

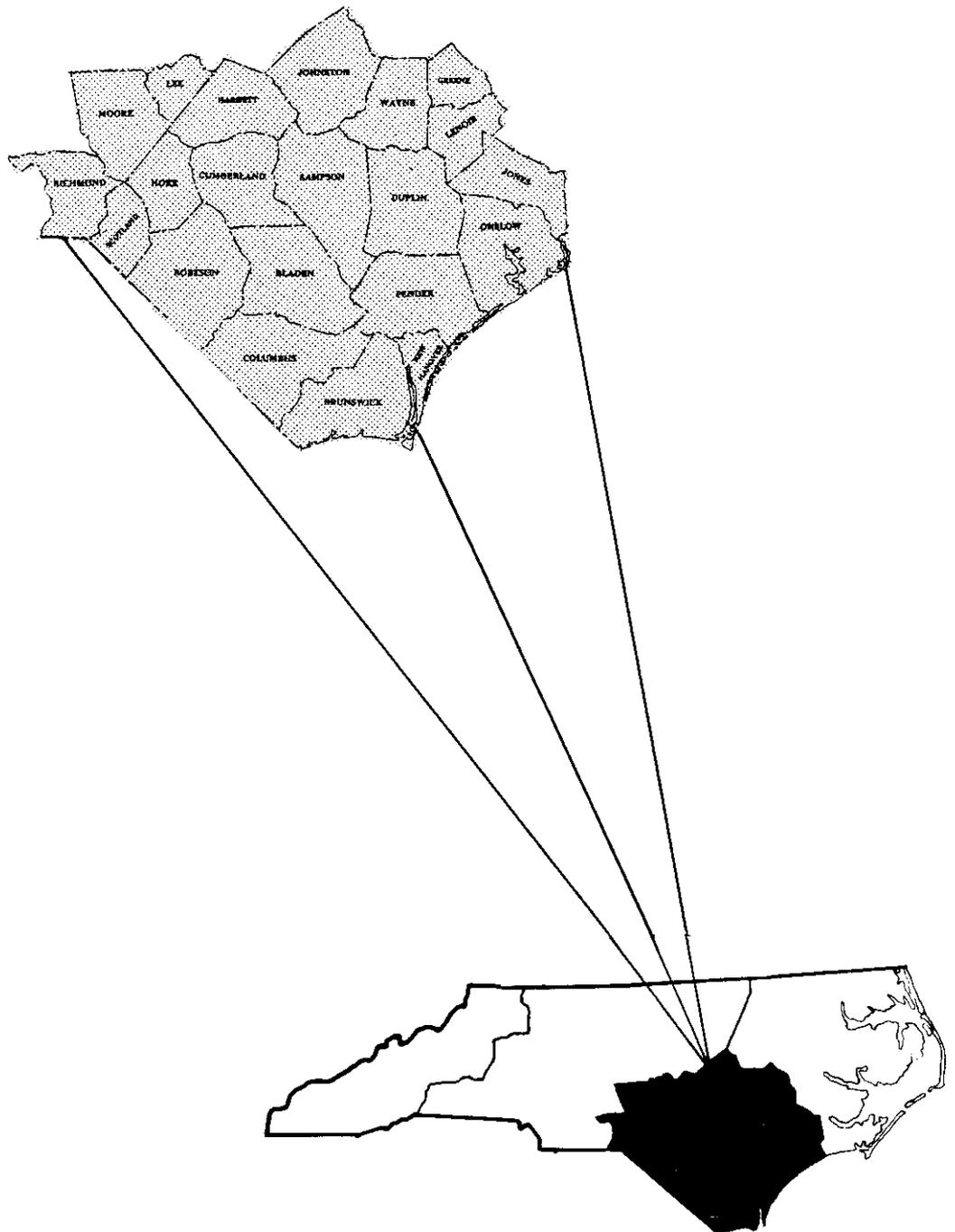
United States  
Department of  
Agriculture  
Forest Service



Southeastern Forest  
Experiment Station

Resource Bulletin  
SE-72

# Forest Statistics for the Southern Coastal Plain of North Carolina, 1983



## Foreword

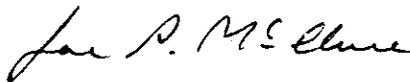
This report highlights the principal findings of the fifth forest survey in the Southern Coastal Plain of North Carolina. Fieldwork began in November 1982 and was completed in June 1983. Four previous surveys, completed in 1937, 1952, 1962, and 1973, provide statistics for measuring changes and trends over the past 46 years. The primary emphasis in this report is on the changes and trends since 1973. Previously reported figures have been adjusted to provide the best estimate of change.

Periodic surveys of the forest resource are authorized by the Forest and Range-land Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the Forest Service, USDA. In Florida, Georgia, North Carolina, South Carolina, and Virginia, these surveys are administered by the Forest Inventory and Analysis (Forest Survey) Research Work Unit at the Southeastern Forest Experiment Station, with headquarters in Asheville, N.C. The primary objective of the survey is to periodically inventory and evaluate all forest and related resources. These multi-resource data help provide a basis for formulating forest policies and programs

and for the orderly development and use of the resources. This report deals only with the extent and condition of forest lands, associated timber volumes, and rates of timber growth and removals.

The 21-county area covered by this report is one of four survey units in North Carolina. Similar reports for the other three units will be issued as the State-wide inventory progresses. When completed, these inventories will provide updated statistics on the timber resource for all of North Carolina.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the North Carolina Forest Service of the State Department of Natural and Economic Resources in collecting field data. Appreciation is also expressed for the excellent cooperation of other public agencies, forest industry, and other private landowners in providing information and access to the sample locations.



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April 1984

Southeastern Forest Experiment Station  
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Forest Statistics for the  
Southern Coastal Plain of North Carolina, 1983

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## Since 1973 in the Southern Coastal Plain of North Carolina

• *area of commercial forest land decreased by over 126,000 acres, or by 2 percent. Approximately 184,000 acres were diverted to other land uses, while only 58,000 acres of new commercial forest were added. Of the acreage diverted, 68 percent was to agricultural uses, and 27 percent was to urban and other uses. The remaining 5 percent was diverted to water or noncommercial forest land. The 5.3 million acres of commercial forest in these 21 counties account for 63 percent of the land area here.*

• *area of commercial forest land held by nonindustrial private forest (NIPF) landowners declined by 6 percent, from nearly 3.9 million acres to just over 3.6 million acres. This relatively small change conceals more extensive shifts among the three ownership categories which compose the NIPF, or other private, sector. Farmer-owned lands declined by 675,000 acres, continuing a trend dating from at least 1952; farmers now own a total 1.7 million acres of commercial forest. Land cleared to a nonforest use accounted for about 15 percent of the reduction; the remaining loss is attributed to land transactions and change in owner occupations. The clearing of farmer-owned lands made up over half of the total commercial forest acreage cleared. In contrast to farm owners, other private individuals increased their commercial forest holdings by over 18 percent to 1.6 million acres. The acreage of commercial forest land owned in the other corporate category increased by nearly 125 percent to 345,000 acres. In contrast to NIPF owners, forest industry increased its holdings by 15 percent. Forest industry now owns almost 1.1 million acres, or 20 percent of the commercial forest land. In addition to these holdings, forest industry controls 99,000 acres of commercial forest land under long-term lease from other private landowners.*

The area of commercial forest in public ownership declined by almost 7,000 acres to 481,000 acres. Almost all of the net decline occurred in the Federal ownership class.

• *acreage of commercial forest classified as a pine forest type declined by 181,000 acres, or by 7 percent. The longleaf-slash pine type covers 548,000 acres, while the loblolly-shortleaf type occupies 2.0 million acres, 212,000 acres less than in 1973. Oak-pine commercial forests cover 697,000 acres, a decline of less than 1 percent. Upland hardwood acreage declined by 12 percent, from 852,000 acres to 749,000 acres, while lowland hardwood acreage increased by 164,000 acres to 1.3 million acres.*

• *almost 930,000 acres, or 95,000 acres annually, were harvested and retained in commercial forest. The acreage undergoing a final harvest represents about 18 percent of the commercial forest area and is 16,000 acres more per year than was harvested between 1962 and 1973. Over 73 percent of the acreage harvested was in other private ownership, 22 percent was owned by forest industry, and the remaining 5 percent was on public land. About 59 percent of the harvest occurred on forest land assigned a pine forest type, 17 percent occurred in oak-pine types, and 24 percent in hardwood types. During the same period, about 351,000 acres experienced some form of partial cutting, intermediate cutting, or stand improvement, while insects, diseases, and other natural agents damaged nearly 692,000 acres of commercial forests. In 1983, 644,000 acres were classed as mature stands with a harvest treatment opportunity. An additional 805,000 acres needed some intermediate silvicultural treatment. Fifty-four percent of the commercial forest area--2.8 million acres--was identified as being in relatively good condition and not in need of any treatment at the time the survey was made.*

• *more than 296,000 acres, or 30,000 acres annually, have been artificially regenerated and are adequately stocked with suitable trees. This artificially regenerated acreage is 17 percent less than that recorded between 1962 and 1972. By ownership, the rate of artificial regeneration decreased by 36 percent, or about 10,000 acres annually, on forest industry land and by 6 percent on public land. Planting increased by about 4,000*

acres per year, or by 60 percent on other private land. Across all ownerships, about 408,000 acres of commercial forest experienced natural regeneration since 1973, while 36,000 acres of nonforest land were regenerated naturally. Altogether, between 1973 and 1983, 739,000 acres, about three-fourths of the area harvested, were regenerated. Of the acres regenerated, 54 percent now supports a pine type. The 41,000 acres of pine regenerated annually represent about 73 percent of the annual pine acreage harvested. About 12,000 acres per year regenerated to an oak-pine type, 3,500 acres less than harvested, and about 22,000 acres regenerated to either a lowland or upland hardwood type, 1,000 acres less than harvested from these types. In 1983, over 685,000 acres of other private land, 149,000 acres of forest industry land, and 139,000 acres of public land were identified as needing to be regenerated. As of the current inventory, about 783,000 acres, or 15 percent of the total commercial forest area, had originated from planting or direct seeding.

• *number of pines in the 2- and 4-inch diameter classes has declined significantly.* The number of pines dropped 30 percent in the 2-inch class and 9 percent in the 4-inch class. These declines continue a trend that began during the previous inventory. On public land, increases were seen in the number of pines in all diameter classes except the 14-inch class. On forest industry land, increases in the number of pines occurred in all diameter classes except the 2-inch class, where the number of stems declined by 49,600 or by 37 percent. On other private land, declines of 33, 19, 17, 5, 6, and 8 percent occurred in the 2- through 12-inch class, respectively. The acres of pine sapling-seedling stands decreased 19 percent, whereas the acreage of pine poletimber stands increased 3 percent and that of pine sawtimber stands increased just over 2 percent.

• *average basal area of all live trees 5.0 inches d.b.h. and larger has increased from 56 to 66 square feet per acre of commercial forest land.* There are also 643 sapling-size trees per acre, 36 fewer than in 1973. Stands classified as fully stocked now total 2.2 million acres,

while stands classified as medium stocked total 2.1 million. Stands classified as poorly stocked total 987,000 acres.

• *volume of softwood growing stock increased 15 percent and now totals 3.5 billion cubic feet.* This increase occurred across the range of diameter classes. Volume of loblolly pine, the predominant species in the Southern Coastal Plain, increased by 358.4 million cubic feet, or 19 percent. Volume of slash pine increased 104.2 million cubic feet. Volumes of longleaf, shortleaf, and pond pines, collectively, declined by 87.2 million cubic feet. Softwood growing-stock volume increased across all ownerships, but over three-fourths of the increase occurred on forest industry land. The increase amounted to about 59.6 million cubic feet, or 23 percent on public land; 357.7 million cubic feet, or 82 percent on forest industry land; and 41.0 million cubic feet, or 2 percent on other private land. The current inventory of softwood growing stock includes 12.6 billion board feet of sawtimber. There is an additional 24.6 million cubic feet of merchantable softwood volume on commercial forest land which is not considered growing stock. The total tree volume of all live softwoods (which includes the volume in stumps, tops, limbs, and in sapling-size trees) equals 4.5 billion cubic feet, 28 percent more than merchantable softwood volume. In terms of green weight of wood and bark, this total softwood inventory is equivalent to 164.6 million tons of forest biomass, an average of 31.3 tons per acre of commercial forest land.

• *volume of hardwood growing stock increased 18 percent from 2.6 to 3.1 billion cubic feet.* As with softwoods, this increase occurred in all diameter classes. Soft maples showed the largest gains in volume, with increases of 124.8 million cubic feet, or 54 percent. Soft-textured hardwoods compose 64 percent of the hardwood volume increase. Ash accounts for another 15 percent, and other red oaks another 16 percent of the increase. By ownership, volume of hardwood growing stock increased by 53.2 million cubic feet, or by 72 percent, on public land; by 112.3 million cubic feet, or by 33 percent, on forest industry land; and by

318.6 million cubic feet, or by 14 percent, on other private land. The current inventory of hardwood growing stock includes 8.9 billion board feet of sawtimber. Merchantable volume of all live hardwood trees exceeds hardwood growing-stock volume by 382.6 million cubic feet, or 12 percent. The total tree volume of all live hardwoods amounts to 5.5 billion cubic feet, 77 percent more than conventional growing-stock hardwood volume and 58 percent more than the merchantable hardwood volume. This total hardwood inventory is equivalent to 209.6 million tons of wood and bark, an average of 39.8 tons per acre of commercial forest land.

#### In 1982

• *net annual growth of growing stock averaged 58 cubic feet per acre of commercial forest land, an increase of 26 percent since 1972.* Net annual growth of softwood growing stock amounted to 194.4 million cubic feet, an increase of 23 percent since 1972. This increase occurred despite concurrent increases in softwood mortality. Although 60 percent of this growth was on NIPF land, compared with 33 percent on land controlled by forest industry, more than 91 percent of the increase occurred on forest industry land. Many young pine plantations on industry land developed to merchantable size during this period. Across all ownerships, softwood net growth exceeded removals by about 37 percent. The majority of this surplus growth was on forest industry land, where growth surpassed removals by 132 percent. On NIPF land, softwood growth exceeded removals by only 7 percent. Within the NIPF sector, softwood removals actually exceeded growth by 16 percent on farmer-owned lands. Net annual growth of hardwood growing stock equaled 113.0 million cubic feet, 25.3 million more than in 1972. Nearly 83 per-

cent of hardwood growth occurred on NIPF land, and another 14 percent was on forest industry land. Hardwood net annual growth surpassed removals on all ownerships, collectively, by 93 percent. Across all species and ownership classes, net growth of growing stock included 1.2 billion board feet of sawtimber.

• *annual removals of growing stock amounted to 200.9 million cubic feet and included 772.1 million board feet of sawtimber.* Softwood removals increased by less than 3 percent to 142.4 million cubic feet since 1972. Pines provide a disproportionate share of the removals. They constitute 49 percent of the inventory and 61 percent of the net growth, yet provide over 70 percent of the removals. Hardwood removals increased by 9 percent since 1972 and totaled 58.6 million cubic feet. By ownership, 80 percent of growing-stock removal for all species was from NIPF land, 17 percent was from forest industry, and only 3 percent was from public land. In 1972, 72 percent of the growing-stock removal was from other private land, 23 percent was from forest industry, and 5 percent was from public land.

• *mortality of growing stock totaled 38.1 million cubic feet and included 109.5 million board feet of sawtimber.* Softwood mortality increased 38 percent since 1972, totaling 24.7 million cubic feet and reducing gross growth by just over 11 percent. Approximately 48 percent of the current softwood mortality can be attributed to insects, another 23 percent to suppression, and 14 percent to diseases. Hardwood mortality increased 3 percent since 1972 to 13.4 million cubic feet and reduced gross growth by almost 11 percent. Disease and weather were the leading causes of hardwood mortality. At the time the inventory was completed, 6.7 million cubic feet of wood were available in salvable dead trees.

## How the Inventory is Made

The method of the inventory is a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented so that any combination of counties may be added together until a total is large enough to meet the desired degree of reliability. Procedures were as follows:

1. Initial estimates of forest and non-forest areas were based on the classification of 27,322 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 1,611 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassifications.

2. Estimates of timber volume and forest classifications were based on measurements recorded at 1,544 ground sample locations systematically distributed within the commercial forest land. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points. Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.

3. Equations prepared from detailed measurements collected on standing trees in this Unit, and similar measurements taken throughout the Southeast, were used to compute the volume of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on these standing

trees required to construct volume equations.

4. Felled trees were measured at 28 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups. Forest biomass estimates were made using equations developed by the Utilization of Southern Timber Research Work Unit of the Southeastern Forest Experiment Station in Athens, Ga.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,592 permanent sample plots established in the fourth survey.

6. Ownership information was collected from correspondence, public records, and local contacts. In those counties where the sample missed a particular ownership class, temporary sample plots were added on these lands.

7. All field data were sent to Asheville for editing and were entered into disk and magnetic-tape storage for processing. Final estimates were based on statistical summaries of the data.

## Reliability of the Data

Statistical analysis of these data indicates the following sampling errors in terms of one standard error (two times out of three):

	<i>Percent</i>
Per million acres of commercial forest land . . . . .	0.95
Per billion cubic feet of growing stock . . . . .	6.39
Per billion cubic feet of net annual growth . . . . .	1.28
Per billion cubic feet of annual removals . . . . .	2.56

Sampling errors for county and unit totals,<sup>a</sup> in terms of one standard error, Southern Coastal Plain of North Carolina, 1983

County	Commercial forest area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		- - - - - Sampling error <sup>b</sup> - - - - -		
Bladen	1.40	9.38	10.21	17.90
Brunswick	1.15	11.82	8.17	25.69
Columbus	1.28	8.05	6.71	19.85
Cumberland	1.96	11.81	12.21	23.93
Duplin	1.59	9.55	8.34	21.98
Greene	3.11	15.94	16.84	40.95
Harnett	1.78	12.24	11.08	28.99
Hoke	3.27	14.76	15.73	32.94
Johnston	1.54	9.21	9.70	25.68
Jones	1.97	12.07	10.91	26.00
Lee	3.67	16.97	14.65	27.69
Lenoir	3.18	16.85	13.16	27.60
Moore	1.29	8.66	8.99	20.77
New Hanover	6.42	28.01	24.78	53.48
Onslow	2.11	10.05	10.22	22.33
Pender	1.06	8.16	7.52	28.10
Richmond	1.68	10.40	11.43	32.57
Robeson	1.81	9.33	8.75	22.56
Sampson	1.54	9.50	7.69	17.67
Scotland	2.73	16.55	17.38	44.81
Wayne	2.23	12.04	10.03	26.60
Total	0.41	2.47	2.29	5.70

<sup>a</sup>Sampling error of breakdowns of county and unit totals may be computed with the following formula:

$$E = \frac{(SE) \sqrt{(\text{specified volume or area})}}{\sqrt{(\text{volume or area total in question})}}$$

Where: E = Sampling error of the volume or area total in question.

SE = Specified sampling error in table.

<sup>b</sup>By random-sampling formula (in percent).

## Definitions of Terms

**All live trees.** All trees 1.0 inch d.b.h. and larger which are not dead at the time of inventory.

**All live tree volume.** Volume (cubic feet) of solid wood above the ground line in all live trees 1.0 inch d.b.h. and larger. The volume in twigs and lateral limbs smaller than 0.5 inch in diameter at the point of occurrence on sapling-size trees is included, but is excluded on poletimber and sawtimber-size trees.

**Allowable cut.** The volume of timber that could be cut on commercial forest land during a given period under specified management plans aimed at sustained production of timber products.

**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.

**Biomass.** The aboveground green weight of solid wood and bark in all live trees 1.0 inch d.b.h. and larger from the ground to the tip of the tree. All foliage is excluded. The weight of wood and bark in lateral limbs, secondary limbs, and twigs under 0.5 inch in diameter at the point of occurrence on sapling-size trees is included, but is excluded on poletimber and sawtimber-size trees.

**Bole.** That portion of a tree between a 1-foot stump and a 4-inch top diameter outside bark (d.o.b.) in trees 5.0 inches d.b.h. and larger.

**Broad management class.** A classification of commercial forest land based on forest type and stand origin.

**Pine plantation.** Stands that have been artificially regenerated by planting or direct seeding and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

**Natural pine.** Stands that have not been artificially regenerated and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

**Oak-pine.** Stands with a forest type of oak-pine.

**Upland hardwood.** Stands with a forest type of oak-hickory, chestnut oak, southern scrub oak, or maple-beech-birch.

**Lowland hardwood.** Stands with a forest type of oak-gum-cypress, elm-ash-cottonwood, palm, or other tropical.

**Bureau of Land Management lands.** Federal lands administered by the Bureau of Land Management.

**Census water.** Streams, sloughs, estuaries, canals, and other moving bodies of water one-eighth of a statute mile in width and greater, and lakes, reservoirs, ponds, and other permanent bodies of water 40 acres in area and greater.

**Commercial forest land.** Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, not currently developed for nonforest use, capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization by legislative action.

**Commercial species.** Tree species conventionally regarded as being able to develop into trees suitable for the manufacture of industrial timber products. Species that typically exhibit small size, poor form, or inferior quality are excluded.

**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.

**D.b.h.** Tree diameter (outside bark) at breast height (4.5 feet above the ground).

**Diameter class.** A classification of trees based on tree d.b.h. Two-inch diameter classes are commonly used by Forest Inventory and Analysis, with the even inch as 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.** Land on which agricultural operations are being conducted and sale of agricultural products totaled \$1,000 or more during the year.

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

**Farmer-owned land.** (See other private land).

**Forest industry land.** Land owned by companies or individuals operating wood-using plants.

**Forest industry leased land.** Land which are leased or under management contracts to forest industry from other owners for periods of one forest rotation or longer. Land under cutting contracts are not included.

**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 on the species forming a plurality of live-tree stocking.

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

**Spruce-fir.** Forests in which spruce or true firs, singly or in combination, constitute a plurality of the stocking. (Common associates include maple, birch, and hemlock.)

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

**Oak-pine.** Forests in which hardwoods (usually upland oaks) constitute a plurality of the stocking but in which pines account for 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, constitute a plurality of the stocking, except where pines account for 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.** Bottom-land forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, constitute a plurality of the stocking, except where pines account for 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, constitute a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple.)

**Maple-beech-birch.** Forests in which maple, beech, or yellow birch, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, elm, basswood, and white pine.)

**Palm, other tropical.** Forests in which palms and other tropicals constitute a plurality of the stocking.

**Gross growth.** Annual increase in merchantable volume of trees in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth, growth on ingrowth, growth on removals prior to removal, and growth on mortality prior to death.)

*Growing-stock trees.* Live sawtimber-size trees of commercial species containing at least a 12-foot log, or two noncontiguous saw logs each 8 feet or longer, meeting minimum grade requirements (hardwoods must qualify as either a log grade 3 or 4; softwoods must qualify as a log grade 3) with at least one-third of the gross board-foot volume (International 1/4-inch rule) between a 1-foot stump and the minimum saw-log top being sound, or a live tree below sawtimber size that will prospectively qualify under the above standards.

**Desirable tree.** A tree that qualifies as growing stock and has no serious defects in quality limiting present or prospective use; is of relatively high vigor (30 percent or more live crown ratio); is compatible with the site and physiographic class; has a total board-foot loss not to exceed 15 percent in softwoods or 25 percent in hardwoods as a result of severe sweep, crook, or lean; and has a relatively clear bole.

**Acceptable tree.** A tree that qualifies as growing stock but does not meet the minimum requirements to qualify as a desirable tree. Included are sawtimber-size trees that do not contain a 12-foot saw log because of excessive, natural taper in the butt log, but have the potential to produce a 12-foot saw log as diameter increases.

*Growing-stock volume.* Volume (cubic feet) of solid wood in growing-stock trees 5.0 inches d.b.h. and larger, from a 1-foot stump to a minimum 4.0-inch top diameter, outside bark, on the central stem. Volume of solid wood in primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

*Hardwoods.* Angiosperms; dicotyledonous trees (including all palm species which are monocotyledonous), usually broadleaf and deciduous.

**Soft hardwoods.** Soft-textured hardwoods such as boxelder, red and silver maples, hackberry, loblolly-bay, sweetgum, yellow-poplar, magnolia, sweetbay, water tupelo, blackgum, sycamore, cottonwood, black cherry, willow, basswood, and elm.

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

*Idle farmland.* Land including former cropland, orchard, improved pasture, and farm sites not tended within the past 2 years, and currently less than 16.7 percent stocked with live trees.

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

*Indian land.* Tribal land held in fee by the Federal Government but administered for Indian Tribal groups by the Bureau of Indian Affairs.

*Industrial wood.* All roundwood products except fuelwood.

*Ingrowth.* The number or net volume of trees that grow large enough during a specified year to qualify as saplings, poletimber, or sawtimber.

*Inhibiting vegetation.* Cover sufficiently dense to prevent the establishment of tree seedlings.

*Land area.* 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 one-eighth of a statute mile in width, and lakes, reservoirs, and ponds less than 40 acres in area.

*Log grade.* A classification of logs based on external characteristics as indicators of quality or value.

*Logging residues.* The unused merchantable portion of growing-stock trees cut or destroyed during logging operations.

*Logging slash.* The unmerchantable portion of growing-stock trees (including saplings) plus all cull trees 1.0 inch d.b.h. and larger cut or destroyed during logging operations and not used.

*Manageable stand.* Commercial forest land at least 60 percent stocked with growing-stock trees that can be featured together under a management scheme.

*Merchantable portion.* That portion of all live trees 5.0 inches d.b.h. and larger between a 1-foot stump and a minimum 4.0-inch top diameter outside bark on the central stem. That portion of primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

*Merchantable volume.* Solid-wood volume in merchantable portion of all live trees.

*Miscellaneous Federal land.* Federal land other than National Forests, land administered by the Bureau of Land Management, and land administered by the Bureau of Indian Affairs.

*Miscellaneous private land.* (see other private land).

*Mortality.* The merchantable volume in trees that have died from natural causes during a specified period.

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

*Net annual growth.* The net change in merchantable volume for a specific year in the absence of cutting (gross growth minus mortality for that specified year.)

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

*Noncommercial forest land.* Forest land not considered commercial. Includes both unproductive forest land and 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 land formerly forested where timber production is precluded by development for other uses.

*Nonindustrial private forest (NIPF) land.* (see other private land).

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

*Other private land.* Privately owned land excluding forest industry land or forest industry leased land. Also referred to as nonindustrial private forest (NIPF) land.

**Farmer-owned land.** Owned by farm operators excluding incorporated farm ownerships.

**Other individual land.** Owned by individuals other than farm operators.

**Other corporate land.** Owned by corporations, including incorporated farm ownerships.

*Other removals.* The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use that result in the removal of the trees from the commercial forest.

*Plant residues.* Wood material generated in the production of timber products at primary manufacturing plants.

**Coarse residues.** Material, such as slabs, edgings, trim, veneer cores and ends, which is suitable for chipping.

**Fine residues.** Material, such as sawdust, shavings, and veneer chippings, which is not suitable for chipping.

**Plant byproducts.** Residues (coarse or fine) utilized in the further manufacture of industrial products or for consumer use, or utilized as fuel.

**Unused plant residues.** Residues (coarse or fine) that are not used for any product, including fuel.

*Poletimber-size trees.* All live trees at least 5.0 inches 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.

*Quality class.* A classification of sawtimber volume by log or tree grades.

*Rangeland.* Land on which the natural vegetation is predominantly native grasses, grasslike plants, forbs, or shrubs valuable for forage, not qualifying as commercial forest and not developed for another land use. Rangeland includes natural grassland and savannah.

*Rotten trees.* Live trees of commercial species that do not contain at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

*Rough trees.* Live trees of commercial species that do not contain at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and all live trees of noncommercial species.

*Roundwood (roundwood logs).* Logs, bolts, or other round sections cut from trees for industrial or consumer uses.

*Roundwood chipped.* Any timber cut primarily for pulpwood, delivered to non-pulpmills, chipped, and then sold to pulpmills as residues, including chipped tops, jump sections, whole trees and pulpwood sticks.

*Roundwood products.* Any primary product such as lumber, poles, pilings, pulp, or fuelwood which is produced from roundwood.

*Salvable dead trees.* Standing or down dead trees considered utilizable by Forest Inventory and Analysis standards.

*Saplings.* Live trees 1.0 to 5.0 inches d.b.h.

*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).

*Saw-log portion.* That part of the bole of sawtimber trees between a 1-foot stump and the saw-log top, including the portion of forks large enough to contain a saw log.

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

*Sawtimber-size trees.* Softwoods 9.0 inches d.b.h. and larger and hardwoods 11.0 inches d.b.h. and larger.

*Sawtimber volume.* Growing-stock volume in the saw-log portion of sawtimber-size trees in board feet (International 1/4-inch rule).

*Seedlings.* Live trees of commercial species less than 1.0 inch d.b.h. that are expected to survive and develop.

*Site class.* A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully stocked natural stands, by annual production capacity.

**Class 1.** 165 or more cubic feet per acre.

**Class 2.** 120 to 164 cubic feet per acre.

**Class 3.** 85 to 119 cubic feet per acre.

**Class 4.** 50 to 84 cubic feet per acre.

**Class 5.** 20 to 49 cubic feet per acre.

**Softwoods.** Gymnosperms; in the order Coniferales, usually evergreen (includes the genus *Taxodium* which is deciduous), having needles or scalelike leaves.

**Pines.** Yellow pine species which include loblolly, longleaf, slash, pond, shortleaf, pitch, Virginia, sand, spruce, and Table Mountain pines.

**Other softwoods.** Cypress, eastern red-cedar, white cedar, eastern white pine, eastern hemlock, spruce, and fir.

**Stand-size class.** A classification of forest land based on the diameter class distribution of growing-stock trees in the stand.

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

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

**Stocking.** The degree of occupancy of land by trees, measured by basal area or the number of trees in a stand and spacing in the stand, compared with a minimum standard, depending on tree size, required to fully utilize the growth potential of the land.

**Fully stocked.** 100 percent or more stocking.

**Medium stocked.** 60 to 99 percent stocking.

**Poorly stocked.** Less than 60 percent stocking.

**Survivor growth.** The merchantable volume increment on trees 5.0 inches d.b.h. and larger in the inventory at the beginning of the year and surviving to its end.

**Timber products.** Roundwood products and byproducts.

**Timber removals.** The merchantable volume of trees removed from the inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

**Top.** The portion of the main stem and forks from a 4.0-inch diameter outside bark to the tips of the main stem and forks, plus all other limbs above the 4.0-inch top at least 0.5 inch in diameter at their point of occurrence.

**Treatment opportunity.** A classification of the management or treatment that would most improve for timber production the existing condition of the stand being sampled.

**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 main stem or fork of sawtimber trees above the saw-log top to minimum top diameter 4.0 inches outside bark or to the point where the main stem or fork breaks into limbs.

**Urban and other areas.** 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.

Stocking standard

D.b.h. class	Minimum number of trees per acre for full stocking	Minimum basal area per acre for full stocking
Seedlings	600	--
2	560	--
4	460	--
6	340	67
8	240	84
10	155	85
12	115	90
14	90	96
16	72	101
18	60	106
20	51	111

Conversion Factors

Cubic feet of wood per average cord  
(excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.6	61.0	68.2	60.0
8	68.4	68.1	76.0	68.4
10	73.4	73.1	81.4	73.4
12	76.8	76.7	85.2	76.4
14	79.2	79.4	88.2	78.4
16	80.9	81.6	90.4	79.8
18	82.3	83.3	92.3	80.8
20	83.5	84.8	93.8	81.5
22	84.1	86.0	95.1	82.1
24+	85.4	87.8	98.1	83.1
Average	74.6	74.1	87.2	74.2

Metric equivalents of units used in this report

- 1 acre = 4,046.86 square meters or 0.404686 hectares  
 1 cubic foot = 0.028317 cubic meters  
 1 inch = 2.54 centimeters or 0.0254 meters  
 Breast height = 1.4 meters above ground level  
 1 square foot = 929.03 square centimeters or 0.0929 square meters  
 1 square foot per acre basal area = 0.229568 square meters per hectare  
 1 pound = 0.454 kilograms  
 1 ton = 0.907 metric tons

### 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 was intended primarily to furnish inventory data for the Survey 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 can be computed with the formula on page 5.

Table 1.--Area, by county and land class, Southern Coastal Plain of North Carolina, 1983

County	All land <sup>a</sup>	Forest land			Nonforest land <sup>b</sup>	
		Total	Commercial forest	Unproductive forest		Productive- reserved
----- Acres -----						
Bladen	562,509	426,304	424,374	--	1,930	136,205
Brunswick	550,714	414,849	414,849	--	--	135,865
Columbus	600,602	416,274	416,274	--	--	184,328
Cumberland	420,646	234,844	234,844	--	--	185,802
Duplin	524,301	295,238	295,238	--	--	229,063
Greene	170,477	78,751	78,751	--	--	91,726
Harnett	384,710	212,208	209,633	--	2,575	172,502
Hoke	250,342	160,786	160,736	--	50	89,556
Johnston	509,062	253,935	253,935	--	--	255,127
Jones	300,806	227,776	227,776	--	--	73,030
Lee	165,939	105,490	105,490	--	--	60,449
Lenoir	257,485	122,035	122,035	--	--	135,450
Moore	448,800	335,699	335,074	--	625	113,101
New Hanover	113,106	64,605	64,605	--	--	53,501
Onslow	488,070	342,703	341,875	--	828	145,367
Pender	559,885	459,146	459,089	--	57	100,739
Richmond	305,402	225,609	225,609	--	--	79,793
Robeson	607,482	278,383	278,383	--	--	329,099
Sampson	605,984	344,807	344,807	--	--	261,177
Scotland	204,371	118,151	118,151	--	--	86,220
Wayne	354,368	154,740	154,165	--	575	199,628
<b>Total</b>	<b>8,390,061</b>	<b>5,272,333</b>	<b>5,265,693</b>	<b>--</b>	<b>6,640</b>	<b>3,117,728</b>

<sup>a</sup>From U.S. Bureau of the Census, 1980.

<sup>b</sup>Includes 54,411 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

Table 2.--Area of commercial forest land, by county and ownership class, Southern Coastal Plain of North Carolina, 1983

County	All ownerships	Ownership class							
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry <sup>a</sup>	Other private		
							Farmer	Corporate	Individual
----- Acres -----									
Bladen	424,374	--	39	36,150	75	101,049	87,518	59,513	140,030
Brunswick	414,849	--	8,567	--	80	224,229	41,765	23,865	116,343
Columbus	416,274	--	--	89	80	201,612	110,945	7,396	96,152
Cumberland	234,844	--	29,825	319	700	11,422	85,590	39,229	67,759
Duplin	295,238	--	--	7,623	142	37,774	161,391	9,135	79,173
Greene	78,751	--	--	20	1	327	42,765	3,564	32,074
Harnett	209,633	--	12	157	--	15,139	113,914	20,103	60,308
Hoke	160,736	--	84,909	1,812	18	4,622	24,777	12,388	32,210
Johnston	253,935	--	--	407	--	4,662	161,031	21,959	65,876
Jones	227,776	37,261	550	31,075	--	60,592	66,589	3,171	28,538
Lee	105,490	--	--	--	208	15,124	32,457	3,606	54,095
Lenoir	122,035	--	--	355	300	10,947	73,622	6,693	30,118
Moore	335,074	--	--	4,543	691	48,209	110,754	18,986	151,891
New Hanover	64,605	--	2,000	1,350	1,465	5,875	3,595	14,377	35,943
Onslow	341,875	--	63,400	46,404	141	113,341	26,682	2,965	88,942
Pender	459,089	--	200	62,798	60	149,181	77,141	19,285	150,424
Richmond	225,609	--	2,336	28,381	1,426	48,067	56,176	3,305	85,918
Robeson	278,383	--	--	151	74	33,343	88,746	36,722	119,347
Sampson	344,807	--	--	187	120	48,950	195,754	11,515	88,281
Scotland	118,151	--	3,808	18,467	900	10,815	40,630	11,608	31,923
Wayne	154,165	--	523	571	266	3,915	90,117	15,673	43,100
<b>Total</b>	<b>5,265,693</b>	<b>37,261</b>	<b>196,169</b>	<b>240,859</b>	<b>6,747</b>	<b>1,149,195</b>	<b>1,691,959</b>	<b>345,058</b>	<b>1,598,445</b>

<sup>a</sup>Includes 98,670 acres of other private land under long-term lease.

Table 3.--Area of commercial forest land, by county and forest-type group, Southern Coastal Plain of North Carolina, 1983

County	All type groups	Forest-type group																
		White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch								
Bladen	424,374	--	--	78,610	158,052	55,975	14,001	117,736	--	--	--	--	--	--	--	--	--	--
Brunswick	414,849	--	--	87,306	186,017	39,584	27,795	70,217	3,930	--	--	--	--	--	--	--	--	--
Columbus	416,274	--	--	29,737	174,637	29,585	36,981	137,993	7,341	--	--	--	--	--	--	--	--	--
Cumberland	234,844	--	--	29,761	79,471	47,913	21,397	56,302	--	--	--	--	--	--	--	--	--	--
Duplin	295,238	--	--	7,694	102,319	56,414	42,631	86,180	--	--	--	--	--	--	--	--	--	--
Greene	78,751	--	--	--	21,403	3,565	28,838	24,945	--	--	--	--	--	--	--	--	--	--
Harnett	209,633	--	--	21,280	57,509	20,103	90,625	16,765	3,351	--	--	--	--	--	--	--	--	--
Hoke	160,736	--	--	63,598	31,191	21,822	14,865	29,260	--	--	--	--	--	--	--	--	--	--
Johnston	253,935	--	--	7,319	70,946	62,214	40,257	47,579	25,620	--	--	--	--	--	--	--	--	--
Jones	227,776	--	--	3,171	139,593	11,997	14,480	42,680	15,855	--	--	--	--	--	--	--	--	--
Lee	105,490	--	--	--	18,373	30,429	45,869	10,819	--	--	--	--	--	--	--	--	--	--
Lenoir	122,035	--	--	--	29,330	12,710	20,081	49,875	10,039	--	--	--	--	--	--	--	--	--
Moore	335,074	--	--	49,425	94,308	45,088	116,590	22,941	6,722	--	--	--	--	--	--	--	--	--
New Hanover	64,605	--	--	18,009	23,030	3,594	9,189	7,189	3,594	--	--	--	--	--	--	--	--	--
Onslow	341,875	--	--	39,285	175,575	43,339	12,552	60,969	10,155	--	--	--	--	--	--	--	--	--
Pender	459,089	--	--	33,685	247,001	34,977	28,960	96,130	18,336	--	--	--	--	--	--	--	--	--
Richmond	225,609	--	--	37,541	80,469	37,321	48,782	21,496	--	--	--	--	--	--	--	--	--	--
Robeson	278,383	--	--	3,060	78,159	30,602	12,391	154,171	--	--	--	--	--	--	--	--	--	--
Sampson	344,807	--	--	12,677	109,671	75,429	62,576	84,454	--	--	--	--	--	--	--	--	--	--
Scotland	118,151	--	--	21,753	49,611	20,666	20,316	5,805	--	--	--	--	--	--	--	--	--	--
Wayne	154,165	--	--	3,918	61,428	13,802	39,753	35,264	--	--	--	--	--	--	--	--	--	--
Total	5,265,693	--	--	547,829	1,988,093	697,129	748,929	1,178,770	104,943	--	--	--	--	--	--	--	--	--

Table 4.--Area of commercial forest land, by county and stand-size class, Southern Coastal Plain of North Carolina, 1983

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
----- Acres -----					
Bladen	424,374	124,617	107,706	185,068	6,983
Brunswick	414,849	87,274	165,344	141,492	20,739
Columbus	416,274	190,310	121,218	86,365	18,381
Cumberland	234,844	112,198	39,549	75,965	7,132
Duplin	295,238	122,128	69,483	89,914	13,713
Greene	78,751	42,784	17,820	18,147	--
Harnett	209,633	87,125	50,807	51,599	20,102
Hoke	160,736	81,317	24,063	50,401	4,955
Johnston	253,935	158,339	58,996	36,600	--
Jones	227,776	91,805	54,148	78,653	3,170
Lee	105,490	41,458	34,616	29,416	--
Lenoir	122,035	46,529	35,762	29,705	10,039
Moore	335,074	141,210	95,468	83,458	14,938
New Hanover	64,605	15,598	14,378	31,035	3,594
Onslow	341,875	123,473	109,321	95,838	13,243
Pender	459,089	182,322	129,919	126,551	20,297
Richmond	225,609	83,958	69,459	58,123	14,069
Robeson	278,383	145,444	60,827	62,932	9,180
Sampson	344,807	128,910	104,919	107,140	3,838
Scotland	118,151	68,702	20,427	26,119	2,903
Wayne	154,165	96,605	25,949	27,693	3,918
<b>Total</b>	<b>5,265,693</b>	<b>2,172,106</b>	<b>1,410,179</b>	<b>1,492,214</b>	<b>191,194</b>

Table 5.--Area of commercial forest land, by county and site class, Southern Coastal Plain of North Carolina, 1983

County	All classes	Site class (cubic feet per acre per year)				
		> 164	120-164	85-119	50-84	20-49
----- Acres -----						
Bladen	424,374	--	17,503	54,007	218,525	134,339
Brunswick	414,849	--	--	56,639	250,680	107,530
Columbus	416,274	--	24,122	163,913	217,255	10,984
Cumberland	234,844	--	10,699	38,470	115,799	69,876
Duplin	295,238	--	15,226	119,084	125,897	35,031
Greene	78,751	--	3,564	24,946	43,113	7,128
Harnett	209,633	--	--	56,960	94,931	57,742
Hoke	160,736	--	--	9,606	89,096	62,034
Johnston	253,935	--	7,319	74,606	157,371	14,639
Jones	227,776	--	--	65,226	121,470	41,080
Lee	105,490	--	7,213	32,665	51,185	14,427
Lenoir	122,035	3,347	--	59,563	42,394	16,731
Moore	335,074	--	9,495	42,713	222,344	60,522
New Hanover	64,605	--	3,594	5,059	19,973	35,979
Onslow	341,875	--	17,347	46,270	181,949	96,309
Pender	459,089	--	3,857	52,100	252,840	150,292
Richmond	225,609	3,305	--	30,589	130,313	61,402
Robeson	278,383	--	6,121	88,744	171,127	12,391
Sampson	344,807	--	7,676	71,685	238,632	26,814
Scotland	118,151	--	--	14,510	44,431	59,210
Wayne	154,165	3,918	15,673	75,233	47,586	11,755
<b>Total</b>	<b>5,265,693</b>	<b>10,570</b>	<b>149,409</b>	<b>1,182,588</b>	<b>2,836,911</b>	<b>1,086,215</b>

Table 6.--Area of commercial forest land, by county and stocking classes of growing-stock trees, Southern Coastal Plain of North Carolina, 1983

County	All classes	Stocking percentage <sup>a</sup>				
		> 130	100-130	60-99	16.7-59	< 16.7
----- Acres -----						
Bladen	424,374	15,561	166,132	157,729	77,969	6,983
Brunswick	414,849	23,682	159,313	150,794	60,321	20,739
Columbus	416,274	48,710	188,831	139,820	20,532	18,381
Cumberland	234,844	--	77,643	101,683	48,386	7,132
Duplin	295,238	26,107	89,901	135,065	30,452	13,713
Greene	78,751	--	24,967	42,766	11,018	--
Harnett	209,633	16,909	58,544	83,924	30,154	20,102
Hoke	160,736	18	36,368	59,599	59,796	4,955
Johnston	253,935	32,935	85,587	124,434	10,979	--
Jones	227,776	7,055	100,534	76,105	40,912	3,170
Lee	105,490	9,580	42,829	45,868	7,213	--
Lenoir	122,035	3,347	40,720	51,872	16,057	10,039
Moore	335,074	24,338	124,132	114,704	56,962	14,938
New Hanover	64,605	--	12,250	23,602	25,159	3,594
Onslow	341,875	9,500	119,373	151,757	48,002	13,243
Pender	459,089	23,452	208,172	149,673	57,495	20,297
Richmond	225,609	14,551	64,855	70,978	61,156	14,069
Robeson	278,383	27,161	88,062	118,587	35,393	9,180
Sampson	344,807	10,176	121,239	169,875	39,679	3,838
Scotland	118,151	2,902	24,117	41,534	46,695	2,903
Wayne	154,165	13,622	28,788	96,082	11,755	3,918
<b>Total</b>	<b>5,265,693</b>	<b>309,606</b>	<b>1,862,357</b>	<b>2,106,451</b>	<b>796,085</b>	<b>191,194</b>

<sup>a</sup>See stocking standards on page 12.

Table 7.--Volume of sawtimber and growing stock on commercial forest land, by county and species group, Southern Coastal Plain of North Carolina, 1983

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	----- Thousand board feet -----					----- Thousand cubic feet <sup>a</sup> -----				
Bladen	1,269,484	720,631	57,503	315,478	175,872	419,892	222,756	11,950	126,199	58,987
Brunswick	1,093,199	633,079	151,352	195,159	113,609	410,669	238,212	49,188	83,116	40,153
Columbus	2,236,417	931,704	175,026	816,730	312,957	711,201	310,201	38,064	265,425	97,511
Cumberland	961,584	726,095	37,421	125,579	72,489	279,072	162,109	10,160	72,520	34,283
Duplin	1,376,685	648,480	21,101	484,761	222,343	401,051	171,923	4,542	147,593	76,993
Greene	400,744	150,534	38,369	145,305	66,536	112,533	36,284	7,261	40,323	28,665
Harnett	832,588	418,030	2,286	198,139	214,133	248,859	104,048	425	64,117	80,269
Hoke	452,359	339,356	5,385	78,468	29,150	128,385	82,376	1,431	31,828	12,750
Johnston	1,664,776	781,360	--	525,807	357,609	441,403	177,732	--	148,434	115,237
Jones	868,603	447,463	79,378	222,206	119,556	259,236	130,102	17,094	67,097	44,943
Lee	484,896	254,467	--	115,515	114,914	161,966	59,755	432	56,017	45,762
Lenoir	543,752	199,981	107,096	168,378	168,297	181,946	47,399	20,743	59,831	53,973
Moore	1,317,059	908,262	45,455	182,966	180,376	428,771	256,601	10,248	75,565	86,357
New Hanover	112,727	68,993	--	20,519	23,215	39,104	20,863	--	10,135	8,106
Onslow	1,245,283	764,220	19,806	286,159	175,098	400,457	229,940	5,144	115,501	49,872
Pender	1,585,888	862,871	138,277	323,290	261,450	543,880	299,950	33,711	123,890	86,329
Richmond	621,593	427,340	--	143,467	50,786	233,177	147,569	428	61,349	23,831
Robeson	1,659,600	614,871	116,475	723,143	205,111	472,550	150,438	28,794	228,584	64,734
Sampson	1,149,497	618,012	44,864	355,772	130,849	367,269	170,220	11,205	125,105	60,739
Scotland	485,696	349,560	24,395	94,742	16,999	133,794	89,981	6,065	31,588	6,160
Wayne	1,046,660	689,898	--	218,557	138,205	256,548	138,950	--	67,267	50,331
<b>Total</b>	<b>21,509,090</b>	<b>11,555,207</b>	<b>1,064,189</b>	<b>5,740,140</b>	<b>3,149,554</b>	<b>6,631,763</b>	<b>3,247,409</b>	<b>256,885</b>	<b>2,001,484</b>	<b>1,125,985</b>

<sup>a</sup>Factors for converting to cords are shown on page 12.

Table 8.--Net annual growth of sawtimber and growing stock on commercial forest land, by county and species group, Southern Coastal Plain of North Carolina, 1982

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	----- Thousand board feet -----					----- Thousand cubic feet -----				
Bladen	72,851	49,369	1,534	13,826	8,122	20,833	14,110	238	4,587	1,898
Brunswick	65,144	46,767	6,811	8,217	3,349	24,390	17,799	1,450	3,526	1,615
Columbus	142,015	87,261	5,680	34,547	14,527	35,015	22,154	961	8,053	3,847
Cumberland	45,659	32,554	1,215	8,566	3,324	13,048	7,450	527	2,955	2,116
Duplin	73,652	40,342	926	20,300	12,084	17,313	8,947	173	4,795	3,398
Greene	21,959	11,339	1,239	3,960	5,421	4,115	1,708	205	1,256	946
Harnett	45,180	22,625	26	12,484	10,045	12,258	6,818	4	2,147	3,289
Hoke	24,101	15,936	230	3,887	4,048	5,483	3,741	40	1,147	555
Johnston	80,887	41,688	--	23,134	16,065	18,327	9,192	--	5,070	4,065
Jones	42,464	24,944	2,882	8,883	5,755	11,611	7,492	501	2,071	1,547
Lee	29,815	11,675	--	11,284	6,856	8,015	3,071	16	2,832	2,096
Lenoir	30,869	9,751	3,319	10,183	7,616	7,147	2,302	553	2,449	1,843
Moore	78,115	56,764	717	9,284	11,350	19,894	13,222	238	2,830	3,604
New Hanover	7,391	4,768	--	1,667	956	1,314	730	29	311	244
Onslow	70,797	48,734	498	15,181	6,384	18,776	12,503	230	4,410	1,633
Pender	93,433	60,047	5,267	14,688	13,431	28,441	20,410	905	4,304	2,822
Richmond	49,175	39,114	--	7,095	2,966	13,161	10,009	15	2,210	927
Robeson	74,519	35,930	3,712	27,430	7,447	16,284	6,733	641	6,359	2,551
Sampson	63,252	38,836	1,620	15,445	7,351	16,395	9,321	308	3,976	2,790
Scotland	27,131	21,735	516	3,917	963	5,528	4,159	82	1,019	268
Wayne	47,681	31,103	--	9,854	6,724	10,029	5,431	--	2,412	2,186
Total	1,186,090	731,282	36,192	263,832	154,784	307,377	187,302	7,116	68,719	44,240



Table 10.--Area of commercial forest land, by forest type and ownership class, Southern Coastal Plain of North Carolina, 1983

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Forest industry- leased	Other private
----- Acres -----						
<b>Softwood types:</b>						
White pine-hemlock	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--
Longleaf pine	362,523	--	123,219	40,879	1,558	196,867
Slash pine	185,306	--	8,933	122,976	19,797	33,600
Loblolly pine	1,516,592	14,904	89,931	427,629	69,765	914,363
Shortleaf pine	11,825	--	4,717	--	--	7,108
Virginia pine	6,608	--	--	--	--	6,608
Sand pine	--	--	--	--	--	--
Eastern redcedar	--	--	--	--	--	--
Pond pine	453,068	7,453	93,173	96,223	343	255,876
Spruce pine	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--
<b>Total</b>	<b>2,535,922</b>	<b>22,357</b>	<b>319,973</b>	<b>687,707</b>	<b>91,463</b>	<b>1,414,422</b>
<b>Hardwood types:</b>						
Oak-pine	697,129	2,484	62,089	80,075	--	552,481
Oak-hickory	645,452	4,968	2,722	29,844	2,447	605,471
Chestnut oak	--	--	--	--	--	--
Southern scrub oak	103,477	--	4,973	2,501	--	95,003
Oak-gum-cypress	1,178,770	7,452	49,792	236,359	4,760	880,407
Elm-ash-cottonwood	104,943	--	4,226	14,039	--	86,678
Maple-beech-birch	--	--	--	--	--	--
<b>Total</b>	<b>2,729,771</b>	<b>14,904</b>	<b>123,802</b>	<b>362,818</b>	<b>7,207</b>	<b>2,221,040</b>
<b>All types</b>	<b>5,265,693</b>	<b>37,261</b>	<b>443,775</b>	<b>1,050,525</b>	<b>98,670</b>	<b>3,635,462</b>

Table 11.--Area of commercial forest land, by ownership and stocking classes of growing-stock trees, Southern Coastal Plain of North Carolina, 1983

Ownership class	All classes	Stocking percentage <sup>a</sup>				
		> 130	100-130	60-99	16.7-59	< 16.7
----- Acres -----						
National Forest	37,261	--	14,904	17,388	4,969	--
Other public	443,775	11,673	103,320	175,511	140,675	12,596
Forest industry	1,050,525	70,127	480,507	330,415	128,394	41,082
Forest industry-leased	98,670	20,552	47,998	18,864	8,974	2,282
Other private	3,635,462	207,254	1,215,628	1,564,273	513,073	135,234
<b>All ownerships</b>	<b>5,265,693</b>	<b>309,606</b>	<b>1,862,357</b>	<b>2,106,451</b>	<b>796,085</b>	<b>191,194</b>

<sup>a</sup>See stocking standards on page 12.

Table 12.--Area of commercial forest land, by stand-age and broad management classes, all ownerships, Southern Coastal Plain of North Carolina, 1983

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
0-10	767,910	288,583	128,948	121,243	129,922	99,214
11-20	748,292	308,101	216,308	89,051	42,740	92,092
21-30	530,209	158,843	224,632	34,565	46,135	66,034
31-40	505,542	1,812	316,771	47,924	61,825	77,210
41-50	592,132	--	267,152	68,490	80,383	176,107
51-60	502,195	--	190,152	67,418	80,762	163,863
61-70	258,143	--	74,778	65,877	37,013	80,475
71-80	132,142	--	17,037	18,309	10,700	86,096
81+	255,674	--	10,333	13,834	27,164	204,343
No manageable stand	973,454	7,299	325,173	170,418	232,285	238,279
All classes	5,265,693	764,638	1,771,284	697,129	748,929	1,283,713

Table 13.--Area of commercial forest land, by stand-age and broad management classes, public ownerships, Southern Coastal Plain of North Carolina, 1983

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
0-10	49,149	31,550	17,599	--	--	--
11-20	81,261	39,104	29,691	5,965	2,484	4,017
21-30	18,416	5,319	9,403	--	--	3,694
31-40	20,500	1,812	18,117	--	571	--
41-50	50,326	--	41,633	4,466	--	4,227
51-60	50,963	--	24,948	3,570	4,484	17,961
61-70	66,137	--	28,098	20,641	--	17,398
71-80	12	--	--	--	--	12
81+	4,968	--	2,484	--	--	2,484
No manageable stand	139,304	--	92,572	29,931	5,124	11,677
All classes	481,036	77,785	264,545	64,573	12,663	61,470

Table 14.--Area of commercial forest land, by stand-age and broad management classes, forest industry,<sup>a</sup> Southern Coastal Plain of North Carolina, 1983

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
0-10	183,187	151,702	6,551	11,068	5,245	8,621
11-20	305,886	227,742	50,271	9,158	5,395	13,320
21-30	166,707	116,635	35,324	6,229	--	8,519
31-40	103,359	--	67,347	17,224	--	18,788
41-50	68,835	--	21,100	10,081	--	37,654
51-60	43,846	--	16,929	2,908	3,558	20,451
61-70	27,121	--	9,938	8,131	--	9,052
71-80	37,872	--	3,929	--	--	33,943
81+	63,279	--	3,930	2,909	--	56,440
No manageable stand	149,103	7,299	60,473	12,367	20,594	48,370
All classes	1,149,195	503,378	275,792	80,075	34,792	255,158

<sup>a</sup>Includes 98,670 acres of other private land under long-term lease.

Table 15.--Area of commercial forest land, by stand-age and broad management classes, other private ownerships,<sup>a</sup> Southern Coastal Plain of North Carolina, 1983

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
0-10	535,574	105,331	104,798	110,175	124,677	90,593
11-20	361,145	41,255	136,346	73,928	34,861	74,755
21-30	345,086	36,889	179,905	28,336	46,135	53,821
31-40	381,683	--	231,307	30,700	61,254	58,422
41-50	472,971	--	204,419	53,943	80,383	134,226
51-60	407,386	--	148,275	60,940	72,720	125,451
61-70	164,885	--	36,742	37,105	37,013	54,025
71-80	94,258	--	13,108	18,309	10,700	52,141
81+	187,427	--	3,919	10,925	27,164	145,419
No manageable stand	685,047	--	172,128	128,120	206,567	178,232
All classes	3,635,462	183,475	1,230,947	552,481	701,474	967,085

<sup>a</sup>Excludes 98,670 acres of other private land under long-term lease to forest industry.

Table 16.--Area of commercial forest land, by broad management and stand-volume classes, Southern Coastal Plain of North Carolina, 1983

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
----- Acres -----						
Pine plantation	764,638	425,072	145,691	66,809	62,087	64,979
Natural pine	1,771,284	513,424	334,770	257,093	230,042	435,955
Oak-pine	697,129	244,977	145,225	111,229	72,106	123,592
Upland hardwood	748,929	311,685	148,031	129,544	75,865	83,804
Lowland hardwood	1,283,713	278,021	180,251	167,982	143,382	514,077
All classes	5,265,693	1,773,179	953,968	732,657	583,482	1,222,407

Table 17.--Volume of growing stock on commercial forest land, by broad management class, species group, and stand-age class, Southern Coastal Plain of North Carolina, 1983

Broad management class and species group	All classes	No manageable stand	Stand-age class (years)									
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+	
----- Thousand cubic feet -----												
<b>Pine plantation:</b>												
Softwood	505,217	989	4,105	229,550	270,573	--	--	--	--	--	--	--
Hardwood	13,967	--	3,394	4,638	5,935	--	--	--	--	--	--	--
<b>Total</b>	<b>519,184</b>	<b>989</b>	<b>7,499</b>	<b>234,188</b>	<b>276,508</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Natural pine:</b>												
Softwood	2,071,308	95,549	37,633	121,334	260,187	532,817	477,341	359,639	122,930	37,844	26,034	
Hardwood	212,907	3,178	4,575	10,427	39,509	44,773	54,010	40,304	13,612	1,923	596	
<b>Total</b>	<b>2,284,215</b>	<b>98,727</b>	<b>42,208</b>	<b>131,761</b>	<b>299,696</b>	<b>577,590</b>	<b>531,351</b>	<b>399,943</b>	<b>136,542</b>	<b>39,767</b>	<b>26,630</b>	
<b>Oak-pine:</b>												
Softwood	462,480	49,012	15,414	38,696	24,634	54,560	81,026	79,412	70,205	25,356	24,165	
Hardwood	352,911	15,268	16,303	18,462	13,697	36,203	69,899	77,255	60,906	23,805	21,113	
<b>Total</b>	<b>815,391</b>	<b>64,280</b>	<b>31,717</b>	<b>57,158</b>	<b>38,331</b>	<b>90,763</b>	<b>150,925</b>	<b>156,667</b>	<b>131,111</b>	<b>49,161</b>	<b>45,278</b>	
<b>Upland hardwood:</b>												
Softwood	115,887	25,391	9,114	6,729	3,845	12,757	20,489	16,007	9,337	5,435	6,783	
Hardwood	589,634	58,405	34,642	17,405	33,043	77,704	107,569	115,416	77,982	14,012	53,456	
<b>Total</b>	<b>705,521</b>	<b>83,796</b>	<b>43,756</b>	<b>24,134</b>	<b>36,888</b>	<b>90,461</b>	<b>128,058</b>	<b>131,423</b>	<b>87,319</b>	<b>19,447</b>	<b>60,239</b>	
<b>Lowland hardwood:</b>												
Softwood	349,402	25,698	3,450	14,177	14,580	7,575	36,911	53,850	18,453	60,307	114,401	
Hardwood	1,958,050	97,976	23,741	32,854	59,049	109,540	388,239	345,443	176,960	172,917	551,331	
<b>Total</b>	<b>2,307,452</b>	<b>123,674</b>	<b>27,191</b>	<b>47,031</b>	<b>73,629</b>	<b>117,115</b>	<b>425,150</b>	<b>399,293</b>	<b>195,413</b>	<b>233,224</b>	<b>665,732</b>	
<b>All classes:</b>												
Softwood	3,504,294	196,639	69,716	410,486	573,819	607,709	615,767	508,908	220,925	128,942	171,383	
Hardwood	3,127,469	174,827	82,655	83,786	151,233	268,220	619,717	578,418	329,460	212,657	626,496	
<b>Total</b>	<b>6,631,763</b>	<b>371,466</b>	<b>152,371</b>	<b>494,272</b>	<b>725,052</b>	<b>875,929</b>	<b>1,235,484</b>	<b>1,087,326</b>	<b>550,385</b>	<b>341,599</b>	<b>797,879</b>	

Table 18.--Net annual growth of growing stock on commercial forest land, by broad management class, species group, and stand-age class, Southern Coastal Plain of North Carolina, 1982

Broad management class <sup>a</sup> and species group	All classes	No manageable stand	Stand-age class <sup>a</sup> (years)									
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+	
----- Thousand cubic feet -----												
<b>Pine plantation:</b>												
Softwood	56,362	61	3,022	31,255	22,024	--	--	--	--	--	--	--
Hardwood	951	--	93	327	531	--	--	--	--	--	--	--
<b>Total</b>	<b>57,313</b>	<b>61</b>	<b>3,115</b>	<b>31,582</b>	<b>22,555</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Natural pine:</b>												
Softwood	102,338	3,424	2,774	11,533	18,075	29,136	19,314	12,641	3,629	1,125	687	
Hardwood	13,020	128	212	811	2,786	2,908	2,626	2,672	583	271	23	
<b>Total</b>	<b>115,358</b>	<b>3,552</b>	<b>2,986</b>	<b>12,344</b>	<b>20,861</b>	<b>32,044</b>	<b>21,940</b>	<b>15,313</b>	<b>4,212</b>	<b>1,396</b>	<b>710</b>	
<b>Oak-pine:</b>												
Softwood	20,248	2,125	1,207	2,973	1,238	2,835	3,195	2,797	2,313	749	816	
Hardwood	14,486	569	627	1,179	885	1,718	2,964	2,948	2,160	750	686	
<b>Total</b>	<b>34,734</b>	<b>2,694</b>	<b>1,834</b>	<b>4,152</b>	<b>2,123</b>	<b>4,553</b>	<b>6,159</b>	<b>5,745</b>	<b>4,473</b>	<b>1,499</b>	<b>1,502</b>	
<b>Upland hardwood:</b>												
Softwood	5,048	961	486	391	338	537	1,005	557	348	196	229	
Hardwood	24,748	2,644	1,901	1,794	2,109	3,268	3,979	3,908	2,948	496	1,701	
<b>Total</b>	<b>29,796</b>	<b>3,605</b>	<b>2,387</b>	<b>2,185</b>	<b>2,447</b>	<b>3,805</b>	<b>4,984</b>	<b>4,465</b>	<b>3,296</b>	<b>692</b>	<b>1,930</b>	
<b>Lowland hardwood:</b>												
Softwood	10,422	1,080	185	602	468	225	1,214	1,450	446	1,579	3,073	
Hardwood	59,754	3,682	1,099	2,192	3,384	4,774	13,258	9,730	4,635	4,669	12,331	
<b>Total</b>	<b>70,176</b>	<b>4,762</b>	<b>1,284</b>	<b>2,794</b>	<b>3,852</b>	<b>4,999</b>	<b>14,472</b>	<b>11,180</b>	<b>5,081</b>	<b>6,348</b>	<b>15,404</b>	
<b>All classes:</b>												
Softwood	194,418	7,551	7,674	46,754	42,143	32,733	24,728	17,445	6,736	3,749	4,805	
Hardwood	112,959	7,023	3,932	6,303	9,695	12,668	22,827	19,258	10,326	6,186	14,741	
<b>Total</b>	<b>307,377</b>	<b>14,674</b>	<b>11,606</b>	<b>53,057</b>	<b>51,838</b>	<b>45,401</b>	<b>47,555</b>	<b>36,703</b>	<b>17,062</b>	<b>9,935</b>	<b>19,546</b>	

<sup>a</sup>Classifications at the end of the remeasurement period.





Table 21.--Area of commercial forest land treated or disturbed annually and retained in commercial forest land, by treatment or disturbance and ownership class, Southern Coastal Plain of North Carolina, 1983

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
----- Acres <sup>a</sup> -----					
Final harvest	94,895	4,237	20,044	1,130	69,484
Selective cutting and high grading	19,564	248	1,535	--	17,781
Commercial thinning	11,378	3,168	1,751	651	5,808
Other stand improvement	4,842	--	896	--	3,946
Site preparation	40,405	3,015	19,353	913	17,124
Artificial regeneration <sup>b</sup>	30,157	3,166	16,126	913	9,952
Natural regeneration <sup>b</sup>	45,261	2,008	2,625	206	40,422
Natural disturbance	14,635	1,334	3,200	--	10,101
Other treatment or disturbance	70,566	5,368	18,000	1,350	45,848

<sup>a</sup>Since some acres experience more than one treatment or disturbance, there are no column totals.

<sup>b</sup>Includes establishment of trees for timber production on forest and nonforest land.

Table 22.--Area of commercial forest land treated or disturbed annually and retained in commercial forest land, by treatment or disturbance and broad management class, Southern Coastal Plain of North Carolina, 1983

Treatment or disturbance	All classes	Broad management class <sup>a</sup>				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres <sup>b</sup> -----						
Final harvest	94,895	324	55,825	15,743	12,015	10,988
Selective cutting and high grading	19,564	680	5,559	3,675	3,733	5,917
Commercial thinning	11,378	3,668	5,905	368	716	721
Other stand improvement	4,842	567	1,739	1,315	--	1,221
Site preparation	40,405	1,579	26,728	5,430	4,271	2,397
Other treatment	14,635	904	6,550	2,553	3,079	1,549
Natural disturbance	70,566	10,675	33,494	7,137	5,216	14,044

<sup>a</sup>Classification before treatment or disturbance.

<sup>b</sup>Since some acres experience more than one treatment or disturbance, there are no column totals.

Table 23.--Area of commercial forest land regenerated annually, by type of regeneration and broad management class, Southern Coastal Plain of North Carolina, 1983

Type of regeneration	All classes	Broad management class <sup>a</sup>				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
Artificial regeneration following harvest	21,893	21,503	--	390	--	--
Natural regeneration following harvest	30,987	--	5,313	7,543	10,753	7,378
Other artificial regeneration on forest land	7,486	7,486	--	--	--	--
Other natural regeneration on forest land	10,603	316	3,250	3,092	987	2,958
Artificial regeneration on nonforest land	778	778	--	--	--	--
Natural reversion of nonforest land	3,671	--	2,433	1,238	--	--
<b>Total</b>	<b>75,418</b>	<b>30,083</b>	<b>10,996</b>	<b>12,263</b>	<b>11,740</b>	<b>10,336</b>

<sup>a</sup>Classification after regeneration.

Table 24.--Area of commercial forest land, by treatment opportunity and broad management classes, Southern Coastal Plain of North Carolina, 1983

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
----- Acres -----						
Salvage	17,075	900	8,949	--	3,660	3,566
Harvest	539,947	--	177,793	90,238	54,489	217,427
Commercial thinning	257,648	103,714	127,641	3,838	7,265	15,190
Other stand improvement	425,882	9,801	116,041	91,462	87,396	121,182
Stand conversion	74,494	3,656	16,913	3,918	19,164	30,843
Regeneration	949,557	7,299	321,579	170,418	232,285	217,976
Stands in relatively good condition	2,785,658	639,268	995,714	333,599	341,319	475,758
Adverse sites <sup>a</sup>	215,432	--	6,654	3,656	3,351	201,771
<b>All classes</b>	<b>5,265,693</b>	<b>764,638</b>	<b>1,771,284</b>	<b>697,129</b>	<b>748,929</b>	<b>1,283,713</b>

<sup>a</sup>Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 25.--Area of commercial forest land, by treatment opportunity and ownership classes, Southern Coastal Plain of North Carolina, 1983

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
----- Acres -----					
Salvage	17,075	3,303	--	--	13,772
Harvest	539,947	49,110	84,870	--	405,967
Commercial thinning	257,648	7,954	87,235	24,315	138,144
Other stand improvement	425,882	10,727	46,776	--	368,379
Stand conversion	74,494	--	21,275	--	53,219
Regeneration	949,557	135,078	141,003	2,282	671,194
Stands in relatively good condition	2,785,658	260,766	584,013	72,073	1,868,806
Adverse sites <sup>a</sup>	215,432	14,098	85,353	--	115,981
All classes	5,265,693	481,036	1,050,525	98,670	3,635,462

<sup>a</sup> Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26.--Merchantable volume of all live trees and growing stock on commercial forest land, by ownership class and species group, Southern Coastal Plain of North Carolina, 1983

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
----- Thousand cubic feet -----										
National Forest	73,431	37,717	5,570	17,277	12,867	68,802	36,474	5,570	15,746	11,012
Other public	389,542	268,871	8,385	60,762	51,524	375,966	267,159	8,385	59,301	41,121
Forest industry	1,150,520	571,769	90,657	369,865	118,229	1,101,289	570,428	89,022	336,168	105,671
Forest industry-leased	154,462	133,487	673	16,943	3,359	149,900	133,258	673	12,988	2,981
Other private	5,271,056	2,251,594	160,192	1,737,741	1,121,529	4,935,806	2,240,090	153,235	1,577,281	965,200
All ownerships	7,039,011	3,263,438	265,477	2,202,588	1,307,508	6,631,763	3,247,409	256,885	2,001,484	1,125,985

Table 27.--Volume of sawtimber on commercial forest land, by ownership class and species group, Southern Coastal Plain of North Carolina, 1983

Ownership class	Small sawtimber <sup>a</sup>					Large sawtimber <sup>b</sup>				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
----- Thousand board feet -----										
National Forest	111,068	71,439	12,051	13,142	14,436	181,241	97,691	13,742	44,120	25,688
Other public	736,031	617,757	11,061	65,004	42,209	576,613	373,430	11,127	98,745	93,311
Forest industry	1,572,487	1,016,220	152,277	337,761	66,229	1,564,815	458,417	205,227	605,052	296,119
Forest industry-leased	192,663	176,641	1,927	11,842	2,253	12,535	3,663	--	6,195	2,677
Other private	8,073,620	5,121,544	215,597	1,710,084	1,026,395	8,488,017	3,618,405	441,180	2,848,195	1,580,237
All ownerships	10,685,869	7,003,601	392,913	2,137,833	1,151,522	10,823,221	4,551,606	671,276	3,602,307	1,998,032

<sup>a</sup>Volume of sawtimber trees less than 15.0 inches at d.b.h.

<sup>b</sup>Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 28.--Net annual growth and removals of growing stock on commercial forest land, by ownership class and species group, Southern Coastal Plain of North Carolina, 1982

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
----- Thousand cubic feet -----										
National Forest	2,464	1,432	163	475	394	421	421	--	--	--
Other public	15,203	11,976	150	1,842	1,235	5,279	5,279	--	--	--
Forest industry	64,850	47,826	2,457	10,423	4,144	29,484	24,311	417	2,724	2,032
Forest industry-leased	13,750	13,016	35	556	143	4,563	2,585	--	1,251	727
Other private	211,110	113,052	4,311	55,423	38,324	161,186	108,762	587	32,878	18,959
All ownerships	307,377	187,302	7,116	68,719	44,240	200,933	141,358	1,004	36,853	21,718

Table 29.--Net annual growth and removals of sawtimber on commercial forest land, by ownership class and species group, Southern Coastal Plain of North Carolina, 1982

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
----- Thousand board feet -----										
National Forest	11,069	6,360	938	2,386	1,385	1,508	1,508	--	--	--
Other public	61,245	48,166	788	6,821	5,470	23,035	23,035	--	--	--
Forest industry	202,512	134,369	13,489	39,226	15,428	90,078	75,630	2,198	4,255	7,995
Forest industry-leased	36,726	35,622	104	856	144	11,759	4,867	--	3,385	3,507
Other private	874,538	506,765	20,873	214,543	132,357	645,738	461,434	3,120	119,511	61,673
All ownerships	1,186,090	731,282	36,192	263,832	154,784	772,118	566,474	5,318	127,151	73,175

Table 30.--Volume of timber on commercial forest land, by class and species group, Southern Coastal Plain of North Carolina, 1983

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
----- <u>Thousand cubic feet</u> -----					
<b>Sawtimber trees:</b>					
Saw-log portion	3,754,101	2,053,012	193,562	990,041	517,486
Upper-stem portion <sup>a</sup>	787,388	293,733	28,445	282,586	182,624
Total	4,541,489	2,346,745	222,007	1,272,627	700,110
Poletimber trees	2,090,274	900,664	34,878	728,857	425,875
All growing-stock trees	6,631,763	3,247,409	256,885	2,001,484	1,125,985
<b>Rough trees:</b>					
Sawtimber size	95,775	8,090	723	54,499	32,463
Poletimber size	210,031	6,472	1,908	77,947	123,704
Total	305,806	14,562	2,631	132,446	156,167
<b>Rotten trees:</b>					
Sawtimber size	90,640	1,467	5,961	61,359	21,853
Poletimber size	10,802	--	--	7,299	3,503
Total	101,442	1,467	5,961	68,658	25,356
<b>Salvable dead trees:</b>					
Sawtimber size	3,857	2,306	143	943	465
Poletimber size	2,801	2,200	22	414	165
Total	6,658	4,506	165	1,357	630
<b>Total, all timber</b>	7,045,669	3,267,944	265,642	2,203,945	1,308,138

<sup>a</sup>Includes cull sections in the saw-log portion.

Table 31.--Number of all live trees on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

Species	Diameter class (inches at breast height)																29.0 and larger			
	1.0-2.9	3.0-4.9	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									
All classes	954	1,444	2,292	3,455	5,076	7,819	11,148	15,515	22,649	32,491	48,232	71,730	102,319	148,888	211,333	299,553	411,692	553,976	742,142	
<b>Softwood:</b>																				
Longleaf pine	78,565	25,767	15,515	11,148	8,849	7,516	4,932	2,979	1,148	503	147	61	--	--	--	--	--	--	--	--
Slash pine	71,843	12,186	25,527	23,581	8,786	1,395	317	51	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	12,222	3,536	1,975	1,871	2,296	1,113	986	277	113	42	13	--	--	--	--	--	--	--	--	--
Loblolly pine	587,967	219,840	133,373	94,726	58,639	32,050	18,986	11,470	6,797	3,352	1,615	1,104	15	--	--	--	--	--	--	--
Pond pine	160,405	66,106	38,194	22,649	15,239	9,523	5,136	2,307	842	252	113	44	--	--	--	--	--	--	--	--
Virginia pine	4,256	1,544	86	477	491	86	66	48	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	8,928	1,022	1,395	883	845	1,080	1,172	972	470	297	321	363	108	--	--	--	--	--	--	--
Pondcypress	10,328	5,887	633	459	1,241	692	523	408	127	137	82	120	19	--	--	--	--	--	--	--
Cedars	20,330	9,477	5,076	3,094	1,433	632	373	47	56	91	51	--	--	--	--	--	--	--	--	--
Total softwoods	954,844	345,365	229,232	158,888	97,819	54,087	32,491	18,559	9,553	4,674	2,342	1,692	142							
<b>Hardwood:</b>																				
Select white oaks	67,498	33,460	13,453	7,885	4,331	3,409	2,280	1,100	761	326	187	263	43							
Select red oaks	10,467	4,842	2,503	1,343	330	689	364	215	35	63	39	38	6							
Chestnut oak	1,531	1,080	--	227	150	--	--	22	19	15	--	18	--							
Other white oaks	48,987	30,200	8,959	3,752	2,205	1,893	1,069	439	161	136	47	115	11							
Other red oaks	336,981	219,945	58,230	26,595	13,584	7,206	4,951	2,510	1,985	854	381	606	134							
Hickory	50,447	34,952	7,893	2,768	2,056	884	844	547	235	147	39	76	6							
Hard maple	1,534	1,011	448	--	75	--	--	--	--	--	--	--	--							
Soft maple	577,319	436,260	85,748	25,596	14,257	6,753	3,694	2,160	1,542	624	358	304	23							
Beech	4,648	2,663	410	321	359	238	125	159	259	55	13	30	15							
Sweetgum	453,863	314,944	77,343	29,049	13,268	7,896	4,520	3,060	1,623	1,140	581	423	16							
Tupelo and blackgum	342,299	236,265	42,183	22,034	13,473	10,217	7,474	4,235	2,610	1,524	969	1,044	171							
Ash	126,548	89,290	18,920	8,902	3,796	2,047	1,537	727	541	428	105	236	18							
Cottonwood	207	--	207	--	--	--	--	--	--	--	--	--	--							
Yellow-poplar	58,583	30,326	9,820	6,114	3,882	2,228	1,732	1,554	1,122	709	472	567	57							
Bay and magnolia	255,011	221,659	22,802	6,894	2,363	505	368	182	95	92	12	39	--							
Black cherry	14,216	9,013	3,198	966	635	322	60	22	--	--	--	--	--							
Black walnut	78	--	--	--	78	--	--	--	--	--	--	--	--							
Sycamore	1,180	211	211	337	59	91	90	77	40	26	--	38	--							
Black locust	206	206	--	--	--	--	--	--	--	--	--	--	--							
Elm	16,429	9,348	2,897	993	1,238	576	574	431	137	82	86	62	5							
Other eastern hardwoods	830,174	647,325	132,846	33,564	10,501	3,278	1,449	694	168	168	63	117	--							
Total hardwoods	3,198,206	2,323,000	488,071	177,340	86,640	48,232	31,132	18,134	11,333	6,490	3,353	3,976	505							
All species	4,153,050	2,668,365	717,303	336,228	184,459	102,319	63,623	36,693	20,886	11,164	5,695	5,668	647							

Table 32.--Number of growing-stock trees on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	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 -----													
<b>Softwood:</b>													
Longleaf pine	76,665	24,374	15,313	11,148	8,606	7,516	4,905	2,952	1,148	503	147	53	--
Slash pine	71,263	12,000	25,133	23,581	8,786	1,395	317	51	--	--	--	--	--
Shortleaf pine	11,536	3,136	1,789	1,871	2,296	1,113	986	277	113	42	13	--	--
Loblolly pine	561,579	199,289	135,055	93,792	58,401	31,859	18,921	11,423	6,776	3,352	1,602	1,094	15
Pond pine	137,270	48,879	33,704	21,662	14,975	9,480	5,102	2,307	752	252	113	44	--
Virginia pine	4,256	1,544	1,544	477	491	86	66	48	--	--	--	--	--
Baldcypress	8,562	815	1,395	770	845	1,080	1,172	972	470	297	297	363	86
Pondcypress	10,066	5,663	633	459	1,241	692	523	408	127	137	71	112	--
Cedars	17,723	7,974	4,468	2,942	1,159	632	336	47	39	75	51	--	--
<b>Total softwoods</b>	<b>899,020</b>	<b>303,674</b>	<b>219,034</b>	<b>156,702</b>	<b>96,800</b>	<b>53,853</b>	<b>32,328</b>	<b>18,485</b>	<b>9,425</b>	<b>4,658</b>	<b>2,294</b>	<b>1,666</b>	<b>101</b>
<b>Hardwood:</b>													
Select white oaks	57,137	24,507	12,443	7,695	4,253	3,358	2,216	1,100	761	326	177	263	38
Select red oaks	9,565	4,431	2,068	1,343	330	633	364	215	35	63	39	38	6
Chestnut oak	1,315	864	--	227	150	--	--	22	19	15	--	18	--
Other white oaks	31,769	16,031	7,353	2,790	2,058	1,775	1,005	388	125	102	47	88	7
Other red oaks	256,536	153,336	49,208	24,486	12,466	6,583	4,550	2,348	1,794	748	370	527	120
Hickory	33,348	19,989	6,489	2,330	1,908	884	778	547	202	147	14	54	6
Hard maple	1,148	625	448	--	75	--	--	--	--	--	--	--	--
Soft maple	310,662	204,661	62,086	20,553	11,341	5,501	2,621	1,699	1,245	490	264	201	--
Beech	3,300	1,651	224	205	359	238	126	139	259	55	13	16	15
Sweetgum	333,662	211,533	64,088	26,984	12,432	7,676	4,368	3,035	1,509	1,097	546	380	14
Tupelo and blackgum	172,426	92,182	26,312	18,028	10,987	9,004	6,979	3,869	2,192	1,392	779	599	103
Ash	58,553	28,474	14,666	7,102	3,280	1,891	1,407	519	481	428	95	197	13
Cottonwood	207	--	207	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	52,201	25,447	9,012	5,697	3,793	2,228	1,662	1,498	1,122	709	448	535	50
Bay and magnolia	113,885	95,176	12,584	4,108	1,392	343	89	76	54	46	--	17	--
Black cherry	6,843	3,139	1,994	868	635	147	60	--	--	--	--	--	--
Black walnut	78	--	--	--	78	--	--	--	--	--	--	--	--
Sycamore	969	--	211	337	59	91	90	77	40	26	--	38	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	10,074	4,644	1,610	596	1,177	576	574	431	137	82	86	56	5
Other eastern hardwoods	85,824	58,349	18,638	5,051	1,729	847	438	380	93	137	63	99	--
<b>Total hardwoods</b>	<b>1,539,502</b>	<b>945,039</b>	<b>289,641</b>	<b>128,500</b>	<b>68,502</b>	<b>41,775</b>	<b>27,327</b>	<b>16,343</b>	<b>10,068</b>	<b>5,863</b>	<b>2,941</b>	<b>3,126</b>	<b>377</b>
<b>All species</b>	<b>2,438,522</b>	<b>1,248,713</b>	<b>508,675</b>	<b>285,202</b>	<b>165,302</b>	<b>95,628</b>	<b>59,655</b>	<b>34,828</b>	<b>19,493</b>	<b>10,521</b>	<b>5,235</b>	<b>4,792</b>	<b>478</b>

Table 33.--Merchantable volume of all live trees on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

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 cubic feet -----											
<b>Softwood:</b>											
Longleaf pine	397,683	27,642	56,078	86,491	85,709	73,420	37,200	20,300	6,816	4,027	--
Slash pine	116,693	51,840	45,099	13,882	4,570	1,302	--	--	--	--	--
Shortleaf pine	68,390	5,396	14,765	14,331	19,254	7,561	3,978	2,169	936	--	--
Loblolly pine	2,249,600	222,868	344,673	361,041	356,381	323,270	262,114	172,315	103,489	101,173	2,276
Pond pine	423,623	52,127	82,100	98,820	87,072	55,263	28,119	10,657	5,879	3,586	--
Virginia pine	7,449	1,468	3,080	868	1,058	975	--	--	--	--	--
Baldcypress	162,275	3,039	5,660	14,096	21,966	23,244	17,229	12,227	17,704	31,832	15,278
Pondcypress	63,587	1,496	8,969	7,251	9,305	10,895	4,336	6,172	3,699	8,755	2,709
Cedars	39,615	8,359	9,263	7,175	5,678	1,332	1,654	3,584	2,570	--	--
<b>Total softwoods</b>	<b>3,528,915</b>	<b>374,235</b>	<b>569,687</b>	<b>603,955</b>	<b>590,993</b>	<b>497,262</b>	<b>354,630</b>	<b>227,424</b>	<b>141,093</b>	<b>149,373</b>	<b>20,263</b>
<b>Hardwood:</b>											
Select white oaks	223,632	18,983	24,109	35,584	36,554	27,125	26,245	14,452	10,488	22,525	7,567
Select red oaks	35,108	3,111	2,498	7,664	6,444	6,077	1,421	2,701	2,125	2,277	790
Chestnut oak	4,157	652	864	--	--	552	562	404	--	1,123	--
Other white oaks	81,960	7,371	10,434	16,560	15,984	9,843	4,923	4,877	2,233	8,218	1,517
Other red oaks	521,120	64,227	71,616	68,763	75,007	55,294	62,218	31,870	19,502	49,146	23,477
Hickory	71,893	5,358	11,347	9,217	12,601	13,057	7,153	6,280	1,067	5,214	599
Hard maple	418	--	418	--	--	--	--	--	--	--	--
Soft maple	432,533	66,036	82,314	71,092	58,078	47,391	45,096	22,424	18,316	19,893	1,893
Beech	30,214	626	2,185	3,117	1,720	4,383	9,684	3,048	550	2,031	2,870
Sweetgum	583,588	62,360	79,180	90,406	81,869	82,889	57,987	55,835	33,860	36,485	2,717
Tupelo and blackgum	747,498	53,786	74,996	103,514	128,273	105,496	84,772	64,856	45,676	63,913	22,216
Ash	172,711	17,547	22,871	22,752	25,382	17,127	18,877	20,383	6,048	19,064	2,660
Cottonwood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	298,682	17,299	24,693	25,115	31,584	39,963	40,566	33,355	27,118	49,907	9,082
Bay and magnolia	46,287	15,941	11,626	4,118	3,124	3,204	2,277	2,803	17	3,177	--
Black cherry	10,859	2,249	3,513	3,262	1,198	637	--	--	--	--	--
Black walnut	375	--	375	--	--	--	--	--	--	--	--
Sycamore	11,376	895	564	1,133	1,572	1,972	1,121	1,215	--	2,904	--
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	55,565	2,715	6,875	6,786	9,742	10,219	4,489	3,874	5,019	5,115	731
Other eastern hardwoods	182,120	63,956	40,486	24,026	18,651	12,476	4,587	7,077	3,687	7,174	--
<b>Total hardwoods</b>	<b>3,510,096</b>	<b>403,112</b>	<b>470,964</b>	<b>493,109</b>	<b>507,783</b>	<b>437,705</b>	<b>371,978</b>	<b>275,454</b>	<b>175,706</b>	<b>298,166</b>	<b>76,119</b>
<b>All species</b>	<b>7,039,011</b>	<b>777,347</b>	<b>1,040,651</b>	<b>1,097,064</b>	<b>1,098,776</b>	<b>934,967</b>	<b>726,608</b>	<b>502,878</b>	<b>316,799</b>	<b>447,539</b>	<b>96,382</b>

Table 34.--Volume of growing stock on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

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
Softwood:											
Longleaf pine	395,427	27,642	55,111	86,491	85,245	72,997	37,200	20,300	6,816	3,625	--
Slash pine	116,693	51,840	45,099	13,882	4,570	1,302	--	--	--	--	--
Shortleaf pine	68,390	5,396	14,765	14,331	19,254	7,561	3,978	2,169	936	--	--
Loblolly pine	2,241,854	221,369	343,564	359,562	355,483	322,248	261,700	172,315	102,808	100,529	2,276
Pond pine	417,596	50,480	80,850	98,309	86,830	55,263	25,742	10,657	5,879	3,586	--
Virginia pine	7,449	1,468	3,080	868	1,058	975	--	--	--	--	--
Baldypress	159,930	2,690	5,660	14,096	21,966	23,244	17,229	12,227	17,011	31,832	13,975
Pondypress	60,015	1,496	8,969	7,251	9,305	10,895	4,336	6,172	3,299	8,292	--
Cedars	36,940	8,109	7,954	7,175	5,348	1,332	1,261	3,191	2,570	--	--
Total softwoods											
	3,504,294	370,490	565,052	601,965	589,059	495,817	351,446	227,031	139,319	147,864	16,251
Hardwood:											
Select white oaks	221,267	18,756	23,823	35,265	36,050	27,125	26,245	14,452	10,084	22,525	6,942
Select red oaks	34,593	3,111	2,498	7,149	6,444	6,077	1,421	2,701	2,125	2,277	790
Chestnut oak	4,157	652	864	--	--	552	562	404	--	1,123	--
Other white oaks	75,338	5,766	9,822	15,956	15,452	9,431	4,299	3,941	2,233	7,159	1,219
Other red oaks	488,932	59,752	67,598	64,074	70,707	52,838	58,466	29,404	19,185	45,099	21,809
Hickory	68,032	4,366	10,689	9,217	12,154	13,057	6,692	6,280	458	4,520	599
Hard maple	418	--	418	--	--	--	--	--	--	--	--
Soft maple	358,178	54,013	69,492	61,222	44,989	40,065	38,957	18,661	14,779	16,000	--
Beech	29,004	3,70	2,185	3,117	4,102	9,684	3,048	3,048	1,358	2,870	--
Sweetgum	566,730	59,494	75,057	89,010	80,837	82,622	55,266	54,713	32,930	34,270	2,171
Tupelo and blackgum	666,129	45,749	64,809	94,579	123,115	99,390	75,204	59,151	40,555	46,438	17,139
Ash	157,241	14,602	19,942	21,752	24,476	13,940	17,895	20,383	5,520	16,384	2,347
Cottonwood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	292,336	16,427	24,313	25,115	30,899	39,175	40,566	33,355	26,446	47,933	8,107
Bay and magnolia	28,840	10,298	7,948	3,166	1,145	1,568	1,577	1,403	--	1,635	--
Black cherry	8,106	1,928	3,513	1,467	1,198	--	--	--	--	--	--
Black walnut	375	--	--	--	--	--	--	--	--	--	--
Sycamore	11,376	895	564	1,133	1,572	1,972	1,121	1,215	--	2,904	--
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	54,288	2,170	6,504	6,786	9,742	10,219	4,489	3,874	5,019	4,754	731
Other eastern hardwoods	62,129	10,961	7,997	7,893	7,070	8,482	3,221	6,404	3,687	6,414	--
Total hardwoods											
	3,127,469	309,420	398,411	446,901	467,570	410,715	345,975	259,389	163,571	260,793	64,724
All species											
	6,631,763	679,910	963,463	1,048,866	1,056,629	906,532	697,421	486,420	302,890	408,657	80,975

Table 35.--Volume of sawtimber on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

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	
----- Thousand board feet -----										
<b>Softwood:</b>										
Longleaf pine	1,557,130	348,366	410,851	392,542	214,606	123,282	43,163	24,320	--	--
Slash pine	77,265	50,269	20,302	6,694	--	--	--	--	--	--
Shortleaf pine	220,045	53,702	86,883	38,650	22,183	12,918	5,709	--	--	--
Loblolly pine	8,373,914	1,282,736	1,597,808	1,651,758	1,470,781	1,034,353	647,382	672,487	16,609	--
Pond pine	1,314,646	371,677	396,653	282,503	142,466	62,606	35,662	23,079	--	--
Virginia pine	12,207	3,316	4,395	4,496	--	--	--	--	--	--
Baldcypress	738,297	42,255	83,559	101,305	82,805	62,288	92,219	185,431	88,435	--
Pondcypress	227,541	23,214	36,364	48,803	21,107	32,287	18,018	47,748	--	--
Cedars	98,351	26,412	24,294	6,707	6,914	18,513	15,511	--	--	--
<b>Total softwoods</b>	<b>12,619,396</b>	<b>2,201,947</b>	<b>2,661,109</b>	<b>2,533,458</b>	<b>1,960,862</b>	<b>1,346,247</b>	<b>857,664</b>	<b>953,065</b>	<b>105,044</b>	
<b>Hardwood:</b>										
Select white oaks	636,408	--	122,564	107,727	116,342	68,716	50,998	127,000	43,061	--
Select red oaks	96,331	--	21,759	25,242	5,990	13,438	11,750	12,843	5,309	--
Chestnut oak	11,969	--	--	2,157	2,343	1,793	--	5,676	--	--
Other white oaks	195,499	--	57,220	39,971	19,915	19,605	11,860	39,105	7,823	--
Other red oaks	1,399,492	--	262,903	223,235	272,893	146,688	101,732	255,408	136,633	--
Hickory	187,974	--	41,944	53,470	30,428	30,761	2,312	25,457	3,602	--
Hard maple	--	--	--	--	--	--	--	--	--	--
Soft maple	700,507	--	146,419	151,979	163,797	84,839	71,023	82,450	--	--
Beech	92,069	--	6,283	15,633	37,822	12,194	2,219	5,670	12,248	--
Sweetgum	1,603,273	--	289,491	354,295	266,573	287,512	183,651	207,224	14,527	--
Tupelo and blackgum	1,988,701	--	407,208	390,870	331,813	284,756	205,319	259,527	109,208	--
Ash	433,515	--	77,482	54,601	77,739	94,923	27,458	87,273	14,039	--
Cottonwood	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	1,154,895	--	110,428	167,685	197,890	177,376	149,603	296,655	55,258	--
Bay and magnolia	31,730	--	3,996	6,239	6,546	6,393	--	8,556	--	--
Black cherry	4,407	--	4,407	--	--	--	--	--	--	--
Sycamore	38,590	--	5,375	7,512	4,684	5,808	--	15,211	--	--
Black locust	--	--	--	--	--	--	--	--	--	--
Elm	161,145	--	33,315	39,384	19,024	17,794	23,861	23,809	3,958	--
Other eastern hardwoods	153,189	--	24,716	33,845	14,942	29,780	17,744	32,162	--	--
<b>Total hardwoods</b>	<b>8,889,694</b>	<b>--</b>	<b>1,615,510</b>	<b>1,673,845</b>	<b>1,568,741</b>	<b>1,282,376</b>	<b>859,530</b>	<b>1,484,026</b>	<b>405,666</b>	
<b>All species</b>	<b>21,509,090</b>	<b>2,201,947</b>	<b>4,276,619</b>	<b>4,207,303</b>	<b>3,529,603</b>	<b>2,628,623</b>	<b>1,717,194</b>	<b>2,437,091</b>	<b>510,710</b>	

Table 36.--Volume of sawtimber on commercial forest land, by species, size class, and log grade, Southern Coastal Plain of North Carolina, 1983

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Log grade				All grades	Log grade			
		1	2	3	4		1	2	3	4
----- Thousand board feet -----										
<b>Softwood:</b>										
Yellow pines <sup>a</sup>	11,555,207	2,878,230	1,432,141	7,244,836	(b)	4,551,606	1,547,546	591,709	2,412,351	(b)
Cypress <sup>c</sup>	965,838	179,850	510,979	275,009	--	530,338	176,495	296,259	157,584	--
Other eastern softwoods <sup>c</sup>	98,351	25,552	18,596	54,203	--	40,938	22,107	12,281	6,550	--
<b>Total</b>	<b>12,619,396</b>	<b>3,083,632</b>	<b>1,961,716</b>	<b>7,574,048</b>	<b>--</b>	<b>5,222,882</b>	<b>1,746,148</b>	<b>900,249</b>	<b>2,576,485</b>	<b>--</b>
<b>Hardwood:<sup>d</sup></b>										
Select white and red oaks	732,739	166,049	119,493	297,309	149,888	455,447	166,049	77,805	151,284	60,309
Other white and red oaks	1,606,960	308,604	367,199	721,231	209,926	1,021,474	308,604	276,395	325,194	111,281
Hickory	187,974	27,768	33,749	102,917	23,540	92,560	27,768	19,437	35,173	10,182
Hard maple	--	--	--	--	--	--	--	--	--	--
Sweetgum	1,603,273	268,656	371,786	824,974	137,857	959,487	268,656	249,467	355,010	86,354
Ash, walnut, and black cherry	437,922	84,117	152,761	189,555	11,489	301,432	81,387	114,544	99,472	6,029
Yellow-poplar	1,154,895	341,945	249,598	384,131	179,221	876,782	341,945	157,821	236,731	140,285
Other hardwoods	3,165,931	605,810	854,482	1,376,318	329,321	1,893,157	605,810	549,016	549,015	189,316
<b>Total</b>	<b>8,889,694</b>	<b>1,802,949</b>	<b>2,149,068</b>	<b>3,896,435</b>	<b>1,041,242</b>	<b>5,600,339</b>	<b>1,800,219</b>	<b>1,444,485</b>	<b>1,751,879</b>	<b>603,756</b>
<b>All species</b>	<b>21,509,090</b>	<b>4,886,581</b>	<b>4,110,784</b>	<b>11,470,483</b>	<b>1,041,242</b>	<b>10,823,221</b>	<b>3,546,367</b>	<b>2,344,734</b>	<b>4,328,364</b>	<b>603,756</b>

<sup>a</sup>Based on "Southern Pine Log Grades for Yard and Structural Lumber," Research Paper SE-39, published by the Southeastern Forest Experiment Station in 1968.

<sup>b</sup>Not applicable.

<sup>c</sup>Based on "Sawlog Grades for Eastern White Pine," Research Paper NE-205, published by the Northeastern Forest Experiment Station in 1971.

<sup>d</sup>Based on "A Guide to Hardwood Log Grading (revised)," General Technical Report NE-1, published by the Northeastern Forest Experiment Station in 1973.

Table 37.--Cubic volume in the merchantable saw-log portion of sawtimber trees, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

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	
----- Thousand cubic feet -----										
<b>Softwood:</b>										
Longleaf pine	284,534	73,087	77,486	68,852	35,474	19,577	6,578	3,480	--	
Slash pine	15,549	10,546	3,829	1,174	--	--	--	--	--	
Shortleaf pine	41,020	11,267	16,386	6,779	3,667	2,051	870	--	--	
Loblolly pine	1,464,912	269,118	301,347	289,718	243,120	164,255	98,661	96,508	2,185	
Pond pine	244,683	77,978	74,809	49,551	23,550	9,942	5,435	3,418	--	
Virginia pine	2,314	696	829	789	--	--	--	--	--	
Baldcypress	132,080	9,989	17,606	19,704	14,863	10,589	15,465	30,448	13,416	
Pondcypress	42,782	5,488	7,662	9,492	3,789	5,489	3,022	7,840	--	
Cedars	18,700	5,728	4,956	1,271	1,211	3,063	2,471	--	--	
<b>Total softwoods</b>	<b>2,246,574</b>	<b>463,897</b>	<b>504,910</b>	<b>447,330</b>	<b>325,674</b>	<b>214,966</b>	<b>132,502</b>	<b>141,694</b>	<b>15,601</b>	
<b>Hardwood:</b>										
Select white oaks	104,381	--	22,919	18,809	19,092	10,823	7,792	18,771	6,175	
Select red oaks	16,029	--	4,069	4,407	983	2,116	1,795	1,898	761	
Chestnut oak	1,882	--	--	377	384	282	--	839	--	
Other white oaks	32,749	--	10,700	6,979	3,268	3,088	1,812	5,780	1,122	
Other red oaks	228,912	--	49,163	38,977	44,782	23,103	15,545	37,749	19,593	
Hickory	31,651	--	7,844	9,336	4,993	4,845	353	3,763	517	
Hard maple	--	--	--	--	--	--	--	--	--	
Soft maple	119,076	--	27,541	26,885	27,387	13,617	11,122	12,524	--	
Beech	14,966	--	1,175	2,730	6,207	1,921	339	838	1,756	
Sweetgum	270,154	--	54,453	62,675	44,571	46,146	28,760	31,477	2,072	
Tupelo and blackgum	363,291	--	85,799	76,024	59,560	48,409	34,432	42,614	16,453	
Ash	70,837	--	14,489	9,533	12,757	14,950	4,196	12,899	2,013	
Cottonwood	--	--	--	--	--	--	--	--	--	
Yellow-poplar	188,361	--	20,772	29,663	33,087	28,469	23,428	45,062	7,880	
Bay and magnolia	5,276	--	752	1,104	1,094	1,026	--	1,300	--	
Black cherry	829	--	829	--	--	--	--	--	--	
Sycamore	6,366	--	1,011	1,329	783	932	--	2,311	--	
Black locust	--	--	--	--	--	--	--	--	--	
Elm	27,189	--	6,267	6,967	3,181	2,856	3,737	3,617	564	
Other eastern hardwoods	25,578	--	4,649	5,987	2,498	4,780	2,779	4,885	--	
<b>Total hardwoods</b>	<b>1,507,527</b>	<b>--</b>	<b>312,432</b>	<b>301,782</b>	<b>264,627</b>	<b>207,363</b>	<b>136,090</b>	<b>226,327</b>	<b>58,906</b>	
<b>All species</b>	<b>3,754,101</b>	<b>463,897</b>	<b>817,342</b>	<b>749,112</b>	<b>590,301</b>	<b>422,329</b>	<b>268,592</b>	<b>368,021</b>	<b>74,507</b>	

Table 36.--Total volume of all live trees on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

Species	Diameter class (inches at breast height)														Total softwoods	Total hardwoods	All species
	1.0- 2.9	3.0- 4.9	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 cubic feet -----																	
<b>Softwood:</b>																	
Longleaf pine	485,928	6,341	16,467	38,697	67,481	100,155	97,475	82,765	41,723	22,700	7,617	4,507	--	--	--	--	--
Slash pine	179,793	3,575	25,867	72,785	54,810	16,081	5,204	1,471	--	--	--	--	--	--	--	--	--
Shortleaf pine	83,038	649	1,863	7,339	17,863	16,659	22,066	8,596	4,502	2,446	1,055	--	--	--	--	--	--
Loblolly pine	2,844,974	47,801	141,290	315,168	421,226	421,818	408,466	367,145	296,017	193,935	116,213	113,348	2,547	--	--	--	--
Pond pine	556,675	13,793	38,038	70,315	99,491	115,765	100,638	63,482	32,199	12,167	6,696	4,091	--	--	--	--	--
Virginia pine	11,451	616	1,847	1,917	3,706	1,012	1,228	1,125	--	--	--	--	--	--	--	--	--
Baldypress	200,304	194	1,871	4,383	7,350	17,491	26,826	28,167	20,796	14,707	21,402	38,237	18,880	--	--	--	--
Pondypress	84,668	1,219	751	2,313	12,292	9,510	11,945	13,824	5,463	7,741	4,688	11,025	3,997	--	--	--	--
Cedars	57,899	2,068	6,842	11,785	11,305	8,552	6,665	1,555	1,979	4,161	2,987	--	--	--	--	--	--
<b>Total softwoods</b>	<b>4,504,730</b>	<b>76,256</b>	<b>234,836</b>	<b>524,702</b>	<b>695,524</b>	<b>707,043</b>	<b>680,513</b>	<b>568,130</b>	<b>402,679</b>	<b>257,857</b>	<b>160,658</b>	<b>171,208</b>	<b>25,324</b>				
<b>Hardwood:</b>																	
Select white oaks	310,615	8,236	17,495	28,035	31,645	45,111	45,861	33,697	32,477	17,848	12,918	27,890	9,402	--	--	--	--
Select red oaks	48,663	1,104	3,137	4,501	3,207	9,689	8,058	7,500	1,772	3,321	2,602	2,808	964	--	--	--	--
Chestnut oak	5,360	117	--	897	1,115	--	--	578	689	495	--	1,369	--	--	--	--	--
Other white oaks	124,087	6,520	10,351	11,289	14,013	21,418	20,395	12,472	6,248	6,196	2,810	10,251	2,124	--	--	--	--
Other red oaks	815,067	50,219	76,477	100,864	97,141	89,312	95,683	69,907	78,730	40,217	24,605	62,098	29,814	--	--	--	--
Hickory	107,316	6,787	9,441	8,289	14,963	11,569	15,618	15,939	8,755	7,606	1,288	6,342	719	--	--	--	--
Hard maple	1,184	146	500	--	538	--	--	--	--	--	--	--	--	--	--	--	--
Soft maple	777,351	97,389	131,952	96,590	105,095	87,608	70,584	57,432	54,476	27,145	22,094	24,418	2,568	--	--	--	--
Beech	39,960	1,145	968	1,030	2,871	3,941	2,141	5,440	11,892	3,731	673	2,633	3,495	--	--	--	--
Sweetgum	859,309	64,668	92,595	92,320	98,229	107,161	95,225	95,421	66,499	63,684	38,703	41,623	3,181	--	--	--	--
Tupelo and blackgum	1,061,816	56,546	57,168	80,431	97,558	129,813	158,354	129,758	104,131	79,907	57,094	82,400	28,656	--	--	--	--
Ash	255,128	23,476	23,607	26,508	28,233	26,943	29,592	19,777	21,709	23,308	6,908	21,988	3,079	--	--	--	--
Cottonwood	234	--	234	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	361,917	7,225	10,498	22,887	29,453	29,136	36,179	45,524	45,984	37,681	30,676	56,378	10,296	--	--	--	--
Bay and magnolia	138,063	47,659	29,317	23,482	14,895	5,037	3,925	3,872	2,729	3,330	46	3,771	--	--	--	--	--
Black cherry	21,719	3,036	5,031	3,244	4,382	3,884	1,403	739	--	--	--	--	--	--	--	--	--
Black walnut	480	--	--	--	480	--	--	--	--	--	--	--	--	--	--	--	--
Sycamore	14,109	8	543	1,292	677	1,345	1,845	2,307	1,309	1,412	--	3,371	--	--	--	--	--
Black locust	50	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	72,814	2,198	3,694	3,768	8,647	8,208	11,619	12,108	5,275	4,548	5,868	6,010	971	--	--	--	--
Other eastern hardwoods	522,669	133,212	138,758	98,413	54,568	30,876	23,621	15,535	5,783	8,637	4,443	8,823	--	--	--	--	--
<b>Total hardwoods</b>	<b>5,537,911</b>	<b>509,741</b>	<b>611,766</b>	<b>603,840</b>	<b>607,710</b>	<b>611,051</b>	<b>620,103</b>	<b>528,106</b>	<b>448,458</b>	<b>329,066</b>	<b>210,728</b>	<b>362,173</b>	<b>95,169</b>				
<b>All species</b>	<b>10,042,641</b>	<b>585,997</b>	<b>846,602</b>	<b>1,128,542</b>	<b>1,303,234</b>	<b>1,318,094</b>	<b>1,300,616</b>	<b>1,096,236</b>	<b>851,137</b>	<b>586,923</b>	<b>371,386</b>	<b>533,381</b>	<b>120,493</b>				

Table 39.--Green weight of forest biomass on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1983

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	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
----- Hundred thousand pounds -----													
<b>Softwood:</b>													
Longleaf pine	384,114	5,288	14,106	26,355	53,405	80,287	78,412	66,185	32,840	17,684	5,970	3,582	--
Slash pine	141,931	2,819	24,005	52,613	43,946	13,214	4,185	1,149	--	--	--	--	--
Shortleaf pine	57,641	353	1,129	4,308	12,208	11,953	15,860	6,181	3,212	1,715	722	--	--
Loblolly pine	2,052,593	24,426	83,860	218,835	310,201	319,554	305,800	270,685	215,222	139,606	82,765	79,850	1,789
Pond pine	392,811	7,380	21,773	47,635	72,567	85,231	73,089	45,995	22,991	8,653	4,640	2,857	--
Virginia pine	9,142	537	1,515	1,500	2,929	846	944	871	--	--	--	--	--
Baldcypress	148,147	81	1,179	1,906	4,101	11,900	19,253	20,839	15,463	11,033	16,616	29,210	16,566
Pondcypress	61,785	521	477	1,117	7,135	6,127	8,271	10,046	4,065	5,946	3,863	9,052	5,165
Cedars	43,428	1,411	4,338	8,032	8,516	6,341	5,487	1,268	1,725	3,644	2,666	--	--
<b>Total softwoods</b>	<b>3,291,592</b>	<b>42,816</b>	<b>152,382</b>	<b>362,301</b>	<b>515,008</b>	<b>535,453</b>	<b>511,301</b>	<b>423,219</b>	<b>295,518</b>	<b>188,281</b>	<b>117,242</b>	<b>124,551</b>	<b>23,520</b>
<b>Hardwood:</b>													
Select white oaks	257,850	6,558	12,735	19,127	24,853	37,531	40,726	29,129	27,934	15,198	11,079	24,535	8,445
Select red oaks	40,710	833	2,277	3,069	2,517	7,934	6,795	6,460	1,460	3,020	2,485	2,851	1,009
Chestnut oak	4,301	110	--	531	820	--	--	562	577	446	--	1,155	--
Other white oaks	106,520	4,752	7,216	8,300	11,137	18,101	17,885	11,075	5,964	6,124	2,733	9,836	3,397
Other red oaks	669,898	42,830	56,062	68,138	77,825	74,786	84,192	61,044	68,031	35,100	20,678	52,726	25,486
Hickory	91,970	6,089	8,185	6,170	11,395	9,375	13,256	13,641	8,140	6,937	1,441	6,573	768
Hard maple	1,007	116	428	--	463	--	--	--	--	--	--	--	--
Soft maple	591,268	75,197	91,918	62,734	79,037	67,729	57,980	47,516	44,977	22,634	17,617	20,973	3,056
Beech	33,207	753	589	580	2,103	2,993	1,972	4,739	10,114	3,092	602	2,838	2,832
Sweetgum	626,954	42,475	62,229	59,383	69,253	78,872	73,436	73,187	51,893	48,919	30,812	33,412	3,083
Tupelo and blackgum	751,220	37,517	37,533	39,626	57,896	82,418	112,928	94,059	77,724	61,167	46,423	76,841	27,088
Ash	163,347	14,714	15,130	17,794	19,280	17,896	19,903	12,957	13,531	13,420	3,987	12,977	1,758
Cottonwood	163	--	153	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	261,242	5,354	7,394	13,840	19,863	20,475	26,284	33,511	33,746	27,435	22,926	42,335	8,079
Bay and magnolia	85,431	28,904	17,768	12,555	9,410	3,261	3,621	2,904	2,009	2,324	162	2,513	--
Black cherry	13,229	1,456	3,203	1,806	12,740	2,636	891	497	--	--	--	--	--
Black walnut	406	--	--	--	406	--	--	--	--	--	--	--	--
Sycamore	9,815	8	357	478	428	923	1,414	1,702	994	1,049	--	2,462	--
Black locust	45	45	--	--	--	--	--	--	--	--	--	--	--
Elm	48,804	1,587	2,582	2,187	5,487	5,319	7,867	8,280	3,569	3,099	3,964	4,203	660
Other eastern hardwoods	434,114	112,615	121,229	68,137	43,940	26,056	23,470	14,638	5,245	7,168	3,497	8,119	--
<b>Total hardwoods</b>	<b>4,191,501</b>	<b>381,913</b>	<b>448,998</b>	<b>384,555</b>	<b>438,853</b>	<b>456,305</b>	<b>492,520</b>	<b>415,901</b>	<b>355,908</b>	<b>258,132</b>	<b>168,406</b>	<b>304,349</b>	<b>85,661</b>
<b>All species</b>	<b>7,483,093</b>	<b>424,729</b>	<b>601,380</b>	<b>746,856</b>	<b>953,861</b>	<b>991,758</b>	<b>1,003,821</b>	<b>839,120</b>	<b>651,426</b>	<b>446,413</b>	<b>285,648</b>	<b>428,900</b>	<b>109,181</b>

Table 40.--Net annual growth and removals of all live timber and growing stock on commercial forest land, by species, Southern Coastal Plain of North Carolina, 1982

Species	All live timber <sup>a</sup>		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
- - - - - Thousand cubic feet - - - - -				
<b>Softwood:</b>				
Yellow pines	187,956	142,382	187,302	141,358
Eastern white pine	--	--	--	--
Spruce and fir	--	--	--	--
Cypress	5,539	946	5,492	882
Other eastern softwoods	1,677	238	1,624	122
<b>Total softwoods</b>	<b>195,172</b>	<b>143,566</b>	<b>194,418</b>	<b>142,362</b>
<b>Hardwood:</b>				
Select white and red oaks	10,309	6,406	10,215	6,011
Other white and red oaks	25,078	13,438	24,572	11,588
Hickory	2,045	1,509	2,015	1,261
Yellow birch	--	--	--	--
Hard maple	15	--	15	--
Sweetgum	21,225	12,772	21,003	11,970
Ash, walnut, and black cherry	4,949	1,875	4,757	1,455
Yellow-poplar	14,690	11,480	14,601	11,278
Tupelo and blackgum	11,547	8,974	11,179	8,030
Bay and magnolia	1,714	530	1,420	425
Other eastern hardwoods	26,199	10,155	23,182	6,553
<b>Total hardwoods</b>	<b>117,771</b>	<b>67,139</b>	<b>112,959</b>	<b>58,571</b>
<b>All species</b>	<b>312,943</b>	<b>210,705</b>	<b>307,377</b>	<b>200,933</b>

<sup>a</sup>Merchantable portion only.

Table 41.--Net annual growth and removals of sawtimber on commercial forest land, by species, Southern Coastal Plain of North Carolina, 1982

Species	: Net annual growth :	: Annual timber removals
	- - <u>Thousand board feet</u> - -	
<b>Softwood:</b>		
Yellow pines	731,282	566,474
Eastern white pine	--	--
Spruce and fir	--	--
Cypress	31,082	4,736
Other eastern softwoods	5,110	582
Total softwoods	767,474	571,792
<b>Hardwood:</b>		
Select white and red oaks	43,247	24,521
Other white and red oaks	82,300	33,965
Hickory	6,278	4,470
Yellow birch	--	--
Hard maple	--	--
Sweetgum	80,291	35,746
Ash, walnut, and black cherry	17,194	5,977
Yellow-poplar	74,084	48,562
Tupelo and blackgum	48,862	29,317
Bay and magnolia	1,225	497
Other eastern hardwoods	65,135	17,271
Total hardwoods	418,616	200,326
<b>All species</b>	<b>1,186,090</b>	<b>-772,118</b>

Table 42.--Annual removals of growing stock on commercial forest land, by species and diameter class, Southern Coastal Plain of North Carolina, 1982

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 cubic feet -----											
<b>Softwood:</b>											
Yellow pines	141,358	9,827	20,328	21,243	24,365	26,403	14,485	12,746	5,715	5,292	954
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	882	--	--	--	129	--	--	--	170	283	--
Other eastern softwoods	122	--	--	--	122	--	--	--	--	--	--
<b>Total softwoods</b>	<b>142,362</b>	<b>9,827</b>	<b>20,328</b>	<b>21,243</b>	<b>24,616</b>	<b>26,403</b>	<b>14,485</b>	<b>12,746</b>	<b>6,185</b>	<b>5,575</b>	<b>954</b>
<b>Hardwood:</b>											
Select white and red oaks	6,011	231	376	316	631	754	1,241	600	588	1,274	--
Other white and red oaks	11,588	1,469	1,070	1,937	1,211	1,909	1,940	270	599	1,183	--
Hickory	1,261	--	142	102	247	324	136	--	310	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	11,970	1,308	1,461	1,670	1,854	1,983	1,847	1,069	482	296	--
Ash, walnut, and black cherry	1,455	114	--	--	359	135	468	--	127	252	--
Yellow-poplar	11,278	155	1,025	637	1,308	2,059	2,074	1,449	1,192	1,214	165
Tupelo and blackgum	8,030	489	434	700	1,343	944	1,296	899	940	985	--
Bay and magnolia	425	--	114	205	--	--	--	106	--	--	--
Other eastern hardwoods	6,553	528	1,051	799	1,461	687	710	818	160	339	--
<b>Total hardwoods</b>	<b>58,571</b>	<b>4,294</b>	<b>5,673</b>	<b>6,366</b>	<b>8,414</b>	<b>8,795</b>	<b>9,712</b>	<b>5,211</b>	<b>4,398</b>	<b>5,543</b>	<b>165</b>
<b>All species</b>	<b>200,933</b>	<b>14,121</b>	<b>26,001</b>	<b>27,609</b>	<b>33,030</b>	<b>35,198</b>	<b>24,197</b>	<b>17,957</b>	<b>10,583</b>	<b>11,118</b>	<b>1,119</b>

Table 43.--Mortality of all live timber, growing stock, and sawtimber on commercial forest land, by species, Southern Coastal Plain of North Carolina, 1982

Species	All live timber <sup>a</sup>	Growing stock	Sawtimber
	<u>Thousand cubic feet</u>		<u>Thousand board feet</u>
<b>Softwood:</b>			
Yellow pines	24,669	23,841	59,627
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	766	713	2,297
Other eastern softwoods	160	160	763
Total softwoods	25,595	24,714	62,687
<b>Hardwood:</b>			
Select white and red oaks	560	251	997
Other white and red oaks	4,463	3,236	13,502
Hickory	358	299	1,333
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	2,227	1,745	6,658
Ash, walnut, and black cherry	841	658	632
Yellow-poplar	2,048	1,545	7,601
Tupelo and blackgum	3,445	2,090	7,245
Bay and magnolia	939	335	1,056
Other eastern hardwoods	7,407	3,263	7,823
Total hardwoods	22,288	13,422	46,847
<b>All species</b>	47,883	38,136	109,534

<sup>a</sup>Merchantable portion only.

Table 44.--Change in number of all live trees on commercial forest land, by species group, survey completion date, and diameter class, Southern Coastal Plain of North Carolina

Species group and year	All classes	Diameter class (inches at breast height)							
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0 and larger
----- <u>Thousand trees</u> -----									
<b>Yellow pine</b>									
1973	1,035,969	469,485	243,209	138,941	77,730	48,101	29,178	16,052	13,273
1983	915,258	328,979	222,128	154,452	94,300	51,683	30,423	17,132	16,161
Change	-120,711	-140,506	-21,081	+15,511	+16,570	+3,582	+1,245	+1,080	+2,888
<b>Other softwood</b>									
1973	45,091	22,567	9,112	4,445	2,671	2,552	1,567	916	1,261
1983	39,586	16,386	7,104	4,436	3,519	2,404	2,068	1,427	2,242
Change	-5,505	-6,181	-2,008	-9	+848	-148	+501	+511	+981
<b>Hardwood</b>									
1973	3,260,441	2,454,376	454,682	162,116	83,557	44,074	25,785	16,273	19,578
1983	3,198,206	2,323,000	488,071	177,340	86,640	48,232	31,132	18,134	25,657
Change	-62,235	-131,376	+33,389	+15,224	+3,083	+4,158	+5,347	+1,861	+6,079

Table 45.--Land area, by class, major forest type, and survey completion date, Southern Coastal Plain of North Carolina

Land use class	Survey completion date			Change 1973-1983
	1962	1973	1983	
----- Acres -----				
<b>Forest land:</b>				
Commercial forest land:				
Pine and oak-pine types	3,669,934	3,419,684	3,233,051	-186,633
Hardwood types	1,997,044	1,972,213	2,032,642	+60,429
<b>Total</b>	<b>5,666,978</b>	<b>5,391,897</b>	<b>5,265,693</b>	<b>-126,204</b>
Noncommercial forest land:				
Productive-reserved	2,200	5,738	6,640	+902
Unproductive	--	--	--	--
<b>Total</b>	<b>2,200</b>	<b>5,738</b>	<b>6,640</b>	<b>+902</b>
<b>Nonforest land:</b>				
Cropland	2,113,719	2,098,231	2,092,389	-5,842
Pasture and range	208,315	166,791	165,658	-1,133
Other	371,492	678,400	805,270	+126,870
<b>Total</b>	<b>2,693,526</b>	<b>2,943,422</b>	<b>3,063,317</b>	<b>+119,895</b>
<b>All land<sup>a</sup></b>	<b>8,362,704</b>	<b>8,341,057</b>	<b>8,335,650</b>	<b>-5,407</b>

<sup>a</sup>Excludes all water areas.

Table 46.--Volume<sup>a</sup> of sawtimber, growing stock, and all live timber on commercial forest land, by species group, survey completion date, and diameter class (inches at breast height)

Species group	All classes	SAWTIMBER (in thousand board feet)																		
		5.0-		7.0-		9.0-		11.0-		13.0-		15.0-		17.0-		19.0-		21.0 and larger		
Softwood	1962	9,177,551	--	1,942,541	2,226,123	1,906,505	1,301,296	893,100	364,878	543,108	1962	10,857,224	--	2,062,611	2,518,189	2,316,148	1,684,094	1,058,131	546,203	671,848
	1973	12,619,396	--	2,201,947	2,661,109	2,533,458	1,960,862	1,346,247	857,664	1,058,109	1962	6,289,909	--	1,250,047	1,414,310	1,194,115	880,576	530,203	1,020,658	1,232,663
Hardwood	1962	2,374,070	224,554	349,823	372,617	361,808	347,070	263,369	178,110	100,895	1962	2,643,320	283,100	384,522	408,440	387,268	282,061	202,531	114,522	212,345
	1973	3,504,294	370,490	565,052	601,965	589,059	495,817	351,446	227,031	139,319	1962	3,046,108	333,721	464,660	557,368	453,258	301,863	178,437	88,727	104,211
Softwood	1962	2,698,444	308,240	465,979	531,039	492,723	373,093	233,249	150,607	59,272	1962	2,698,444	308,240	464,660	557,368	492,723	373,093	233,249	150,607	59,272
	1973	3,046,108	333,721	464,660	557,368	557,368	453,258	301,863	178,437	88,727	1962	3,046,108	333,721	464,660	557,368	453,258	301,863	178,437	88,727	104,211
Hardwood	1962	2,374,070	224,554	349,823	372,617	361,808	347,070	263,369	178,110	100,895	1962	2,374,070	224,554	349,823	372,617	361,808	347,070	263,369	178,110	100,895
	1973	2,643,320	283,100	384,522	408,440	387,268	282,061	202,531	114,522	212,345	1962	2,643,320	283,100	384,522	408,440	387,268	282,061	202,531	114,522	212,345
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
Hardwood	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226	1962	2,662,124	291,897	413,532	410,926	392,908	283,171	189,155	108,363	202,226
	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999
	1973	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878	1962	3,066,790	338,391	467,934	565,794	559,252	454,573	304,570	178,728	89,878
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	1973	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983	1962	2,971,856	368,003	454,550	450,436	420,553	392,830	303,257	215,086	122,983
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Softwood	1962	2,716,514	312,554	469,267	532,854	494,386	374,176	235,341	150,895	59,999	1962	2,716,514								



Tansey, John B.

Forest statistics for the Southern Coastal Plain of North Carolina, 1983. Resour. Bull. SE-72, Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station; 1984. 51 p.

Since 1973 the area of commercial forest land in the Southern Coastal Plain has declined by just over 126,000 acres. About 95,000 acres were annually harvested and retained in commercial forest, while only 30,000 acres annually were adequately regenerated. The number of pines dropped 30 percent in the 2-inch class and 9 percent in the 4-inch class. Volume of softwood growing stock increased to 3.5 billion cubic feet. In 1982, softwood net annual growth amounted to 19.4 million cubic feet, an increase of 23 percent since 1972. Volume of hardwood growing stock increased by 18 percent to 3.1 billion cubic feet. Annual removals of growing stock have increased by 4 percent to 200.9 million cubic feet. Softwood mortality, which increased by 38 percent since 1972, now totals 24.7 million cubic feet.

KEYWORDS: Commercial forest land, timber volume, timber growth, timber removals.

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KEYWORDS: Commercial forest land, timber volume, timber growth, timber removals.



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