

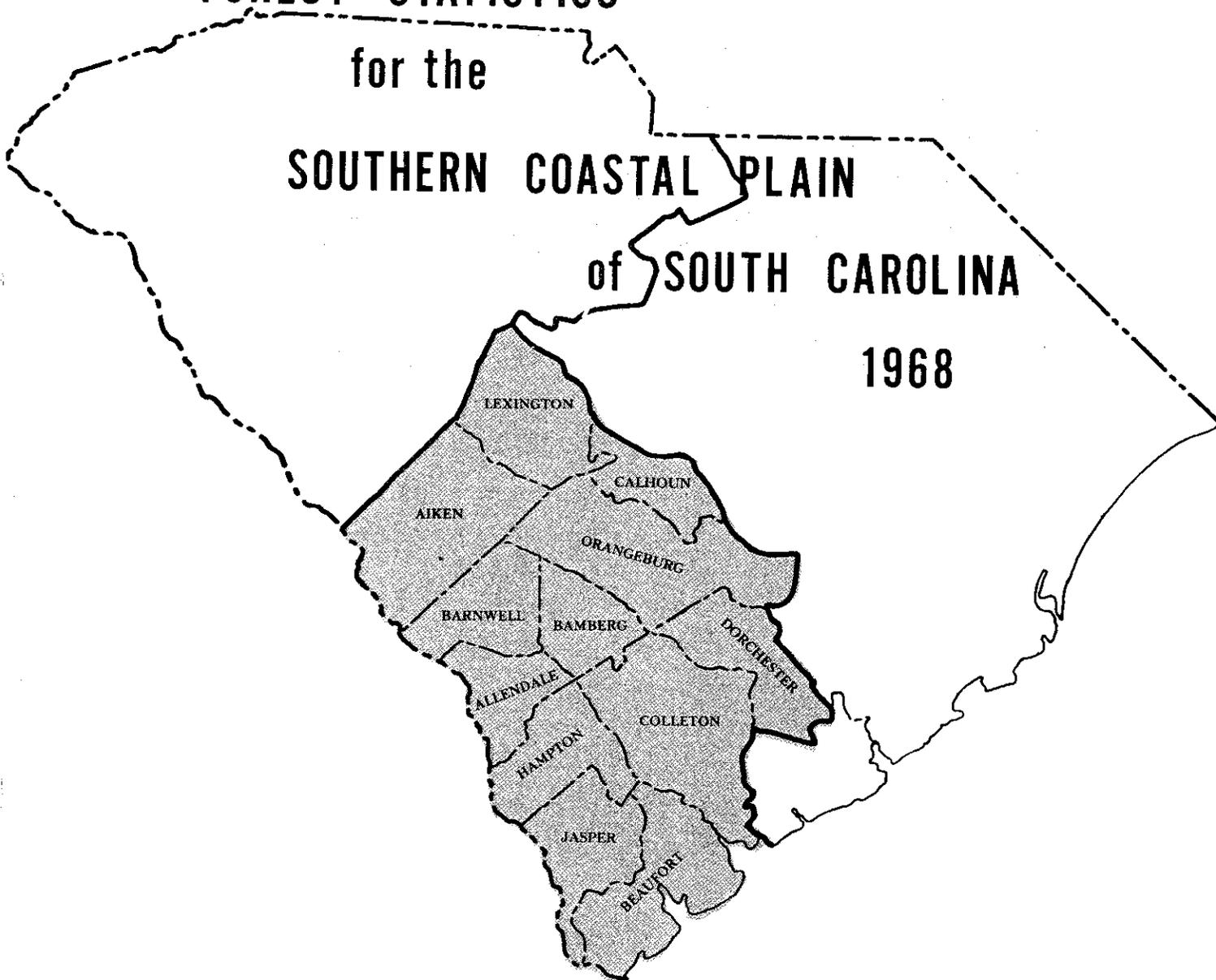
FOREST STATISTICS

for the

SOUTHERN COASTAL PLAIN

of SOUTH CAROLINA

1968



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
SOUTHEASTERN FOREST EXPERIMENT STATION
ASHEVILLE, NORTH CAROLINA

FOREWORD

This report highlights the principal findings of the fourth Forest Survey in the Southern Coastal Plain of South Carolina, completed in July 1968. Findings of the three earlier surveys, completed in 1936, 1947, and 1958, provide the basis for measuring the changes that have occurred and the trends that have developed over the past 30 years.

Forest Survey, authorized by the McSweeney-McNary Forest Research Act of May 22, 1928, as amended, is a continuing nationwide undertaking by the regional experiment stations of the U. S. Forest Service. In Florida, Georgia, North Carolina, South Carolina, and Virginia, Forest Survey is an activity of the Southeastern Forest Experiment Station, with headquarters at Asheville, North Carolina. The general objective is to inventory periodically forest lands, their extent, condition, and volume of timber, and to ascertain rates of forest growth and depletion. It is necessary to keep this basic information up to date to provide a sound basis for the formulation of forest policies and programs.

The 12-county area covered by this report is one of three Survey units in South Carolina. Similar reports for the Piedmont and Northern Coastal Plain have been published, and copies are available at the Southeastern Station. A Statewide statistical report is now being prepared and will contain additional data along with a comprehensive analysis of the findings.

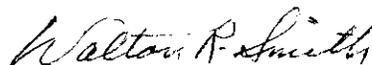
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by

NOEL D. COST, ASSOCIATE RESOURCE ANALYST

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HIGHLIGHTS

Since 1958 in the Southern Coastal Plain of South Carolina--

- area of commercial forest has increased by 156,500 acres, or 5 percent. Commercial forest land totals almost 3.3 million acres, or 63 percent of the total land area. Especially noticeable is the reversion of over 250,000 acres of former agricultural lands to forest. In contrast, over 104,000 acres of commercial forest were lost to other land uses. Most of this loss was to agricultural uses, but over one-third went to urban development.
- area in pine and oak-pine cover types has increased 14 percent and now makes up about 55 percent of the commercial forest. In contrast, the area in hardwood cover types has decreased almost 4 percent. Oak-gum-cypress, with over 800,000 acres, is the leading cover type, followed by loblolly pine, which occupies slightly over 500,000 acres.
- area of commercial forest land owned by farm operators decreased 13 percent while miscellaneous private holdings increased 88 percent. Commercial forest land owned by farm operators was reduced by 245,000 acres, most of which presumably shifted to the miscellaneous private category. Collectively, farmers and miscellaneous private owners now own 2.6 million acres, or 80 percent of the commercial forest. Area in public ownership is up slightly, and forest industry holdings have declined.
- sapling and seedling stands have increased by 167,700 acres, largely the result of natural reversion and planting. Acreage in pole timber stands has remained about the same, and saw timber stands have increased by 87,000 acres. The area in nonstocked forest land is down from 355,600 to 227,000 acres. About 15 percent of all stands in this 12-county area originated wholly or in part from artificial regeneration.
- average stand density, measured in basal area per acre, of all live trees 5.0 inches d.b.h. and larger has increased from 47 to 54 square feet. Still, only one acre in eight is fully stocked with growing-stock trees, and over one-third of the stands are poorly stocked. This indicates that the current net growth, which averages about 50 cubic feet per acre annually, could be increased substantially.
- volume of softwood growing stock, primarily pine, increased from 1.2 to 1.5 billion cubic feet, or almost 29 percent, reversing a downward trend in softwood volume between 1947 and 1958. Volume of softwood saw timber is up almost 24 percent compared to a 7-percent de-

crease between 1947 and 1958. Most of the recent increase in sawtimber volume was in loblolly and longleaf pines. In pole-timber trees, loblolly and slash pine accounted for most of the increase in volume, largely in the form of ingrowth from some of the older pine plantations.

--volume of hardwood growing stock has continued to increase, and at a faster rate than between the two previous surveys. Volume of hardwood growing stock is up 10 percent, compared to a 2-percent increase between 1947 and 1958. Volume of hardwood sawtimber is up 9 percent, which reverses a downward trend in hardwood sawtimber volume between 1947 and 1958. The red oaks as a group made up most of the increase. Tupelo and blackgum, however, which are the leading hardwood species in the area in terms of volume, made very small gains.

In 1967--

--public and forest industry holdings produced almost 29 percent of the net growth of growing stock, although these holdings account for only 20 percent of the area of commercial forest land. This indicates that these lands are responding to somewhat more intensive management than is generally practiced on the farmer and miscellaneous private holdings. This finding also emphasizes, however, that collectively, the farmer and miscellaneous private lands still provide 71 percent of the net growth.

--net growth of growing stock exceeded removals by an estimated 51.2 million cubic feet, or 46 percent. Over 60 percent of this growth over removal was pine, about 21 percent was oak, with cypress and miscellaneous hardwood species accounting for the remaining 19 percent. By ownership, 65 percent of the excess growth was on farmer and miscellaneous private holdings, 18 percent on public holdings, and the remaining 17 percent on forest industry lands.

--net growth of sawtimber exceeded removals by an estimated 157.3 million board feet, or 39 percent. The breakdowns of this surplus growth by species and ownership follow closely the breakdowns of growing stock.

--mortality of growing stock was estimated to total 24.7 million cubic feet, which reduced the gross growth by about 13 percent. Over two-thirds of the mortality was hardwood, and suppression and climatic factors were the leading identifiable causes of death.

HOW THE FOREST SURVEY IS MADE

The method of survey is essentially a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented to permit adding any combination of counties together until the total is large enough to meet the desired degree of reliability. The basic steps of the survey procedure were as follows:

1. Initial estimates of forest and nonforest areas were based on the classification of 30,219 sample points systematically spaced on the latest aerial photographs available.
2. The initial estimates of area by land-use class were either verified or adjusted on the basis of a ground check at 1,789 of these sample points.
3. Estimates of timber volume and forest classifications were based on measurements recorded at 1,144 of the ground check locations which fell within commercial forest land. A 10-point cluster of plots systematically spaced on an acre were measured at each of these sample locations using a basal area factor of 37.5 square feet per acre. Trees less than 5.0 inches d.b.h. were tallied on fixed-radius plots around the point centers.
4. Equations prepared from detailed measurements collected on the trees tallied at one out of every 20 sample locations were used to compute the volumes of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on standing trees required to construct the volume equations. The same 5-percent subsample of plots used for the tree-volume study also served as a quality control of field measurements. Felled trees were measured at active cutting operations to provide utilization factors for product and species groups and to supplement the standing tree-volume study.
5. Permanent sample plots established in 1958 were reconstructed where possible, and their remeasurement provided the primary estimates of growth, removal, and mortality.
6. Ownership information was collected from local contacts, correspondence, and public records. In those counties where the sample missed a particular ownership class, temporary sample plots were added and measured to describe the forest conditions within the ownership class.

7. All field data were sent to Asheville for editing and were punched in cards and stored on magnetic tape for machine computing, sorting, and tabulation. Final estimates were based on statistical summaries of the data.

RELIABILITY OF THE DATA

Statistical analysis of these data indicates a sampling error of ± 0.8 percent for the estimate of total commercial forest area, 3.2 percent for total cubic volume, and 2.7 percent for cubic growth. As these totals are broken down by county, forest type, species, tree diameter, and other subdivisions, the sampling error increases. The order of this increase is suggested in the following tabulation which shows the sampling error to which the estimates are liable, in terms of one standard error.

Forest area	Sampling error ^{1/}	Cubic volume	Sampling error ^{1/}	Net cu.-ft. growth	Sampling error ^{1/}
<u>Thousand acres</u>	<u>Percent</u>	<u>Million cu. ft.</u>	<u>Percent</u>	<u>Million cu. ft.</u>	<u>Percent</u>
3,269.4	0.8				
2,092.4	1.0				
523.1	2.0			163.4	2.7
232.5	3.0	3,281.7	3.2	132.4	3.0
130.8	4.0	2,100.3	4.0	74.4	4.0
83.7	5.0	1,344.2	5.0	47.6	5.0
20.9	10.0	336.0	10.0	11.9	10.0
9.3	15.0	149.4	15.0	5.3	15.0
5.2	20.0	84.0	20.0	3.0	20.0
3.3	25.0	53.8	25.0	1.9	25.0

^{1/} By random-sampling formula.

DEFINITIONS OF TERMS

Acceptable trees.--Growing-stock trees of commercial species that meet specified standards of size and quality, but not qualifying as desirable trees.

Basal area.--The area in square feet of the cross section at breast height of a single tree or of all the trees in a stand usually expressed as square feet of basal area per acre.

Commercial forest land.--Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization.

Commercial species.--Tree species presently or prospectively suitable for industrial wood products.

Cropland.--Land under cultivation within the past 24 months, including orchards and land in soil-improving crops, but excluding land cultivated in developing improved pasture. Also includes idle farmland.

Desirable trees.--Growing-stock trees of commercial species having no serious defects in quality limiting present or prospective use for timber products, of relatively high vigor, and containing no pathogens that may result in death or serious deterioration before rotation age.

Diameter class.--A classification of trees based on diameter outside bark, measured at breast height ($4\frac{1}{2}$ feet above the ground). D.b.h. is the common abbreviation for "diameter at breast height." Two-inch diameter classes are commonly used in Forest Survey, with the even inch the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h., inclusive.

Farm.--Either a place operated as a unit of 10 or more acres from which the sale of agricultural products totaled \$50 or more annually, or a place operated as a unit of less than 10 acres from which the sale of agricultural products for the year amounted to at least \$250.

Farm operator.--A person who operates a farm, either doing the work himself or directly supervising the work.

Farmer-owned lands.--Lands owned by farm operators.

Forest industry lands.--Lands owned by companies or individuals operating wood-using plants.

Forest land.--Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Forest type.--A classification of forest land based upon the species forming a plurality of live-tree stocking.

White pine-hemlock.--Forests in which eastern white pine or hemlock, singly or in combination, comprises a plurality of the stocking. (Common associates include birch and maple.)

Longleaf-slash pine.--Forests in which longleaf or slash pine, singly or in combination, comprises a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Loblolly-shortleaf pine.--Forests in which loblolly pine, shortleaf pine, or other southern yellow pines, except longleaf or slash pine, singly or in combination, comprises a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Oak-pine.--Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking but in which pines comprise 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

Oak-hickory.--Forests in which upland oaks or hickory, singly or in combination, comprise a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut.)

Oak-gum-cypress.--Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprises a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

Elm-ash-cottonwood.--Forests in which elm, ash, or cottonwood, singly or in combination, comprises a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple.)

Gross growth.--Annual increase in net volume of trees in the absence of cutting and mortality.

Growing-stock trees.--Live trees of commercial species qualifying as desirable or acceptable trees.

Growing-stock volume.--Net volume in cubic feet of growing-stock trees 5.0 inches d.b.h. and over from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs.

Hardwoods.--Dicotyledonous trees, usually broad-leaved and deciduous.

Soft hardwoods.--Soft-textured hardwoods such as boxelder, red and silver maple, buckeye, hackberry, loblolly-bay, silverbell (in mts.), butternut, sweetgum, yellow-poplar, cucumbertree, magnolia, sweetbay, water tupelo, blackgum, sycamore, cottonwood, black cherry, willow, basswood, and elm.

Hard hardwoods.--Hard-textured hardwoods such as Florida and sugar maple, birch, hickory, dogwood, persimmon (forest grown), beech, ash, honeylocust, holly, black walnut, mulberry, all commercial oaks, and black locust.

Idle farmland.--Includes former croplands, orchards, improved pastures and farm sites not tended within the past two years, and presently less than 16.7 percent stocked with trees.

Improved pasture.--Land currently improved for grazing by cultivation, seeding, irrigation, or clearing of trees or brush.

Industrial wood.--All roundwood products except fuelwood.

Land area.

Bureau of the Census.--The area of dry land and land temporarily or partly covered by water such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide); streams, sloughs, estuaries, and canals less than 1/8 of a statute mile in width; and lakes, reservoirs, and ponds less than 40 acres in area.

Forest Survey.--The same as the Bureau of the Census, except minimum width of streams, etc., is 120 feet, and minimum size of lakes, etc., is 1 acre.

Logging residues.--The unused portions of trees cut or killed by logging.

Miscellaneous Federal lands.--Federal lands other than National Forests, lands administered by the Bureau of Land Management, and Indian lands.

Miscellaneous private lands - corporate.--Lands owned by private corporations other than forest industry.

Miscellaneous private lands - individual.--Privately owned lands other than forest-industry, farmer-owned, or corporate lands.

Mortality.--Number or sound-wood volume of live trees dying from natural causes during a specified period.

National Forest land.--Federal lands which have been legally designated as National Forests or purchase units, and other lands under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Net annual growth.--The increase in volume of a specified size class for a specific year.

Net volume.--Gross volume less deductions for rot, sweep, or other defect affecting use for timber products.

Noncommercial forest land.--(a) Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions, and (b) productive-reserved forest land.

Noncommercial species.--Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

Nonforest land.--Land that has never supported forests and lands formerly forested where use for timber management is precluded by development for other uses.

Nonstocked land.--Commercial forest land less than 16.7 percent stocked with growing-stock trees.

Other Federal lands.--Federal lands other than National Forests, including lands administered by the Bureau of Land Management, Bureau of Indian Affairs, and other Federal agencies.

Other public lands.--Publicly-owned lands other than National Forests.

Overstocked areas.--Areas where growth of trees is significantly reduced by excessive numbers of trees.

Poletimber trees.--Growing-stock trees of commercial species at least 5.0 inches in d.b.h. but smaller than sawtimber size.

Productive-reserved forest land.--Forest land sufficiently productive to qualify as commercial forest land, but withdrawn from timber utilization through statute or administrative designation.

Rangeland.--Land on which the natural plant cover is composed principally of native grasses, forbs, or shrubs valuable for forage.

Rotten trees.--Live trees of commercial species that do not contain at least one 12-foot saw log now or prospectively and/or do not meet Regional specifications for freedom from defect primarily because of rot.

Rough trees.--(a) Live trees of commercial species that do not contain at least one 12-foot saw log now or prospectively and/or do not meet Regional specifications for freedom from defect primarily because of roughness or poor form, and (b) all live trees of noncommercial species.

Salvable dead trees.--Standing or down dead trees that are considered merchantable by Regional standards.

Saplings.--Live trees 1.0 inch to 5.0 inches in diameter at breast height.

Saw log.--A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods), or other combinations of size and defect specified by Regional standards.

Saw-log portion.--That part of the bole of sawtimber trees between the stump and the saw-log top.

Saw-log top.--The point on the bole of sawtimber trees above which a saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber trees.--Live trees of commercial species containing at least a 12-foot saw log and meeting Regional specifications for freedom from defect. Softwoods must be at least 9.0 inches and hardwoods at least 11.0 inches in diameter at breast height.

Sawtimber volume.--Net volume of the saw-log portion of live sawtimber in board-foot International 1/4-inch rule.

Seedlings.--Live trees less than 1.0 inch in diameter at breast height that are expected to survive according to Regional standards.

Site class.--A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully stocked natural stands.

Class 1.--Sites capable of producing 165 or more cubic feet per acre annually.

Class 2.--Sites capable of producing 120 to 165 cubic feet per acre annually.

Class 3.--Sites capable of producing 85 to 120 cubic feet per acre annually.

Class 4.--Sites capable of producing 50 to 85 cubic feet per acre annually.

*Class 5.--Sites incapable of producing 50 cubic feet per acre annually, but excluding unproductive sites.

Softwoods.--Coniferous trees, usually evergreen, having needles or scale-like leaves.

Pines.--Yellow pine species which include loblolly, longleaf, slash, shortleaf, pitch, Virginia, Table-Mt., sand, and spruce pine.

Other softwoods.--White pine, hemlock, cypress, eastern redcedar, white-cedar, spruce, and fir.

Stand-size class.--A classification of forest land based on the size class of growing-stock trees on the area.

Sawtimber stands.--Stands at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.--Stands at least 16.7 percent stocked with growing-stock trees of which half or more of this stocking is in poletimber and/or sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands.--Stands at least 16.7 percent stocked with growing-stock trees of which more than half of the stocking is saplings and/or seedlings.

State, county, and municipal lands.--Lands owned by States, counties, and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

Stocking.--The degree of occupancy of land by trees, measured by basal area and/or the number of trees in a stand and spacing in the stand, compared to a minimum standard of 75 square feet of basal area per acre to fully utilize the growth potential of the land.

Timber removals.--The net volume of growing-stock trees removed from the inventory by harvesting; cultural operations, such as stand improvement; land clearing, or changes in land use.

Unproductive forest land.--Forest land incapable of producing 20 cubic feet per acre of industrial wood under natural conditions, because of adverse site conditions.

Upper-stem portion.--That part of the bole of sawtimber trees above the saw-log top to a minimum top diameter of 4.0 inches outside bark or to the point where the central stem breaks into limbs.

Urban and other areas.--Areas within the legal boundaries of cities and towns; suburban areas developed for residential, industrial, or recreational purposes; school yards; cemeteries; roads; railroads; airports; beaches; powerlines and other rights-of-way; or other nonforest land not included in any other specified land use class.

Water.

Bureau of the Census.--Streams, sloughs, estuaries, and canals more than 1/8 of a statute mile in width; and lakes, reservoirs, and ponds more than 40 acres in area.

Forest Survey.--The same as Census except minimum width of streams, etc., is 120 feet and minimum size of lakes, etc., is 1 acre.

Conversion factors:

Cubic feet of wood per average cord
(excluding bark)

D.b.h. class	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
6	60.5	61.0	69.0	59.8	59.5
8	68.3	67.9	76.3	68.2	68.1
10	73.4	73.0	81.3	73.2	73.2
12	76.9	76.5	85.2	76.3	76.3
14	79.3	79.3	88.0	78.3	78.3
16	81.0	81.5	90.4	79.7	79.7
18	82.1	83.2	92.2	80.7	80.7
20	82.9	84.7	93.7	81.5	81.5
22	83.9	86.6	96.2	82.4	82.6
24+	85.9	89.8	101.8	83.7	83.8
Average	75.4	74.5	86.5	75.1	75.1

COUNTY TABLES

The county tables are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey in the Southern Coastal Plain of South Carolina was intended primarily to furnish inventory data for the Unit as a whole, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulation on page 4.

Table 1.--Area, by land class and county, 1968

County	All land ^{1/}	Forest land			Nonforest land ^{1/}	
		Total	Commercial forest	Unproductive forest		Productive reserved
----- Thousand acres -----						
Aiken	701.7	512.4	512.1	--	0.3	189.3
Allendale	267.5	160.6	160.6	--	--	106.9
Bamberg	252.8	152.5	152.1	--	0.4	100.3
Barnwell	350.9	243.2	240.7	2.2	0.3	107.7
Beaufort	376.3	157.0	153.9	--	3.1	219.3
Calhoun	241.3	134.1	134.1	--	--	107.2
Colleton	670.7	484.5	484.5	--	(3/)	186.2
Dorchester	364.1	263.2	262.9	--	0.3	100.9
Hampton	359.7	243.8	243.8	--	--	115.9
Jasper	423.7	312.9	312.9	--	--	110.8
Lexington	453.1	264.6	264.6	--	--	188.5
Orangeburg	707.2	347.8	347.2	--	0.6	359.4
Total	5,169.0	3,276.6	3,269.4	2.2	5.0	1,892.4

^{1/} From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

^{2/} Includes 48,600 acres of water according to Survey standards of area classification but defined by the Bureau of the Census as land.

^{3/} Less than 50 acres.

Table 2.--Area of commercial forest land, by ownership class and county, 1968

County	All ownerships	Ownership class									
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry	Farmer	Miscellaneous private Corporate	Individual		
		Thousand acres									
Aiken	512.1	--	67.8	1.0	0.7	26.6	236.5	34.2	145.3		
Allendale	160.6	--	3.9	(1/)	--	47.6	90.1	--	19.0		
Bamberg	152.1	--	--	--	(1/)	16.8	110.5	--	24.8		
Barnwell	240.7	--	111.6	0.7	(1/)	7.4	72.6	--	48.4		
Beaufort	153.9	--	3.1	2.0	0.8	22.5	64.2	--	61.3		
Calhoun	134.1	--	--	1.2	(1/)	4.0	103.1	2.9	22.9		
Colleton	484.5	--	--	0.7	1.7	89.7	279.0	3.0	110.4		
Dorchester	262.9	--	--	1.4	1.2	83.0	133.6	13.7	30.0		
Hampton	243.8	--	--	4.5	0.3	60.2	73.8	2.8	102.2		
Jasper	312.9	--	--	--	--	63.5	97.0	--	152.4		
Lexington	264.6	--	--	0.6	0.3	5.1	178.1	5.8	74.7		
Orangeburg	347.2	--	0.6	5.8	(1/)	28.7	247.4	--	64.7		
Total	3,269.4	--	187.0	17.9	5.0	455.1	1,685.9	62.4	856.1		

1/ Less than 50 acres.

Table 3.--Area of commercial forest land, by forest-type group and county, 1968

County	All type groups	Forest-type groups										Thousand acres
		White pine-hemlock	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood				
Aiken	512.1	--	138.5	104.4	70.1	147.7	48.5	2.9				
Allendale	160.6	--	25.3	48.5	34.3	21.3	10.1	21.1				
Bamberg	152.1	--	28.6	24.2	30.4	15.9	53.0	--				
Barnwell	240.7	--	75.9	38.4	32.5	42.6	51.3	--				
Beaufort	153.9	--	15.4	27.0	29.2	42.7	39.6	--				
Calhoun	134.1	--	23.7	37.2	11.5	31.5	27.3	2.9				
Colleton	484.5	--	72.7	109.4	58.6	66.2	169.5	8.1				
Dorchester	262.9	--	32.7	52.8	53.2	13.7	107.8	2.7				
Hampton	243.8	--	51.8	52.3	24.7	14.2	100.8	--				
Jasper	312.9	--	70.2	46.1	71.0	43.2	50.1	32.3				
Lexington	264.6	--	45.0	62.4	40.8	98.0	12.6	5.8				
Orangeburg	347.2	--	41.9	58.4	48.5	62.5	135.9	--				
Total	3,269.4	--	621.7	661.1	504.8	599.5	806.5	75.8				

Table 4.--Area of commercial forest land, by stand-size class and county, 1968

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling and seedling	
----- Thousand acres -----					
Aiken	512.1	147.6	111.7	147.4	105.4
Allendale	160.6	66.9	47.5	43.8	2.4
Bamberg	152.1	64.0	29.4	58.7	--
Barnwell	240.7	65.4	78.8	76.5	20.0
Beaufort	153.9	74.0	23.1	45.1	11.7
Calhoun	134.1	66.2	38.4	26.6	2.9
Colleton	484.5	189.3	131.2	157.9	6.1
Dorchester	262.9	155.7	40.5	61.2	5.5
Hampton	243.8	107.3	59.7	68.8	8.0
Jasper	312.9	136.0	68.4	106.9	1.6
Lexington	264.6	102.5	51.7	49.8	60.6
Orangeburg	347.2	167.0	84.0	93.4	2.8
Total	3,269.4	1,341.9	764.4	936.1	227.0

Table 5.--Area of commercial forest land, by site class and county, 1968

County	All classes	Site class				
		1	2	3	4	5
----- Thousand acres -----						
Aiken	512.1	--	2.8	27.2	218.5	263.6
Allendale	160.6	--	--	20.1	131.3	9.2
Bamberg	152.1	--	--	16.6	98.2	37.3
Barnwell	240.7	--	--	16.9	169.7	54.1
Beaufort	153.9	--	--	31.1	106.6	16.2
Calhoun	134.1	--	11.5	43.3	59.2	20.1
Colleton	484.5	--	27.4	116.0	314.8	26.3
Dorchester	262.9	8.3	19.1	86.1	119.4	30.0
Hampton	243.8	2.2	--	27.7	176.5	37.4
Jasper	312.9	--	1.6	66.6	204.4	40.3
Lexington	264.6	--	2.9	4.0	142.5	115.2
Orangeburg	347.2	--	17.5	81.2	214.8	33.7
Total	3,269.4	10.5	82.8	536.8	1,955.9	683.4

Table 6.--Area of commercial forest land, by stocking classes of growing-stock trees, by county, 1968

County	All classes	Stocking percentage ^{1/}				
		Over 130	100-130	60-99	16.7-59	Less than 16.7
----- <u>Thousand acres</u> -----						
Aiken	512.1	--	31.0	178.2	197.5	105.4
Allendale	160.6	2.7	23.3	93.4	38.8	2.4
Bamberg	152.1	--	15.0	104.6	32.5	--
Barnwell	240.7	3.0	16.6	120.5	80.6	20.0
Beaufort	153.9	--	6.7	63.3	72.2	11.7
Calhoun	134.1	--	17.2	74.7	39.3	2.9
Colleton	484.5	8.1	109.3	286.7	74.3	6.1
Dorchester	262.9	--	26.4	165.5	65.5	5.5
Hampton	243.8	2.6	43.8	141.8	47.6	8.0
Jasper	312.9	1.6	37.7	216.3	55.7	1.6
Lexington	264.6	--	18.6	83.0	102.4	60.6
Orangeburg	347.2	--	51.9	162.2	130.3	2.8
Total	3,269.4	18.0	397.5	1,690.2	936.7	227.0

^{1/} Stocking percentage is based on a standard of 75 square feet per acre.

Table 7.--Volume of sawtimber and growing stock on commercial forest land, by species group and county, 1968

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Million board feet					Million cubic feet ^{1/}				
Aiken	919.5	521.2	17.7	282.3	98.3	313.4	174.3	5.0	93.5	40.6
Allendale	452.6	202.8	29.3	119.8	100.7	153.4	64.0	10.9	43.5	35.0
Bamberg	446.4	136.9	68.9	172.5	68.1	149.5	43.7	23.8	56.9	25.1
Barnwell	408.2	197.7	24.3	125.1	61.1	169.0	69.7	10.1	61.2	28.0
Beaufort	544.1	272.6	3.9	169.1	98.5	167.6	76.6	0.9	52.6	37.5
Calhoun	500.7	259.9	6.7	181.1	53.0	162.3	77.6	1.8	62.0	20.9
Colleton	1,644.9	746.2	83.9	451.1	363.7	577.9	228.6	23.8	192.4	133.1
Dorchester	1,054.9	463.7	147.9	237.2	206.1	343.5	132.3	40.2	99.2	71.8
Hampton	1,025.3	281.4	105.6	330.6	307.7	345.0	94.7	29.1	123.0	98.2
Jasper	978.0	408.1	75.3	240.5	254.1	340.4	120.2	23.8	98.3	98.1
Lexington	486.8	374.1	1.9	58.7	52.1	161.2	112.6	0.7	24.4	23.5
Orangeburg	1,127.7	415.5	109.5	383.7	219.0	398.5	122.9	32.9	157.2	85.5
Total	9,589.1	4,280.1	674.9	2,751.7	1,882.4	3,281.7	1,317.2	203.0	1,064.2	697.3

^{1/} Factors for converting to cords are shown on page 11.

Table 8.--Net annual growth of sawtimber and growing stock on commercial forest land,
by species group and county, 1967

County	Sawtimber						Growing stock					
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	
	- Million board feet						- Million cubic feet					
Aiken	67.4	51.1	0.4	10.2	5.7	18.8	14.4	0.1	2.6	1.7		
Allendale	25.7	16.1	0.6	4.8	4.2	8.2	5.2	0.2	1.4	1.4		
Bamberg	21.4	9.4	1.9	6.8	3.3	7.3	4.2	0.5	1.6	1.0		
Barnwell	33.3	22.3	0.6	6.5	3.9	10.7	6.8	0.2	2.3	1.4		
Beaufort	27.5	19.2	0.1	4.2	4.0	7.4	4.7	(1/)	1.4	1.3		
Calhoun	33.2	23.6	0.1	7.6	1.9	8.2	5.3	(1/)	2.1	0.8		
Colleton	96.0	58.5	2.4	17.7	17.4	28.4	16.5	0.5	5.9	5.5		
Dorchester	51.3	31.0	3.4	8.7	8.2	13.7	7.5	0.7	2.8	2.7		
Hampton	57.5	26.6	3.4	14.4	13.1	16.1	8.0	0.6	3.7	3.8		
Jasper	54.6	29.1	2.3	9.2	14.0	16.7	8.2	0.5	4.0	4.0		
Lexington	35.2	29.5	0.1	3.1	2.5	10.3	8.1	(1/)	1.1	1.1		
Orangeburg	56.7	27.3	2.9	16.3	10.2	17.6	8.5	0.6	4.6	3.9		
Total	559.8	343.7	18.2	109.5	88.4	163.4	97.4	3.9	33.5	28.6		

1/ Negligible.

Table 9.--Annual removals of sawtimber and growing stock on commercial forest land,
by species group and county, 1967

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
		Million board feet	Million board feet	Million board feet	Million board feet	Million cubic feet				
Aiken	27.0	22.5	1.6	2.3	0.6	7.8	6.8	0.3	0.6	0.1
Allendale	21.9	10.9	--	6.0	5.0	5.9	2.6	--	1.7	1.6
Bamberg	6.2	3.4	--	1.4	1.4	1.7	0.9	(1/)	0.4	0.4
Barnwell	18.3	6.4	0.9	7.0	4.0	5.1	1.6	0.3	2.2	1.0
Beaufort	16.9	12.2	--	3.8	0.9	5.8	3.8	--	1.3	0.7
Calhoun	21.0	13.7	0.7	5.6	1.0	6.0	4.1	0.2	1.4	0.3
Colleton	124.2	85.6	1.3	25.8	11.5	33.2	21.4	0.3	7.5	4.0
Dorchester	43.2	22.4	1.7	10.1	9.0	11.8	6.0	0.4	2.8	2.6
Hampton	29.1	17.9	1.4	7.9	1.9	8.0	4.7	0.4	2.1	0.8
Jasper	28.3	16.8	1.3	4.6	5.6	7.6	4.8	0.3	1.1	1.4
Lexington	22.4	14.7	--	7.7	--	6.7	4.0	--	2.5	0.2
Orangeburg	44.0	23.4	2.5	9.8	8.3	12.6	5.5	0.8	3.5	2.8
Total	402.5	249.9	11.4	92.0	49.2	112.2	66.2	3.0	27.1	15.9

1/ Negligible.

Table 10.--Area of commercial forest land, by forest type and ownership class, 1968

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Farmer	Misc. private
- - - - - Thousand acres - - - - -						
Softwood types:						
White pine-hemlock	--	--	--	--	--	--
Longleaf pine	258.1	--	31.3	11.7	122.6	92.5
Slash pine	363.6	--	33.3	104.3	136.1	89.9
Loblolly pine ^{1/}	518.3	--	31.6	65.0	286.0	135.7
Shortleaf pine	19.5	--	2.7	--	8.1	8.7
Virginia pine	--	--	--	--	--	--
Redcedar	--	--	--	--	--	--
Pond pine	123.3	--	6.5	19.3	50.9	46.6
Pitch pine	--	--	--	--	--	--
Total	1,282.8	--	105.4	200.3	603.7	373.4
Hardwood types:						
Oak-pine	504.8	--	30.4	53.5	289.5	131.4
Oak-hickory	350.6	--	19.4	21.8	206.1	103.3
Southern scrub oak	248.9	--	14.8	2.1	134.6	97.4
Oak-gum-cypress	806.5	--	33.0	170.1	411.9	191.5
Elm-ash-cottonwood	75.8	--	6.9	7.3	40.1	21.5
Total	1,986.6	--	104.5	254.8	1,082.2	545.1
All types	3,269.4	--	209.9	455.1	1,685.9	918.5

^{1/} Includes 2,000 acres of spruce pine type.

Table 11.--Area of commercial forest land, by ownership and stocking classes of growing-stock trees, 1968

Ownership classes	All classes	Stocking percentage ^{1/}				
		Over 130	100-130	60-99	16.7-59	Less than 16.7
- - - - - Thousand acres - - - - -						
National Forest	--	--	--	--	--	--
Other public	209.9	--	26.3	118.8	52.9	11.9
Forest industry	455.1	8.8	104.8	246.1	86.4	9.0
Farmer	1,685.9	6.1	167.4	845.1	556.1	111.2
Misc. private	918.5	3.1	99.0	480.2	241.3	94.9
All ownerships	3,269.4	18.0	397.5	1,690.2	936.7	227.0

^{1/} Stocking percentage is based on a standard of 75 square feet per acre.

Table 12.--Volume of timber on commercial forest land,
by class and species group, 1968

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
- - - - - Million cubic feet - - - - -					
Sawtimber trees:					
Saw-log portion	2,193.4	951.6	162.7	639.6	439.5
Upper-stem portion	214.5	50.6	16.4	98.3	49.2
Total	2,407.9	1,002.2	179.1	737.9	488.7
Poletimber trees	873.8	315.0	23.9	326.3	208.6
All growing-stock trees	3,281.7	1,317.2	203.0	1,064.2	697.3
Rough trees:					
Sawtimber-size trees	173.6	8.4	2.4	85.4	77.4
Poletimber-size trees	262.2	26.1	2.7	136.0	97.4
Total	435.8	34.5	5.1	221.4	174.8
Rotten trees:					
Sawtimber-size trees	149.0	0.5	7.6	90.0	50.9
Poletimber-size trees	17.4	0.5	0.1	12.8	4.0
Total	166.4	1.0	7.7	102.8	54.9
Salvable dead trees:					
Sawtimber-size trees	3.9	0.7	0.9	--	2.3
Poletimber-size trees	5.0	2.4	--	1.9	0.7
Total	8.9	3.1	0.9	1.9	3.0
Total, all timber	3,892.8	1,355.8	216.7	1,390.3	930.0

Table 13.--Number of growing-stock trees on commercial forest land, by species and diameter class, 1968

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
----- Thousand trees -----											
Softwood:											
Longleaf pine	28,570	10,365	6,941	5,099	3,585	1,647	655	219	40	19	--
Slash pine	35,810	24,576	6,880	2,480	880	585	303	50	40	15	--
Shortleaf pine	5,020	2,220	1,028	894	521	277	72	--	5	3	--
Loblolly pine	64,423	28,515	14,549	8,016	5,274	3,552	2,099	1,223	645	535	15
Virginia pine	--	--	--	--	--	--	--	--	--	--	--
Pond pine	13,077	4,330	2,998	2,542	1,892	638	334	199	75	69	--
Spruce pine	1,734	647	387	182	185	135	57	73	40	28	--
Cypress	10,964	3,150	2,350	1,578	1,656	1,103	584	312	116	100	15
Other eastern softwoods	86	--	28	43	15	--	--	--	--	--	--
Total softwoods	159,684	73,803	35,161	20,834	14,008	7,937	4,104	2,076	961	770	30
Hardwood:											
Select white oaks ^{1/}	4,495	1,785	992	509	441	256	237	81	82	103	9
Select red oaks ^{2/}	1,481	448	322	152	144	197	88	54	24	42	10
Other white oaks	3,587	1,120	931	508	369	210	156	91	77	107	18
Other red oaks	30,431	13,062	6,500	4,593	2,228	1,643	826	716	338	490	35
Hickory	4,681	1,951	944	493	461	388	176	124	65	58	21
Hard maple	8	--	--	--	--	8	--	--	--	--	--
Soft maple	8,338	3,600	1,900	1,064	775	488	237	136	57	81	--
Beech	6	--	--	--	--	--	--	--	--	6	--
Sweetgum	28,229	12,561	6,109	3,514	2,557	1,655	847	543	265	164	14
Tupelo and blackgum	30,718	7,861	6,810	6,209	4,097	2,599	1,747	748	362	277	8
Ash	5,395	2,004	1,090	961	445	446	239	128	14	62	6
Cottonwood	297	103	57	99	--	10	9	5	5	9	--
Basswood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	4,357	1,419	1,035	727	498	205	183	113	79	89	9
Black walnut	--	--	--	--	--	--	--	--	--	--	--
Black cherry	366	213	91	55	--	--	7	--	--	--	--
Elm	3,180	578	1,156	580	355	184	155	97	34	41	--
Sycamore	213	76	26	--	53	--	22	22	4	7	3
Birch (except yellow)	429	40	174	89	82	29	9	6	--	--	--
Other eastern hardwoods	2,951	1,358	482	495	162	211	85	69	35	48	6
Total hardwoods	129,162	48,179	28,619	20,048	12,667	8,529	5,023	2,933	1,441	1,584	139
All species	288,846	121,982	63,780	40,882	26,675	16,465	9,127	5,009	2,402	2,354	169

^{1/} Includes white, swamp white, and swamp chestnut oaks.
^{2/} Includes cherrybark and Shumard oaks.

Table 14.--Volume of all live trees on commercial forest land, by species and diameter class, 1968

Species	Diameter class (inches at breast height)													29.0 and larger
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger			
--- Million cubic feet ---														
Softwood:														
Longleaf pine	278.7	24.5	41.0	59.3	67.3	46.4	24.9	11.2	2.7	1.4	--	--	--	--
Slash pine	176.3	49.5	37.5	31.0	19.2	19.6	12.9	2.4	2.8	1.4	--	--	--	--
Shortleaf pine	45.8	5.3	6.6	10.1	9.8	9.5	3.8	--	0.4	0.3	--	--	--	--
Loblolly pine	691.3	61.6	83.4	88.4	96.6	105.2	84.6	66.0	46.1	56.0	3.4	--	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fond pine	134.8	11.7	16.6	26.3	31.8	17.4	10.9	9.3	5.1	5.7	--	--	--	--
Spruce pine	25.8	1.3	2.6	2.2	3.6	3.5	2.4	4.4	2.9	2.9	--	--	--	--
Cypress	214.8	9.9	16.6	23.7	41.1	38.3	31.0	20.3	9.9	16.0	8.0	--	--	--
Other eastern softwoods	1.0	0.1	0.1	0.6	0.2	--	--	--	--	--	--	--	--	--
Total softwoods	1,568.5	163.9	204.4	241.6	269.6	239.9	170.5	113.6	69.9	83.7	11.4	--	--	--
Hardwood:														
Select white oaks ^{1/}	70.1	4.3	7.4	6.5	9.2	7.4	9.5	5.0	5.4	12.9	2.5	--	--	--
Select red oaks ^{2/}	32.9	1.4	2.2	2.1	3.2	6.3	3.8	3.1	2.0	6.1	2.7	--	--	--
Other white oaks	96.9	5.1	7.6	8.8	8.8	9.7	9.3	8.9	11.2	19.6	7.9	--	--	--
Other red oaks	477.3	41.3	51.0	65.7	55.4	57.8	40.1	45.2	29.4	74.5	16.9	--	--	--
Hickory	77.8	6.1	7.0	7.6	10.0	13.0	7.9	7.9	5.5	7.6	5.2	--	--	--
Hard maple	0.2	--	--	--	--	0.2	--	--	--	--	--	--	--	--
Soft maple	174.3	19.6	23.9	23.6	24.5	26.6	18.1	15.2	7.9	13.3	1.6	--	--	--
Beech	5.0	--	0.3	--	0.8	0.2	--	--	0.9	2.6	0.2	--	--	--
Sweetgum	389.8	36.2	50.4	52.2	60.9	60.0	42.5	35.4	22.3	25.0	4.9	--	--	--
Tupelo and blackgum	622.7	31.9	65.4	105.2	111.0	97.2	85.9	49.1	31.3	42.1	3.6	--	--	--
Ash	98.6	9.0	11.4	16.4	12.7	16.2	12.9	9.1	1.7	7.6	1.6	--	--	--
Cottonwood	6.5	0.4	0.9	1.3	--	1.1	0.3	0.3	0.8	1.4	--	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	76.9	4.1	8.0	9.7	11.4	6.7	8.7	7.4	5.6	11.3	4.0	--	--	--
Black walnut	0.3	0.1	--	--	--	--	--	0.2	--	--	--	--	--	--
Black cherry	6.2	2.0	1.5	1.2	0.5	0.5	0.5	--	--	--	--	--	--	--
Elm	60.7	2.8	8.4	9.8	8.7	6.6	7.4	6.8	2.8	6.2	1.2	--	--	--
Sycamore	6.5	0.5	0.2	0.2	1.5	--	0.9	1.2	0.4	1.1	0.7	--	--	--
Birch (except yellow)	6.7	0.3	1.5	0.9	2.3	0.8	0.3	0.4	--	--	--	--	--	--
Other eastern hardwoods	106.0	24.1	19.0	18.6	7.8	9.7	6.3	6.7	3.3	8.1	2.4	--	--	--
Total hardwoods	2,315.4	189.2	266.1	329.8	328.7	320.0	254.4	201.9	130.5	239.4	55.4	--	--	--
All species	3,883.9	353.1	470.5	571.4	598.3	559.9	424.9	315.5	200.4	323.1	66.8	--	--	--

^{1/} Includes white, swamp white, and swamp chestnut oaks.

^{2/} Includes cherrybark and Shumard oaks.

Table 15.--Volume of growing stock on commercial forest land, by species and diameter class, 1968

Species	All classes	Diameter class (inches at breast height)											Million cubic feet
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger		
Softwood:													
Longleaf pine	276.6	23.5	40.4	59.2	66.9	46.4	24.9	11.2	2.7	1.4	--	--	--
Slash pine	170.1	45.2	35.9	31.0	19.2	19.3	12.9	2.4	2.8	1.4	--	--	--
Shortleaf pine	44.6	5.0	5.7	10.1	9.8	9.5	3.8	--	0.4	0.3	--	--	--
Loblolly pine	672.1	55.7	76.1	84.9	95.6	103.7	84.6	66.0	46.1	56.0	3.4	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pond pine	128.6	9.5	14.5	25.1	31.4	17.1	10.9	9.3	5.1	5.7	--	--	--
Spruce pine	25.2	1.2	2.3	2.1	3.5	3.5	2.4	4.4	2.9	2.9	--	--	--
Cypress	202.2	8.1	15.7	21.7	39.6	38.2	30.1	20.3	9.3	12.9	6.3	--	--
Other eastern softwoods	0.8	--	0.1	0.5	0.2	--	--	--	--	--	--	--	--
Total softwoods	1,520.2	148.2	190.7	234.6	266.2	237.7	169.6	113.6	69.3	80.6	9.7	--	--
Hardwood:													
Select white oaks ^{1/}	64.7	3.8	6.1	5.7	8.0	6.9	9.3	4.4	5.5	12.4	2.6	--	--
Select red oaks ^{2/}	29.7	1.3	2.2	1.7	2.9	6.2	3.8	3.1	2.0	4.8	1.7	--	--
Other white oaks	54.0	1.9	4.5	4.8	5.7	5.7	5.7	4.4	4.9	12.1	4.3	--	--
Other red oaks	386.0	31.4	40.0	56.2	45.0	49.9	34.4	39.6	24.9	55.2	9.4	--	--
Hickory	65.4	3.9	4.7	5.7	8.6	11.8	7.3	7.0	4.8	6.9	4.7	--	--
Hard maple	0.2	--	--	--	--	0.2	--	--	--	--	--	--	--
Soft maple	101.5	10.4	13.8	14.4	15.9	16.1	10.6	8.5	4.3	7.5	--	--	--
Beech	1.5	--	--	--	--	--	--	--	--	1.5	--	--	--
Sweetgum	330.6	27.6	37.0	44.1	55.2	53.1	38.6	32.2	20.7	18.4	3.7	--	--
Tupelo and blackgum	469.5	16.1	41.3	75.3	84.0	81.6	71.9	41.1	26.5	30.1	1.6	--	--
Ash	79.9	5.6	8.6	13.3	10.5	14.8	10.6	7.5	1.1	6.7	1.2	--	--
Cottonwood	5.1	0.4	0.6	1.3	--	0.5	0.3	0.3	0.5	1.2	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	70.6	3.5	6.3	9.5	11.0	6.4	8.2	6.7	5.6	10.6	2.8	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--	--	--
Black cherry	2.5	0.8	0.5	0.7	--	--	0.5	--	--	--	--	--	--
Elm	49.1	1.1	6.6	7.2	7.5	5.9	6.8	6.5	2.7	4.8	--	--	--
Sycamore	5.9	0.1	0.2	--	1.6	--	1.0	1.2	0.3	0.8	0.7	--	--
Birch (except yellow)	5.5	0.2	1.3	1.0	1.5	0.8	0.3	0.4	--	--	--	--	--
Other eastern hardwoods	39.8	3.2	2.6	6.4	3.3	6.0	4.1	4.3	2.6	5.9	1.4	--	--
Total hardwoods	1,761.5	111.3	176.3	247.3	260.7	265.9	213.4	167.2	106.4	178.9	34.1	--	--
All species	3,281.7	259.5	367.0	481.9	526.9	503.6	383.0	280.8	175.7	259.5	43.8	--	--

1/ Includes white, swamp white, and swamp chestnut oaks.
 2/ Includes cherrybark and Shumard oaks.

Table 16.--Volume of sawtimber on commercial forest land, by species and diameter class, 1968

Species	All classes	Diameter class (inches at breast height)									
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger		
----- Million board feet -----											
Softwood:											
Longleaf pine	940.6	233.7	297.7	217.2	119.1	54.8	12.5	5.6	--	--	--
Slash pine	337.7	103.1	74.9	79.2	53.4	9.9	11.6	5.6	--	--	--
Shortleaf pine	142.0	38.6	40.0	43.4	17.2	--	1.7	1.1	--	--	--
Loblolly pine	2,338.3	308.9	390.6	451.0	384.0	306.9	215.4	265.7	15.8	--	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--
Fond pine	440.8	92.1	129.3	75.7	50.0	43.8	23.0	26.9	--	--	--
Spruce pine	80.7	6.9	12.6	12.0	8.8	17.2	11.1	12.1	--	--	--
Cypress	673.0	63.9	134.4	143.9	121.2	86.0	43.3	55.4	24.9	--	--
Other eastern softwoods	1.9	1.3	0.6	--	--	--	--	--	--	--	--
Total softwoods	4,955.0	848.5	1,080.1	1,022.4	753.7	518.6	318.6	372.4	40.7	--	--
Hardwood:											
Select white oaks ^{1/}	173.8	--	24.4	23.6	33.2	17.0	19.7	47.4	8.5	--	--
Select red oaks ^{2/}	97.3	--	10.5	24.4	15.6	12.5	8.3	19.7	6.3	--	--
Other white oaks	153.2	--	17.9	21.6	19.8	16.0	18.5	43.6	15.8	--	--
Other red oaks	1,035.9	--	159.3	194.9	142.1	162.8	100.3	235.2	41.3	--	--
Hickory	201.7	--	28.8	46.3	27.4	28.4	20.6	30.6	19.6	--	--
Hard maple	0.7	--	--	0.7	--	--	--	--	--	--	--
Soft maple	207.2	--	44.6	49.5	36.9	31.0	15.8	29.4	--	--	--
Beech	7.4	--	--	--	--	--	--	7.4	--	--	--
Sweetgum	898.9	--	181.8	214.4	164.9	145.4	95.7	79.7	17.0	--	--
Tupelo and blackgum	1,170.1	--	246.4	284.8	254.7	156.0	103.8	118.5	5.9	--	--
Ash	182.1	--	29.7	52.9	37.9	26.3	4.6	25.7	5.0	--	--
Cottonwood	11.3	--	--	1.8	1.4	1.4	2.5	4.2	--	--	--
Basswood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	228.8	--	41.2	27.2	37.8	30.8	28.7	49.6	13.5	--	--
Black walnut	--	--	--	--	--	--	--	--	--	--	--
Black cherry	1.9	--	--	--	1.9	--	--	--	--	--	--
Elm	122.5	--	23.7	19.3	25.1	25.2	10.7	18.5	--	--	--
Sycamore	22.5	--	4.5	--	3.9	5.2	1.6	4.2	3.1	--	--
Birch (except yellow)	8.2	--	3.4	2.0	1.0	1.8	--	--	--	--	--
Other eastern hardwoods	110.6	--	9.6	19.7	19.2	17.7	9.3	28.5	6.6	--	--
Total hardwoods	4,634.1	--	825.8	983.1	822.8	677.5	440.1	742.2	142.6	--	--
All species	9,589.1	848.5	1,905.9	2,005.5	1,576.5	1,196.1	758.7	1,114.6	183.3	--	--

^{1/} Includes white, swamp white, and swamp chestnut oaks.

^{2/} Includes cherrybark and Shumard oaks.

Table 17.--Net annual growth and removals of growing stock on commercial forest land, by species, 1967

Species	Net annual growth	Annual timber removals
	- - - - <u>Million cubic feet</u> - - - -	
Softwood:		
Yellow pines	97.4	66.2
Cypress	3.9	3.0
Other eastern softwoods	(1/)	--
Total softwoods	101.3	69.2
Hardwood:		
Select white and red oaks	3.8	2.1
Other white and red oaks	20.0	11.0
Hickory	2.0	1.4
Hard maple	(1/)	--
Sweetgum	12.3	8.2
Ash, walnut, and black cherry	2.6	1.5
Yellow-poplar	4.1	2.4
Other hardwoods	17.3	16.4
Total hardwoods	62.1	43.0
All species	163.4	112.2

1/ Negligible.

Table 18.--Net annual growth and removals of sawtimber on commercial forest land, by species, 1967

Species	: Net annual growth :	: Annual timber removals
	- - - - <u>Million board feet</u> - - - -	
Softwood:		
Yellow pines	343.7	249.9
Cypress	18.1	11.4
Other eastern softwoods	0.1	--
Total softwoods	361.9	261.3
Hardwood:		
Select white and red oaks	12.0	7.2
Other white and red oaks	61.5	34.2
Hickory	6.1	5.3
Hard maple	(1/)	--
Sweetgum	37.6	28.7
Ash, walnut, and black cherry	8.0	2.5
Yellow-poplar	16.4	9.9
Other hardwoods	56.3	53.4
Total hardwoods	197.9	141.2
All species	559.8	402.5

1/ Negligible.

Table 19.--Mortality of growing stock and sawtimber on commercial forest land, by species, 1967

Species	Growing stock	Sawtimber
	<u>Million cubic feet</u>	<u>Million board feet</u>
Softwood:		
Yellow pines	7.4	21.7
Cypress	0.8	1.9
Other eastern softwoods	--	--
Total softwoods	8.2	23.6
Hardwood:		
Select white and red oaks	0.9	3.5
Other white and red oaks	6.3	16.7
Hickory	0.9	3.6
Hard maple	--	--
Sweetgum	2.6	7.6
Ash, walnut, and black cherry	0.5	0.3
Yellow-poplar	0.2	0.4
Other hardwoods	5.1	11.2
Total hardwoods	16.5	43.3
All species	24.7	66.9

Table 20.--Volume of all live trees and growing stock on commercial forest land, by ownership class and species group, 1968

Ownership class	All live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
						Million cubic feet				
National Forest	--	--	--	--	--	--	--	--	--	--
Other public	221.0	84.2	8.4	81.7	46.7	194.6	81.1	7.9	69.1	36.5
Forest industry	827.3	248.4	61.6	309.6	207.7	709.7	242.4	58.7	235.5	173.1
Farmer	1,836.1	660.8	92.2	669.2	413.9	1,545.2	645.9	88.3	512.5	298.5
Miscellaneous private	992.5	352.3	53.6	327.9	258.7	832.2	347.8	48.1	247.1	189.2
All ownerships	3,883.9	1,352.7	215.8	1,388.4	927.0	3,281.7	1,317.2	203.0	1,064.2	697.3

Table 21.--Volume of sawtimber on commercial forest land, by ownership class and species group, 1968

Ownership class	Small sawtimber ^{1/}					Large sawtimber ^{2/}				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
						Million board feet				
National Forest	--	--	--	--	--	--	--	--	--	--
Other public	233.7	133.3	9.1	65.7	25.6	274.8	79.7	14.8	111.7	68.6
Forest industry	946.0	451.4	107.6	238.0	149.0	1,133.5	247.8	97.3	425.1	363.3
Farmer	2,264.2	1,280.7	139.7	574.6	269.2	2,207.4	931.7	122.6	673.1	480.0
Miscellaneous private	1,316.0	741.5	87.7	281.9	204.9	1,213.5	414.0	96.1	381.6	321.8
All ownerships	4,759.9	2,606.9	344.1	1,160.2	648.7	4,829.2	1,673.2	330.8	1,591.5	1,233.7

^{1/} Volume of sawtimber trees less than 15.0 inches at d.b.h.
^{2/} Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 22.--Net annual growth and removals of growing stock on commercial forest land, by ownership class and species group, 1967

Ownership class	Net annual growth				Annual timber removals				Million cubic feet	
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood		Soft hardwood
National Forest	--	--	--	--	--	--	--	--	--	--
Other public	11.5	7.5	0.1	2.4	1.5	2.2	0.5	--	0.5	1.2
Forest industry	35.8	21.3	1.1	7.0	6.4	26.9	19.0	0.6	3.5	3.8
Farmer	75.4	43.6	1.8	16.6	13.4	61.6	33.1	1.9	19.2	7.4
Miscellaneous private	40.7	25.0	0.9	7.5	7.3	21.5	13.6	0.5	3.9	3.5
All ownerships	163.4	97.4	3.9	33.5	28.6	112.2	66.2	3.0	27.1	15.9

Table 23.--Net annual growth and removals of sawtimber on commercial forest land, by ownership class and species group, 1967

Ownership class	Net annual growth				Annual timber removals				Million board feet	
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood		Soft hardwood
National Forest	--	--	--	--	--	--	--	--	--	--
Other public	39.5	26.7	0.5	8.2	4.1	7.4	1.1	--	1.7	4.6
Forest industry	115.4	66.6	5.1	21.8	21.9	89.8	64.9	2.3	11.4	11.2
Farmer	262.1	162.6	7.4	55.2	36.9	226.5	134.3	7.3	63.7	21.2
Miscellaneous private	142.8	87.8	5.2	24.3	25.5	78.8	49.6	1.8	15.2	12.2
All ownerships	559.8	343.7	18.2	109.5	88.4	402.5	249.9	11.4	92.0	49.2

Table 24.--Average net volume per acre of sawtimber, growing stock, and other live timber^{1/} on commercial forest land, by ownership class, major forest type, and species group, 1968

Forest type, species group, and class of material	Ownership class											
	All ownerships		National Forest		Other public		Forest industry		Farmer		Misc. private	
	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet
Pine types:												
Growing stock:												
Softwood	2,126	706.0	--	--	1,000	521.2	1,812	710.3	2,354	727.4	2,298	722.3
Hardwood	120	57.5	--	--	25	12.0	112	53.6	155	74.0	95	46.4
Total	2,246	763.5	--	--	1,025	533.2	1,924	763.9	2,509	801.4	2,393	768.7
Other timber:												
Softwood	--	22.5	--	--	--	26.9	--	20.8	--	19.2	--	27.7
Hardwood	--	27.8	--	--	--	11.0	--	20.8	--	37.6	--	21.2
Total	--	50.3	--	--	--	37.9	--	41.6	--	56.8	--	48.9
Oak-pine type:												
Growing stock:												
Softwood	1,858	504.0	--	--	2,359	608.6	2,582	705.3	1,826	489.1	1,394	399.1
Hardwood	823	331.2	--	--	521	217.0	2,030	675.4	660	298.6	618	247.5
Total	2,681	835.2	--	--	2,880	825.6	4,612	1,380.7	2,486	787.7	2,012	646.6
Other timber:												
Softwood	--	9.6	--	--	--	5.6	--	3.9	--	9.7	--	13.5
Hardwood	--	110.7	--	--	--	75.4	--	135.9	--	101.2	--	128.9
Total	--	120.3	--	--	--	81.0	--	139.8	--	110.9	--	142.4
Upland hardwood types:												
Growing stock:												
Softwood	494	133.9	--	--	471	116.8	850	216.5	399	115.0	613	157.6
Hardwood	986	414.4	--	--	1,154	485.4	3,463	1,203.4	721	343.6	1,020	397.3
Total	1,480	548.3	--	--	1,625	602.2	4,313	1,419.9	1,120	458.6	1,633	554.9
Other timber:												
Softwood	--	1.3	--	--	--	--	--	4.6	--	1.3	--	1.0
Hardwood	--	168.7	--	--	--	190.1	--	300.6	--	169.1	--	141.7
Total	--	170.0	--	--	--	190.1	--	305.2	--	170.4	--	142.7
Bottomland hardwood types:												
Growing stock:												
Softwood	1,127	315.7	--	--	1,070	296.3	1,354	370.1	1,019	302.7	1,148	293.6
Hardwood	3,964	1,450.0	--	--	5,185	1,994.6	4,508	1,546.6	3,396	1,302.3	4,441	1,573.3
Total	5,091	1,765.7	--	--	6,255	2,290.9	5,862	1,916.7	4,415	1,605.0	5,589	1,866.9
Other timber:												
Softwood	--	15.0	--	--	--	11.9	--	16.4	--	10.5	--	24.3
Hardwood	--	416.7	--	--	--	328.0	--	420.6	--	380.0	--	513.2
Total	--	431.7	--	--	--	339.9	--	437.0	--	390.5	--	537.5
All types:												
Growing stock:												
Softwood	1,521	466.7	--	--	1,129	426.1	1,681	555.8	1,506	447.6	1,545	457.2
Hardwood	1,419	538.6	--	--	1,258	494.3	2,158	745.5	1,224	495.9	1,366	501.1
Total	2,940	1,005.3	--	--	2,387	920.4	3,839	1,301.3	2,730	943.5	2,911	958.3
Other timber:												
Softwood	--	14.7	--	--	--	16.6	--	16.2	--	11.6	--	19.2
Hardwood	--	170.6	--	--	--	109.6	--	198.2	--	167.0	--	175.2
Total	--	185.3	--	--	--	126.2	--	214.4	--	178.6	--	194.4
All timber	2,940	1,190.6	--	--	2,387	1,046.6	3,839	1,515.7	2,730	1,122.1	2,911	1,152.7

^{1/} Rough and rotten trees.

Table 25.--Land area, by class, major forest type, and survey completion date, 1947, 1958, and 1968

Land use class	Survey completion date			Change 1958-1968
	1947	1958	1968	
- - - - - <u>Thousand acres</u> - - - - -				
Forest land:				
Commercial forest land:				
Pine and oak-pine types	1,626.8	1,571.7	1,787.6	+215.9
Hardwood types	1,399.5	1,541.2	1,481.8	- 59.4
Total	3,026.3	3,112.9	3,269.4	+156.5
Noncommercial forest land:				
Productive-reserved	5.3	5.6	5.0	- 0.6
Unproductive	0.6	--	2.2	+ 2.2
Total	5.9	5.6	7.2	+ 1.6
Nonforest land:				
Cropland	1,703.2	1,387.7	1,128.4	-259.3
Pasture and range	102.9	164.4	191.3	+ 26.9
Other	321.3	448.6	524.1	+ 75.5
Total	2,127.4	2,000.7	1,843.8	-156.9
All land ^{1/}	5,159.6	5,119.2	5,120.4	+ 1.2

^{1/} Excludes all water areas.

Table 26.--Volume^{1/} of sawtimber, growing stock, and all live timber on commercial forest land, by species group, diameter class, and survey completion date

Species group	Year	All classes	Diameter class (inches at breast height)									
			5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger	
SAWTIMBER (in million board feet)												
Softwood	1947	4,295.4	--	--	717.2	798.5	737.1	567.0	519.9	354.7	601.0	
	1958	4,003.2	--	--	744.5	840.4	838.3	651.5	442.2	214.2	272.1	
	1968	4,955.0	--	--	848.5	1,080.1	1,022.4	753.7	518.6	318.6	413.1	
Hardwood	1947	4,455.1	--	--	--	767.8	930.0	719.2	595.1	471.9	971.1	
	1958	4,241.0	--	--	--	780.2	927.9	831.1	537.6	434.0	730.2	
	1968	4,634.1	--	--	--	825.8	983.1	822.8	677.5	440.1	884.8	
GROWING STOCK (in million cubic feet)												
Softwood	1947	1,244.6	77.7	150.5	198.3	196.8	171.4	127.6	113.8	77.1	131.4	
	1958	1,180.2	72.6	150.3	205.8	207.1	194.9	146.6	96.8	46.6	59.5	
	1968	1,520.2	148.2	190.7	234.6	266.2	237.7	169.6	113.6	69.3	90.3	
Hardwood	1947	1,563.0	72.6	119.7	195.4	242.4	251.5	186.6	146.9	114.1	233.8	
	1958	1,596.1	91.7	158.0	220.0	246.4	251.0	215.6	132.7	104.9	175.8	
	1968	1,761.5	111.3	176.3	247.3	260.7	265.9	213.4	167.2	106.4	213.0	
ALL LIVE TIMBER (in million cubic feet)												
Softwood	1947	1,281.9	85.6	161.4	204.3	199.3	172.9	128.2	114.0	77.8	138.4	
	1958	1,213.6	80.0	161.2	212.1	209.8	196.6	147.3	96.9	47.0	62.7	
	1968	1,568.5	163.9	204.4	241.6	269.6	239.9	170.5	113.6	69.9	95.1	
Hardwood	1947	2,036.2	123.2	180.7	260.7	305.6	302.8	222.4	177.3	139.9	323.6	
	1958	2,089.6	155.7	238.5	293.5	310.5	302.1	257.1	160.2	128.7	243.3	
	1968	2,315.4	189.2	266.1	329.8	328.7	320.0	254.4	201.9	130.5	294.8	

^{1/} To provide a basis for valid comparisons, adjustments have been made for differences in volume tables and sawtimber specifications used in previous surveys.

