



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 Northern Coastal Plain of South Carolina, completed in February 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 16-county area covered by this report is one of three Survey units in South Carolina. A comparable report, "Forest Statistics for the Piedmont of South Carolina 1967," U. S. Forest Service Resource Bulletin SE-9, was issued, and a similar report for the Southern Coastal Plain will be issued when the Statewide survey is completed.

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FOREST STATISTICS
for the
NORTHERN COASTAL PLAIN of SOUTH CAROLINA
1968

by

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HIGHLIGHTS

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

- the addition of 206,300 acres of commercial forest land barely replaced the diversion of 195,100 acres of commercial forest to other land uses; however, the downward trend in forest area between 1947 and 1958 has been stopped. Most of the diversion was to agricultural uses, but over one-third of the loss was to urban development. Area of commercial forest land totals almost 4.7 million acres, or 63 percent of the total land area.
- area in pine and oak-pine cover types has increased about 7 percent and now makes up 57 percent of the commercial forest. In contrast, the area in hardwood cover types has decreased almost 8 percent. Loblolly pine, with almost 1.1 million acres, is the leading cover type, followed closely by oak-gum-cypress, which also occupies slightly over 1.0 million acres.
- forest industries have increased their holdings of commercial forest land by almost 300,000 acres, or 38 percent. Area of commercial forest land owned by farm operators decreased by over 360,000 acres, or 15 percent, and although this is a substantial reduction, it is much smaller than the decline in farmer-owned forest land found in the Piedmont of South Carolina. Miscellaneous private holdings are up 96,000 acres, or 10 percent, and public holdings are down slightly. Collectively, farmers and miscellaneous private owners still own over 3.1 million acres, or more than two-thirds of the commercial forest.
- sawtimber stands have increased by 119,300 acres, and poletimber stands have decreased by almost 139,000 acres. The trends also show more sapling and seedling stands and less area of nonstocked forest land. Almost half of the stands under 10 years of age originated from artificial planting or seeding.
- average stand density of all live trees 5.0 inches d.b.h. and larger expressed in basal area per acre has increased from 53 to 63 square feet. Still, less than 20 percent of the stands are fully stocked with growing-stock trees, and over one-fourth of the stands are very poorly stocked. This indicates that the current net growth, which averages about 59 cubic feet per acre annually, could be increased substantially.

--volume of softwood growing stock, primarily pine, increased from 2.1 to 2.6 billion cubic feet, or over 24 percent, reversing a downward trend in softwood volume between 1947 and 1958. There were gains in all diameter classes, and loblolly pine accounted for over 60 percent of the increase.

--volume of hardwood growing stock increased from 2.4 to over 2.7 billion cubic feet, or over 12 percent, which also reversed a downward trend in hardwood volume between 1947 and 1958. Gains were measured in all diameter classes; but collectively, laurel oak, water oak, and willow oak accounted for around 40 percent of the increase. About one-third of the increase was in blackgum, sweetgum, and tupelo, which are the leading hardwood species in the area in terms of volume.

In 1967--

--net growth of growing stock exceeded removals by 93.3 million cubic feet, or 51 percent. Over half of this growth over removal was pine and about 22 percent was oak. The soft-textured hardwoods accounted for less than 15 percent of the surplus growth. By ownership, 68 percent of the excess growth was on farmer and miscellaneous private holdings, 18 percent on public holdings, and the remaining 14 percent on forest industry lands.

--net growth of sawtimber exceeded removals by over 300 million board feet, or 46 percent. Two-thirds of this growth over removal was pine and about 18 percent was oak. The soft-textured hardwoods accounted for less than 10 percent of the surplus growth. By ownership, 66 percent of the excess growth was on farmer and miscellaneous private holdings, 21 percent on public holdings, and the remaining 13 percent on forest industry lands.

--mortality of growing stock totaled 26.6 million cubic feet, which tended to reduce gross growth by almost 10 percent. Over half of the mortality was hardwood, and suppression and climatic factors seemed to be the leading 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 38,432 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 3,130 of these sample points.
3. Estimates of timber volume and forest classifications were based on measurements recorded at 2,022 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 1957 and 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 +0.7 percent for the estimate of total commercial forest area, 2.1 percent for total cubic volume, and 1.8 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/}
Thousand acres	Percent	Million cu. ft.	Percent	Million cu. ft.	Percent
4,687.4	0.7				
2,296.8	1.0			274.6	1.8
574.2	2.0	5,341.2	2.1	222.4	2.0
255.2	3.0	2,617.2	3.0	98.9	3.0
143.6	4.0	1,472.2	4.0	55.6	4.0
91.9	5.0	942.2	5.0	35.6	5.0
23.0	10.0	235.5	10.0	8.9	10.0
10.2	15.0	104.7	15.0	4.0	15.0
5.7	20.0	58.9	20.0	2.2	20.0
3.7	25.0	37.7	25.0	1.4	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	60.3	60.9	67.7	59.8	59.5
8	68.3	68.1	76.3	68.2	68.2
10	73.4	73.0	81.3	73.3	73.2
12	76.7	76.5	85.2	76.3	76.3
14	79.1	79.3	88.0	78.3	78.3
16	80.9	81.5	90.3	79.7	79.7
18	82.2	83.2	92.2	80.7	80.7
20	83.2	84.7	93.6	81.5	81.5
22	84.3	86.7	96.1	82.5	82.6
24+	86.4	89.9	100.1	83.8	83.8
Average	76.0	75.7	88.3	75.4	75.6

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 Northern 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 ^{2/}	
		Total	Commercial forest	Unproductive forest		Productive reserved
----- Thousand acres -----						
Berkeley	701.6	583.3	578.5	1.7	3.1	118.3
Charleston	604.8	307.2	302.0	--	5.2	297.6
Chesterfield	507.5	328.6	322.5	--	6.1	178.9
Clarendon	382.7	214.2	214.2	--	(3/)	168.5
Darlington	349.0	176.8	176.8	--	--	172.2
Dillon	260.5	136.5	135.6	0.6	0.3	124.0
Florence	515.2	274.9	274.9	--	(3/)	240.3
Georgetown	520.3	391.3	388.8	--	2.5	129.0
Horry	737.3	494.5	486.1	8.1	0.3	242.8
Kershaw	503.1	381.1	381.1	--	--	122.0
Lee	261.8	106.5	105.7	--	0.8	155.3
Marion	312.3	210.1	210.1	--	--	102.2
Marlboro	308.5	158.1	158.1	--	--	150.4
Richland	478.7	340.5	340.2	--	0.3	138.2
Sumter	441.0	226.1	225.7	--	0.4	214.9
Williamsburg	598.4	387.1	387.1	--	--	211.3
Total	7,482.7	4,716.8	4,687.4	10.4	19.0	2,765.9

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

^{2/} Includes 76,900 acres of water according to Survey standards of area classification but defined by 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 ^{1/}	Farmer	Miscellaneous private	
								Corporate	Individual
----- Thousand acres -----									
Berkeley	578.5	154.5	8.6	14.3	0.6	165.5	71.9	11.0	152.1
Charleston	302.0	68.3	1.4	1.0	2.0	73.7	49.8	--	105.8
Chesterfield	322.5	--	--	84.1	0.2	21.3	164.2	4.2	48.5
Clarendon	214.2	--	0.3	4.3	0.3	42.8	131.0	8.9	26.6
Darlington	176.8	--	--	0.9	0.1	28.6	120.2	2.5	24.5
Dillon	135.6	--	--	0.5	(2/)	27.2	103.0	--	4.9
Florence	274.9	--	--	0.1	0.2	37.1	216.1	--	21.4
Georgetown	388.8	--	--	0.1	0.3	235.2	54.4	2.0	96.8
Horry	486.1	--	3.4	0.6	0.1	129.9	313.0	--	39.1
Kershaw	381.1	--	--	0.7	3.2	55.0	136.6	10.3	175.3
Lee	105.7	--	--	2.0	--	0.9	88.5	--	14.3
Marion	210.1	--	--	--	(2/)	84.9	89.8	--	35.4
Marlboro	158.1	--	--	0.1	0.1	45.6	98.3	--	14.0
Richland	340.2	--	48.5	5.5	0.3	26.0	99.9	4.5	155.5
Sumter	225.7	--	--	43.6	0.4	28.6	129.7	--	23.4
Williamsburg	387.1	--	--	--	0.1	69.2	260.0	--	57.8
Total	4,687.4	222.8	62.2	157.8	7.9	1,071.5	2,126.4	43.4	995.4

^{1/} Not including 4,800 acres of farmer and miscellaneous private lands leased to forest industry.

^{2/} 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						
		White pine-hemlock	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood
----- Thousand acres -----								
Berkeley	578.5	--	62.3	221.9	83.1	81.2	120.7	9.3
Charleston	302.0	--	21.5	121.8	71.4	35.0	52.3	--
Chesterfield	322.5	--	89.5	56.5	56.0	91.0	19.0	10.5
Clarendon	214.2	--	29.4	44.9	30.1	33.3	76.5	--
Darlington	176.8	--	19.8	42.6	32.1	50.5	29.3	2.5
Dillon	135.6	--	2.1	24.5	19.6	43.1	43.9	2.4
Florence	274.9	--	14.2	92.7	60.9	27.7	79.4	--
Georgetown	388.8	--	29.6	133.7	62.6	49.8	113.1	--
Horry	486.1	--	20.6	159.8	92.8	107.8	102.7	2.4
Kershaw	381.1	--	56.2	120.2	80.1	77.2	23.0	24.4
Lee	105.7	--	7.6	29.2	16.7	31.1	16.7	4.4
Marion	210.1	--	1.8	49.4	38.7	33.8	76.5	9.9
Marlboro	158.1	--	16.1	22.3	18.2	53.9	32.7	14.9
Richland	340.2	--	37.2	111.8	66.9	59.6	58.0	6.7
Sumter	225.7	--	24.8	54.8	23.3	46.8	65.7	10.3
Williamsburg	387.1	--	27.1	101.5	73.9	83.3	101.3	--
Total	4,687.4	--	459.8	1,387.6	826.4	905.1	1,010.8	97.7

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 -----					
Berkeley	578.5	312.2	114.9	130.9	20.5
Charleston	302.0	182.0	64.8	51.3	3.9
Chesterfield	322.5	109.8	75.5	107.3	29.9
Clarendon	214.2	96.2	39.8	73.4	4.8
Darlington	176.8	88.6	39.4	46.4	2.4
Dillon	135.6	81.8	30.4	21.0	2.4
Florence	274.9	168.4	40.3	66.2	--
Georgetown	388.8	193.5	96.3	78.4	20.6
Horry	486.1	244.4	117.8	112.4	11.5
Kershaw	381.1	112.8	88.1	157.0	23.2
Lee	105.7	37.9	26.3	41.5	--
Marion	210.1	128.6	37.4	36.8	7.3
Marlboro	158.1	59.1	51.2	41.3	6.5
Richland	340.2	135.4	85.3	107.0	12.5
Sumter	225.7	122.3	35.9	67.5	--
Williamsburg	387.1	202.5	85.5	94.8	4.3
Total	4,687.4	2,275.5	1,028.9	1,233.2	149.8

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 -----						
Berkeley	578.5	--	17.9	167.6	297.1	95.9
Charleston	302.0	--	18.1	86.9	149.9	47.1
Chesterfield	322.5	--	--	23.2	161.0	138.3
Clarendon	214.2	--	2.2	37.4	124.9	49.7
Darlington	176.8	--	4.2	58.1	81.7	32.8
Dillon	135.6	--	4.9	38.9	62.8	29.0
Florence	274.9	--	7.1	92.1	127.2	48.5
Georgetown	388.8	--	26.1	130.6	162.8	69.3
Horry	486.1	--	2.5	83.8	290.2	109.6
Kershaw	381.1	--	7.7	40.4	218.7	114.3
Lee	105.7	--	4.4	14.3	57.4	29.6
Marion	210.1	--	--	73.1	94.2	42.8
Marlboro	158.1	--	4.1	27.6	95.1	31.3
Richland	340.2	--	2.2	61.5	193.3	83.2
Sumter	225.7	--	6.3	78.4	118.0	23.0
Williamsburg	387.1	--	21.0	105.5	205.1	55.5
Total	4,687.4	--	128.7	1,119.4	2,439.4	999.9

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
----- Thousand acres -----						
Berkeley	578.5	6.6	107.4	318.8	125.2	20.5
Charleston	302.0	5.4	63.8	166.6	62.3	3.9
Chesterfield	322.5	4.2	27.0	141.2	120.2	29.9
Clarendon	214.2	10.7	38.1	123.9	36.7	4.8
Darlington	176.8	2.7	19.1	105.6	47.0	2.4
Dillon	135.6	--	18.9	84.9	29.4	2.4
Florence	274.9	3.4	45.2	172.3	54.0	--
Georgetown	388.8	10.8	86.4	216.8	54.2	20.6
Horry	486.1	21.4	73.0	272.4	107.8	11.5
Kershaw	381.1	5.2	52.5	172.2	128.0	23.2
Lee	105.7	--	7.2	50.7	47.8	--
Marion	210.1	6.5	37.6	109.8	48.9	7.3
Marlboro	158.1	--	24.9	101.5	25.2	6.5
Richland	340.2	--	52.9	178.7	96.1	12.5
Sumter	225.7	2.1	39.7	141.8	42.1	--
Williamsburg	387.1	2.6	46.2	241.8	92.2	4.3
Total	4,687.4	81.6	739.9	2,599.0	1,117.1	149.8

^{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/} -----				
Berkeley	2,326.7	1,404.1	120.1	446.9	355.6	717.0	388.4	34.5	168.2	125.9
Charleston	1,100.5	719.3	60.9	205.9	114.4	362.7	208.6	17.2	85.8	51.1
Chesterfield	612.6	362.1	--	160.4	90.1	210.0	114.1	0.3	56.8	38.8
Clarendon	929.9	277.2	107.0	349.0	196.7	317.2	82.4	27.6	130.4	76.8
Darlington	678.9	359.0	44.9	160.6	114.4	205.1	92.5	11.3	58.0	43.3
Dillon	509.0	230.3	33.7	175.4	69.6	168.3	59.3	8.2	70.9	29.9
Florence	1,297.7	720.6	91.9	319.7	165.5	387.5	189.3	25.9	112.2	60.2
Georgetown	1,616.1	837.0	119.7	437.2	222.2	533.8	250.8	30.0	162.2	90.8
Horry	1,694.3	731.1	142.0	568.3	252.9	569.0	219.7	37.5	222.0	89.8
Kershaw	768.5	407.5	9.8	251.9	99.3	259.5	133.4	3.2	82.2	40.7
Lee	184.8	64.1	--	93.6	27.1	68.3	20.9	--	35.3	12.1
Marion	943.5	353.0	99.8	313.2	177.5	299.6	93.1	23.8	119.3	63.4
Marlboro	484.5	166.8	39.9	207.0	70.8	171.8	47.2	9.8	84.8	30.0
Richland	1,026.1	441.1	22.5	368.4	194.1	341.4	134.1	6.6	125.6	75.1
Sumter	955.5	418.8	46.9	365.9	123.9	289.6	114.9	11.4	120.3	43.0
Williamsburg	1,417.0	711.4	49.1	274.1	382.4	440.4	190.6	13.5	107.8	128.5
Total	16,545.6	8,203.4	988.2	4,697.5	2,656.5	5,341.2	2,339.3	260.8	1,741.8	999.3

^{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	Pine	Other softwood	Soft hardwood	Hard hardwood
	- - - - - Million board feet - - - - -					- - - - - Million cubic feet - - - - -				
Berkeley	128.1	93.5	3.4	16.1	15.1	36.2	24.9	1.1	5.3	4.9
Charleston	77.0	58.3	2.4	9.6	6.7	20.6	14.6	0.4	3.0	2.6
Chesterfield	44.3	32.0	--	6.9	5.4	13.6	9.4	--	2.2	2.0
Clarendon	46.9	23.3	4.0	11.3	8.3	14.2	6.4	0.8	4.0	3.0
Darlington	36.2	21.6	1.1	8.2	5.3	10.5	5.9	0.2	2.3	2.1
Dillon	27.8	14.8	0.9	8.8	3.3	7.9	3.5	0.2	2.6	1.6
Florence	65.4	46.0	2.6	10.7	6.1	17.0	10.5	0.6	3.6	2.3
Georgetown	94.1	66.0	4.2	13.7	10.2	25.8	16.3	0.9	4.7	3.9
Horry	100.0	58.9	5.2	24.6	11.3	29.1	16.3	1.2	7.7	3.9
Kershaw	63.0	45.7	0.2	11.2	5.9	19.3	13.8	0.1	3.2	2.2
Lee	11.4	5.6	--	4.2	1.6	3.9	1.8	--	1.4	0.7
Marion	48.8	22.2	3.2	14.4	9.0	13.6	5.7	0.6	4.7	2.6
Marlboro	28.9	11.4	1.3	11.7	4.5	8.9	3.6	0.3	3.4	1.6
Richland	59.1	32.1	0.6	16.4	10.0	19.0	10.7	0.3	4.6	3.4
Sumter	48.4	26.9	1.6	14.7	5.2	14.0	7.8	0.4	3.9	1.9
Williamsburg	75.1	45.6	1.6	12.2	15.7	21.0	11.4	0.3	4.0	5.3
Total	954.5	603.9	32.3	194.7	123.6	274.6	162.6	7.4	60.6	44.0

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 cubic feet - - - - -				
Berkeley	75.4	63.7	0.6	1.9	9.2	21.1	17.7	0.2	0.6	2.6
Charleston	46.7	36.8	--	7.4	2.5	12.5	9.2	--	2.2	1.1
Chesterfield	19.3	6.9	--	10.1	2.3	7.0	3.1	--	3.1	0.8
Clarendon	46.6	14.8	6.7	21.4	3.7	12.1	3.5	1.4	5.9	1.3
Darlington	16.5	7.8	--	6.3	2.4	4.3	1.8	--	1.6	0.9
Dillon	26.9	18.7	--	8.0	0.2	6.7	4.7	--	1.9	0.1
Florence	49.0	40.5	--	4.8	3.7	13.0	9.5	--	2.0	1.5
Georgetown	71.6	48.1	7.6	12.5	3.4	17.8	12.0	1.4	3.3	1.1
Horry	55.9	42.7	--	7.3	5.9	15.7	11.0	--	2.4	2.3
Kershaw	43.8	32.1	--	7.4	4.3	16.6	12.1	--	3.1	1.4
Lee	14.3	3.2	--	9.9	1.2	4.0	0.9	--	2.6	0.5
Marion	27.2	10.8	1.2	10.6	4.6	7.1	2.7	0.2	2.8	1.4
Marlboro	40.2	20.4	3.0	11.9	4.9	11.2	5.3	0.7	3.6	1.6
Richland	38.8	16.8	0.8	16.4	4.8	10.9	5.0	0.3	4.1	1.5
Sumter	34.0	11.7	1.5	16.2	4.6	8.6	3.0	0.4	3.8	1.4
Williamsburg	47.3	26.0	0.9	14.2	6.2	12.7	6.7	0.2	4.0	1.8
Total	653.5	401.0	22.3	166.3	63.9	181.3	108.2	4.8	47.0	21.3

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	249.2	31.5	56.1	62.3	61.4	37.9
Slash pine	210.6	2.2	37.1	53.7	62.0	55.6
Loblolly pine ^{1/}	1,078.8	85.6	33.1	261.4	471.1	227.6
Shortleaf pine	33.7	2.2	4.0	4.9	8.7	13.9
Virginia pine	--	--	--	--	--	--
Redcedar	13.0	--	--	--	2.2	10.8
Pond pine	262.1	17.4	16.8	83.4	86.1	58.4
Pitch pine	--	--	--	--	--	--
Total	1,847.4	138.9	147.1	465.7	691.5	404.2
Hardwood types:						
Oak-pine	826.4	34.2	29.3	138.3	436.3	188.3
Oak-hickory	806.0	11.1	15.1	141.2	487.7	150.9
Southern scrub oak	99.1	--	15.0	11.1	44.2	28.8
Oak-gum-cypress	1,010.8	36.4	13.9	301.2	427.3	232.0
Elm-ash-cottonwood	97.7	2.2	7.5	14.0	39.4	34.6
Total	2,840.0	83.9	80.8	605.8	1,434.9	634.6
All types	4,687.4	222.8	227.9	1,071.5	2,126.4	1,038.8

^{1/} Includes 3,600 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	222.8	10.2	56.9	114.8	40.9	--
Other public	227.9	0.6	32.5	112.2	72.1	10.5
Forest industry	1,071.5	35.1	204.1	648.3	150.6	33.4
Farmer	2,126.4	24.0	300.2	1,180.4	561.0	60.8
Misc. private	1,038.8	11.7	146.2	543.3	292.5	45.1
All ownerships	4,687.4	81.6	739.9	2,599.0	1,117.1	149.8

^{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	3,776.9	1,787.2	218.5	1,106.7	664.5
Upper-stem portion	341.7	99.3	20.0	147.0	75.4
Total	4,118.6	1,886.5	238.5	1,253.7	739.9
Poletimber trees	1,222.6	452.8	22.3	488.1	259.4
All growing-stock trees	5,341.2	2,339.3	260.8	1,741.8	999.3
Rough trees:					
Sawtimber-size trees	341.9	23.4	5.7	183.3	129.5
Poletimber-size trees	398.6	37.3	3.7	208.1	149.5
Total	740.5	60.7	9.4	391.4	279.0
Rotten trees:					
Sawtimber-size trees	212.1	1.1	17.9	132.0	61.1
Poletimber-size trees	22.9	0.4	0.3	16.6	5.6
Total	235.0	1.5	18.2	148.6	66.7
Salvable dead trees:					
Sawtimber-size trees	1.8	0.5	--	--	1.3
Poletimber-size trees	2.5	2.2	--	--	0.3
Total	4.3	2.7	--	--	1.6
Total, all timber	6,321.0	2,404.2	288.4	2,281.8	1,346.6

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	36,700	12,329	8,764	7,430	4,466	2,370	946	274	75	44	2
Slash pine	16,485	13,374	2,045	768	175	89	13	21	--	--	--
Shortleaf pine	9,651	4,909	2,386	1,125	648	343	150	65	20	5	--
Loblolly pine	135,470	54,231	28,739	18,340	13,348	8,958	5,956	2,898	1,648	1,305	47
Virginia pine	159	48	96	15	--	--	--	--	--	--	--
Pond pine	35,583	15,195	8,665	5,443	3,388	1,537	828	355	117	55	--
Spruce pine	586	136	257	86	78	--	25	--	4	--	--
Cypress	12,348	3,082	2,321	2,038	1,688	1,267	806	519	277	287	63
Other eastern softwoods	1,294	1,095	69	48	11	27	12	11	12	9	--
Total softwoods	248,276	104,399	53,342	35,293	23,802	14,591	8,736	4,143	2,153	1,705	112
Hardwood:											
Select white oaks ^{1/}	6,496	1,884	1,597	1,027	727	575	275	189	93	112	17
Select red oaks ^{2/}	2,315	509	524	340	292	262	144	86	52	100	6
Other white oaks	6,855	3,207	1,401	795	407	344	206	142	129	162	62
Other red oaks	40,288	17,885	8,529	4,802	3,340	1,862	1,359	911	575	890	135
Hickory	6,031	2,275	1,151	768	607	489	286	184	112	148	11
Hard maple	152	117	--	16	10	9	--	--	--	--	--
Soft maple	15,173	6,590	3,561	1,808	1,087	859	565	343	184	170	6
Beech	150	96	--	--	22	8	6	15	--	3	--
Sweetgum	48,408	21,194	11,374	5,929	3,897	2,678	1,497	860	490	439	50
Tupelo and blackgum	50,937	14,246	10,834	8,325	6,695	5,048	2,962	1,521	684	580	42
Ash	8,109	3,476	1,633	1,307	755	384	270	138	52	94	--
Cottonwood	2,017	798	350	371	192	167	76	33	8	20	2
Basswood	12	--	--	--	12	--	--	--	--	--	--
Yellow-poplar	5,492	1,697	1,141	894	638	379	373	208	84	73	5
Black walnut	57	--	43	14	--	--	--	--	--	--	--
Black cherry	437	350	77	--	10	--	--	--	--	--	--
Elm	4,148	1,869	751	643	312	226	138	85	45	71	8
Sycamore	438	37	149	33	78	18	37	26	24	36	--
Birch (except yellow)	1,271	437	254	234	146	97	55	25	20	3	--
Other eastern hardwoods	4,921	2,384	1,093	665	402	175	84	64	36	13	5
Total hardwoods	203,707	79,051	44,462	27,971	19,629	13,580	8,333	4,830	2,588	2,914	349
All species	451,983	183,450	97,804	63,264	43,431	28,171	17,069	8,973	4,741	4,619	461

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

^{2/} Includes cherrybark, northern red, and Shumard oaks.

Table 14.--Volume of all live 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
----- Million cubic feet -----											
Softwood:											
Longleaf pine	374.0	28.3	52.1	84.9	83.0	65.5	36.2	14.1	5.0	4.6	0.3
Slash pine	46.4	20.6	10.0	7.5	3.3	3.3	0.5	1.2	--	--	--
Shortleaf pine	68.5	9.6	13.3	11.9	12.3	9.7	6.0	3.6	1.5	0.6	--
Loblolly pine	1,628.5	113.5	164.7	201.8	243.6	250.6	233.4	157.9	116.7	136.6	9.7
Virginia pine	0.8	--	0.6	0.2	--	--	--	--	--	--	--
Pond pine	277.1	31.4	43.8	52.9	54.0	38.3	28.5	16.6	7.1	4.5	--
Spruce pine	6.2	0.5	2.1	0.9	1.4	0.2	0.9	--	0.2	--	--
Cypress	279.6	6.7	15.9	27.7	37.2	42.1	35.0	31.1	22.1	36.2	25.6
Other eastern softwoods	8.8	2.7	1.0	0.7	0.5	0.7	0.4	0.6	0.9	1.3	--
Total softwoods	2,689.9	213.3	303.5	388.5	435.3	410.4	340.9	225.1	153.5	183.8	35.6
Hardwood:											
Select white oaks ^{1/}	105.2	5.7	10.7	12.4	13.6	17.0	11.3	10.7	6.8	12.1	4.9
Select red oaks ^{2/}	46.8	1.6	3.2	4.4	5.2	6.2	5.3	4.4	3.5	11.5	1.5
Other white oaks	139.4	10.0	12.5	11.4	11.2	12.8	11.9	9.8	11.1	27.5	21.2
Other red oaks	687.9	53.6	62.8	69.8	79.8	66.4	67.4	60.9	52.7	127.4	47.1
Hickory	113.8	5.6	8.5	9.6	13.9	14.9	14.0	12.4	10.1	20.5	4.3
Hard maple	1.6	0.2	0.3	0.4	0.4	0.2	0.1	--	--	--	--
Soft maple	324.0	31.8	42.6	41.0	40.6	43.5	36.4	28.3	22.1	31.0	6.7
Beech	6.2	0.3	0.3	0.1	0.9	0.9	0.5	1.2	0.1	1.3	0.6
Sweetgum	655.3	57.7	80.6	84.3	97.3	95.4	71.2	55.3	41.2	57.2	15.1
Tupelo and blackgum	1,025.0	49.4	93.5	138.4	172.8	178.9	141.8	100.9	56.9	74.9	17.5
Ash	136.2	14.8	18.7	23.5	21.7	16.2	13.1	9.4	4.6	13.5	0.7
Cottonwood	30.8	2.5	2.6	5.4	4.8	5.5	3.5	2.1	0.6	2.4	1.4
Basswood	0.4	0.1	0.1	--	0.2	--	--	--	--	--	--
Yellow-poplar	97.9	4.9	7.3	13.4	14.4	12.7	15.8	12.0	6.6	8.8	2.0
Black walnut	1.5	--	0.9	0.2	--	--	0.1	0.1	0.2	--	--
Black cherry	6.2	2.6	1.5	0.5	0.6	0.3	--	--	--	0.7	--
Elm	74.4	6.7	7.2	10.4	9.6	8.5	7.2	6.9	4.3	10.9	2.7
Sycamore	14.8	0.2	0.9	0.7	1.9	1.2	1.9	1.8	1.8	4.4	--
Birch (except yellow)	22.8	1.7	2.9	3.9	4.8	3.2	2.3	1.6	1.8	0.6	--
Other eastern hardwoods	136.6	35.7	30.3	25.0	17.8	10.2	5.3	5.1	3.2	2.9	1.1
Total hardwoods	3,626.8	285.1	387.4	454.8	511.5	494.0	409.1	322.9	227.6	407.6	126.8
All species	6,316.7	498.4	690.9	843.3	946.8	904.4	750.0	548.0	381.1	591.4	162.4

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

^{2/} Includes cherrybark, northern red, 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)									
		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	371.7	27.5	51.5	84.6	82.8	65.3	36.0	14.0	5.0	4.7	0.3
Slash pine	44.3	19.2	9.5	7.3	3.3	3.3	0.5	1.2	--	--	--
Shortleaf pine	67.2	9.2	12.9	11.7	12.1	9.6	6.0	3.6	1.5	0.6	--
Loblolly pine	1,584.8	101.0	151.2	191.5	239.5	249.2	233.1	157.4	116.6	135.6	9.7
Virginia pine	0.8	--	0.6	0.2	--	--	--	--	--	--	--
Pond pine	265.7	28.0	40.6	50.4	53.2	37.6	28.3	16.3	6.9	4.4	--
Spruce pine	4.8	0.3	1.3	0.7	1.4	--	0.9	--	0.2	--	--
Cypress	253.6	5.8	13.7	25.0	35.2	41.3	34.4	29.9	21.3	31.9	15.1
Other eastern softwoods	7.2	2.4	0.4	0.7	0.3	0.7	0.4	0.5	0.9	0.9	--
Total softwoods	2,600.1	193.4	281.7	372.1	427.8	407.0	339.6	222.9	152.4	178.1	25.1
Hardwood:											
Select white oaks ^{1/}	93.9	4.2	9.0	10.9	12.5	15.6	10.4	9.9	6.0	11.5	3.9
Select red oaks ^{2/}	43.7	1.0	2.6	3.8	5.0	6.3	5.3	4.2	3.5	10.8	1.2
Other white oaks	93.0	6.2	6.8	6.9	6.4	8.4	7.3	6.6	8.2	20.0	16.2
Other red oaks	546.8	39.6	48.7	53.5	66.0	54.7	54.5	50.4	43.1	102.5	33.8
Hickory	94.3	4.1	5.7	7.5	10.2	14.0	11.9	11.0	8.4	18.4	3.1
Hard maple	0.9	0.3	--	0.2	0.2	0.2	--	--	--	--	--
Soft maple	187.4	16.2	22.4	22.9	22.1	26.8	23.4	19.8	13.8	18.9	1.1
Beech	2.2	0.1	--	--	0.5	0.2	0.3	0.8	--	0.3	--
Sweetgum	570.2	42.3	64.9	70.7	82.6	87.1	65.4	52.3	39.2	53.1	12.6
Tupelo and blackgum	765.7	28.3	60.1	98.0	130.0	148.0	117.8	81.2	45.2	49.6	7.5
Ash	96.0	7.8	10.8	16.6	15.7	11.5	11.0	8.7	3.7	10.2	--
Cottonwood	28.1	1.9	2.2	4.9	4.5	5.3	3.3	1.9	0.6	2.4	1.1
Basswood	0.2	--	--	--	0.2	--	--	--	--	--	--
Yellow-poplar	87.8	4.3	6.6	11.5	13.4	10.7	15.4	11.6	6.0	7.2	1.1
Black walnut	0.7	--	0.5	0.2	--	--	--	--	--	--	--
Black cherry	1.6	0.9	0.5	--	0.2	--	--	--	--	--	--
Elm	57.2	4.7	4.2	8.0	6.6	7.0	5.9	5.5	3.3	9.5	2.5
Sycamore	12.6	0.1	1.0	0.5	1.5	0.5	1.9	1.6	1.6	3.9	--
Birch (except yellow)	16.7	0.8	1.7	2.9	3.1	2.9	2.3	1.1	1.6	0.3	--
Other eastern hardwoods	42.1	4.8	6.3	6.9	7.8	4.6	3.2	3.4	2.5	1.7	0.9
Total hardwoods	2,741.1	167.6	254.0	325.9	388.5	403.8	339.3	270.0	186.7	320.3	85.0
All species	5,341.2	361.0	535.7	698.0	816.3	810.8	678.9	492.9	339.1	498.4	110.1

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

^{2/} Includes cherrybark, northern red, 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	1,323.4	351.4	377.7	307.3	173.3	67.4	23.1	21.7	1.5
Slash pine	63.2	26.2	14.5	14.7	1.9	5.9	--	--	--
Shortleaf pine	178.4	37.8	48.3	40.4	26.5	15.8	6.6	3.0	--
Loblolly pine	5,777.9	697.0	994.8	1,094.1	1,053.2	718.6	538.0	638.0	44.2
Virginia pine	0.8	0.8	--	--	--	--	--	--	--
Pond pine	847.5	193.4	223.8	169.1	130.9	76.6	33.2	20.5	--
Spruce pine	12.2	1.9	5.2	--	3.9	--	1.2	--	--
Cypress	971.5	76.0	129.8	174.5	151.8	138.0	94.3	142.1	65.0
Other eastern softwoods	16.7	3.1	1.5	2.9	1.5	1.8	2.1	3.8	--
Total softwoods	9,191.6	1,387.6	1,795.6	1,803.0	1,543.0	1,024.1	698.5	829.1	110.7
Hardwood:									
Select white oaks ^{1/}	235.4	--	36.2	52.9	35.8	36.2	21.2	38.2	14.9
Select red oaks ^{2/}	151.7	--	17.7	25.6	21.7	20.3	14.7	47.1	4.6
Other white oaks	258.3	--	21.3	28.2	24.6	22.8	27.8	72.9	60.7
Other red oaks	1,456.4	--	201.5	186.3	200.9	182.4	163.6	389.2	132.5
Hickory	296.1	--	35.1	53.3	46.1	42.4	32.4	74.1	12.7
Hard maple	1.1	--	0.5	0.6	--	--	--	--	--
Soft maple	409.4	--	60.4	82.7	81.0	68.0	46.5	67.5	3.3
Beech	6.8	--	1.5	0.7	1.0	2.8	--	0.8	--
Sweetgum	1,593.1	--	267.8	344.8	282.9	238.3	172.8	229.9	56.6
Tupelo and blackgum	2,090.6	--	373.4	519.8	456.5	322.1	184.1	201.6	33.1
Ash	204.9	--	42.3	39.2	38.5	31.7	13.3	39.9	--
Cottonwood	67.3	--	12.0	18.8	12.5	7.7	2.1	9.2	5.0
Basswood	0.9	--	0.9	--	--	--	--	--	--
Yellow-poplar	278.6	--	45.7	43.8	69.3	52.7	28.1	35.3	3.7
Black walnut	--	--	--	--	--	--	--	--	--
Black cherry	0.4	--	0.4	--	--	--	--	--	--
Elm	143.1	--	18.9	23.2	20.8	20.8	12.6	36.3	10.5
Sycamore	42.7	--	4.7	1.1	7.6	5.5	7.0	16.8	--
Birch (except yellow)	31.8	--	6.7	9.0	6.7	3.7	4.5	1.2	--
Other eastern hardwoods	85.4	--	23.6	16.3	11.7	12.5	11.1	7.8	2.4
Total hardwoods	7,354.0	--	1,170.6	1,446.3	1,317.6	1,069.9	741.8	1,267.8	340.0
All species	16,545.6	1,387.6	2,966.2	3,249.3	2,860.6	2,094.0	1,440.3	2,096.9	450.7

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

^{2/} Includes cherrybark, northern red, 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	162.6	108.2
Cypress	7.0	4.7
Other eastern softwoods	0.4	0.1
Total softwoods	170.0	113.0
Hardwood:		
Select white and red oaks	6.1	3.7
Other white and red oaks	30.2	12.0
Hickory	3.3	2.2
Hard maple	(1/)	--
Sweetgum	24.5	18.7
Ash, walnut, and black cherry	3.4	2.2
Yellow-poplar	6.1	3.1
Other hardwoods	31.0	26.4
Total hardwoods	104.6	68.3
All species	274.6	181.3

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	603.9	401.0
Cypress	31.8	22.3
Other eastern softwoods	0.5	--
Total softwoods	636.2	423.3
Hardwood:		
Select white and red oaks	22.9	13.8
Other white and red oaks	76.5	32.6
Hickory	10.6	6.7
Hard maple	(1/)	--
Sweetgum	76.1	65.1
Ash, walnut, and black cherry	10.6	6.9
Yellow-poplar	26.1	11.4
Other hardwoods	95.5	93.7
Total hardwoods	318.3	230.2
All species	954.5	653.5

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	10.8	27.1
Cypress	0.4	1.0
Other eastern softwoods	0.1	0.4
Total softwoods	11.3	28.5
Hardwood:		
Select white and red oaks	1.0	3.4
Other white and red oaks	4.3	13.6
Hickory	0.3	1.4
Hard maple	--	--
Sweetgum	2.5	7.1
Ash, walnut, and black cherry	0.8	1.0
Yellow-poplar	0.3	0.4
Other hardwoods	6.1	14.3
Total hardwoods	15.3	41.2
All species	26.6	69.7

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	406.3	225.5	30.9	105.1	44.8	365.9	221.6	29.3	83.2	31.8
Other public	204.0	136.6	3.5	29.9	34.0	180.9	134.7	2.8	22.5	20.9
Forest industry	1,600.5	577.6	101.3	603.1	318.5	1,361.8	559.3	96.9	462.2	243.4
Farmer	2,707.3	1,016.3	89.9	996.4	604.7	2,272.7	988.9	77.9	755.8	450.1
Miscellaneous private	1,398.6	445.5	62.8	547.3	343.0	1,159.9	434.8	53.9	418.1	253.1
All ownerships	6,316.7	2,401.5	288.4	2,281.8	1,345.0	5,341.2	2,339.3	260.8	1,741.8	999.3

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	579.1	409.4	38.8	112.7	18.2	676.8	455.5	65.9	93.3	62.1
Other public	338.6	297.6	7.3	19.6	14.1	236.5	159.9	2.1	33.9	40.6
Forest industry	1,947.0	1,139.9	152.3	477.4	177.4	2,124.4	652.2	213.2	756.7	502.3
Farmer	3,159.1	1,855.8	122.4	819.3	361.6	3,882.0	1,731.8	186.1	1,172.2	791.9
Miscellaneous private	1,579.3	895.7	67.0	421.3	195.3	2,022.8	605.6	133.1	791.1	493.0
All ownerships	7,603.1	4,598.4	387.8	1,850.3	766.6	8,942.5	3,605.0	600.4	2,847.2	1,889.9

^{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				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
----- Million cubic feet -----										
National Forest	16.8	12.0	0.8	2.7	1.3	9.4	9.3	--	0.1	--
Other public	11.7	9.3	0.3	1.0	1.1	2.6	2.0	--	0.1	0.5
Forest industry	71.1	43.2	2.6	15.4	9.9	57.3	33.9	3.0	14.7	5.7
Farmer	118.2	66.8	2.1	28.0	21.3	76.6	42.9	1.2	22.1	10.4
Miscellaneous private	56.8	31.3	1.6	13.5	10.4	35.4	20.1	0.6	10.0	4.7
All ownerships	274.6	162.6	7.4	60.6	44.0	181.3	108.2	4.8	47.0	21.3

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				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
----- Million board feet -----										
National Forest	65.4	50.4	3.4	7.7	3.9	34.2	33.7	--	0.5	--
Other public	41.0	34.6	0.5	3.3	2.6	8.4	6.7	--	--	1.7
Forest industry	249.7	159.2	11.4	49.5	29.6	210.5	126.0	14.7	51.6	18.2
Farmer	399.9	243.2	9.8	91.2	55.7	276.9	168.8	5.3	76.0	26.8
Miscellaneous private	198.5	116.5	7.2	43.0	31.8	123.5	65.8	2.3	38.2	17.2
All ownerships	954.5	603.9	32.3	194.7	123.6	653.5	401.0	22.3	166.3	63.9

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	3,041	900.1	5,246	1,382.5	2,665	813.0	2,405	793.4	3,411	969.7	2,682	799.8
Hardwood	174	85.7	335	140.9	103	51.4	133	67.3	214	104.8	138	72.7
Total	3,215	985.8	5,581	1,523.4	2,768	864.4	2,538	860.7	3,625	1,074.5	2,820	872.5
Other timber:												
Softwood	--	25.3	--	26.8	--	12.2	--	26.7	--	27.5	--	24.2
Hardwood	--	40.8	--	56.9	--	31.1	--	34.0	--	45.1	--	41.2
Total	--	66.1	--	83.7	--	43.3	--	60.7	--	72.6	--	65.4
Oak-pine type:												
Growing stock:												
Softwood	2,010	542.5	5,009	1,174.5	1,611	377.1	2,211	622.0	1,954	524.0	1,537	439.3
Hardwood	810	344.1	1,922	797.8	376	108.2	944	403.7	718	313.9	800	328.2
Total	2,820	886.6	6,931	1,972.3	1,987	485.3	3,155	1,025.7	2,672	837.9	2,337	767.5
Other timber:												
Softwood	--	14.5	--	22.8	--	--	--	21.7	--	14.4	--	9.6
Hardwood	--	120.2	--	288.7	--	28.9	--	107.1	--	124.3	--	111.1
Total	--	134.7	--	311.5	--	28.9	--	128.8	--	138.7	--	120.7
Upland hardwood types:												
Growing stock:												
Softwood	569	149.0	336	98.8	305	96.8	603	153.3	575	151.8	588	151.0
Hardwood	1,923	737.7	5,223	1,863.4	584	222.9	2,503	886.7	1,739	702.4	2,024	744.1
Total	2,492	886.7	5,559	1,962.2	889	319.7	3,106	1,040.0	2,314	854.2	2,612	895.1
Other timber:												
Softwood	--	4.9	--	31.0	--	1.9	--	3.0	--	5.8	--	2.9
Hardwood	--	216.8	--	511.6	--	172.1	--	233.3	--	207.3	--	220.5
Total	--	221.7	--	542.6	--	174.0	--	236.3	--	213.1	--	223.4
Bottomland hardwood types:												
Growing stock:												
Softwood	1,183	294.8	3,316	868.4	730	166.3	1,405	359.0	1,067	254.5	894	228.0
Hardwood	4,331	1,527.8	3,402	1,400.9	2,648	1,074.6	4,401	1,576.9	3,994	1,420.8	5,093	1,711.2
Total	5,514	1,822.6	6,718	2,269.3	3,378	1,240.9	5,806	1,935.9	5,061	1,675.3	5,987	1,939.2
Other timber:												
Softwood	--	23.8	--	25.1	--	34.3	--	14.9	--	26.0	--	29.0
Hardwood	--	479.4	--	349.5	--	394.1	--	485.9	--	453.8	--	539.8
Total	--	503.2	--	374.6	--	428.4	--	500.8	--	479.8	--	568.8
All types:												
Growing stock:												
Softwood	1,961	554.6	4,610	1,193.3	1,990	586.6	1,880	571.5	1,888	516.7	1,657	476.5
Hardwood	1,576	587.2	1,358	546.0	457	183.5	1,678	618.3	1,527	585.6	1,865	658.6
Total	3,537	1,141.8	5,968	1,739.3	2,447	770.1	3,558	1,189.8	3,415	1,102.3	3,522	1,135.1
Other timber:												
Softwood	--	19.2	--	26.2	--	11.2	--	19.8	--	19.1	--	19.2
Hardwood	--	189.3	--	165.6	--	86.6	--	189.0	--	191.5	--	213.8
Total	--	208.5	--	191.8	--	97.8	--	208.8	--	210.6	--	233.0
All timber	3,537	1,350.3	5,968	1,931.1	2,447	867.9	3,558	1,398.6	3,415	1,312.9	3,522	1,368.1

^{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	2,705.0	2,494.4	2,673.8	+179.4
Hardwood types	2,149.5	2,181.8	2,013.6	-168.2
Total	4,854.5	4,676.2	4,687.4	+ 11.2
Noncommercial forest land:				
Productive-reserved	18.6	14.4	19.0	+ 4.6
Unproductive	1.7	2.7	10.4	+ 7.7
Total	20.3	17.1	29.4	+ 12.3
Nonforest land:				
Cropland	1,966.2	2,062.4	1,886.7	-175.7
Pasture and range	120.0	171.8	177.1	+ 5.3
Other	463.7	480.9	625.2	+144.3
Total	2,549.9	2,715.1	2,689.0	- 26.1
All land ^{1/}	7,424.7	7,408.4	7,405.8	- 2.6

^{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	8,575.4	--	--	1,121.6	1,551.3	1,913.7	1,546.7	939.7	539.5	962.9
	1958	7,353.6	--	--	1,209.9	1,532.6	1,374.3	1,209.0	855.4	478.9	693.5
	1968	9,191.6	--	--	1,387.6	1,795.6	1,803.0	1,543.0	1,024.1	698.5	939.8
Hardwood	1947	8,478.3	--	--	--	1,201.2	1,515.8	1,449.1	1,330.0	832.0	2,150.2
	1958	6,600.0	--	--	--	1,031.9	1,352.5	1,130.4	963.4	669.8	1,452.0
	1968	7,354.0	--	--	--	1,170.6	1,446.3	1,317.6	1,069.9	741.8	1,607.8
GROWING STOCK (in million cubic feet)											
Softwood	1947	2,264.0	91.5	199.2	300.8	369.6	432.0	340.4	204.6	117.7	208.2
	1958	2,093.7	146.0	241.0	324.5	365.2	310.2	266.1	186.2	104.5	150.0
	1968	2,600.1	193.4	281.7	372.1	427.8	407.0	339.6	222.9	152.4	203.2
Hardwood	1947	2,928.7	132.5	203.8	310.2	398.7	423.2	373.2	335.7	209.4	542.0
	1958	2,433.6	141.2	205.1	298.4	342.5	377.6	291.1	243.2	168.5	366.0
	1968	2,741.1	167.6	254.0	325.9	388.5	403.8	339.3	270.0	186.7	405.3
ALL LIVE TIMBER (in million cubic feet)											
Softwood	1947	2,333.5	101.3	214.5	314.2	376.1	435.6	341.7	206.6	118.6	224.9
	1958	2,166.7	161.7	259.4	338.9	371.6	312.8	267.1	188.1	105.2	161.9
	1968	2,689.9	213.3	303.5	388.5	435.3	410.4	340.9	225.1	153.5	219.4
Hardwood	1947	3,833.1	225.3	311.2	432.7	524.9	517.6	450.0	401.4	255.2	714.8
	1958	3,212.1	240.1	313.1	416.2	450.9	461.8	351.0	290.8	205.5	482.7
	1968	3,626.8	285.1	387.4	454.8	511.5	494.0	409.1	322.9	227.6	534.4

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

