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Forest Statistics for the Piedmont of South Carolina, 1986

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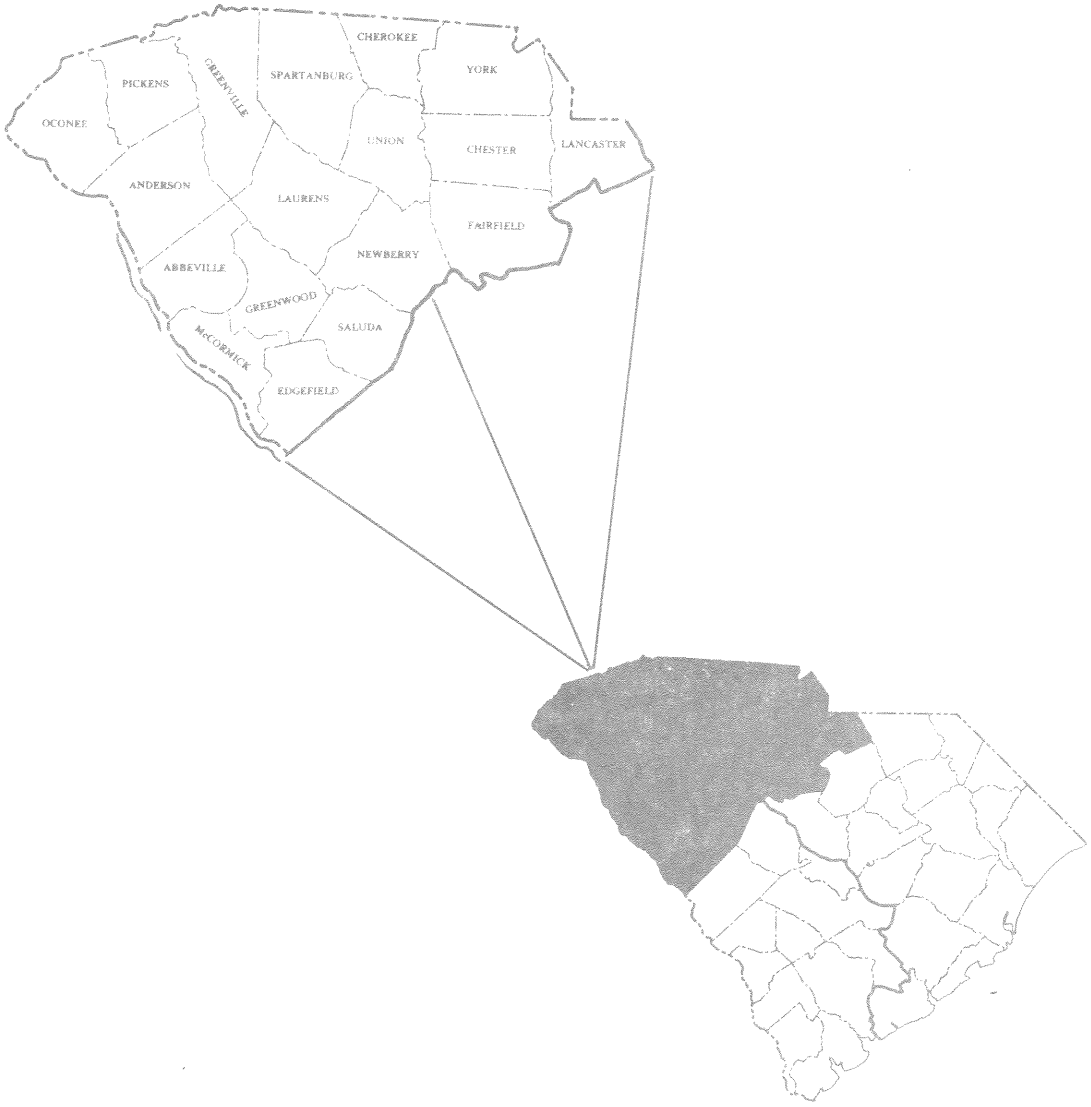

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Southeastern Forest Experiment Station
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Forest Statistics for the Piedmont of South Carolina, 1986

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Foreword

This report highlights the principal findings of the sixth forest survey in the Piedmont of South Carolina. Field work began in November 1985 and was completed in April 1986. Five previous surveys, completed in 1936, 1948, 1957, 1967, and 1977, provide statistics for measuring changes and trends over the past 50 years. The primary emphasis in this report is on the changes and trends since 1977. 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 Rangeland Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the USDA Forest Service. In Florida, Georgia, North Carolina, South Carolina, and Virginia, these surveys are administered by the Forest Inventory and Analysis (Forest Survey) Research Unit at the Southeastern Forest Experiment Station, with headquarters in Asheville, NC. The primary objective of the survey is to periodically inventory and evaluate all forest and related resources. These multiresource 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 land, associated timber volumes, and rates of timber growth and removals.

The 18-county area covered by this report is one of three survey units in South Carolina. A comparable report for the Northern and Southern Coastal Plain units will be issued as the statewide inventory progresses. When completed, the inventory will provide updated statistics on the timber resource for all of South Carolina.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the South Carolina Forestry Commission 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.

Joe P. McClure

JOE P. McCLURE
Project Leader

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Since 1977 in the Piedmont of South Carolina

• area of timberland has declined by 87,000 acres, or 2 percent. Altogether, 245,000 acres of timberland were diverted to other land uses. More than three-fourths of the diversions were about equally divided between agricultural uses and urban development. The addition of 133,000 acres of timberland, 93 percent from nonforest sources and 7 percent from a reclassification of reserved timberland, partially offset the area diverted. A land transfer between counties, which resulted in a change to FIA survey unit boundaries, added nearly 25,000 acres of timberland to the Piedmont survey unit. Timberland in these 18 counties now covers 4.4 million acres and accounts for two-thirds of the land area in the region.

• area of timberland controlled by forest industry has increased 30 percent, from 628,000 to 820,000 acres. During the same period, area in nonindustrial private forest (NIPF) declined by 9 percent, or by 319,000 acres. Within the NIPF grouping, farm timberland acreage dropped from 1.6 to 1.2 million acres, while area of timberland controlled by other individuals rose from 1.5 to 1.6 million acres. Other corporate timberland acreage remained at just under 0.5 million acres.

• area of timberland supporting softwood types dropped by 5 percent. This reduction, plus a 15-percent decline in oak-pine type, accounts for all of the timberland loss. Hardwood forest types increased by 9 percent. Within the softwood type grouping, area of natural pine stands declined by 405,000 acres, or 22 percent, while the area of pine plantations increased by 283,000 acres, or 70 percent. Due in part to plantation establishment, area of timberland classified as a loblolly type increased 127,000 acres. This 9-percent increase continues a trend evident since the late 1950's. Conversely, the area of shortleaf pine type has declined for 30 years and now totals only 338,000 acres; shortleaf acreage is down by 44 percent since 1977. Oak-hickory forests now cover 1.6 million acres, 8 percent more than in 1977.

• more than 88,000 acres have been harvested annually and retained in timberland. About two-thirds of the acreage undergoing a final harvest was in NIPF ownership and 31 percent was on land controlled by forest industry. Sixty percent of the annual harvest was from pine types, 11 percent from oak-pine, and 29 percent from hardwood types. During the same period, more than 63,000 additional acres experienced partial cutting or some intermediate silvicultural treatment each year, while insects, weather, and other natural destructive agents damaged 48,000 acres annually.

• an average of 41,000 acres have been artificially regenerated annually to adequate stocking levels. The annual rate of artificial regeneration has more than doubled on both forest industry and NIPF lands and totals about 25,000 and 14,000 acres, respectively. Plantations now account for 45 percent of forest industry timberland and 16 percent of all timberland in the Piedmont. In addition to the artificial regeneration, an average of 51,000 acres of successful natural regeneration occurred each year; 85 percent was on NIPF land. Area of timberland supporting pine stands less than 10 years old has increased 47 percent and now totals 440,000 acres. An increase of 156,000 acres of young pine plantations offset a small decline of 16,000 acres in 0- to 10-year-old natural pine stands. Area of young pine plantations increased by 84 percent on forest industry land and by 152 percent on NIPF land. When all owners, types, and regeneration methods are considered, the area successfully regenerated between 1977 and 1986 exceeds the area harvested by 4 percent. The total area regenerated to pine types just about equaled the area of pine stands harvested each year.

• average basal area of live trees 5.0 inches d.b.h. and larger has declined from 70 to 67 square feet per acre of timberland. Declines occurred in yellow pine and oak-pine forest types. Hardwood forest types had small increases. Area of poorly stocked stands declined by 60,000

acres, but these stands still constitute 11 percent of total timberland area. Areas of fully stocked and medium stocked stands changed little. They now total 1.8 and 2.1 million acres, respectively.

• number of yellow pine and hardwood trees declined significantly in the smaller diameter classes. Number of pines dropped 26 and 37 percent in the 2- and 4-inch class, respectively. These declines continue a trend begun during the previous decade. The number of pines declined by 36 percent in the 6-inch class, 29 percent in the 8-inch class, and 13 percent in the 10-inch class. On forest industry land, number of 2- and 4-inch yellow pines declined but increases occurred in all larger diameter classes. On NIPF land, declines in small-diameter pines were more severe and extended through the 12-inch diameter class. Timberland shifts between NIPF and forest industry ownership contributed to these changes. Number of live hardwoods declined by 7 percent. Declines of like magnitude occurred in each of the 2- through 8-inch diameter classes. For both pines and hardwoods, the only significant increases in tree numbers were in the 14-inch and larger diameter classes.

• volume of softwood growing stock declined by 10 percent to 3.1 billion cubic feet. Declines of 32, 27, and 13 percent occurred in the 6-, 8-, and 10-inch diameter classes, respectively. Volume of shortleaf pine declined by 295 million cubic feet. This loss accounted for more than 82 percent of the net softwood decline. Loblolly volume declined by about 7 percent to 2.1 billion cubic feet. The current inventory of softwood growing stock includes 10.9 billion board feet of sawtimber, an increase of 2 percent.

• volume of hardwood growing stock increased by 6 percent to 2.9 billion cubic feet. Declines of 8 and 3 percent in the 6- and 8-inch diameter classes were negated by increases in most larger classes. Increases in board-foot volume in all diameter classes greater than 14.0 inches contributed to a total increase of 14 percent in hardwood sawtimber. Hardwoods make up almost one-half of total growing-stock volume and 43 percent of total sawtimber volume.

In 1985

• net annual growth of softwood growing stock totaled 141 million cubic feet--a decline of 43 percent from the 250 million cubic feet in 1976. Because of both reduced growth per acre and a loss of timberland acreage, more than 88 percent of the total reduction in net growth occurred on NIPF land. Softwood net growth on forest industry land remained fairly stable. Net annual growth of hardwood growing stock declined by 29 percent to 88 million cubic feet. Net annual growth of all hardwoods (including both growing stock and cull stems) declined more severely--by 41 percent. The decline for hardwood growing stock is less severe in part because a higher proportion of hardwood stems were classified as growing stock during the most recent survey. Reductions occurred across major species and ownership groups but were concentrated on NIPF land. Including both softwoods and hardwoods, net growth of live trees 5.0 inches d.b.h and larger averaged 53 cubic feet per acre of timberland--42 percent less than in 1976.

• annual mortality of softwood growing stock totaled 43 million cubic feet and reduced softwood gross growth by 23 percent. Since 1976, softwood mortality has increased by nearly 41 percent. Disease accounted for 29 percent of softwood mortality and insects another 28 percent. Softwood growing-stock mortality included 113 million board feet of sawtimber. Mortality of hardwood growing stock totaled 19 million cubic feet--an increase of 53 percent since 1976. Mortality reduced hardwood gross growth by 18 percent. In 1976, mortality reduced gross growth by only 9 percent. Disease accounted for 29 percent of the total hardwood mortality. Growing-stock mortality included 49 million board feet of hardwood sawtimber.

• annual removals of softwood growing stock totaled 169 million cubic feet--an increase of 31 percent since 1976. Annual removals of softwood growing stock now

exceed net growth by 19 percent. Removals almost doubled on forest industry timberland and increased by 32 percent on NIPF timberland. Increases occurred in all diameter classes. Hardwood removals increased by 31 percent and now total 56 million cubic feet. Although hardwood growth still exceeds removals by almost 58 percent, the surplus is much less than in 1976 when hardwood growth exceeded removals by 3 to 1. Annual removals of hardwood growing stock increased threefold on forest industry land and by 29 percent on NIPF land. Increases in hardwood removals occurred through the 14-inch diameter class.

* * * * * * * * * * * *

These new findings substantiate significant decreases in the inventory and net growth of yellow pine identified in an interim survey conducted in 1983. Since ownership statistics were not updated in the interim survey, the changes in pine inventory and growth by ownership reported here differ somewhat from those indicated by the interim survey. Because forest industry has acquired additional timberland in the region, the current pine inventory on forest industry land is considerably higher than that reported in 1983. Likewise, a reduction in NIPF timberland resulted in more serious declines in both pine inventory and growth within this owner group.

Because hardwoods were not remeasured in the interim survey, the large decrease in hardwood growth was not identified until now. Causes of the decline in growth deserve further study. The aging of hardwood stands and climatic conditions during the past decade probably are contributing factors.

A redesignation of unit boundaries since the previous survey transferred approximately 25,000 acres of timberland from Kershaw County, located in the Northern Coastal Plain, to Lancaster County, located in the Piedmont. Changes in the timberland resource that occurred as a result of this land shift are reflected in the statistics reported here.

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 nonforest areas were based on the classification of 17,971 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 1,859 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 1,211 ground sample locations systematically distributed on timberland. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, established by 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 35 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 from 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 1,069 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.

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):

	Percent
Per million acres of timberland	0.99
Per billion cubic feet of growing stock	5.85
Per billion cubic feet of net annual growth	1.15
Per billion cubic feet of annual removals	2.94

Sampling errors for county and unit totals,[a] in terms of one standard error, Piedmont of South Carolina, 1986

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
	- - - - - - - Sampling error[b] - - - - - - -			
Abbeville	3.06	13.18	10.78	26.23
Anderson	2.81	9.80	10.23	22.37
Cherokee	2.54	11.84	11.54	44.05
Chester	1.75	9.55	9.78	26.60
Edgefield	1.61	10.57	9.58	19.87
Fairfield	.95	8.04	7.83	20.58
Greenville	2.47	8.17	9.84	31.18
Greenwood	2.53	14.28	12.85	28.41
Lancaster	1.33	10.13	9.72	24.18
Laurens	1.62	9.75	9.18	21.72
McCormick	1.59	10.57	10.56	29.13
Newberry	1.32	9.72	10.21	17.44
Oconee	2.03	6.83	7.67	27.13
Pickens	1.79	8.11	8.20	41.47
Saluda	2.43	15.19	13.62	18.70
Spartanburg	1.94	9.86	9.31	29.48
Union	1.29	9.38	10.20	29.99
York	1.88	9.17	9.61	25.79
Total	.45	2.37	2.40	6.21

[a]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.

[b]By random-sampling formula (in percent).

Definitions of Terms

Allowable cut. The volume of timber that could be cut on timberland 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 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 timberland 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. (see: Timberland).

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.

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 leased or under management contracts to forest industry from other owners for periods of one forest rotation or longer. Land under cutting contracts is 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 a log grade of either 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. All lands held in trust by the United States for individual Indians or tribes, or all lands, titles to which are held by individual Indians or tribes, subject to Federal restrictions against alienation.

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.

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

Live-tree volume. Volume (cubic feet) of wood above the ground line in 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.

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. Timberland at least 60 percent stocked with growing-stock trees that can be featured together under a management scheme.

Merchantable portion. That portion of 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 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 species. Tree species of typically small size, poor form, or inferior quality which normally do not development 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. Timberland 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 timberland.

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. Live trees at least 5.0 inches d.b.h. but smaller than sawtimber size.

Productive-reserved forest land. (see: Reserved timberland).

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 timberland and not developed for another land use. Rangeland includes natural grassland and savannah.

Reserved timberland. Forest land sufficiently productive to qualify as timberland, but withdrawn from timber utilization through statute or adminstrative designation.

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 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 nonpulpmills, 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.

Timberland. 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.

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.

Tree grade. A classification of sawtimber trees based on the log grade of the butt log in the tree.

Unproductive forest land. (see: Woodland).

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.

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

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	60.7	61.0	68.2	60.0
8	68.5	68.1	76.0	68.4
10	73.3	73.1	81.4	73.4
12	76.6	76.7	85.2	76.4
14	79.0	79.4	88.2	78.4
16	80.6	81.6	90.4	79.8
18	81.9	83.3	92.3	80.8
20	82.6	84.8	93.8	81.5
22	83.3	86.0	95.1	82.1
24+	84.6	87.7	97.8	83.1
Average	74.0	73.9	80.0	74.0

Metric equivalents of units used in this report

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

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, Piedmont of South Carolina, 1986

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
	Acres					
Abbeville	316,560	219,088	218,434	--	654	97,472
Anderson	458,582	193,618	193,618	--	--	264,964
Cherokee	253,203	150,014	148,727	--	1,287	103,189
Chester	371,341	290,759	290,759	--	--	80,582
Edgefield	313,344	236,288	236,288	--	--	77,056
Fairfield	438,425	383,607	383,607	--	--	54,818
Greenville	508,672	283,085	265,488	--	17,597	225,587
Greenwood	288,435	201,800	201,286	--	514	86,635
Lancaster	353,312	259,382	259,382	--	--	93,930
Laurens	455,872	307,196	307,196	--	--	148,676
McCormick	223,878	210,971	210,851	--	120	12,907
Newberry	405,517	299,311	299,033	--	278	106,206
Oconee	402,816	279,098	271,609	--	7,489	123,718
Pickens	319,315	218,026	215,150	--	2,876	101,289
Saluda	291,757	172,323	172,323	--	--	119,434
Spartanburg	520,903	252,939	252,939	--	--	267,964
Union	329,805	256,111	256,111	--	--	73,694
York	438,278	261,390	258,390	--	3,000	176,888
Total	6,690,015	4,475,006	4,441,191	--	33,815	2,215,009

[a]From U.S. Bureau of the Census, 1980.

[b]Includes 82,916 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

Table 2.--Area of timberland, by county and ownership class, Piedmont of South Carolina, 1986

County	All ownerships	Ownership class							
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
	Acres								
Abbeville	218,434	21,690	6,898	6,085	86	58,897	40,468	13,490	70,820
Anderson	193,618	--	9,189	6,293	347	7,777	75,561	26,446	68,005
Cherokee	148,727	--	--	110	140	20,466	47,547	10,972	69,492
Chester	290,759	11,591	--	476	686	87,487	84,675	21,169	84,675
Edgefield	236,288	29,865	--	50	298	66,048	29,479	7,370	103,178
Fairfield	383,607	11,560	--	359	119	130,622	59,412	16,503	165,032
Greenville	265,488	--	--	11,907	1,374	9,381	74,082	45,273	123,471
Greenwood	201,286	10,023	--	750	500	40,682	45,948	19,145	84,238
Lancaster	259,382	--	--	460	616	50,551	45,777	38,734	123,244
Laurens	307,196	20,746	--	1,168	1,293	74,601	129,440	3,807	76,141
McCormick	210,851	46,578	29,516	4,586	462	55,099	22,957	2,870	48,783
Newberry	299,033	54,224	--	320	813	61,996	80,747	16,149	84,784
Oconee	271,609	71,156	5,383	4,969	835	573	48,921	59,403	80,369
Pickens	215,150	--	777	14,758	754	1,651	38,669	58,003	100,538
Saluda	172,323	4,012	--	21	216	36,743	67,349	13,470	50,512
Spartanburg	252,939	--	--	6,909	2,123	20,439	106,239	32,971	84,258
Union	256,111	57,783	--	154	69	64,245	53,544	4,462	75,854
York	258,390	--	720	5,939	1,356	32,422	101,946	42,184	73,823
Total	4,441,191	339,228	52,483	65,314	12,087	819,680	1,152,761	432,421	1,567,217

[a]Includes 30,841 acres of other private land under long-term lease.

Table 3.--Area of timberland, by county and forest-type group, Piedmont of South Carolina, 1986

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
	Acres									
Abbeville	218,434	--	--	--	92,204	21,727	101,131	--	3,372	--
Anderson	193,618	--	--	--	60,607	25,814	99,641	--	7,556	--
Cherokee	148,727	--	--	--	53,047	25,602	69,968	--	110	--
Chester	290,759	--	--	--	181,343	53,138	46,427	5,847	4,004	--
Edgefield	236,288	--	--	--	125,294	35,038	66,097	3,685	6,174	--
Fairfield	383,607	--	--	--	246,116	40,861	90,029	--	6,601	--
Greenville	265,488	--	--	--	66,778	37,041	153,325	4,228	4,116	--
Greenwood	201,286	--	--	--	128,172	30,874	38,411	--	3,829	--
Lancaster	259,382	--	--	3,522	119,253	30,277	99,287	3,521	3,522	--
Laurens	307,196	--	--	--	135,973	29,528	130,583	7,614	3,498	--
McCormick	210,851	--	--	--	143,487	26,387	33,811	--	7,166	--
Newberry	299,033	--	--	--	180,797	46,691	54,686	--	16,859	--
Oconee	271,609	--	--	--	96,568	62,462	112,579	--	--	--
Pickens	215,150	10,685	--	--	46,225	27,068	131,172	--	--	--
Saluda	172,323	--	--	3,368	117,018	17,053	34,884	--	--	--
Spartanburg	252,939	--	--	--	101,818	29,308	110,823	3,664	7,326	--
Union	256,111	--	--	--	114,932	7,861	116,091	--	17,227	--
York	258,390	--	--	--	106,110	24,610	117,124	3,516	7,030	--
Total	4,441,191	10,685	--	6,890	2,115,742	571,340	1,606,069	32,075	98,390	--

Table 4.--Area of timberland, by county and stand-size class, Piedmont of South Carolina, 1986

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
	Acres				
Abbeville	218,434	68,653	56,701	93,080	--
Anderson	193,618	81,033	74,805	34,002	3,778
Cherokee	148,727	62,426	51,874	30,769	3,658
Chester	290,759	103,227	87,772	96,232	3,528
Edgefield	236,288	98,236	75,341	59,026	3,685
Fairfield	383,607	134,710	121,797	127,100	--
Greenville	265,488	145,240	78,053	38,080	4,115
Greenwood	201,286	69,069	46,308	82,080	3,829
Lancaster	259,382	59,847	104,506	95,029	--
Laurens	307,196	119,966	95,230	92,000	--
McCormick	210,851	95,217	53,230	62,404	--
Newberry	299,033	142,356	59,678	81,851	15,148
Oconee	271,609	149,369	85,770	36,470	--
Pickens	215,150	109,834	84,771	20,545	--
Saluda	172,323	73,945	24,780	73,598	--
Spartanburg	252,939	103,220	88,345	57,042	4,332
Union	256,111	124,575	78,635	52,901	--
York	258,390	84,279	110,111	62,644	1,356
Total	4,441,191	1,825,202	1,377,707	1,194,853	43,429

Table 5.--Area of timberland, by county and site class, Piedmont of South Carolina, 1986

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
	Acres					
Abbeville	218,434	--	11,884	40,510	132,483	33,557
Anderson	193,618	--	3,778	38,658	147,404	3,778
Cherokee	148,727	--	--	14,741	123,014	10,972
Chester	290,759	--	4,004	42,008	226,288	18,459
Edgefield	236,288	--	9,858	97,628	114,062	14,740
Fairfield	383,607	--	--	58,941	258,636	66,030
Greenville	265,488	4,116	5,490	94,515	149,168	12,199
Greenwood	201,286	--	--	46,568	143,231	11,487
Lancaster	259,382	--	--	33,798	163,155	62,429
Laurens	307,196	--	6,916	75,989	213,179	11,112
McCormick	210,851	--	3,583	52,153	139,142	15,973
Newberry	299,033	--	--	98,000	197,644	3,389
Oconee	271,609	14,930	22,871	38,737	158,857	36,214
Pickens	215,150	6,818	3,867	42,977	149,110	12,378
Saluda	172,323	3,367	6,734	53,594	108,628	--
Spartanburg	252,939	7,326	4,725	60,681	180,207	--
Union	256,111	--	6,837	43,146	173,582	32,546
York	258,390	--	8,388	42,467	186,443	21,092
Total	4,441,191	36,557	98,935	975,111	2,964,233	366,355

Table 6.--Area of timberland, by county and stocking class of growing-stock trees, Piedmont of South Carolina, 1986

County	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
	Acres					
Abbeville	218,434	3,373	89,424	108,776	16,861	--
Anderson	193,618	--	71,557	106,949	11,334	3,778
Cherokee	148,727	3,991	40,900	88,761	11,417	3,658
Chester	290,759	15,064	138,602	122,505	11,060	3,528
Edgefield	236,288	1,463	76,246	128,713	26,181	3,685
Fairfield	383,607	--	174,760	190,734	18,113	--
Greenville	265,488	12,348	54,430	149,357	45,238	4,115
Greenwood	201,286	7,778	87,838	94,183	7,658	3,829
Lancaster	259,382	9,150	118,613	108,385	23,234	--
Laurens	307,196	10,492	108,668	149,107	38,929	--
McCormick	210,851	4,751	122,304	67,824	15,972	--
Newberry	299,033	15,040	112,690	127,184	28,971	15,148
Oconee	271,609	14,929	59,722	166,263	30,695	--
Pickens	215,150	4,308	27,068	149,111	34,663	--
Saluda	172,323	18,213	89,483	49,150	15,477	--
Spartanburg	252,939	14,260	102,604	92,257	39,486	4,332
Union	256,111	17,361	66,357	125,244	47,149	--
York	258,390	17,576	103,364	115,001	21,093	1,356
Total	4,441,191	170,097	1,644,630	2,139,504	443,531	43,429

[a]See stocking standards on page 12.

Table 7.--Volume of growing stock and sawtimber on timberland, by county and species group, Piedmont of South Carolina, 1986

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet[a]					Thousand board feet				
Abbeville	231,764	79,219	10,572	69,034	72,939	694,809	298,463	8,636	207,546	180,164
Anderson	292,091	102,026	2,610	61,366	126,089	870,908	339,334	7,811	224,694	299,069
Cherokee	184,391	68,119	1,314	39,048	75,910	521,286	217,092	2,097	103,485	198,612
Chester	360,523	212,798	10,425	65,985	71,315	1,080,451	716,684	15,773	161,906	186,088
Edgefield	339,235	223,654	436	75,461	39,684	1,349,491	1,034,730	--	215,652	99,109
Fairfield	443,132	279,698	6,913	74,167	82,354	1,340,957	939,350	5,241	187,508	208,858
Greenville	406,414	125,523	1,754	97,366	181,771	1,285,645	428,365	11,720	277,733	567,827
Greenwood	241,788	161,626	1,148	45,485	33,529	798,483	588,123	--	126,416	83,944
Lancaster	304,004	155,699	3,059	75,698	69,548	777,616	455,423	5,442	172,470	144,281
Laurens	391,790	180,026	4,469	89,657	117,638	1,211,046	612,075	6,438	250,883	341,650
McCormick	343,495	226,689	2,815	60,313	53,678	1,264,386	942,869	3,663	193,245	124,609
Newberry	452,463	292,140	4,563	72,696	83,064	1,543,866	1,127,304	8,760	219,165	188,637
Oconee	389,305	161,945	28,269	52,385	146,706	1,184,051	446,118	153,935	153,089	430,909
Pickens	320,166	83,660	14,518	67,684	154,304	999,297	255,798	46,122	249,372	448,005
Saluda	248,757	160,248	1,164	39,289	48,056	871,102	598,817	2,148	85,415	184,722
Spartanburg	364,806	155,289	5,315	66,343	137,859	1,039,262	440,853	10,449	162,276	425,684
Union	381,524	184,004	6,269	73,134	118,117	1,248,141	629,223	14,774	231,606	372,538
York	352,427	171,926	7,538	81,663	91,300	838,904	466,586	9,942	159,844	202,532
Total	6,048,075	3,024,289	113,151	1,206,774	1,703,861	18,919,701	10,537,207	312,951	3,382,305	4,687,238

[a]Factors for converting to cords are shown on page 12.

Table 8.--Net annual growth of growing stock and sawtimber on timberland, by county and species group, Piedmont of South Carolina, 1985

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Abbeville	8,232	3,534	549	1,745	2,404	27,399	14,282	731	4,892	7,494
Anderson	9,791	4,037	82	1,460	4,212	38,668	17,580	120	5,906	15,062
Cherokee	6,009	2,507	50	1,176	2,276	23,210	9,049	43	3,387	10,731
Chester	14,864	9,592	529	2,007	2,736	53,969	40,930	887	4,818	7,334
Edgefield	11,337	7,896	14	2,064	1,363	56,974	43,212	--	7,918	5,844
Fairfield	20,707	15,437	577	2,294	2,399	69,355	53,060	576	8,607	7,112
Greenville	12,737	4,920	33	2,835	4,949	61,212	26,871	226	14,066	20,049
Greenwood	11,741	8,751	40	1,422	1,528	48,468	40,973	235	4,150	3,110
Lancaster	12,732	7,922	85	2,432	2,293	41,394	28,982	186	5,440	6,786
Laurens	14,792	8,279	143	2,781	3,589	65,918	40,594	142	12,320	12,862
McCormick	12,751	9,397	92	1,633	1,629	52,873	43,029	246	4,974	4,624
Newberry	18,070	13,255	199	1,945	2,671	79,200	63,197	148	5,906	9,949
Oconee	13,274	6,227	1,118	1,580	4,349	57,558	27,636	5,924	5,002	18,996
Pickens	10,482	3,121	983	2,085	4,293	44,647	17,011	4,403	7,654	15,579
Saluda	10,190	7,626	69	1,083	1,412	45,042	35,294	44	3,628	6,076
Spartanburg	13,109	6,589	250	2,271	3,999	48,788	27,064	242	7,598	13,884
Union	14,803	9,036	264	1,958	3,545	62,049	39,273	932	7,091	14,753
York	14,001	7,571	623	2,556	3,251	47,812	29,334	292	9,093	9,093
Total	229,622	135,697	5,700	35,327	52,898	924,536	597,371	15,377	122,450	189,338

Table 9.--Annual removals of growing stock and sawtimber on timberland, by county and species group, Piedmont of South Carolina, 1985

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Abbeville	7,633	4,641	--	983	2,009	19,685	16,135	--	778	2,772
Anderson	11,335	5,548	168	1,165	4,454	26,995	9,715	755	3,888	12,637
Cherokee	3,674	3,334	--	340	--	8,389	8,389	--	--	--
Chester	8,148	6,038	128	672	1,310	22,588	17,258	--	1,295	4,035
Edgefield	19,583	17,254	--	979	1,350	77,145	70,893	--	3,166	3,086
Fairfield	19,021	15,992	148	1,205	1,676	66,476	57,747	--	3,684	5,045
Greenville	10,559	5,397	--	1,014	4,148	29,339	14,479	--	3,727	11,133
Greenwood	18,669	13,108	--	3,257	2,304	83,608	64,791	--	11,408	7,409
Lancaster	9,925	7,945	178	1,005	797	21,795	13,918	394	4,133	3,350
Laurens	14,730	11,577	--	1,138	2,015	47,571	40,352	--	1,934	5,285
McCormick	8,884	8,481	120	283	--	36,774	35,278	512	984	--
Newberry	32,043	28,615	450	1,034	1,944	120,221	112,649	--	3,585	3,987
Oconee	6,020	3,079	--	222	2,719	17,229	9,795	--	897	6,537
Pickens	3,049	1,320	--	405	1,324	9,667	5,374	--	1,416	2,877
Saluda	20,712	17,559	--	642	2,511	69,128	62,003	--	--	7,125
Spartanburg	9,146	6,046	293	979	1,828	27,861	19,868	635	3,231	4,127
Union	10,771	7,022	--	1,887	1,862	43,165	28,777	--	8,435	5,953
York	10,687	4,220	73	3,505	2,889	31,833	10,518	--	14,911	6,404
Total	224,589	167,176	1,558	20,715	35,140	759,469	597,939	2,296	67,472	91,762

Table 10.--Area of timberland, by forest type and ownership class, Piedmont of South Carolina, 1986

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Forest industry-leased	Other private
	Acres					
Softwood types						
White pine-hemlock	10,685	--	2,951	--	--	7,734
Spruce-fir	--	--	--	--	--	--
Longleaf pine	--	--	--	--	--	--
Slash pine	6,890	--	--	--	--	6,890
Loblolly pine	1,563,315	177,336	38,239	489,919	26,733	831,088
Shortleaf pine	337,668	20,186	7,084	25,888	3,159	281,351
Virginia pine	191,259	8,894	--	5,628	441	176,296
Sand pine	--	--	--	--	--	--
Eastern redcedar	15,558	--	343	4,494	--	10,721
Pond pine	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--
Pitch pine	7,942	4,447	--	--	--	3,495
Table Mountain pine	--	--	--	--	--	--
Total	2,133,317	210,863	48,617	525,929	30,333	1,317,575
Hardwood types						
Oak-pine	571,340	46,055	4,197	75,062	--	446,026
Oak-hickory	1,587,227	66,938	76,806	162,584	508	1,280,391
Chestnut oak	15,157	--	--	--	--	15,157
Southern scrub oak	3,685	--	--	--	--	3,685
Oak-gum-cypress	32,075	2,318	--	4,228	--	25,529
Elm-ash-cottonwood	98,390	13,054	264	21,036	--	64,036
Maple-beech-birch	--	--	--	--	--	--
Total	2,307,874	128,365	81,267	262,910	508	1,834,824
All types	4,441,191	339,228	129,884	788,839	30,841	3,152,399

Table 11.--Area of timberland, by ownership and stocking classes of growing-stock trees, Piedmont of South Carolina, 1986

Ownership class	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
	Acres					
National Forest	339,228	11,429	149,585	162,335	15,879	--
Other public	129,884	71	40,311	69,851	17,233	2,418
Forest industry	788,839	52,341	369,605	297,695	51,288	17,910
Forest industry-leased	30,841	3,169	18,703	8,461	--	508
Other private	3,152,399	103,087	1,066,426	1,601,162	359,131	22,593
All ownerships	4,441,191	170,097	1,644,630	2,139,504	443,531	43,429

[a]See stocking standards on page 12.

Table 12.--Area of timberland, by forest type and stand-size class, Piedmont of South Carolina, 1986

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
	Acres				
Softwood types					
White pine-hemlock	10,685	3,867	6,818	--	--
Spruce-fir	--	--	--	--	--
Longleaf pine	--	--	--	--	--
Slash pine	6,890	6,890	--	--	--
Loblolly pine	1,563,315	640,168	359,588	543,640	19,919
Shortleaf pine	337,668	116,103	141,356	80,209	--
Virginia pine	191,259	93,306	71,094	22,744	4,115
Sand pine	--	--	--	--	--
Eastern redcedar	15,558	--	8,158	7,400	--
Pond pine	--	--	--	--	--
Spruce pine	--	--	--	--	--
Pitch pine	7,942	4,447	--	3,495	--
Table Mountain pine	--	--	--	--	--
Total	2,133,317	864,781	587,014	657,488	24,034
Hardwood types					
Oak-pine	571,340	199,010	157,977	214,353	--
Oak-hickory	1,587,227	681,195	580,985	309,337	15,710
Chestnut oak	15,157	4,116	11,041	--	--
Southern scrub oak	3,685	--	3,685	--	--
Oak-gum-cypress	32,075	13,596	7,323	7,471	3,685
Elm-ash-cottonwood	98,390	62,504	29,682	6,204	--
Maple-beech-birch	--	--	--	--	--
Total	2,307,874	960,421	790,693	537,365	19,395
All types	4,441,191	1,825,202	1,377,707	1,194,853	43,429

Table 13.--Area of timberland, by stand-age and broad management classes, all ownerships, Piedmont of South Carolina, 1986

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
0-10	740,806	322,199	117,478	130,240	170,889	--
11-20	534,965	144,979	204,715	74,940	102,695	7,636
21-30	462,610	142,219	204,585	40,371	66,610	8,825
31-40	607,390	61,816	323,341	68,123	136,824	17,286
41-50	674,923	10,600	257,012	75,017	313,864	18,430
51-60	524,838	3,778	168,023	60,320	271,185	21,532
61-70	279,419	--	69,489	22,331	180,223	7,376
71-80	103,910	--	10,672	23,372	66,283	3,583
81+	122,509	--	13,341	28,117	67,798	13,253
No manageable stand	389,821	2,928	76,142	48,509	229,698	32,544
All classes	4,441,191	688,519	1,444,798	571,340	1,606,069	130,465

Table 14.--Area of timberland, by stand-age and broad management classes, public ownerships, Piedmont of South Carolina, 1986

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
0-10	38,434	15,949	7,934	6,714	7,837	--
11-20	53,800	23,491	25,861	--	4,448	--
21-30	18,022	5,360	4,477	--	8,185	--
31-40	24,282	--	10,246	--	14,036	--
41-50	62,338	3,399	49,730	2,318	6,891	--
51-60	105,058	--	59,877	15,429	29,752	--
61-70	61,861	--	29,143	3,583	25,288	3,847
71-80	42,200	--	10,672	4,447	23,498	3,583
81+	51,472	--	13,341	16,926	15,488	5,717
No manageable stand	11,645	--	--	835	8,321	2,489
All classes	469,112	48,199	211,281	50,252	143,744	15,636

Table 15.--Area of timberland, by stand-age and broad management classes, forest industry,[a] Piedmont of South Carolina, 1986

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
0-10	278,971	205,273	26,979	17,823	28,896	--
11-20	150,627	95,605	22,435	15,806	16,781	--
21-30	94,934	51,741	29,253	8,637	--	5,303
31-40	87,679	17,401	34,824	13,830	18,696	2,928
41-50	76,410	--	34,265	10,468	27,673	4,004
51-60	57,959	--	21,258	4,004	29,769	2,928
61-70	3,950	--	3,950	--	--	--
71-80	9,047	--	--	4,494	4,553	--
81+	3,498	--	--	--	--	3,498
No manageable stand	56,605	2,928	10,350	--	36,724	6,603
All classes	819,680	372,948	183,314	75,062	163,092	25,264

[a]Includes 30,841 acres of other private land under long-term lease.

Table 16.--Area of timberland, by stand-age and broad management classes, other private ownerships,[a] Piedmont of South Carolina, 1986

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
0-10	423,401	100,977	82,565	105,703	134,156	--
11-20	330,538	25,883	156,419	59,134	81,466	7,636
21-30	349,654	85,118	170,855	31,734	58,425	3,522
31-40	495,429	44,415	278,271	54,293	104,092	14,358
41-50	536,175	7,201	173,017	62,231	279,300	14,426
51-60	361,821	3,778	86,888	40,887	211,664	18,604
61-70	213,608	--	36,396	18,748	154,935	3,529
71-80	52,663	--	--	14,431	38,232	--
81+	67,539	--	--	11,191	52,310	4,038
No manageable stand	321,571	--	65,792	47,674	184,653	23,452
All classes	3,152,399	267,372	1,050,203	446,026	1,299,233	89,565

[a]Excludes 30,841 acres of other private land under long-term lease to forest industry.

Table 17.--Area of timberland, by broad management and stand-volume classes, Piedmont of South Carolina, 1986

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	688,519	373,033	60,058	56,490	78,044	120,894
Natural pine	1,444,798	314,640	250,756	183,600	208,779	487,023
Oak-pine	571,340	200,684	59,145	132,873	80,567	98,071
Upland hardwood	1,606,069	314,740	252,495	333,768	253,789	451,277
Lowland hardwood	130,465	23,251	18,377	18,356	23,044	47,437
All classes	4,441,191	1,226,348	640,831	725,087	644,223	1,204,702

Table 18.--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Piedmont of South Carolina, 1986

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										
Pine plantation											
Softwood	622,300	196	3,764	98,635	322,300	161,704	24,215	11,486	--	--	--
Hardwood	15,604	--	1,970	4,572	2,305	1,736	2,324	2,697	--	--	--
Total	637,904	196	5,734	103,207	324,605	163,440	26,539	14,183	--	--	--
Natural pine											
Softwood	1,992,070	23,209	21,802	89,965	246,529	520,064	538,017	337,633	175,824	21,079	17,948
Hardwood	272,267	2,675	5,567	13,071	27,226	49,160	80,795	66,463	23,915	2,524	871
Total	2,264,337	25,884	27,369	103,036	273,755	569,224	618,812	404,096	199,739	23,603	18,819
Oak-pine											
Softwood	322,268	20,346	16,332	22,904	23,785	42,826	62,166	57,725	23,243	20,101	32,840
Hardwood	316,687	9,837	17,625	14,094	13,931	46,345	59,815	61,434	33,043	27,392	33,171
Total	638,955	30,183	33,957	36,998	37,716	89,171	121,981	119,159	56,286	47,493	66,011
Upland hardwood											
Softwood	194,737	13,691	6,128	14,323	11,948	21,496	50,355	44,351	18,497	5,107	8,841
Hardwood	2,060,992	121,028	38,120	54,940	58,117	182,628	497,902	495,425	345,014	133,594	134,224
Total	2,255,729	134,719	44,248	69,263	70,065	204,124	548,257	539,776	363,511	138,701	143,065
Lowland hardwood											
Softwood	6,065	696	--	--	590	546	934	783	2,516	--	--
Hardwood	245,085	20,244	--	670	16,529	32,838	31,508	56,497	28,297	9,053	49,449
Total	251,150	20,940	--	670	17,119	33,384	32,442	57,280	30,813	9,053	49,449
All types											
Softwood	3,137,440	58,138	48,026	225,827	605,152	746,636	675,687	451,978	220,080	46,287	59,629
Hardwood	2,910,635	153,784	63,282	87,347	118,108	312,707	672,344	682,516	430,269	172,563	217,715
Total	6,048,075	211,922	111,308	313,174	723,260	1,059,343	1,348,031	1,134,494	650,349	218,850	277,344

Table 19.--Net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Piedmont of South Carolina, 1985

Broad management class[a] and species group	All classes	No manageable stand	Stand-age class[a] (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
	Thousand cubic feet										
Pine plantation											
Softwood	36,989	11	1,621	10,431	16,686	7,082	763	395	--	--	--
Hardwood	598	--	21	177	102	91	107	100	--	--	--
Total	37,587	11	1,642	10,608	16,788	7,173	870	495	--	--	--
Natural pine											
Softwood	85,644	1,198	1,928	7,045	13,251	24,686	20,589	10,790	5,048	624	485
Hardwood	10,856	63	252	627	1,240	2,409	2,976	2,274	840	96	79
Total	96,500	1,261	2,180	7,672	14,491	27,095	23,565	13,064	5,888	720	564
Oak-pine											
Softwood	12,198	689	868	1,238	1,195	2,049	2,342	1,552	810	576	879
Hardwood	11,455	341	653	1,255	837	1,695	2,525	1,957	929	611	652
Total	23,653	1,030	1,521	2,493	2,032	3,744	4,867	3,509	1,739	1,187	1,531
Upland hardwood											
Softwood	6,452	535	275	584	473	761	1,528	1,333	533	94	336
Hardwood	59,890	3,512	1,831	2,270	2,958	5,981	15,506	13,868	8,037	2,971	2,956
Total	66,342	4,047	2,106	2,854	3,431	6,742	17,034	15,201	8,570	3,065	3,292
Lowland hardwood											
Softwood	114	16	--	--	15	10	21	20	32	--	--
Hardwood	5,426	497	--	18	756	896	821	1,022	409	192	815
Total	5,540	513	--	18	771	906	842	1,042	441	192	815
All types											
Softwood	141,397	2,449	4,692	19,298	31,620	34,588	25,243	14,090	6,423	1,294	1,700
Hardwood	88,225	4,413	2,757	4,347	5,893	11,072	21,935	19,221	10,215	3,870	4,502
Total	229,622	6,862	7,449	23,645	37,513	45,660	47,178	33,311	16,638	5,164	6,202

[a]Classifications at the end of the remeasurement period.

Table 20.--Annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, Piedmont of South Carolina, 1985

Broad management class[a] and species group	All classes	No manageable stand	Stand-age class[a] (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
	Thousand cubic feet										
Pine plantation											
Softwood	21,329	--	--	9,420	5,590	4,393	1,926	--	--	--	--
Hardwood	296	--	--	196	100	--	--	--	--	--	--
Total	21,625	--	--	9,616	5,690	4,393	1,926	--	--	--	--
Natural pine											
Softwood	130,484	338	1,802	8,654	31,706	37,799	29,061	13,795	5,015	2,314	--
Hardwood	9,653	63	340	362	2,259	2,158	2,739	998	594	140	--
Total	140,137	401	2,142	9,016	33,965	39,957	31,800	14,793	5,609	2,454	--
Oak-pine											
Softwood	10,646	316	248	861	1,397	2,301	3,259	1,968	--	296	--
Hardwood	7,015	--	341	642	443	1,184	2,889	463	535	518	--
Total	17,661	316	589	1,503	1,840	3,485	6,148	2,431	535	814	--
Upland hardwood											
Softwood	5,544	815	301	--	382	455	1,369	1,314	655	--	253
Hardwood	35,061	4,930	948	914	2,447	5,605	7,971	8,450	3,796	--	--
Total	40,605	5,745	1,249	914	2,829	6,060	9,340	9,764	4,451	--	253
Lowland hardwood											
Softwood	731	--	--	--	--	207	--	--	--	524	--
Hardwood	3,830	875	--	--	--	505	--	--	1,831	619	--
Total	4,561	875	--	--	--	712	--	--	1,831	1,143	--
All types											
Softwood	168,734	1,469	2,351	18,935	39,075	45,155	35,615	17,077	5,670	3,134	253
Hardwood	55,855	5,868	1,629	2,114	5,249	9,452	13,599	9,911	6,756	1,277	--
Total	224,589	7,337	3,980	21,049	44,324	54,607	49,214	26,988	12,426	4,411	253

[a]Classifications before timber removals.

Table 21.--Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, Piedmont of South Carolina, 1986

Forest-type group	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									
White pine-hemlock	18,377	1,158	12,633	1,220	3,366	16,631	1,158	12,633	--	2,840
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	14,051	14,051	--	--	--	14,051	14,051	--	--	--
Loblolly-shortleaf pine	2,956,142	2,579,625	35,535	181,028	159,954	2,871,559	2,552,517	34,011	161,643	123,388
Oak-pine	692,911	290,790	36,777	145,995	219,349	638,955	287,134	35,134	130,048	186,639
Oak-hickory	2,483,494	167,426	30,640	850,225	1,435,203	2,255,729	164,500	30,237	776,326	1,284,666
Oak-gum-cypress	52,772	--	546	36,901	15,325	48,061	--	546	34,426	13,089
Elm-ash-cottonwood	234,922	4,929	590	126,346	103,057	203,089	4,929	590	104,331	93,239
Maple-beech-birch	--	--	--	--	--	--	--	--	--	--
All types	6,452,669	3,057,979	116,721	1,341,715	1,936,254	6,048,075	3,024,289	113,151	1,206,774	1,703,861

Table 22.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Piedmont of South Carolina, 1977 to 1986

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
	Acres[a]				
Final harvest	88,292	3,484	26,122	1,195	57,491
Partial harvest and high grading	28,796	2,501	2,381	--	23,914
Commercial thinning	26,427	4,402	1,975	547	19,503
Other stand improvement	8,105	2,635	455	--	5,015
Site preparation	42,524	3,076	22,272	767	16,409
Artificial regeneration[b]	40,594	2,260	23,822	928	13,584
Natural regeneration[b]	51,333	2,307	5,199	367	43,460
Other treatment	8,111	85	791	--	7,235
Natural disturbance	47,929	4,772	9,462	190	33,505

[a]Since some acres experience more than one treatment or disturbance, there are no column totals.

[b]Includes establishment of trees for timber production on forest and nonforest land.

Table 23.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class, Piedmont of South Carolina, 1977 to 1986

Treatment or disturbance	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres[b]					
Final harvest	88,292	2,355	50,920	9,636	24,101	1,280
Partial harvest and high grading	28,796	1,332	17,380	2,926	7,158	--
Commercial thinning	26,427	10,919	14,242	--	1,266	--
Other stand improvement	8,105	455	4,122	1,276	2,252	--
Site preparation	42,524	2,995	21,766	4,722	12,585	456
Other treatment	8,111	444	2,965	3,115	1,587	--
Natural disturbance	47,929	7,233	23,337	5,339	10,200	1,820

[a]Classification before treatment or disturbance.

[b]Since some acres experience more than one treatment or disturbance, there are no column totals.

Table 24.--Area of timberland regenerated annually, by type of regeneration and broad management class, Piedmont of South Carolina, 1977 to 1986

Type of regeneration	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
Artificial regeneration following harvest	30,009	26,478	--	3,002	529	--
Natural regeneration following harvest	36,670	--	10,560	9,095	17,015	--
Other artificial regeneration on forest land	6,572	5,775	--	797	--	--
Other natural regeneration on forest land	7,338	--	2,598	2,054	2,238	448
Artificial regeneration on nonforest land	4,013	4,013	--	--	--	--
Natural reversion of nonforest land	7,325	--	4,304	1,742	1,279	--
Total	91,927	36,266	17,462	16,690	21,061	448

[a]Classification after regeneration.

Table 25.--Area of timberland, by treatment opportunity and broad management classes, Piedmont of South Carolina, 1986

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
Salvage	69,712	14,547	47,386	4,115	3,664	--
Harvest	153,758	3,498	39,842	23,741	66,258	20,419
Commercial thinning	159,285	82,158	73,463	--	3,664	--
Other stand improvement	312,201	11,766	111,125	43,242	146,068	--
Stand conversion	45,743	--	8,668	10,700	26,375	--
Regeneration	370,711	2,928	72,484	44,643	218,112	32,544
Stands in relatively good condition	3,180,439	573,622	1,072,501	413,533	1,043,281	77,502
Adverse sites[a]	149,342	--	19,329	31,366	98,647	--
All classes	4,441,191	688,519	1,444,798	571,340	1,606,069	130,465

[a]Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26.--Area of timberland, by treatment opportunity and ownership classes, Piedmont of South Carolina, 1986

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
	Acres				
Salvage	69,712	9,840	2,814	--	57,058
Harvest	153,758	77,079	11,490	--	65,189
Commercial thinning	159,285	7,381	66,020	7,475	78,409
Other stand improvement	312,201	30,234	37,203	--	244,764
Stand conversion	45,743	6,732	11,013	--	27,998
Regeneration	370,711	11,645	56,097	508	302,461
Stands in relatively good condition	3,180,439	282,707	604,202	22,858	2,270,672
Adverse sites[a]	149,342	43,494	--	--	105,848
All classes	4,441,191	469,112	788,839	30,841	3,152,399

[a]Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 27.--Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, Piedmont of South Carolina, 1986

Ownership class	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	681,179	388,878	26,252	128,912	137,137	654,022	388,451	26,252	123,411	115,908
Other public	257,870	105,192	4,314	37,425	110,939	239,868	104,188	4,314	34,876	96,490
Forest industry	845,379	531,435	6,419	136,583	170,942	794,383	523,587	6,419	117,956	146,421
Forest industry-leased	16,788	16,788	--	--	--	16,788	16,788	--	--	--
Other private	4,651,453	2,015,686	79,736	1,038,795	1,517,236	4,343,014	1,991,275	76,166	930,531	1,345,042
All ownerships	6,452,669	3,057,979	116,721	1,341,715	1,936,254	6,048,075	3,024,289	113,151	1,206,774	1,703,861

Table 28.--Volume of sawtimber on timberland, by ownership class and species group, Piedmont of South Carolina, 1986

Ownership class	Small sawtimber[a]					Large sawtimber[b]				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand board feet									
National Forest	962,267	718,325	27,868	87,704	128,370	1,812,269	1,168,163	90,544	331,061	222,501
Other public	410,119	290,975	6,788	32,098	80,258	457,035	154,756	5,108	72,332	224,839
Forest industry	1,409,142	1,140,042	2,582	104,739	161,779	832,782	405,444	--	209,823	217,515
Forest industry-leased	39,347	39,347	--	--	--	--	--	--	--	--
Other private	7,520,307	4,901,370	103,742	998,511	1,516,684	5,476,433	1,718,785	76,319	1,546,037	2,135,292
All ownerships	10,341,182	7,090,059	140,980	1,223,052	1,887,091	8,578,519	3,447,148	171,971	2,159,253	2,800,147

[a]Volume of sawtimber trees less than 15.0 inches at d.b.h.

[b]Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 29.--Net annual growth and removals of growing stock on timberland, by ownership class and species group, Piedmont of South Carolina, 1985

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	20,217	12,983	934	3,128	3,172	14,188	12,046	--	345	1,797
Other public	7,445	3,643	236	1,035	2,531	5,792	4,458	--	254	1,080
Forest industry	39,243	30,235	723	3,314	4,971	50,248	42,597	666	3,314	3,671
Forest industry-leased	1,184	1,184	--	--	--	1,738	1,212	76	175	275
Other private	161,533	87,652	3,807	27,850	42,224	152,623	106,863	816	16,627	28,317
All ownerships	229,622	135,697	5,700	35,327	52,898	224,589	167,176	1,558	20,715	35,140

Table 30.--Net annual growth and removals of sawtimber on timberland, by ownership class and species group, Piedmont of South Carolina, 1985

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	89,687	60,558	4,992	10,921	13,216	62,370	58,341	--	395	3,634
Other public	32,213	18,073	949	4,379	8,812	22,173	19,754	--	1,416	1,003
Forest industry	138,812	110,467	159	14,599	13,587	177,200	160,722	394	5,934	10,150
Forest industry-leased	6,813	6,813	--	--	--	5,465	4,201	--	767	497
Other private	657,011	401,460	9,277	92,551	153,723	492,261	354,921	1,902	58,960	76,478
All ownerships	924,536	597,371	15,377	122,450	189,338	759,469	597,939	2,296	67,472	91,762

Table 31.--Volume of timber on timberland, by class of timber and species group, Piedmont of South Carolina, 1986

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet				
Sawtimber trees					
Saw-log portion	3,565,912	1,993,434	54,665	610,634	907,179
Upper-stem portion[a]	517,430	227,908	5,521	109,795	174,206
Total	4,083,342	2,221,342	60,186	720,429	1,081,385
Poletimber trees	1,964,733	802,947	52,965	486,345	622,476
All growing-stock trees	6,048,075	3,024,289	113,151	1,206,774	1,703,861
Rough trees					
Sawtimber size	141,609	15,807	841	48,698	76,263
Poletimber size	227,184	17,883	1,742	73,932	133,627
Total	368,793	33,690	2,583	122,630	209,890
Rotten trees					
Sawtimber size	32,243	--	987	9,934	21,322
Poletimber size	3,558	--	--	2,377	1,181
Total	35,801	--	987	12,311	22,503
Salvable dead trees					
Sawtimber size	9,128	7,347	160	556	1,065
Poletimber size	7,541	6,089	304	276	872
Total	16,669	13,436	464	832	1,937
Total, all timber	6,469,338	3,071,415	117,185	1,342,547	1,938,191

[a]Includes cull sections in the saw-log portion.

Table 32.--Number of live trees on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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												
Softwood													
Longleaf pine	53	--	--	--	--	--	--	20	18	15	--	--	--
Slash pine	1,581	--	197	445	542	302	95	--	--	--	--	--	--
Shortleaf pine	227,035	94,431	55,603	32,288	22,064	12,369	6,530	2,290	979	382	88	11	--
Loblolly pine	589,459	277,649	117,181	70,549	48,384	33,101	21,752	11,370	5,108	2,787	922	627	29
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	87,606	33,773	18,744	12,673	9,988	7,912	2,504	1,461	303	214	14	20	--
Pitch pine	7,935	5,217	904	699	456	291	265	90	--	--	13	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	6,710	4,060	678	738	480	220	145	106	22	79	54	102	26
Eastern hemlock	2,278	1,376	--	144	257	334	42	59	40	--	--	26	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	187,440	135,304	33,747	11,762	4,827	1,126	458	136	42	17	--	21	--
Total softwoods	1,110,097	551,810	227,054	129,298	86,998	55,655	31,791	15,532	6,512	3,494	1,091	807	55
Hardwood													
Select white oaks	113,756	51,988	24,083	12,897	9,040	5,935	3,721	2,626	1,578	1,070	375	404	39
Select red oaks	25,813	13,146	4,398	2,150	1,296	1,535	1,472	710	580	267	148	100	11
Chestnut oak	23,559	13,927	2,312	2,251	1,283	1,442	877	618	366	145	122	182	34
Other white oaks	42,888	17,016	13,064	5,314	2,922	2,154	1,334	654	281	36	64	49	--
Other red oaks	219,427	129,331	35,582	20,237	14,160	8,184	4,689	3,142	2,119	1,110	326	527	20
Hickory	137,795	89,838	25,100	10,675	5,575	2,702	1,471	1,040	607	344	276	143	24
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	29,821	25,581	2,802	1,100	94	119	71	48	--	--	--	6	--
Soft maple	198,867	146,821	30,128	10,701	5,545	2,885	1,035	862	367	206	150	167	--
Beech	12,951	8,018	1,824	1,531	579	191	254	257	80	32	67	101	17
Sweetgum	386,359	252,977	69,640	32,497	14,541	7,759	4,498	2,153	1,044	761	282	184	23
Tupelo and blackgum	65,834	50,791	9,341	2,671	1,581	811	138	209	181	94	--	17	--
Ash	42,008	24,837	7,377	4,625	1,717	1,495	749	712	220	123	96	46	11
Cottonwood	232	--	--	--	--	--	41	--	59	--	53	47	32
Basswood	575	217	--	120	232	--	--	--	--	--	--	6	--
Yellow-poplar	79,963	42,669	15,201	6,240	3,864	3,410	3,192	2,022	1,207	839	628	675	16
Bay and magnolia	1,327	654	452	--	221	--	--	--	--	--	--	--	--
Black cherry	63,777	49,313	9,517	3,355	969	529	73	--	21	--	--	--	--
Black walnut	2,316	218	1,070	492	311	94	72	--	22	15	--	22	--
Sycamore	3,907	1,232	838	286	396	252	246	248	185	61	63	91	9
Black locust	2,507	1,661	226	140	331	51	--	26	22	35	15	--	--
Elm	137,595	98,704	23,341	8,991	3,770	1,790	502	311	142	14	--	26	4
Other eastern hardwoods	530,767	401,512	91,086	26,041	6,670	3,083	1,337	447	261	131	90	104	5
Total hardwoods	2,122,044	1,420,451	367,382	152,314	75,097	44,421	25,772	16,085	9,342	5,283	2,755	2,897	245
All species	3,232,141	1,972,261	594,436	281,612	162,095	100,076	57,563	31,617	15,854	8,777	3,846	3,704	300

Table 33.--Number of growing-stock trees on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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												
Softwood													
Longleaf pine	53	--	--	--	--	--	--	20	18	15	--	--	--
Slash pine	1,581	--	197	445	542	302	95	--	--	--	--	--	--
Shortleaf pine	202,212	75,508	50,813	31,637	21,838	12,205	6,530	2,264	936	382	88	11	--
Loblolly pine	530,847	232,836	107,940	68,258	46,855	32,602	21,582	11,311	5,108	2,787	922	617	29
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	76,644	25,624	16,768	12,534	9,647	7,623	2,464	1,433	303	214	14	20	--
Pitch pine	7,483	4,765	904	699	456	291	265	90	--	--	13	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	6,224	3,589	678	738	480	220	145	106	22	79	54	87	26
Eastern hemlock	2,278	1,376	--	144	257	334	42	59	40	--	--	26	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	156,187	108,781	29,907	11,103	4,656	1,126	420	136	20	17	--	21	--
Total softwoods	983,509	452,479	207,207	125,558	84,731	54,703	31,543	15,419	6,447	3,494	1,091	782	55
Hardwood													
Select white oaks	87,825	32,476	20,325	11,249	8,585	5,652	3,603	2,601	1,537	1,070	362	355	10
Select red oaks	19,419	9,262	2,822	1,786	1,121	1,371	1,371	652	546	251	135	91	11
Chestnut oak	17,003	9,202	1,849	1,946	1,009	1,288	759	423	281	79	55	96	16
Other white oaks	30,983	8,246	11,079	4,930	2,612	1,961	1,206	579	259	20	64	27	--
Other red oaks	156,948	78,788	28,087	17,979	13,197	7,797	4,431	2,933	1,946	1,004	300	469	17
Hickory	96,397	52,967	21,962	9,815	5,323	2,702	1,386	981	589	295	249	108	20
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	7,397	4,977	1,321	761	94	119	71	48	--	--	--	6	--
Soft maple	94,332	62,147	17,324	7,256	3,890	1,872	557	612	308	160	98	108	--
Beech	7,852	3,959	1,135	1,240	579	191	254	257	80	32	52	63	10
Sweetgum	266,780	153,981	54,244	29,786	13,084	7,274	4,345	1,996	1,024	661	244	124	17
Tupelo and blackgum	27,928	16,917	6,475	2,144	1,209	720	66	178	158	44	--	17	--
Ash	20,549	11,267	2,627	2,616	1,340	1,015	555	661	220	123	96	18	11
Cottonwood	232	--	--	--	--	--	41	--	59	--	53	47	32
Basswood	343	217	--	120	--	--	--	--	--	--	--	6	--
Yellow-poplar	68,566	34,113	13,921	5,301	3,675	3,253	3,032	2,022	1,187	808	617	631	6
Bay and magnolia	507	436	--	--	71	--	--	--	--	--	--	--	--
Black cherry	24,441	19,497	3,745	455	472	272	--	--	--	--	--	--	--
Black walnut	1,802	--	1,070	313	311	45	37	--	--	15	--	11	--
Sycamore	2,689	805	606	--	309	153	203	248	141	61	63	91	9
Black locust	1,484	735	226	140	251	51	--	26	22	18	15	--	--
Elm	62,256	33,488	15,599	7,334	3,412	1,644	317	284	142	14	--	18	4
Other eastern hardwoods	20,496	9,073	4,807	2,520	1,679	1,215	597	232	180	80	39	74	--
Total hardwoods	1,016,229	542,553	209,224	107,691	62,223	38,595	22,831	14,733	8,679	4,735	2,442	2,360	163
All species	1,999,738	995,032	416,431	233,249	146,954	93,298	54,374	30,152	15,126	8,229	3,533	3,142	218

Table 34.--Merchantable volume of live trees on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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										
Softwood											
Longleaf pine	2,473	--	--	--	--	856	672	945	--	--	--
Slash pine	10,068	1,042	3,721	3,348	1,957	--	--	--	--	--	--
Shortleaf pine	627,339	86,033	144,301	143,000	121,438	65,730	39,401	20,645	5,974	817	--
Loblolly pine	2,086,521	173,984	291,519	391,871	419,515	320,701	204,839	151,890	64,247	61,534	6,421
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	317,113	43,519	72,215	94,114	46,255	38,161	10,634	9,990	685	1,540	--
Pitch pine	14,465	1,896	2,600	2,815	4,426	1,866	--	--	862	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	34,343	1,947	2,775	1,963	2,238	3,073	526	4,028	3,023	10,077	4,693
Eastern hemlock	11,252	320	1,384	3,039	733	1,633	1,428	--	--	2,715	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	71,126	25,240	23,041	10,642	6,642	2,688	1,052	600	--	1,221	--
Total softwoods	3,174,700	333,981	541,556	650,792	603,204	434,708	258,552	188,098	74,791	77,904	11,114
Hardwood											
Select white oaks	483,290	38,399	56,092	67,851	72,226	71,316	59,739	52,287	23,811	36,635	4,934
Select red oaks	139,205	7,663	8,688	17,956	27,786	18,824	22,508	13,808	9,959	9,464	2,549
Chestnut oak	92,645	6,125	6,606	15,544	12,434	12,220	11,480	5,844	5,413	12,597	4,382
Other white oaks	103,263	15,284	16,755	20,153	20,030	14,529	8,680	1,077	3,379	3,376	--
Other red oaks	587,525	56,783	84,169	87,765	80,563	81,519	74,343	52,988	19,662	45,055	4,678
Hickory	222,161	26,409	31,144	28,678	28,195	30,030	25,575	16,441	17,532	13,166	4,991
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	7,552	2,246	405	1,407	1,143	1,488	--	--	--	863	--
Soft maple	170,413	30,112	31,757	31,160	16,621	19,639	11,428	8,707	8,743	12,246	--
Beech	41,384	4,442	3,382	2,338	4,642	6,847	2,811	1,482	3,644	9,171	2,625
Sweetgum	526,723	81,971	88,326	90,161	87,002	60,420	41,493	40,653	17,335	16,120	3,242
Tupelo and blackgum	41,010	6,663	8,427	8,213	2,274	4,706	6,103	3,466	--	1,158	--
Ash	100,981	12,264	10,921	16,261	14,531	20,611	8,124	6,468	6,474	3,612	1,715
Cottonwood	22,594	--	--	--	776	--	2,581	--	4,224	6,567	8,446
Basswood	2,473	483	952	--	--	--	--	--	--	1,038	--
Yellow-poplar	396,701	17,822	25,550	39,451	59,901	57,537	47,132	44,290	41,647	61,007	2,364
Bay and magnolia	1,807	--	1,807	--	--	--	--	--	--	--	--
Black cherry	19,347	7,283	5,391	5,117	1,023	--	533	--	--	--	--
Black walnut	6,664	1,094	1,483	903	995	--	117	909	--	1,163	--
Sycamore	41,512	1,049	3,312	2,739	4,747	7,330	5,731	3,054	3,705	8,530	1,315
Black locust	6,562	306	1,926	862	--	798	855	1,079	736	--	--
Elm	89,205	21,008	21,288	20,034	8,107	8,752	5,565	1,070	--	2,334	1,047
Other eastern hardwoods	174,952	57,750	30,976	28,832	20,328	9,847	9,604	4,434	4,467	8,220	494
Total hardwoods	3,277,969	395,156	439,357	485,425	463,324	426,413	344,402	258,057	170,731	252,322	42,782
All species	6,452,669	729,137	980,913	1,136,217	1,066,528	861,121	602,954	446,155	245,522	330,226	53,896

Table 35.--Volume of growing stock on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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										
Softwood											
Longleaf pine	2,473	--	--	--	--	856	672	945	--	--	--
Slash pine	10,068	1,042	3,721	3,348	1,957	--	--	--	--	--	--
Shortleaf pine	621,797	84,843	142,907	141,207	121,438	65,396	38,570	20,645	5,974	817	--
Loblolly pine	2,064,882	169,052	283,708	387,134	416,869	319,872	204,839	151,890	64,247	60,850	6,421
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	310,604	43,219	69,959	91,651	45,626	37,300	10,634	9,990	685	1,540	--
Pitch pine	14,465	1,896	2,600	2,815	4,426	1,866	--	--	862	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	33,356	1,947	2,775	1,963	2,238	3,073	526	4,028	3,023	9,090	4,693
Eastern hemlock	11,252	320	1,384	3,039	733	1,633	1,428	--	--	2,715	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	68,543	24,088	22,451	10,642	6,335	2,688	518	600	--	1,221	--
Total softwoods	3,137,440	326,407	529,505	641,799	599,622	432,684	257,187	188,098	74,791	76,233	11,114
Hardwood											
Select white oaks	463,604	34,000	52,975	64,877	70,702	70,804	58,761	52,287	23,405	34,498	1,295
Select red oaks	129,824	6,582	7,478	16,815	25,867	17,545	21,323	13,335	9,196	9,134	2,549
Chestnut oak	73,122	5,652	5,519	14,168	11,051	9,615	9,736	3,951	2,886	8,033	2,511
Other white oaks	93,478	14,029	15,301	18,676	18,188	12,992	8,150	674	3,379	2,089	--
Other red oaks	550,547	51,959	79,090	83,725	76,440	76,485	69,324	49,408	18,844	41,573	3,699
Hickory	210,337	24,750	29,951	28,678	27,129	28,560	25,133	14,563	16,175	10,895	4,503
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	6,972	1,666	405	1,407	1,143	1,488	--	--	--	863	--
Soft maple	123,260	20,981	23,292	21,263	10,145	14,432	10,414	7,041	6,658	9,034	--
Beech	36,227	3,713	3,382	2,338	4,642	6,847	2,811	1,482	2,942	6,175	1,895
Sweetgum	494,948	76,710	80,695	86,571	84,702	57,024	40,804	36,216	16,567	12,465	3,194
Tupelo and blackgum	33,434	5,331	6,816	7,258	1,330	3,895	5,582	2,064	--	1,158	--
Ash	83,861	8,073	8,121	11,850	11,603	19,687	8,124	6,468	6,474	1,746	1,715
Cottonwood	22,594	--	--	--	776	--	2,581	--	4,224	6,567	8,446
Basswood	1,521	483	--	--	--	--	--	--	--	1,038	--
Yellow-poplar	383,162	15,439	24,391	37,976	57,328	57,537	46,393	42,983	41,377	58,648	1,090
Bay and magnolia	587	--	587	--	--	--	--	--	--	--	--
Black cherry	7,436	1,358	3,207	2,871	--	--	--	--	--	--	--
Black walnut	5,159	782	1,483	427	561	--	--	909	--	997	--
Sycamore	37,837	--	2,803	1,665	4,149	7,330	5,286	3,054	3,705	8,530	1,315
Black locust	5,835	306	1,572	862	--	798	855	706	736	--	--
Elm	79,936	18,359	19,731	18,612	5,649	8,043	5,565	1,070	--	1,860	1,047
Other eastern hardwoods	66,954	6,712	11,136	13,962	10,424	5,709	7,197	3,155	2,199	6,460	--
Total hardwoods	2,910,635	296,885	377,935	434,001	421,829	398,791	328,039	239,366	158,767	221,763	33,259
All species	6,048,075	623,292	907,440	1,075,800	1,021,451	831,475	585,226	427,464	233,558	297,996	44,373

Table 36.--Volume of sawtimber on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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								
Softwood									
Longleaf pine	14,552	--	--	4,781	3,999	5,772	--	--	--
Slash pine	21,030	11,837	9,193	--	--	--	--	--	--
Shortleaf pine	1,788,410	522,342	550,927	335,435	214,835	122,709	36,920	5,242	--
Loblolly pine	7,848,315	1,393,703	1,879,196	1,642,610	1,155,259	916,090	406,079	407,720	47,658
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	823,161	333,822	194,171	175,655	54,016	52,800	3,761	8,936	--
Pitch pine	41,739	8,874	18,570	8,943	--	--	5,352	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	166,231	6,973	9,936	15,269	2,774	22,990	17,937	58,456	31,896
Eastern hemlock	44,326	10,152	2,867	7,448	7,361	--	--	16,498	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	102,394	43,694	30,812	13,829	2,839	3,509	--	7,711	--
Total softwoods	10,850,158	2,331,397	2,695,672	2,203,970	1,441,083	1,123,870	470,049	504,563	79,554
Hardwood									
Select white oaks	1,343,754	--	240,400	281,712	259,440	248,562	117,842	188,293	7,505
Select red oaks	414,586	--	86,353	68,218	90,120	60,007	44,749	48,122	17,017
Chestnut oak	200,974	--	35,716	36,403	41,076	18,133	13,812	41,684	14,150
Other white oaks	192,902	--	66,337	54,935	38,100	3,425	17,977	12,128	--
Other red oaks	1,502,278	--	276,950	315,677	314,174	243,962	97,984	230,256	23,275
Hickory	566,899	--	93,264	116,860	114,840	70,571	83,599	60,345	27,420
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	14,745	--	4,006	6,035	--	--	--	4,704	--
Soft maple	241,252	--	33,369	54,423	43,779	31,731	31,871	46,079	--
Beech	105,155	--	16,901	25,870	10,912	5,890	11,898	25,611	8,073
Sweetgum	1,119,651	--	302,906	244,071	196,093	189,248	91,806	74,613	20,914
Tupelo and blackgum	58,707	--	4,457	14,894	23,715	9,469	--	6,172	--
Ash	231,965	--	38,091	76,191	35,135	30,517	32,447	9,500	10,084
Cottonwood	131,160	--	2,431	--	12,040	--	22,380	38,968	55,341
Basswood	5,758	--	--	--	--	--	--	5,758	--
Yellow-poplar	1,523,944	--	204,849	252,350	229,353	231,161	236,072	362,812	7,347
Bay and magnolia	--	--	--	--	--	--	--	--	--
Black cherry	--	--	--	--	--	--	--	--	--
Black walnut	9,707	--	1,847	--	--	3,674	--	4,186	--
Sycamore	151,814	--	13,606	28,501	22,590	14,341	18,435	46,498	7,843
Black locust	11,825	--	--	2,968	3,242	2,728	2,887	--	--
Elm	94,708	--	19,245	31,228	23,942	4,982	--	9,427	5,884
Other eastern hardwoods	147,759	--	36,248	22,831	31,485	14,592	10,256	32,347	--
Total hardwoods	8,069,543	--	1,476,976	1,633,167	1,490,036	1,182,993	834,015	1,247,503	204,853
All species	18,919,701	2,331,397	4,172,648	3,837,137	2,931,119	2,306,863	1,304,064	1,752,066	284,407

Table 37.--Volume of sawtimber on timberland, by species, size class, and tree grade, Piedmont of South Carolina, 1986

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Tree grade				All grades	Tree grade			
		1	2	3	4		1	2	3	4
	Thousand board feet									
Softwood										
Yellow pines[a]	10,537,207	2,395,153	2,312,922	5,829,132	--	3,447,148	1,039,743	926,369	1,481,036	--
Eastern white pine[b]	166,231	52,328	57,640	37,564	18,699	134,053	48,367	44,364	22,623	18,699
Spruce and fir[b]	--	--	--	--	--	--	--	--	--	--
Cypress[c]	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods[b]	146,720	6,536	30,543	67,262	42,379	37,918	--	10,412	19,795	7,711
Total	10,850,158	2,454,017	2,401,105	5,933,958	61,078	3,619,119	1,088,110	981,145	1,523,454	26,410
Hardwood[c]										
Select white and red oaks	1,758,340	363,039	619,427	632,705	143,169	1,081,657	363,039	426,654	208,622	83,342
Other white and red oaks	1,896,154	245,276	526,828	876,704	247,346	1,110,136	245,276	416,623	343,228	105,009
Hickory	566,899	128,144	176,882	223,255	38,618	356,775	128,144	116,380	97,761	14,490
Yellow birch	--	--	--	--	--	--	--	--	--	--
Hard maple	14,745	--	2,835	11,910	--	4,704	--	--	4,704	--
Sweetgum	1,119,651	174,955	376,857	462,702	105,137	572,674	174,955	249,516	117,498	30,705
Ash, walnut, and black cherry	241,672	29,796	95,825	106,785	9,266	125,543	29,796	53,498	36,198	6,051
Yellow-poplar	1,523,944	462,045	488,937	486,834	86,128	1,066,745	462,045	353,563	210,176	40,961
Other eastern hardwoods	948,138	136,703	285,665	355,488	170,282	641,166	136,703	234,981	170,226	99,256
Total	8,069,543	1,539,958	2,573,256	3,156,383	799,946	4,959,400	1,539,958	1,851,215	1,188,413	379,814
All species	18,919,701	3,993,975	4,974,361	9,090,341	861,024	8,578,519	2,628,068	2,832,360	2,711,867	406,224

[a]For yellow pines, tree grade is based on "Southern Pine Tree Grades for Yard and Structural Lumber," Research Paper SE-40, published by the Southeastern Forest Experiment Station, Asheville, NC, 1968. Tree grade 4 does not apply to yellow pine.

[b]For other softwoods (excluding cypress), tree grade is based on "Tree Grades for Eastern White Pine," Research Paper NE-214, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

[c]For hardwoods and cypress, tree grades 1, 2, and 3 are based on "Hardwood Tree Grades for Factory Lumber," Research Paper NE-333, published by the Northeastern Forest Experiment Station, Broomall, PA, 1976. Grade 4 trees are sawtimber trees not qualifying as tree Grades 1, 2, or 3. The butt log of these trees qualify as construction (tie and timber) logs based on "A Guide to Hardwood Log Grading (revised)," General Technical Report NE-1, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

Table 38.--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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								
Softwood									
Longleaf pine	2,407	--	--	824	656	927	--	--	--
Slash pine	4,364	2,574	1,790	--	--	--	--	--	--
Shortleaf pine	349,919	112,753	110,321	62,230	37,530	20,363	5,913	809	--
Loblolly pine	1,456,540	301,680	374,464	302,181	198,615	149,407	63,596	60,241	6,356
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	171,499	73,961	40,856	34,786	10,129	9,602	663	1,502	--
Pitch pine	8,705	2,190	3,946	1,731	--	--	838	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	27,129	1,539	2,003	2,858	497	3,861	2,917	8,858	4,596
Eastern hemlock	8,364	2,289	623	1,484	1,344	--	--	2,624	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	19,172	8,665	5,756	2,496	491	576	--	1,188	--
Total softwoods	2,048,099	505,651	539,759	408,590	249,262	184,736	73,927	75,222	10,952
Hardwood									
Select white oaks	263,260	--	50,465	58,189	51,474	47,434	21,707	32,744	1,247
Select red oaks	80,861	--	18,386	14,005	17,950	11,560	8,188	8,312	2,460
Chestnut oak	40,206	--	7,815	7,827	8,455	3,562	2,641	7,516	2,390
Other white oaks	37,034	--	13,327	10,786	7,179	617	3,139	1,986	--
Other red oaks	282,607	--	54,586	62,647	60,506	44,696	17,358	39,237	3,577
Hickory	107,765	--	19,523	23,625	22,071	13,114	14,895	10,225	4,312
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	2,892	--	831	1,242	--	--	--	819	--
Soft maple	47,618	--	6,993	11,346	8,823	6,177	5,988	8,291	--
Beech	22,464	--	3,292	5,490	2,381	1,299	2,626	5,624	1,752
Sweetgum	207,157	--	59,498	47,085	36,219	33,464	15,666	12,066	3,159
Tupelo and blackgum	11,792	--	965	3,129	4,786	1,833	--	1,079	--
Ash	46,492	--	8,171	16,024	7,085	5,874	6,015	1,662	1,661
Cottonwood	21,248	--	477	--	2,271	--	3,926	6,304	8,270
Basswood	990	--	--	--	--	--	--	990	--
Yellow-poplar	265,451	--	39,693	47,650	41,269	39,758	39,147	56,855	1,079
Bay and magnolia	--	--	--	--	--	--	--	--	--
Black cherry	--	--	--	--	--	--	--	--	--
Black walnut	2,081	--	379	--	--	803	--	899	--
Sycamore	28,234	--	2,781	5,750	4,433	2,697	3,355	7,963	1,255
Black locust	2,616	--	--	650	717	607	642	--	--
Elm	18,724	--	3,956	6,410	4,743	947	--	1,693	975
Other eastern hardwoods	28,321	--	7,101	4,588	6,037	2,727	1,982	5,886	--
Total hardwoods	1,517,813	--	298,239	326,443	286,399	217,169	147,275	210,151	32,137
All species	3,565,912	505,651	837,998	735,033	535,661	401,905	221,202	285,373	43,089

Table 39.--Total volume of live trees on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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 cubic feet												
Softwood													
Longleaf pine	2,771	--	--	--	--	--	--	962	752	1,057	--	--	--
Slash pine	12,526	--	378	1,536	4,510	3,884	2,218	--	--	--	--	--	--
Shortleaf pine	827,395	23,138	58,759	117,050	173,974	166,077	138,704	74,458	44,419	23,200	6,700	916	--
Loblolly pine	2,622,480	57,458	113,077	246,603	355,264	456,891	480,062	363,606	230,913	170,641	72,010	68,799	7,156
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	407,754	8,325	23,026	57,044	86,370	109,760	53,359	43,775	12,161	11,401	781	1,752	--
Pitch pine	18,717	973	639	2,429	3,130	3,292	5,119	2,149	--	--	986	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	42,073	955	805	2,617	3,376	2,319	2,609	3,563	609	4,642	3,482	11,687	5,409
Eastern hemlock	13,443	227	--	445	1,710	3,597	856	1,885	1,636	--	--	3,087	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	160,875	28,451	36,440	38,384	29,775	13,100	8,034	3,226	1,257	713	--	1,495	--
Total softwoods	4,108,034	119,527	233,124	466,108	658,109	758,920	690,961	493,624	291,747	211,654	83,959	87,736	12,565
Hardwood													
Select white oaks	660,257	12,754	33,529	56,168	73,637	86,016	90,314	88,504	73,909	64,468	29,419	45,305	6,234
Select red oaks	183,703	2,903	6,982	10,454	11,105	22,658	34,475	23,273	27,758	16,990	12,261	11,713	3,131
Chestnut oak	121,950	3,098	3,021	8,471	8,457	19,276	15,323	15,068	14,036	7,183	6,671	15,715	5,631
Other white oaks	158,258	3,613	19,102	22,853	22,313	25,922	25,403	18,313	10,884	1,398	4,217	4,240	--
Other red oaks	833,603	28,328	49,024	88,317	112,386	111,633	100,731	100,782	91,875	65,207	24,228	55,424	5,668
Hickory	334,001	19,392	31,091	41,007	41,270	36,045	34,661	36,473	30,923	19,878	21,130	16,072	6,059
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	19,091	5,918	3,147	3,533	529	1,753	1,391	1,793	--	--	--	1,027	--
Soft maple	296,052	35,362	46,030	43,447	40,131	37,996	20,179	23,578	13,729	10,399	10,461	14,740	--
Beech	56,191	1,606	1,556	6,695	4,485	2,959	5,806	8,495	3,474	1,839	4,514	11,447	3,315
Sweetgum	783,110	54,148	86,326	120,325	109,912	106,709	100,765	69,322	47,275	46,295	19,729	18,534	3,770
Tupelo and blackgum	71,661	10,593	10,350	9,372	10,531	9,857	2,689	5,588	7,178	4,138	--	1,365	--
Ash	137,885	6,869	10,227	17,555	13,382	19,203	16,846	23,688	9,289	7,366	7,355	4,163	1,942
Cottonwood	26,055	--	--	--	--	--	915	--	2,989	--	4,871	7,548	9,732
Basswood	3,023	89	--	604	1,149	--	--	--	--	--	--	1,181	--
Yellow-poplar	485,856	10,570	20,994	24,268	30,418	45,501	68,171	65,034	53,091	49,784	46,787	68,546	2,692
Bay and magnolia	2,931	275	418	--	2,238	--	--	--	--	--	--	--	--
Black cherry	56,848	17,625	14,251	10,243	6,707	6,185	1,212	--	625	--	--	--	--
Black walnut	10,541	28	2,063	1,592	1,848	1,092	1,212	--	225	1,073	--	1,408	--
Sycamore	49,914	458	673	1,408	4,022	3,239	5,557	8,525	6,777	3,534	4,296	9,863	1,562
Black locust	8,899	568	220	417	2,427	1,054	--	962	1,030	1,338	883	--	--
Elm	164,170	19,525	30,694	31,159	26,808	24,218	9,674	10,339	6,551	1,250	--	2,727	1,225
Other eastern hardwoods	439,973	95,748	110,614	86,916	40,312	36,004	25,111	12,026	11,688	5,465	5,473	10,013	603
Total hardwoods	4,903,972	329,470	480,312	584,804	564,067	597,320	560,435	511,763	413,306	307,605	202,295	301,031	51,564
All species	9,012,006	448,997	713,436	1,050,912	1,222,176	1,356,240	1,251,396	1,005,387	705,053	519,259	286,254	388,767	64,129

Table 40.--Green weight of forest biomass on timberland, by species and diameter class, Piedmont of South Carolina, 1986

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												
Softwood													
Longleaf pine	2,183	--	--	--	--	--	--	752	606	825	--	--	--
Slash pine	9,466	--	345	1,056	3,370	2,990	1,705	--	--	--	--	--	--
Shortleaf pine	566,647	13,047	35,751	71,501	119,571	118,449	100,155	53,804	32,080	16,770	4,849	670	--
Loblolly pine	1,886,021	28,037	66,798	176,024	262,413	334,442	351,603	267,360	168,117	124,060	52,225	49,822	5,120
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	308,850	7,265	18,835	44,045	65,007	82,136	39,649	32,628	9,064	8,333	587	1,301	--
Pitch pine	12,772	707	589	1,590	2,062	2,238	3,458	1,487	--	--	641	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	25,776	391	368	1,748	2,289	1,609	1,791	2,279	430	2,885	2,170	6,804	3,012
Eastern hemlock	10,172	121	--	366	1,411	2,973	635	1,370	1,222	--	--	2,074	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	112,088	17,135	23,239	28,934	22,498	9,531	5,927	2,348	925	525	--	1,026	--
Total softwoods	2,933,975	66,703	145,925	325,264	478,621	554,368	504,923	362,028	212,444	153,398	60,472	61,697	8,132
Hardwood													
Select white oaks	532,423	10,027	24,895	40,288	57,884	69,222	72,714	72,885	61,233	54,396	24,749	38,538	5,592
Select red oaks	149,418	2,426	5,238	7,828	8,950	18,184	28,373	19,384	22,630	13,854	10,067	9,610	2,874
Chestnut oak	98,082	2,837	2,388	6,337	6,665	14,909	12,331	12,238	11,269	5,861	5,606	12,899	4,742
Other white oaks	124,736	2,532	13,150	15,895	17,362	21,122	21,274	15,480	9,234	1,274	3,658	3,755	--
Other red oaks	678,947	22,790	37,042	61,341	88,226	92,125	84,105	85,266	78,191	56,004	20,810	47,813	5,234
Hickory	270,793	16,851	27,277	29,317	31,714	28,425	27,563	29,725	25,552	16,961	18,140	13,914	5,354
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	15,844	4,839	2,692	2,646	474	1,430	1,256	1,557	--	--	--	950	--
Soft maple	217,942	26,774	32,978	30,721	31,043	28,419	14,994	17,554	10,119	7,636	7,370	10,334	--
Beech	45,030	1,276	1,362	4,231	3,377	2,323	4,556	6,878	2,876	1,569	3,969	9,809	2,804
Sweetgum	558,120	35,844	57,537	79,792	78,084	77,328	74,114	51,857	35,665	35,172	15,296	14,453	2,978
Tupelo and blackgum	48,896	8,296	7,746	5,292	6,491	6,337	1,816	3,874	5,017	3,000	--	1,027	--
Ash	87,063	4,207	6,466	13,154	9,406	12,673	10,288	14,021	5,454	4,169	4,020	2,215	990
Cottonwood	19,380	--	--	--	--	--	604	--	2,130	--	3,502	5,577	7,567
Basswood	2,059	64	--	362	810	--	--	--	--	--	--	823	--
Yellow-poplar	346,331	7,800	14,061	14,702	20,779	31,955	48,517	46,821	38,563	36,295	34,186	50,615	2,037
Bay and magnolia	1,800	176	272	--	1,352	--	--	--	--	--	--	--	--
Black cherry	34,025	8,609	9,525	6,101	4,347	4,140	845	--	458	--	--	--	--
Black walnut	9,173	19	1,687	1,250	1,726	987	1,088	--	211	929	--	1,276	--
Sycamore	36,193	319	482	698	2,376	2,260	3,859	6,124	5,016	2,685	3,326	7,781	1,267
Black locust	8,521	499	192	396	2,266	932	--	925	998	1,397	916	--	--
Elm	106,570	14,053	21,492	18,153	17,046	15,162	6,347	6,601	4,264	784	--	1,847	821
Other eastern hardwoods	349,843	81,284	95,304	59,590	30,607	26,904	19,448	10,031	9,219	4,625	4,477	8,043	311
Total hardwoods	3,741,189	251,522	361,786	398,094	420,985	454,837	434,092	401,221	328,099	246,611	160,092	241,279	42,571
All species	6,675,164	318,225	507,711	723,358	899,606	1,009,205	939,015	763,249	540,543	400,009	220,564	302,976	50,703

Table 41.--Net annual growth and removals of live timber and growing stock on timberland, by species, Piedmont of South Carolina, 1985

Species	Live timber[a]		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
	- - - - - Thousand cubic feet - - - - -			
Softwood				
Yellow pines	136,693	170,806	135,697	167,176
Eastern white pine	1,666	--	1,659	--
Spruce and fir	--	--	--	--
Cypress	--	--	--	--
Other eastern softwoods	4,096	1,600	4,041	1,558
Total softwoods	142,455	172,406	141,397	168,734
Hardwood				
Select white and red oaks	18,640	9,451	18,191	8,951
Other white and red oaks	25,538	22,754	24,808	20,959
Hickory	4,773	2,779	4,702	2,526
Yellow birch	--	--	--	--
Hard maple	147	93	134	--
Sweetgum	14,450	10,279	13,996	9,229
Ash, walnut, and black cherry	3,307	1,791	2,804	1,065
Yellow-poplar	12,309	7,772	12,089	7,591
Tupelo and blackgum	860	508	792	449
Bay and magnolia	20	--	11	--
Other eastern hardwoods	12,977	7,718	10,698	5,085
Total hardwoods	93,021	63,145	88,225	55,855
All species	235,476	235,551	229,622	224,589

[a]Merchantable portion only.

Table 42.--Net annual growth and removals of sawtimber on timberland, by species, Piedmont of South Carolina, 1985

Species	Net annual growth	Annual timber removals
	Thousand board feet	
Softwood		
Yellow pines	597,371	597,939
Eastern white pine	8,278	--
Spruce and fir	--	--
Cypress	--	--
Other eastern softwoods	7,099	2,296
Total softwoods	612,748	600,235
Hardwood		
Select white and red oaks	74,203	22,332
Other white and red oaks	85,609	53,974
Hickory	11,521	6,897
Yellow birch	--	--
Hard maple	304	--
Sweetgum	41,305	27,753
Ash, walnut, and black cherry	7,847	1,968
Yellow-poplar	55,208	31,082
Tupelo and blackgum	1,586	1,419
Bay and magnolia	--	--
Other eastern hardwoods	34,205	13,809
Total hardwoods	311,788	159,234
All species	924,536	759,469

Table 43.--Annual removals of growing stock on timberland, by species and diameter class, Piedmont of South Carolina, 1985

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										
Softwood											
Yellow pines	167,176	17,955	31,089	29,392	29,387	26,144	16,413	8,827	4,986	2,811	172
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	--	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods	1,558	418	624	387	129	--	--	--	--	--	--
Total softwoods	168,734	18,373	31,713	29,779	29,516	26,144	16,413	8,827	4,986	2,811	172
Hardwood											
Select white and red oaks	8,951	1,750	767	1,122	948	1,504	1,027	531	844	225	233
Other white and red oaks	20,959	2,381	3,390	2,619	3,439	3,229	1,725	1,874	1,170	1,132	--
Hickory	2,526	223	260	573	362	--	174	--	557	377	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	9,229	1,482	1,357	386	1,194	1,239	773	1,339	777	682	--
Ash, walnut, and black cherry	1,065	95	219	265	167	--	--	177	142	--	--
Yellow-poplar	7,591	278	134	710	381	2,514	1,024	1,036	682	572	260
Tupelo and blackgum	449	--	--	--	324	125	--	--	--	--	--
Bay and magnolia	--	--	--	--	--	--	--	--	--	--	--
Other eastern hardwoods	5,085	628	554	651	638	479	371	346	401	797	220
Total hardwoods	55,855	6,837	6,681	6,326	7,453	9,090	5,094	5,303	4,573	3,785	713
All species	224,589	25,210	38,394	36,105	36,969	35,234	21,507	14,130	9,559	6,596	885

Table 44.--Mortality of live timber, growing stock, and sawtimber on timberland, by species, Piedmont of South Carolina, 1985

Species	Live timber[a]	Growing stock	Sawtimber
	Thousand cubic feet		Thousand board feet
Softwood			
Yellow pines	43,851	41,213	109,704
Eastern white pine	267	267	1,813
Spruce and fir	--	--	--
Cypress	--	--	--
Other eastern softwoods	1,309	1,155	1,246
Total softwoods	45,427	42,635	112,763
Hardwood			
Select white and red oaks	3,131	1,991	4,841
Other white and red oaks	11,313	9,565	22,051
Hickory	970	564	1,481
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	3,269	2,276	8,696
Ash, walnut, and black cherry	1,410	765	563
Yellow-poplar	1,508	1,226	3,987
Tupelo and blackgum	--	--	--
Bay and magnolia	--	--	--
Other eastern hardwoods	6,553	2,703	7,303
Total hardwoods	28,154	19,090	48,922
All species	73,581	61,725	161,685

[a]Merchantable portion only.

Table 45.--Change in number of live trees on timberland, by species group, survey completion date, and diameter class, Piedmont of South 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
	Thousand trees								
Yellow pine									
1977	1,275,637	553,744	306,625	181,172	115,224	62,370	31,126	14,607	10,769
1986	913,669	411,070	192,629	116,654	81,434	53,975	31,146	15,231	11,530
Change	-361,968	-142,674	-113,996	-64,518	-33,790	-8,395	+20	+624	+761
Other softwood									
1977	229,199	170,531	42,991	9,650	3,569	1,443	500	147	368
1986	196,428	140,740	34,425	12,644	5,564	1,680	645	301	429
Change	-32,771	-29,791	-8,566	+2,994	+1,995	+237	+145	+154	+61
Hardwood									
1977	2,273,630	1,540,099	388,136	165,910	77,737	43,523	26,879	14,055	17,291
1986	2,122,044	1,420,451	367,382	152,314	75,097	44,421	25,772	16,085	20,522
Change	-151,586	-119,648	-20,754	-13,596	-2,640	+898	-1,107	+2,030	+3,231

Table 46.--Land area, by land use class, major forest type, and survey completion date, Piedmdont of South Carolina

Land use class	Survey completion date			Change 1977-1986
	1967	1977	1986	
	Acres			
Forest land				
Timberland:				
Pine and oak-pine types	3,053,500	2,929,453	2,704,657	-224,796
Hardwood types	1,425,611	1,598,583	1,736,534	+137,951
Total	4,479,111	4,528,036	4,441,191	-86,845
Reserved timberland	46,600	38,746	33,815	-4,931
Woodland	--	--	--	--
Total forest land	4,525,711	4,566,782	4,475,006	-91,776
Nonforest land				
Cropland	1,021,527	741,685	746,205	+4,520
Pasture and range	661,429	728,065	648,148	-79,917
Other	472,113	607,247	737,740	+130,493
Total	2,155,069	2,076,997	2,132,093	+55,096
All land[a]	6,680,780	6,643,779	6,607,099	-36,680

[a]Excludes all water areas.

Table 47.--Volume[a] of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, Piedmont of South Carolina

Species group and year	All classes	Diameter class (inches at breast height)								
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger
					SAWTIMBER (in thousand board feet)					
Softwood										
1967	6,718,534	--	--	1,747,175	1,689,125	1,332,178	830,762	491,456	294,264	333,574
1977	10,688,529	--	--	2,672,903	2,681,931	2,093,466	1,515,802	872,595	373,103	478,729
1986	10,850,158	--	--	2,331,397	2,695,672	2,203,970	1,441,083	1,123,870	470,049	584,117
Hardwood										
1967	4,933,343	--	--	--	1,061,055	1,023,713	859,469	700,741	476,121	812,244
1977	7,108,588	--	--	--	1,540,601	1,426,993	1,302,250	957,053	685,490	1,196,201
1986	8,069,543	--	--	--	1,476,976	1,633,167	1,490,036	1,182,993	834,015	1,452,356
					GROWING STOCK (in thousand cubic feet)					
Softwood										
1967	2,409,222	449,101	514,762	480,918	375,695	261,519	148,271	82,252	46,820	49,884
1977	3,495,620	481,798	723,081	735,729	596,515	410,967	270,534	146,041	59,364	71,591
1986	3,137,440	326,407	529,505	641,799	599,622	432,684	257,187	188,098	74,791	87,347
Hardwood										
1967	2,014,637	260,616	322,857	313,819	303,072	249,991	189,227	141,793	90,638	142,624
1977	2,749,552	323,742	390,987	425,396	440,046	348,472	286,713	193,657	130,495	210,044
1986	2,910,635	296,885	377,935	434,001	421,829	398,791	328,039	239,366	158,767	255,022
					LIVE TIMBER[b] (in thousand cubic feet)					
Softwood										
1967	2,442,136	458,907	526,019	487,613	377,844	262,798	149,074	82,252	46,820	50,809
1977	3,540,498	492,321	738,892	745,974	599,945	412,964	271,985	146,041	59,364	73,012
1986	3,174,700	333,981	541,556	650,792	603,204	434,708	258,552	188,098	74,791	89,018
Hardwood										
1967	2,286,548	345,915	375,517	350,930	332,846	267,300	198,692	152,852	97,479	165,017
1977	3,109,250	429,707	454,761	475,706	483,284	372,598	301,044	208,785	140,300	243,065
1986	3,277,969	395,156	439,357	485,425	463,324	426,413	344,402	258,057	170,731	295,104

[a]To provide a basis for valid comparisons, adjustments have been made to allow for differences in volume tables and sawtimber specifications used in previous surveys.

[b]Merchantable volume.

*U.S. GOVERNMENT PRINTING OFFICE: 1986-730-612 Region 4.

Tansey, John B.
Forest statistics for the Piedmont of South Carolina, 1986. Resour. Bull. SE-89. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station; 1986. 53 pp.

Since 1977, area of timberland in the Piedmont of South Carolina has declined by 87,000 acres. Forest industry timberland holdings have increased by 192,000 acres, while nonindustrial private holdings have declined by 319,000 acres. For every acre harvested and retained in timberland, about 1 acre was successfully regenerated. Volume of softwood growing stock dropped from 3.5 to 3.1 billion cubic feet. Volume of hardwood growing stock increased by 6 percent to 2.9 billion cubic feet. Number of yellow pines declined in all diameter classes through the 10-inch class. In 1985, softwood net annual growth totaled 141 million cubic feet, a drop of 43 percent from 1976. Hardwood growth declined by 29 percent to 88 million cubic feet. Softwood removals increased by 31 percent and exceeded growth by 19 percent. Hardwood removals increased by 31 percent to 56 million cubic feet, but hardwood growth continues to exceed removals. Annual mortality of growing stock totaled 62 million cubic feet, up 44 percent since 1976.

KEYWORDS: Land use trends, timberland ownership, timber growth, timber removals.

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