6
Loblolly pine	73.3	420.7	379.5	283.6	1,457.3	2,614.4
Shortleaf pine	5.7	103.3	128.5	89.6	468.6	795.7
Pond pine	--	--	--	--	13.2	13.2
Oak-pine	28.4	111.0	73.4	106.9	398.5	718.2
Upland hwdws.	16.7	74.3	100.3	86.8	248.1	526.2
Scrub oak	150.4	53.1	8.4	--	--	211.9
Lowland hwdws.	12.9	151.7	205.6	260.1	814.9	1,445.2
Cypress	1.2	6.7	3.5	3.1	13.3	27.8
All types	318.0	1,044.5	980.6	883.6	3,460.8	6,687.5
Percent	4.8	15.6	14.7	13.2	51.7	100.0

GROWING STOCK 5.0 INCHES DBH AND LARGER

Longleaf pine	69.4	169.4	26.1	4.9	2.5	272.3
Slash pine	39.1	9.1	10.9	0.7	2.8	62.6
Loblolly pine	904.7	1,153.1	405.8	117.8	33.0	2,614.4
Shortleaf pine	202.5	457.4	84.7	41.7	9.4	795.7
Pond pine	--	10.7	2.5	--	--	13.2
Oak-pine	312.2	341.7	53.6	10.7	--	718.2
Upland hwdws.	195.7	296.4	25.9	7.1	1.1	526.2
Scrub oak	206.4	5.5	--	--	--	211.9
Lowland hwdws.	273.0	726.5	336.1	85.9	23.7	1,445.2
Cypress	1.2	8.7	15.1	1.3	1.5	27.8
All types	2,204.2	3,178.5	960.7	270.1	74.0	6,687.5
Percent	33.0	47.5	14.4	4.0	1.1	100.0

SAWTIMBER GROWING STOCK

Longleaf pine	171.4	86.0	14.2	0.7	--	272.3
Slash pine	51.5	11.1	--	--	--	62.6
Loblolly pine	1,647.2	782.9	155.6	27.1	1.6	2,614.4
Shortleaf pine	487.4	260.2	42.2	5.9	--	795.7
Pond pine	2.5	8.2	2.5	--	--	13.2
Oak-pine	489.0	208.2	19.7	1.3	--	718.2
Upland hwdws.	372.3	139.9	14.0	--	--	526.2
Scrub oak	209.9	2.0	--	--	--	211.9
Lowland hwdws.	627.7	684.1	116.9	15.0	1.5	1,445.2
Cypress	5.0	16.5	4.8	1.5	--	27.8
All types	4,063.9	2,199.1	369.9	51.5	3.1	6,687.5
Percent	60.7	32.9	5.5	0.8	0.1	100.0

Table 18.--Net annual growth of sawtimber by stand-size class and species group, 1952

(In thousand board feet)

Stand-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Sawtimber stands	336,108	5,509	133,987	52,009	527,613
Poletimber stands	272,506	275	65,822	32,303	370,906
Other stands	35,669	75	5,620	3,211	44,575
All stands	644,283	5,859	205,429	87,523	943,094

Table 19.--Net annual growth of growing stock by stand-size class and species group, 1952

(In thousand cords)

Stand-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Sawtimber stands	798	13	567	223	1,601
Poletimber stands	1,262	3	434	265	1,964
Other stands	256	(<u>1</u> /)	44	35	335
All stands	2,316	16	1,045	523	3,900

1/ Less than 500 cords.

Table 20.--Average growth of sawtimber per acre by forest type
and stand-size class, 1952

(In board feet)

Forest type	Stand-size class			All stands
	Sawtimber	Poletimber	Other stands	
Longleaf and slash pine	334	92	24	129
Loblolly and pond pine	412	150	18	169
Shortleaf pine	327	166	15	155
Cypress	298	7	--	224
Oak-pine	256	137	24	107
Oak-hickory	224	90	21	80
Lowland hdwds.	286	131	54	173
Scrub oak	--	--	2	2
All types	336	139	23	147

Table 21.--Average growth of growing stock per acre by forest type
and stand-size class, 1952

(In standard cords)

Forest type	Stand-size class			All stands
	Sawtimber	Poletimber	Other stands	
Longleaf and slash pine	0.9	0.6	0.2	0.5
Loblolly and pond pine	1.2	0.9	0.2	0.7
Shortleaf pine	0.9	0.8	0.1	0.6
Cypress	1.0	0.1	--	0.8
Oak-pine	0.9	0.7	0.1	0.5
Oak-hickory	0.7	0.4	0.1	0.3
Lowland hdwds.	1.1	0.9	0.2	0.8
Scrub oak	--	--	(1/)	(1/)
All types	1.1	0.8	0.2	0.6

1/ Less than 0.05 cords per acre.

Table 22.--Annual net growth percentages^{1/} for sawtimber volumes by stand-size class and species group, 1952

Stand-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Sawtimber stands	10.48	4.17	7.01	4.67	8.29
Poletimber stands	21.07	4.94	11.64	7.77	16.27
Other stands	10.29	3.29	4.36	3.34	7.77
All stands	13.30	4.18	7.88	5.39	10.23

^{1/} For use with board-foot volumes.

Table 23.--Annual net growth percentages^{1/} for growing stock volumes by stand-size class and species group, 1952

Stand-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Sawtimber stands	6.85	3.13	6.73	5.13	6.45
Poletimber stands	12.77	5.65	10.45	8.74	11.48
Other stands	14.58	1.67	6.28	7.19	11.27
All stands	9.77	3.33	7.84	6.60	8.58

^{1/} For use with volumes in cubic feet or standard cords.

Table 24.--Average annual drain on sawtimber by tree-size class and species group

(In thousand board feet)

Tree-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Small sawtimber	499,307	1,120	36,615	4,338	541,380
Large sawtimber	287,642	--	135,113	50,402	473,157
All trees	786,949	1,120	171,728	54,740	1,014,537

Table 25.--Average annual drain on growing stock by tree-size class and species group

(In thousand cords)

Tree-size class	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Pole trees	303	--	51	27	381
Small sawtimber	1,479	3	108	15	1,605
Large sawtimber	688	--	339	128	1,155
All trees	2,470	3	498	170	3,141

Table 26.--Net change in sawtimber volume by species group, 1952

(In thousand board feet)

Item	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Net volume, Jan. 1, 1952	4,845,632	140,072	2,606,229	1,624,561	9,216,494
Total growth	669,544	7,442	213,830	101,793	992,609
Mortality	25,261	1,583	8,401	14,270	49,515
Net growth	644,283	5,859	205,429	87,523	943,094
Drain	786,949	1,120	171,728	54,740	1,014,537
Loss or gain	-142,666	+4,739	+33,701	+32,783	-71,443
Net volume, Jan. 1, 1953	4,702,966	144,811	2,639,930	1,657,344	9,145,051
Percent change	- 2.94	+ 3.38	+ 1.29	+ 2.02	- 0.78

Table 27.--Net change in growing stock by species group, 1952

(In thousand cords)

Item	Softwoods		Soft-textured hardwoods	Hard-textured hardwoods	All species
	Pine	Other			
Growing stock, Jan. 1, 1952	24,168	490	13,180	7,739	45,577
Total growth	2,430	21	1,091	607	4,149
Mortality	114	5	46	84	249
Net growth	2,316	16	1,045	523	3,900
Drain	2,470	3	498	170	3,141
Loss or gain	-154	+13	+547	+353	+759
Growing stock, Jan. 1, 1953	24,014	503	13,727	8,092	46,336
Percent change	-0.64	+2.65	+4.15	+4.56	+1.67

Table 28.--County area by broad use class, 1952

County	Total area ^{1/}	Nonforest area		Forest land		
		Land	Water	Non-commercial	Commercial	
	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Percent
Baldwin	169.6	64.0	3.1	--	102.5	61.6
Bibb	162.6	66.8	3.0	--	92.8	58.1
Bleckley	140.2	76.4	0.2	--	63.6	45.4
Burke	532.5	280.8	2.1	--	249.6	47.1
Butts	120.3	50.4	2.3	--	67.6	57.3
Calhoun	185.0	90.7	0.2	--	94.1	50.9
Chattahoochee	161.9	31.8	1.3	--	128.8	80.2
Clay	143.4	69.5	0.6	--	73.3	51.3
Columbia	197.1	46.1	11.8	--	139.2	75.1
Crawford	201.6	54.8	1.5	--	145.3	72.6
Dougherty	210.6	116.3	8.0	--	86.3	42.6
Glascok	91.5	40.8	0.7	--	50.0	55.1
Greene	258.5	61.1	0.8	--	196.6	76.3
Hancock	310.4	80.4	0.6	--	229.4	74.0
Harris	302.7	49.1	6.6	--	247.0	83.4
Houston	243.2	119.3	1.8	--	122.1	50.6
Jasper	240.0	59.3	1.8	--	178.9	75.1
Jefferson	340.5	172.9	0.1	--	167.5	49.2
Jones	257.3	47.0	0.8	--	209.5	81.7
Lamar	115.8	46.8	--	--	69.0	59.6
Lee	229.1	133.9	6.0	--	89.2	40.0
Lincoln	163.2	36.5	34.4	--	92.3	71.7
McDuffie	168.3	60.9	4.1	--	103.3	62.9
Macon	257.9	118.4	4.6	--	134.9	53.3
Marion	233.6	58.2	0.1	--	175.3	75.1
Monroe	255.4	47.8	1.0	--	206.6	81.2
Morgan	227.8	97.6	0.1	--	130.1	57.1
Muscogee	142.1	46.0	3.7	--	92.4	66.8
Peach	96.6	58.9	0.1	--	37.6	39.0
Pike	147.2	78.9	0.1	--	68.2	46.4
Pulaski	162.6	88.2	0.8	--	73.6	45.5
Putnam	224.0	32.9	6.6	--	184.5	84.9
Quitman	109.4	29.3	1.1	--	79.0	72.9
Randolph	279.0	132.5	0.3	--	146.2	52.5
Richmond	208.6	83.9	4.2	2.2	118.3	57.9
Schley	103.7	39.3	--	--	64.4	62.1
Stewart	296.3	87.8	0.6	--	207.9	70.3
Sumter	314.9	174.3	2.5	--	138.1	44.2
Talbot	249.6	36.3	1.0	--	212.3	85.4
Taliaferro	124.8	25.0	--	--	99.8	80.0
Taylor	257.9	87.5	2.4	--	168.0	65.8
Terrell	210.6	136.8	1.3	--	72.5	34.6
Twiggs	233.6	52.8	1.2	--	179.6	77.3
Upton	213.8	57.8	1.9	--	154.1	72.7
Warren	187.7	66.4	0.1	--	121.2	64.6
Washington	431.4	156.9	0.9	--	273.6	63.6
Webster	124.8	32.5	--	--	92.3	74.0
Wilkes	302.1	72.9	1.7	--	227.5	75.7
Wilkinson	293.1	61.0	0.5	--	231.6	79.2
Unit total	10,633.8	3,815.5	128.6	2.2	6,687.5	63.7

^{1/} Gross area from Bureau of the Census, 1950.

Table 29.--Ownership of commercial forest land by county, 1952

County	Private		Public					
			National forest	Other federal	State	County, city, town	Total public	
	Thousand acres	Percent	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Percent
Baldwin	97.9	95.5	--	--	4.6	--	4.6	4.5
Bibb	92.4	99.6	--	--	--	0.4	0.4	0.4
Bleckley	63.5	99.8	--	--	0.1	(1/)	0.1	0.2
Burke	249.5	100.0	--	--	0.1	(1/)	0.1	(2/)
Butts	67.0	99.1	--	--	0.6	(1/)	0.6	0.9
Calhoun	94.1	100.0	--	--	--	(1/)	(1/)	(2/)
Chattahoochee	92.7	72.0	--	35.7	--	0.4	36.1	28.0
Clay	73.3	100.0	--	--	--	--	--	--
Columbia	131.9	94.8	--	7.3	--	(1/)	7.3	5.2
Crawford	145.2	99.9	--	--	--	0.1	0.1	0.1
Dougherty	84.4	97.8	--	0.5	1.4	(1/)	1.9	2.2
Glascok	50.0	100.0	--	--	--	--	--	--
Greene	175.1	89.1	--	21.0	0.5	(1/)	21.5	10.9
Hancock	229.4	100.0	--	--	--	(1/)	(1/)	(2/)
Harris	241.0	97.6	--	--	5.9	0.1	6.0	2.4
Houston	119.0	97.5	--	3.1	--	(1/)	3.1	2.5
Jasper	153.9	86.0	--	25.0	--	(1/)	25.0	14.0
Jefferson	164.8	98.4	--	2.7	--	--	2.7	1.6
Jones	168.0	80.2	4.6	36.7	--	0.2	41.5	19.8
Lamar	68.9	99.9	--	--	--	0.1	0.1	0.1
Lee	88.8	99.6	--	0.1	0.3	--	0.4	0.4
Lincoln	72.5	78.5	--	19.8	--	--	19.8	21.5
McDuffie	89.4	86.5	--	13.9	--	--	13.9	13.5
Macon	134.7	99.9	--	--	--	0.2	0.2	0.1
Marion	174.9	99.8	--	0.4	--	(1/)	0.4	0.2
Monroe	206.6	100.0	--	--	--	(1/)	(1/)	(2/)
Morgan	124.4	95.6	--	0.3	5.3	0.1	5.7	4.4
Muscogee	15.2	16.5	--	77.2	--	--	77.2	83.5
Peach	37.5	99.7	--	--	0.1	(1/)	0.1	0.3
Pike	68.0	99.7	--	--	--	0.2	0.2	0.3
Pulaski	73.6	100.0	--	--	--	--	--	--
Putnam	140.4	76.1	--	30.2	13.8	0.1	44.1	23.9
Quitman	79.0	100.0	--	--	--	(1/)	(1/)	(2/)
Randolph	146.1	99.9	--	--	--	0.1	0.1	0.1
Richmond	84.8	71.7	--	32.3	1.2	(1/)	33.5	28.3
Schley	64.4	100.0	--	--	--	--	--	--
Stewart	207.8	100.0	--	--	--	0.1	0.1	(2/)
Sumter	137.8	99.8	--	0.1	(1/)	0.2	0.3	0.2
Talbot	212.3	100.0	--	--	--	--	--	--
Taliaferro	98.9	99.1	--	--	0.9	--	0.9	0.9
Taylor	167.9	99.9	--	--	--	0.1	0.1	0.1
Terrell	72.4	99.9	--	--	--	0.1	0.1	0.1
Twiggs	179.4	99.9	--	--	--	0.2	0.2	0.1
Upson	153.9	99.9	--	--	--	0.2	0.2	0.1
Warren	121.1	99.9	--	0.1	--	(1/)	0.1	0.1
Washington	273.5	100.0	--	--	--	0.1	0.1	(2/)
Webster	92.3	100.0	--	--	--	--	--	--
Wilkes	222.4	97.8	--	5.1	--	(1/)	5.1	2.2
Wilkinson	231.3	99.9	--	--	(1/)	0.3	0.3	0.1
Unit total	6,333.3	94.7	4.6	311.5	34.8	3.3	354.2	5.3

1/ Less than 50 acres.

2/ Less than 0.05 percent.

Table 30.--Net volume^{1/} of sawtimber by county and species group, 1952

(In million board feet)

County	Softwoods ^{2/}	Gum, maple and yellow-poplar ^{3/}	Other hardwoods	All species
Baldwin	83.6	13.5	16.5	113.6
Bibb	71.7	32.8	27.8	132.3
Bleckley	37.7	29.1	27.0	93.8
Burke	173.4	191.4	54.6	419.4
Butts	67.6	38.0	18.2	123.8
Calhoun	41.2	47.8	26.4	115.4
Chattahoochee	254.9	32.0	19.7	306.6
Clay	27.7	14.8	20.7	63.2
Columbia	94.9	24.3	32.3	151.5
Crawford	124.9	30.1	26.2	181.2
Dougherty	95.3	32.5	69.6	197.4
Glascocock	29.0	20.3	13.3	62.6
Greene	133.7	46.3	36.5	216.5
Hancock	121.9	87.7	20.2	229.8
Harris	199.7	31.4	25.6	256.7
Houston	102.9	141.4	86.1	330.4
Jasper	231.8	61.3	39.9	333.0
Jefferson	77.4	121.1	73.6	272.1
Jones	296.0	32.0	30.7	358.7
Lamar	48.5	8.9	8.4	65.8
Lee	46.7	25.8	24.3	96.8
Lincoln	38.5	12.7	11.6	62.8
McDuffie	48.6	59.8	5.7	114.1
Macon	74.8	150.1	68.3	293.2
Marion	58.2	69.6	29.0	156.8
Monroe	95.8	32.7	32.0	160.5
Morgan	105.2	78.0	20.4	203.6
Muscogee	148.5	22.3	8.7	179.5
Peach	36.4	19.2	10.9	66.5
Pike	31.3	22.0	5.3	58.6
Pulaski	75.6	36.3	21.4	133.3
Putnam	230.5	35.1	22.2	287.8
Quitman	39.4	13.0	13.2	65.6
Randolph	49.7	93.3	22.3	165.3
Richmond	69.7	66.7	26.8	163.2
Schley	20.9	28.1	11.8	60.8
Stewart	246.1	58.5	59.4	364.0
Sumter	43.9	119.4	39.0	202.3
Talbot	97.5	17.8	7.4	122.7
Taliaferro	49.5	23.1	5.7	78.3
Taylor	53.3	55.4	28.0	136.7
Terrell	40.9	62.2	16.4	119.5
Twiggs	196.5	56.0	49.9	302.4
Upton	90.7	17.2	54.3	162.2
Warren	58.9	40.6	17.1	116.6
Washington	162.0	110.0	76.2	348.2
Webster	35.3	38.8	27.4	101.5
Wilkes	253.5	35.6	46.2	335.3
Wilkinson	174.0	170.2	190.4	534.6
Unit total	4,985.7	2,606.2	1,624.6	9,216.5

^{1/} Log scale, International 1/4-inch rule.

^{2/} Includes pine, cypress, and cedar.

^{3/} Includes other soft-textured hardwoods.

Table 31.--Net volume^{1/} of sawtimber by county, broad species group, and diameter-class group, 1952

County	Softwoods		Hardwoods		Softwoods	Hardwoods
	9-14 inches	15+ inches	11-14 inches	15+ inches		
	<u>Million</u> <u>bd. ft.</u>	<u>Million</u> <u>bd. ft.</u>	<u>Million</u> <u>bd. ft.</u>	<u>Million</u> <u>bd. ft.</u>		
Baldwin	70.2	13.4	16.6	13.4	73.6	26.4
Bibb	50.2	21.5	26.8	33.8	54.2	45.8
Bleckley	27.9	9.8	22.3	33.8	40.2	59.8
Burke	117.8	55.6	119.7	126.3	41.3	58.7
Butts	58.0	9.6	17.9	38.3	54.6	45.4
Calhoun	31.1	10.1	32.3	41.9	35.7	64.3
Chattahoochee	144.1	110.8	30.0	21.7	83.1	16.9
Clay	26.7	1.0	19.0	16.5	43.8	56.2
Columbia	75.6	19.3	20.8	35.8	62.6	37.4
Crawford	103.5	21.4	28.7	27.6	68.9	31.1
Dougherty	69.9	25.4	29.6	72.5	48.3	51.7
Glascok	19.3	9.7	17.3	16.3	46.3	53.7
Greene	133.7	--	44.7	38.1	61.8	38.2
Hancock	119.4	2.5	69.9	38.0	53.0	47.0
Harris	170.4	29.3	34.3	22.7	77.8	22.2
Houston	62.5	40.4	77.6	149.9	31.1	68.9
Jasper	198.0	33.8	39.9	61.3	69.6	30.4
Jefferson	72.0	5.4	98.9	95.8	28.4	71.6
Jones	228.3	67.7	34.1	28.6	82.5	17.5
Lamar	43.4	5.1	10.5	6.8	73.7	26.3
Lee	39.2	7.5	25.5	24.6	48.2	51.8
Lincoln	30.5	8.0	12.3	12.0	61.3	38.7
McDuffie	41.7	6.9	30.7	34.8	42.6	57.4
Macon	40.5	34.3	92.5	125.9	25.5	74.5
Marion	56.4	1.8	49.1	49.5	37.1	62.9
Monroe	89.0	6.8	27.8	36.9	59.7	40.3
Morgan	99.6	5.6	32.7	65.7	51.7	48.3
Muscogee	78.0	70.5	15.0	16.0	82.7	17.3
Peach	27.7	8.7	13.8	16.3	54.7	45.3
Pike	27.2	4.1	20.0	7.3	53.4	46.6
Pulaski	48.7	26.9	26.3	31.4	56.7	43.3
Putnam	185.8	44.7	40.2	17.1	80.1	19.9
Quitman	35.9	3.5	15.0	11.2	60.1	39.9
Randolph	49.7	--	72.9	42.7	30.1	69.9
Richmond	55.9	13.8	39.9	53.6	42.7	57.3
Schley	20.0	0.9	13.7	26.2	34.4	65.6
Stewart	208.2	37.9	56.1	61.8	67.6	32.4
Sumter	31.1	12.8	58.5	99.9	21.7	78.3
Talbot	89.7	7.8	20.8	4.4	79.5	20.5
Taliaferro	41.5	8.0	14.8	14.0	63.2	36.8
Taylor	48.4	4.9	45.1	38.3	39.0	61.0
Terrell	27.1	13.8	39.0	39.6	34.2	65.8
Twiggs	153.0	43.5	61.1	44.8	65.0	35.0
Upson	72.0	18.7	26.5	45.0	55.9	44.1
Warren	49.6	9.3	28.1	29.6	50.5	49.5
Washington	132.8	29.2	93.9	92.3	46.5	53.5
Webster	28.9	6.4	38.1	28.1	34.8	65.2
Wilkes	221.0	32.5	50.0	31.8	75.6	24.4
Wilkinson	127.1	46.9	152.5	208.1	32.5	67.5
Unit total	3,978.2	1,007.5	2,002.8	2,228.0	54.1	45.9

^{1/} Log scale, International 1/4-inch rule.

Table 32.--Net volume^{1/} of all timber by county, pulping species group, and tree-diameter group, 1952

(In thousand cords)

GROWING STOCK

County	Yellow pines		Other softwoods		Soft-text. hdwds.		Hard-text. hdwds.		All species
	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	
Baldwin	303	97	--	--	89	22	59	32	602
Bibb	263	102	--	--	93	60	86	64	668
Bleckley	93	32	--	2	158	61	41	61	448
Burke	271	234	28	42	561	404	102	124	1,766
Butts	318	63	--	--	90	89	67	35	662
Calhoun	91	44	11	7	174	89	68	56	540
Chattahoochee	376	407	--	--	164	55	48	47	1,097
Clay	141	11	--	--	61	27	47	47	334
Columbia	516	106	--	--	60	49	113	81	925
Crawford	429	109	--	--	100	53	36	60	787
Dougherty	169	90	93	29	47	71	77	152	728
Glascok	99	40	--	--	79	39	58	27	342
Greene	672	55	--	--	160	88	90	65	1,130
Hancock	681	51	--	--	240	176	151	35	1,334
Harris	899	158	--	4	209	53	85	48	1,456
Houston	219	145	15	23	301	297	100	196	1,296
Jasper	863	234	4	--	254	129	148	83	1,715
Jefferson	251	51	21	16	424	200	125	163	1,251
Jones	973	361	--	--	103	46	24	78	1,585
Lamar	271	46	--	--	71	15	43	17	463
Lee	168	57	4	2	69	57	56	64	477
Lincoln	323	26	--	--	31	26	33	18	457
McDuffie	362	33	--	--	155	126	31	8	715
Macon	241	119	--	--	221	311	99	152	1,143
Marion	352	23	--	--	207	122	59	73	836
Monroe	758	53	--	--	159	68	94	76	1,208
Morgan	550	63	--	--	195	162	131	46	1,147
Muscogee	256	234	--	--	134	39	56	20	739
Peach	117	44	--	--	77	35	33	27	333
Pike	171	25	2	--	49	42	12	8	309
Pulaski	117	103	3	18	70	73	34	43	461
Putnam	888	241	--	--	110	56	78	43	1,416
Quitman	173	31	--	--	73	18	56	26	377
Randolph	233	24	--	--	346	191	45	50	889
Richmond	194	75	9	15	172	144	69	65	743
Schley	231	12	--	2	95	64	30	22	456
Stewart	805	259	--	--	232	108	141	119	1,664
Sumter	173	47	--	5	202	276	99	75	877
Talbot	550	68	--	--	55	35	107	10	825
Taliaferro	408	34	--	--	88	38	49	8	625
Taylor	357	30	--	--	200	103	94	52	836
Terrell	57	45	34	12	296	115	31	43	633
Twiggs	511	191	--	--	132	114	217	95	1,260
Upson	372	96	--	--	93	23	74	128	786
Warren	261	37	--	--	122	74	81	40	615
Washington	540	169	3	--	232	199	206	168	1,517
Webster	134	30	--	--	142	69	63	56	494
Wilkes	1,548	181	--	--	263	57	230	99	2,378
Wilkinson	467	167	68	18	418	336	323	435	2,232
Unit total	19,215	4,953	295	195	8,076	5,104	4,199	3,540	45,577

^{1/} Sound wood and bark.

Table 32.--Net volume^{1/} of all timber by county, pulping species group, and tree-diameter group, 1952 (cont'd.)

(In thousand cords)

OTHER MATERIAL

County	Yellow pines		Other softwoods		Soft-text. hdwds.		Hard-text. hdwds.		All species
	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	
Baldwin	40	24	--	--	13	12	28	14	131
Bibb	20	4	--	--	40	40	34	27	165
Bleckley	17	6	1	--	84	43	49	62	262
Burke	47	80	--	--	198	305	99	171	900
Butts	24	5	--	--	6	25	7	10	77
Calhoun	3	2	--	--	75	76	35	126	317
Chattahoochee	81	98	--	--	69	33	31	18	330
Clay	18	9	--	2	19	20	54	65	187
Columbia	110	27	--	--	34	28	78	28	305
Crawford	42	25	--	--	39	58	65	57	286
Dougherty	25	20	8	--	24	48	44	155	324
Glascok	4	3	--	--	33	21	49	22	132
Greene	123	4	--	--	68	82	89	59	425
Hancock	82	9	--	--	55	69	54	38	307
Harris	199	68	--	--	115	96	204	125	807
Houston	11	6	--	--	154	141	47	104	463
Jasper	87	54	--	1	22	39	84	42	329
Jefferson	51	30	8	--	138	194	149	146	716
Jones	119	68	--	--	62	34	30	59	372
Lamar	58	23	--	--	36	17	27	16	177
Lee	11	4	1	2	47	127	59	92	343
Lincoln	35	9	--	--	8	22	85	23	182
McDuffie	54	13	--	--	49	62	10	21	209
Macon	29	22	--	--	45	98	34	68	296
Marion	56	14	--	--	89	100	176	65	500
Monroe	131	43	--	--	36	64	59	37	370
Morgan	47	13	--	--	80	78	42	33	293
Muscogee	20	18	--	--	55	27	25	41	186
Peach	5	6	--	--	15	12	8	5	51
Pike	62	20	--	--	29	40	30	13	194
Pulaski	5	28	--	--	37	94	15	78	257
Putnam	260	87	--	4	46	16	59	32	504
Quitman	36	16	--	--	25	17	38	75	207
Randolph	58	46	--	--	104	136	50	107	501
Richmond	33	9	--	--	99	125	46	34	346
Schley	20	16	--	--	19	32	21	9	117
Stewart	47	38	--	--	48	117	122	72	444
Sumter	9	--	--	--	31	106	34	44	224
Talbot	144	33	--	5	72	76	77	33	440
Taliaferro	54	6	--	--	19	19	35	16	149
Taylor	20	4	--	--	60	77	113	66	340
Terrell	26	6	2	--	67	73	77	58	309
Twiggs	59	29	--	--	67	165	60	117	497
Upton	73	33	--	--	86	25	90	54	361
Warren	26	8	--	--	54	57	64	31	240
Washington	154	23	--	--	245	232	121	206	981
Webster	36	9	--	--	51	49	56	73	274
Wilkes	169	24	--	--	44	56	44	128	465
Wilkinson	62	20	3	--	123	183	124	308	823
Unit total	2,902	1,162	23	14	3,034	3,666	3,031	3,283	17,115

^{1/} Sound wood and bark.

Table 33.--Average annual sawtimber drain by county and species group^{1/}

(In thousand board feet)

County	Pine	Other softwoods	Soft-textured hardwoods	Hard-textured hardwoods	All species
Baldwin	9,641	--	97	106	9,844
Bibb	14,895	--	304	640	15,839
Bleckley	3,610	--	2,582	1,251	7,443
Burke	16,600	--	541	189	17,330
Butts	15,779	--	304	--	16,083
Calhoun	15,815	--	6,588	706	23,109
Chattahoochee	1,811	--	116	--	1,927
Clay	8,451	--	1,088	3,975	13,514
Columbia	16,425	--	3,163	--	19,588
Crawford	15,273	--	--	385	15,658
Dougherty	3,824	--	912	4,146	8,882
Glascocock	3,982	--	4,319	130	8,431
Greene	39,407	--	4,776	--	44,183
Hancock	26,197	--	1,805	--	28,002
Harris	40,861	--	1,579	--	42,440
Houston	9,353	427	1,019	3,190	13,989
Jasper	29,882	--	--	3,092	32,974
Jefferson	21,215	--	6,425	--	27,640
Jones	23,253	--	3,606	1,798	28,657
Lamar	12,628	--	4,079	1,307	18,014
Lee	2,637	--	2,038	2,137	6,812
Lincoln	12,572	--	273	--	12,845
McDuffie	7,750	--	3,419	--	11,169
Macon	10,136	--	2,757	--	12,893
Marion	19,120	--	953	128	20,201
Monroe	12,233	--	1,680	--	13,913
Morgan	54,951	--	3,124	320	58,395
Muscogee	9,661	--	275	96	10,032
Peach	4,205	--	445	98	4,748
Pike	20,904	--	9,593	782	31,279
Pulaski	7,511	--	5,639	--	13,150
Putnam	8,439	--	586	204	9,229
Quitman	10,063	--	1,862	3,365	15,290
Randolph	9,718	--	13,274	1,133	24,125
Richmond	4,761	241	4,831	1,269	11,102
Schley	10,580	--	--	--	10,580
Stewart	15,670	--	1,267	--	16,937
Sumter	22,952	--	2,353	--	25,305
Talbot	21,013	--	9,816	--	30,829
Taliaferro	12,394	--	--	173	12,567
Taylor	9,448	--	13,877	2,173	25,498
Terrell	3,097	--	7,350	--	10,447
Twiggs	41,780	452	2,956	1,497	46,685
Upton	10,111	--	2,197	--	12,308
Warren	19,836	--	6,994	--	26,830
Washington	38,861	--	13,536	3,608	56,005
Webster	5,501	--	4,375	872	10,748
Wilkes	42,081	--	10,591	--	52,672
Wilkinson	10,062	--	2,364	15,970	28,396
Unit total	786,949	1,120	171,728	54,740	1,014,537

^{1/} Estimates of timber drain by county are less accurate than inventory volumes, and use of individual county statistics should be avoided. For general use, data for a minimum of 10 counties should be combined.

Table 34.--Average annual drain on growing stock by county and species group^{1/}

(In thousand cords)

County	Pine	Other softwoods	Soft-textured hardwoods	Hard-textured hardwoods	All species
Baldwin	32	--	1	1	34
Bibb	46	--	1	3	50
Bleckley	10	--	9	4	23
Burke	45	--	5	3	53
Butts	46	--	1	--	47
Calhoun	47	--	19	2	68
Chattahoochee	5	--	1	--	6
Clay	23	--	3	11	37
Columbia	45	--	9	1	55
Crawford	47	--	--	1	48
Dougherty	16	--	2	13	31
Glascok	14	--	11	--	25
Greene	131	--	15	--	146
Hancock	87	--	11	2	100
Harris	139	--	4	3	146
Houston	22	1	3	8	34
Jasper	105	--	--	8	113
Jefferson	58	--	17	--	75
Jones	94	--	18	8	120
Lamar	37	--	11	6	54
Lee	7	--	5	6	18
Lincoln	47	--	1	--	48
McDuffie	26	--	9	--	35
Macon	30	--	7	--	37
Marion	52	--	5	2	59
Monroe	37	--	5	--	42
Morgan	177	--	8	2	187
Muscogee	34	--	3	1	38
Peach	11	--	1	--	12
Pike	58	--	26	4	88
Pulaski	19	--	14	--	33
Putnam	27	--	5	3	35
Quitman	26	--	6	9	41
Randolph	25	--	36	3	64
Richmond	20	1	13	3	37
Schley	36	--	--	--	36
Stewart	50	--	4	--	54
Sumter	62	--	7	--	69
Talbot	71	--	38	1	110
Taliaferro	60	--	--	1	61
Taylor	32	--	33	5	70
Terrell	8	--	19	--	27
Twiggs	115	1	8	4	128
Upson	33	--	7	--	40
Warren	67	--	18	--	85
Washington	106	--	35	10	151
Webster	16	--	11	2	29
Wilkes	139	--	26	--	165
Wilkinson	30	--	7	40	77
Unit total	2,470	3	498	170	3,141

^{1/} Estimates of timber drain by county are less accurate than inventory volumes, and use of individual county statistics should be avoided. For general use, data for a minimum of 10 counties should be combined.

DEFINITION OF TERMS

Land-Use Classes

Forest land: Includes (a) lands which are at least 10 percent stocked with trees of any size and capable of producing sawtimber or other wood products, and (b) lands from which the trees described in (a) have been removed to less than 10-percent stocking but which have not been developed for other use; subdivided into the following classes:

Commercial: Forest land which is (a) producing, or physically capable of producing, usable crops of wood (usually sawtimber), (b) economically available now or in the future, and (c) not withdrawn from timber use.

Noncommercial: Forest land (a) withdrawn from timber utilization through statute, ordinance, or administrative order but which otherwise qualifies as commercial forest land, and (b) incapable of yielding usable wood products (usually sawtimber) because of adverse site conditions, or so physically inaccessible as to be unavailable economically in the foreseeable future.

Nonforest land: Includes land in any of the following classes:

Active agriculture: Land under cultivation or in pasture including farm yards and work lots.

Pasture: Land under fence used primarily for grazing purposes where the timber has been cleared to less than 10-percent stocking and a real attempt to produce a sod has been made.

Idle agriculture: Land previously cultivated or pastured but now idle or abandoned and having less than a 10-percent stocking of forest trees.

Marsh: Low, wet areas characterized by a heavy growth of grass and reeds and an absence of timber.

Urban and other areas: Includes towns, residential and industrial suburban areas, school yards, cemeteries, roads, railroads, power lines, and other rights-of-way.

Water: Includes lakes, bays, and estuaries over 40 acres in size, and streams, canals, and sloughs at least one-eighth of a mile in width which are classed as "inland water" by the Bureau of the Census. Smaller lakes and ponds between one acre and 40 acres in size, and waterways between 120 feet and 660 feet in width, which are classed as land area by the Bureau of the Census, are also included as water areas.

Forest Types

Forest type is determined on the basis of cubic volume for all stand sizes except seedlings and saplings (stand size 4), in which case the number of stems are the criteria.

Pine types: Forests in which 50 percent or more of the stand is in pine species. Plurality of volume or number of trees is used to determine the specific type.

Oak-pine type: Forests in which 50 percent or more of the stand is hardwood, usually upland oaks, but in which southern yellow pines make up 25-49 percent of the stand.

Oak-hickory type

Upland hardwood: Forests in which 50 percent or more of the stand is composed of upland oak, hickory, yellow-poplar, maple, gum, and other hardwoods, except where pines comprise 25-49 percent of the stand.

Scrub oak: Upland forests in which 50 percent or more of the stand is composed of scrub oak species, except where pines comprise 25-49 percent of the stand.

Oak-gum-cypress type

Lowland hardwood: Bottomland forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, ash, oak, elm, maple, and associated species, except where pines comprise 25-49 percent of the stand.

Cypress: Bottomland forests in which 50 percent or more of the stand is cypress, except where pines comprise 25-49 percent of the stand.

Stand-Size Classes

Sawtimber: Stands containing at least 1,500 board feet net volume per acre, 1/4-inch log rule, in sound, live, softwood trees 9.0 inches d.b.h. or larger, or hardwood trees 11.0 inches d.b.h. or larger. Two classes of sawtimber stands are recognized:

Large sawtimber: Stands of sawtimber having more than 50 percent of the net board-foot volume in trees 15.0 inches d.b.h. or larger.

Small sawtimber: Stands of sawtimber having 50 percent or less of the net board-foot volume in trees 15.0 inches d.b.h. or larger.

Poletimber: Stands failing to meet the minimum sawtimber specifications, but at least 10-percent stocked with trees 5.0 inches d.b.h. or larger and with at least half the minimum stocking in pole-size trees.

Seedling and saplings: Stands not qualifying as sawtimber or poletimber stands, but having at least a 10-percent stocking of trees of commercial species and with half the minimum stocking in seedlings and saplings.

Nonstocked and other areas: Forest areas not qualifying as sawtimber, poletimber, or seedling and sapling stands.

Diameters

D.b.h. (diameter at breast height): Stem diameter in inches, outside bark, measured at 4-1/2 feet above the ground.

Diameter class: All trees were tallied by 2-inch diameter classes, each class including diameters 1.0 inch below and 0.9 inch above the stated midpoint, e.g., trees 7.0 to and including 8.9 inches are included in the 8-inch class. Corresponding limits apply to other diameter classes.

Timber Quality Classification

Growing Stock

Sawtimber trees: Live softwood trees at least 9.0 inches d.b.h. and hardwood trees at least 11.0 inches d.b.h., with not less than one merchantable log 12 feet long, or with less than 50 percent of the gross volume of the tree in sound sawtimber.

Poletimber trees: Straight-boled trees between 5.0 inches d.b.h. and sawtimber size.

Sapling-size trees: Trees 1.0 inch to 4.9 inches d.b.h. which will grow into poletimber or sawtimber size trees of sound quality.

Other Material

Sound cull trees: Live trees of all sizes that are unmerchantable for sawlogs now or prospectively because of species, poor form, excessive limbiness, or other sound defect.

Rotten cull trees: Live trees of all sizes that are unmerchantable for sawlogs now or prospectively because of rotten defect.

Hardwood limbs: The limb volume of all hardwood sawtimber and cull trees to a minimum diameter of 4.0 inches inside bark.

Species Groups

Yellow pines: Includes longleaf, slash, loblolly, pond, and shortleaf pine.

Other softwoods: Pondcypress, baldcypress, eastern redcedar, and Atlantic whitecedar.

Soft-textured hardwoods: Black and tupelo gum, yellow-poplar, sweetgum, cottonwood, soft maple, basswood, magnolia, sweetbay, and willow.

Hard-textured hardwoods: All of the oaks, hickories, ash, beech, elm, river birch, hackberry, sycamore, black locust, mulberry, black walnut, holly, dogwood, and persimmon.

Volume Estimates

Board-foot volume: The volume in board feet, measured by the International 1/4-inch rule, exclusive of defect, of that portion of sound sawtimber trees between the stump and the upper limit of merchantability for sawlogs.

Volume in cords: For sound trees the volume in standard cords (including bark) of the sound portion of trees 5.0 inches d.b.h. and larger, between stump and a minimum top-stem diameter of 4.0 inches inside bark. Similar volumes are given for cull trees. The volume in limbs, in sections four feet long and at least 4.0 inches in diameter inside bark, of all sawtimber size hardwoods is shown separately.

Volume in cubic feet: Same as volume shown in cords except bark is not included.

International 1/4-inch log rule: A rule for estimating the board-foot volume of 4-foot log sections, according to the formula $V = .905 (0.22D^2 - 0.71D)$. The taper allowance for computing the volume in log lengths greater than four feet is 0.5 inch per 4-foot section. Allowance for saw kerf is 1/4 inch.

Standard cord: A stacked pile, 4 x 4 x 8 feet, of round or split bolts, estimated to contain, on the average, about 73 cubic feet of solid wood.

Stocking

Stocking is the extent to which growing space is effectively utilized by trees. The number of stems present by d.b.h. classes was used as a basis for stocking classification. Areas having the minimum numbers of trees listed below, either in a single diameter class or proportionately in any combinations of diameter classes, were considered fully stocked.

<u>D.b.h.</u>	<u>Minimum number trees per acre</u>
Seedlings	1,000
2 inches	800
4 inches	590
6 inches	400
8 inches	240
10 inches	155
12 inches	115
14 inches	90

Growth and Drain

Net growth.--The estimated volume of net growth includes the growth on the present growing stock plus the ingrowth accrual resulting from smaller trees reaching volume size. It excludes mortality, or loss of volume in trees dying from natural causes. Net growth estimates are based on the volume or number of sound trees. Other material is not included.

In board feet: The change during the calendar year in sawtimber volume resulting from growth, ingrowth, and mortality losses.

In cubic feet or cords: The change during the calendar year in the volume of all sound trees 5.0 inches and larger resulting from growth, ingrowth, and mortality losses.

Timber drain.--The volume of timber drain is based on the measurement and tally of stumps found on regular ground sample plots. Stumps of all trees cut during the past three-year period are recorded and the measurements are converted into equivalent tree volume. The average volume of drain for the three-year period is then taken as the annual estimate. Board-foot drain volumes include the sawlog portion of all sawtimber size trees which were cut. Drain in cubic feet or cords includes the entire stem from stump to 4.0-inch top of all sound trees 5.0 inches in diameter and larger.

RELIABILITY OF FOREST SURVEY DATA

In general, the errors which affect the accuracy of Forest Survey area and timber volume estimates arise from two sources. These may be described as (1) sampling errors which result from using sampling procedures rather than making a complete inventory or canvass, and (2) non-sampling errors which arise from human mistakes in judgment, measurement, recording, or arithmetic.

In Forest Survey work a diligent effort is made to maintain a high degree of accuracy in the collection and compilation of data. The sampling errors are held to a specified minimum through survey design and sampling technique. These errors are the only measurable errors involved in computing the reliability of the data. The nonsampling errors are minimized or eliminated through training, supervision, field check cruises, and complete editing and machine verification in compiling the data.

Forest area.--The sampling intensity of the 1952 survey was sufficient to provide an estimate of the total forest acreage in the Unit with a standard error of ± 0.4 percent. The probabilities are two out of three that the estimated forest acreage is within ± 0.4 percent of the actual acreage.

Cubic volume.--The standard error of the 1952 net cubic-foot volume in the Unit was ± 2.0 percent. Here again, the probabilities are two out of three that the estimated volume does not vary from the actual volume by more than this percentage. The standard error of the volume in cords was not computed but it should be approximately the same.

Board-foot volume.--The standard error of the 1952 estimate of board-foot volume in the Unit was ± 2.3 percent.

Use of county data.--The tables showing area and timber volumes by county are included to permit grouping of the data in any desired combinations. The survey was designed so that the number of sample plots taken in each county would provide an estimate of the timber volume in cubic feet which would not exceed ± 15 percent. The actual range of error of the cubic volume estimates by county is from ± 11.2 percent to ± 14.9 percent. The errors of board-foot volume estimates by county range from ± 11.5 percent to ± 18.0 percent, and of forest area from ± 5.6 percent to ± 12.0 percent.

In spite of the accuracy limit set on volume estimates by county, comparison of individual county statistics may be subject to considerable error and should be avoided. Grouping the data for a number of counties will increase the reliability and make the combined estimates sufficiently accurate for general use. For example, grouping the growing stock volume data for four counties with errors ranging from 11 to 15 percent resulted in a total volume estimate with only 7 percent error.

HOW THE FOREST INVENTORY IS MADE

The present system of inventory is a two-step method which includes land-use classification of points on aerial photographs followed by the cruising of ground sample plots. The county is the basic work unit. The detailed procedure is as follows:



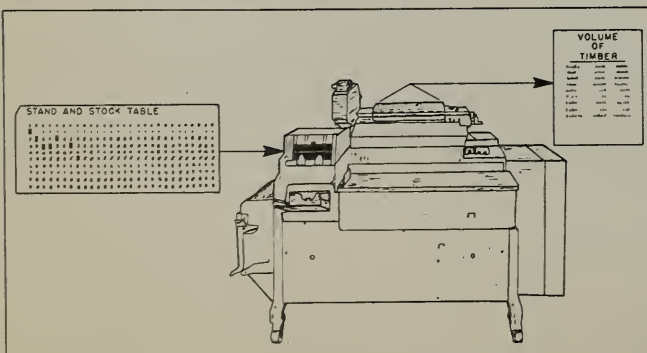
1. Preliminary estimates of the acreage of land in forests and other land-use classes are obtained by classifying points printed on every third aerial photograph in alternate flight lines within a county. The proportion of points falling in each class is used to estimate the acreage. This estimate is later checked and revised through the use of ground plots.



2. Ground sample plots are selected in a systematic manner from the forest land classifications made in Step 1, using an interval which will provide sufficient plots to meet established limits of error per billion cubic feet of timber. This results in a proportional sample of all existing timber stands. Timber cruisers make a detailed description and tally of the ground plots to obtain data on timber volume, quality, stocking, and mortality. Samples of agricultural and other photo classifications are also checked on the ground to verify or adjust the area estimates based on these classifications.



3. Growth estimates are based on increment borings taken proportionally from sample trees of various diameters and species in each forest type and stand class. The volume of timber drain is computed from a tally of the stumps of trees cut on the plots during a specified period.



4. All field data are sent to Asheville for editing and are placed on punch cards for machine sorting and tabulation. Final estimates are based on statistical summaries of the data.

FOREST SURVEY REPORTS PUBLISHED SINCE 1945

Southeastern Forest Experiment Station

- No. 21 - 1945 Pulpwood Production by County in the Carolinas and Virginia
No. 22 - Southern Forests as a Source of Pulpwood
No. 23 - 1946 Pulpwood Production by County in the Southeast
No. 24 - Southern Pulpwood Production and the Timber Supply
No. 25 - Forest Resources of the Lower Coastal Plain of South Carolina
No. 26 - 1946 Commodity Drain by County from South Carolina Forests
No. 27 - 1947 Pulpwood Production by County in the Southeast
No. 28 - South Carolina's Forest Resources, 1947
No. 29 - 1948 Pulpwood Production by County in the Southeast
No. 30 - Forest Resources of Northeast Florida, 1949
No. 31 - Forest Resources of Central Florida 1949
No. 32 - Forest Resources of Northwest Florida, 1949
No. 33 - Forest Resources of South Florida, 1949
No. 34 - Timber Production and Commodity Drain from Florida's Forests,
1948
No. 36 - Forest Statistics for Florida, 1949
No. 37 - Forest Statistics for Southwest Georgia, 1951
No. 38 - 1951 Pulpwood Production in the South
No. 39 - Forest Statistics for Southeast Georgia, 1952

OTHER BULLETINS

- Pulpwood Production in the South, 1950. Forest Survey Release No. 69
1952 Pulpwood Production in the South. Forest Survey Release No. 72
Virginia Forest Resources and Industries, 1949. U. S. Dept. Agr. Misc.
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The Timber Supply Outlook in South Carolina, 1951. U. S. Dept. Agr.
Resource Report No. 3
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Report No. 6

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