



United States
Department of
Agriculture

Forest Service

Southern Forest
Experiment Station

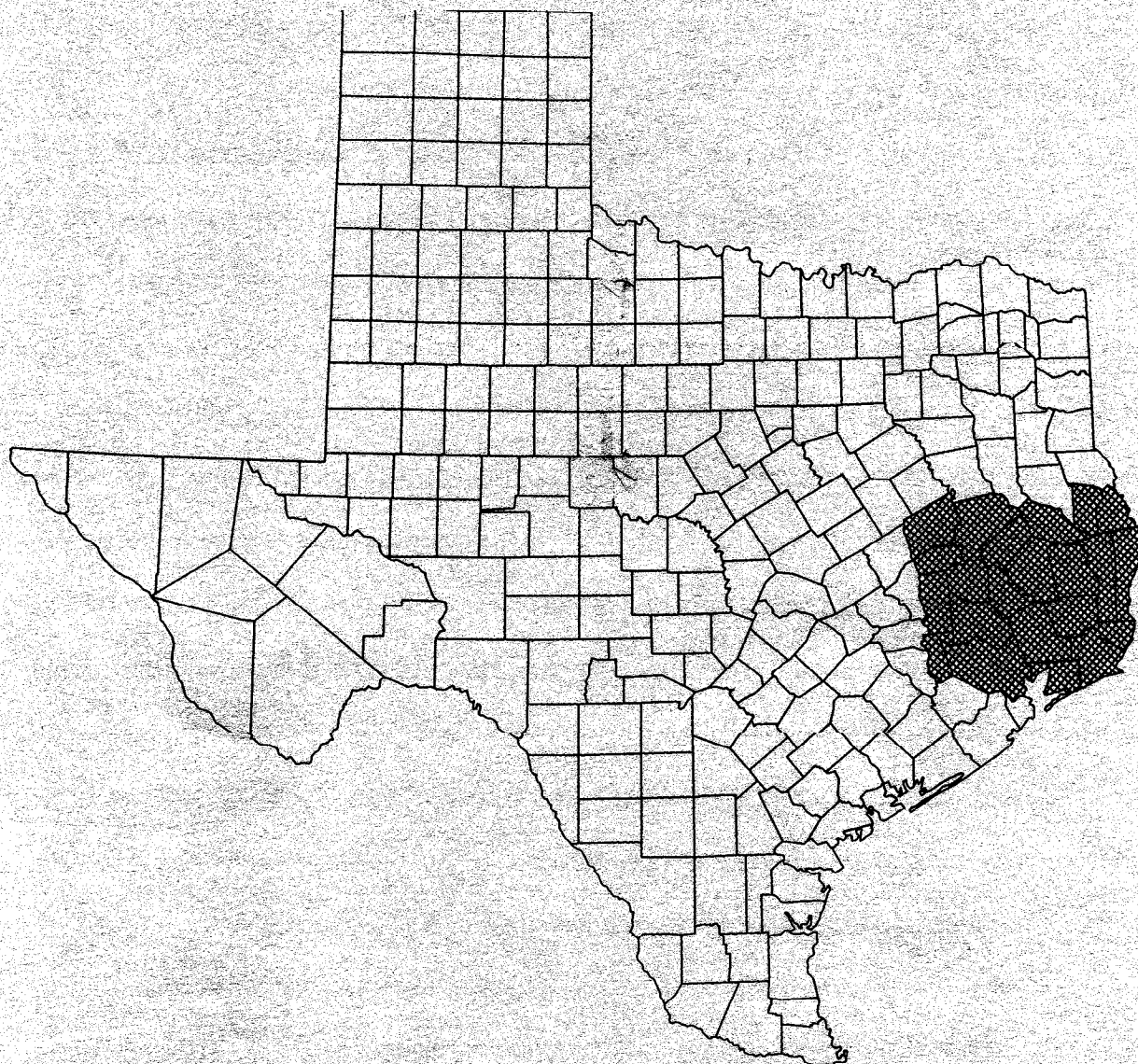
New Orleans,
Louisiana

Resource Bulletin
SO-172
November 1992



Forest Statistics for Southeast Texas Counties—1992

John F. Kelly, Patrick E. Miller, and Andrew J. Hartsell



FOREWORD

The USDA-Forest Service, Southern Forest Experiment Station, Forest Inventory and Analysis unit (SO-FIA), conducts forest inventories covering the States of Alabama, Arkansas, Louisiana, Mississippi, east Oklahoma, Tennessee, and east Texas and the Commonwealth of Puerto Rico.

The SO-FIA forest inventories are part of a nationwide effort originally authorized by the McSweeney-McNary Act of 1928. More recent legislation pertinent to the SO-FIA mission includes the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978. The SO-FIA mission is to develop, analyze, and maintain forest resource information that is essential for formulation of forest policies and programs.

ACKNOWLEDGMENTS

The SO-FIA gratefully acknowledges the cooperation and excellent assistance provided by the Texas Forest Service, International Paper Company, Champion International, and Temple-Inland in collecting field data. Appreciation is also expressed for the cooperation of other public agencies and private landowners in providing access to measurement plots.

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*Core tables are presented in response to the Southern Industrial Forestry Research Council's recommendations. These tables are identical among Forest Inventory and Analysis units in the eastern United States.

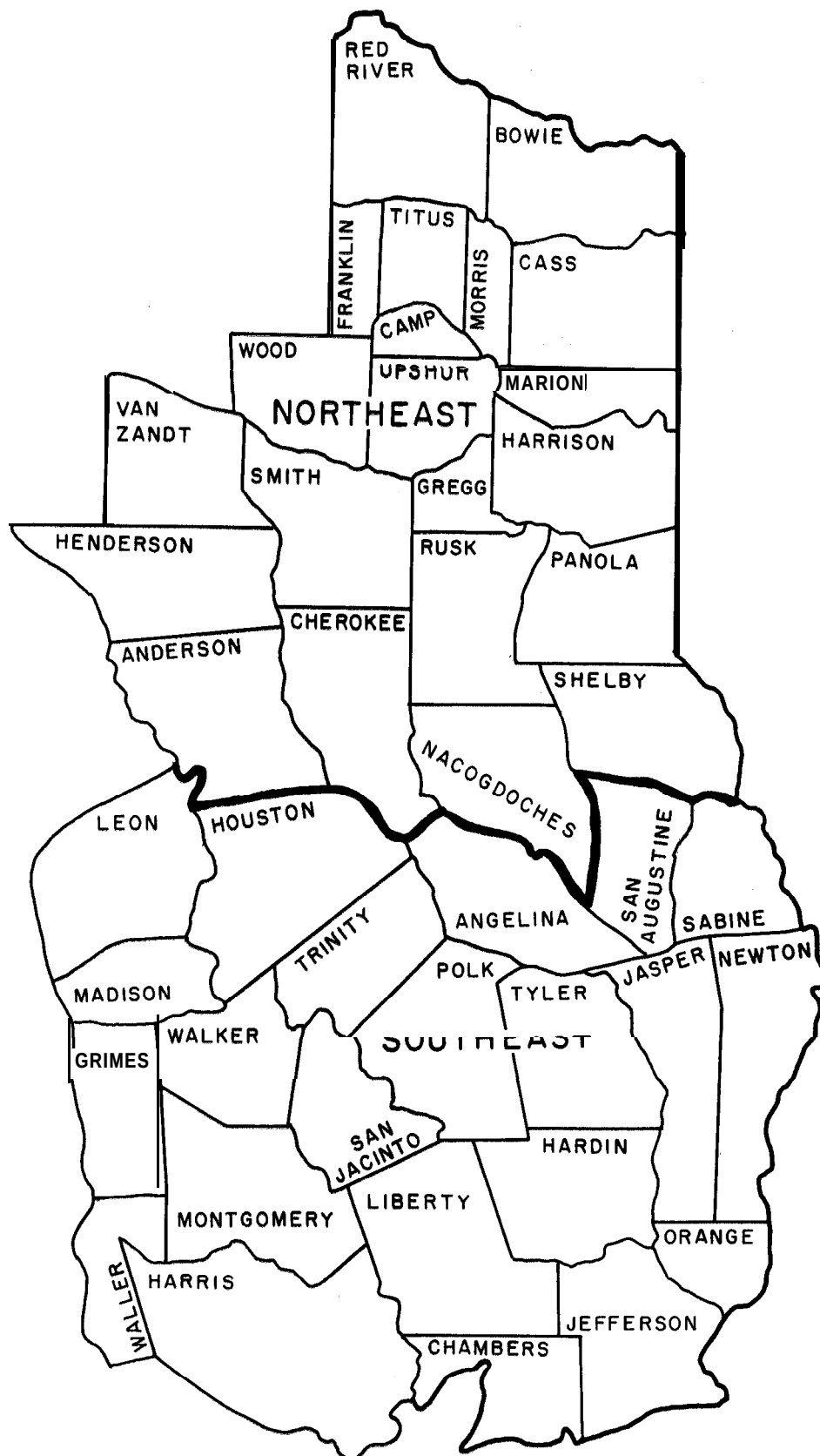


Figure 1.-Forest survey regions in Texas.

Forest Statistics for Southeast Texas Counties-1992

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INTRODUCTION

Tabulated results were derived from data obtained during a 1992 forest inventory of southeast Texas counties (fig. 1). Core tables (1 through 25) are compatible among Forest Inventory and Analysis units in the Eastern United States. Supplemental tables (26 through 43) provide information beyond that provided by the core tables. Comparisons are made between results of the 1992 inventory and previous inventories conducted in 1986 and 1975.

METHODS

The Southern Forest Experiment Station, Forest Inventory and Analysis unit (SOFIA) uses a two-phase sample of temporary aerialphoto points and a systematic grid of permanent ground plots. The area of forested land was determined by photointerpretation of temporary points and field checks of permanent plots. Field measurements were conducted on a subset of permanent plots spaced 3 miles apart. Trees were measured on plots that were forested at the time of the current inventory or were forested at the time of the previous inventory.

Each plot consisted of 10 satellite points spread over about 1 acre. At each point, trees 5.0 inches in diameter at breast height (d.b.h.) and larger were selected for measurement on a variable-radius plot defined by a 37.5-factor prism. Thus each tree selected with the prism represented 3.75 square feet of basal area per acre. Trees from 1.0 to 4.9 inches in d.b.h. were tallied on a 1/275-acre fixed plot at each of the first three points and at any remaining points where fewer than two trees 5.0 inches in d.b.h. or larger were tallied. If no trees greater than 1.0 inch were tallied at a point, then seedlings were tallied. Several plot-level measurements relating to timber and other forest resources were also collected.

Tree data were used to estimate volumes, basal area, number of trees, and other plot-level variables. Ownership information was obtained for each measurement plot using tax records and other sources. Plot-level estimates were expanded using county-level factors derived as part of the forest area determination.

Over successive inventories, techniques have evolved so that some changes have been instituted. In recent inventories these changes have been mostly minor in scale and have been instituted because of the availability of better methods or to achieve greater compatibility among Forest Inventory and

Analysis units. These changes may, in some cases, affect the ability to discern minor shifts in resource trends.

The major change affecting the 1992 inventory is the modified tree classification system that has been in effect since the 1988 inventory of Arkansas. Tree grade 5 is used to designate trees capable of producing at least one 12-foot log or two 8-foot logs in the sawlog portion, but not capable of producing a gradable 12-foot log in the butt 16-foot section. These trees-formerly classed as rough or rotten culls-are now included in growing stock. In previous States where this revision has been in effect, these trees have increased softwood growing-stock volume 1 to 2 percent, and hardwood 6 to 8 percent. Comparisons of current inventory with previous estimates of growing stock are based on data that has been reprocessed to account for the change in definition as far as possible.

Another change affecting the classification of growing-stock trees is the requirement that at least one-third of the sawlog volume (or prospective volume, in the case of smaller-than-sawtimber size trees) has to be utilizable. Previously, one-half the volume had to be utilizable. In the previous States where this revision in utilizable volume has been in effect, few trees have been affected.

Because of the revised definitions, and to better assess trends, analysis of trends in inventory volume, growth, removals, and mortality will focus on live trees.

STATISTICAL RELIABILITY

The sampling methods were designed to achieve suitable sampling errors for estimates of area and volume at the State level. Sampling error increases as the area or volume considered decreases. The sampling errors presented in table I are equal to one standard deviation for the sample estimates and may be used to compute confidence intervals for population data.

As an example, the 95-percent confidence interval for growing-stock volume in southeast Texas counties is computed as follows:

$$7,416.7 \pm 1.96(0.027 \times 7,416.7) = 7,416.7 \pm 392.5$$

where 1.96 is the number of standard deviations. The 95-percent confidence interval is thus 7,024.2 to 7,809.2 million cubic feet. This interval captures the true growing-stock inventory volume for the region unless a 1-in-20 chance of a random event has occurred.

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Table I.-Sampling errors* for timberland, live trees, growing stock, and sawtimber, southeast Texas counties, 1992

County	Timberland	Live trees			Growing stock			Sawtimber volume
		Volume	Growth	Removals	Volume	Growth	Removals	
Percent								
Angelina	15	9.3	8.1	18.6	9.4	7.8	18.6	123
Chambers	15.8	t	26.8	41.5	t	3.5	44.1	t
Grimes	1.8	13.0	19.2	t	16.1	22.4	t	21.5
Hardin	1.4	12.7	14.6	23.3	13.1	13.8	23.7	18.5
Harris	1.7	15.5	16.5	t	17.0	19.4	t	18.3
Houston	1.0	10.3	10.9	25.2	11.2	10.1	25.1	14.5
Jasper	1.3	9.5	10.6	15.0	9.4	10.1	15.1	11.2
Jefferson	1.4	29.4	t	t	37.0	35.8	t	42.3
Leon	2.4	9.7	15.4	50.0	11.9	17.1	t	18.6
Liberty	1.4	9.1	21.6	18.3	10.2	19.4	18.5	12.6
Madison	2.3	22.3	t	t	26.2	44.2	t	32.6
Montgomery	1.7	1.3	8.0	17.6	7.1	8.1	17.7	9.4
Newton	1.6	9.1	12.3	18.2	9.3	10.8	18.3	12.5
Orange	2.1	19.5	21.2	33.3	21.4	20.3	33.4	24.1
Polk	1.4	9.2	9.2	17.0	9.5	9.2	17.1	15.7
Sabine	1.3	10.7	7.7	21.6	10.1	7.9	21.7	13.8
San Augustine	1.0	12.0	14.0	31.3	12.0	12.4	31.4	17.4
San Jacinto	1.6	11.3	20.1	25.2	11.8	20.4	25.7	13.4
Trinity	1.7	14.0	13.5	22.1	13.6	13.1	22.4	16.9
Tyler	0.9	9.8	12.9	17.1	10.6	12.9	17.4	14.4
Walker	2.3	8.7	10.4	18.8	8.2	12.2	19.2	10.8
Waller	2.2	20.3	19.8	t	21.1	18.5	t	24.3
All counties	0.4	2.6	3.1	5.4	2.7	3.0	5.4	3.5

*By random-sampling formula.

†Sampling error greater than 50.

The results are reported for individual counties, thereby allowing computation of statistical confidence for any combination of counties. Values for individual counties are subject to high sampling errors; users are cautioned about using data for single counties. Sampling error may be estimated for any group of counties by the following formula:

$$SE_g = SE_t \frac{\sqrt{X_t}}{\sqrt{X_g}}$$

where

SE_g = standard error of estimate (expressed as a percent) for the group of counties desired

SE_t = standard error of estimate (expressed as a percent) for the unit

X_g = sum of values for the variable of interest (area or volume) for group of counties to be combined

X_t = total area or volume for the unit.

For example, the estimate of sampling error for growing-stock volume in Gregg, Harrison, Nacogdoches, Panola, Rusk, and Shelby Counties is computed as:

$$SE_g = 2.7 \frac{\sqrt{7,416.7}}{\sqrt{2,552.4}} = 4.6$$

Thus, the sampling error is 4.6 percent and the resulting **95-percent** confidence interval for growing-stock volume in the six-county area is **2,552.4 ± 230.1** million cubic feet.

HIGHLIGHTS

Area

There are **6,845,000** acres of forest land in southeast Texas counties, about the same amount as estimated in 1986. Most of this forest land is timberland, with only 16,500 acres of woodland and 125,100 acres of reserved timberland.

Pine forest types continue to dominate southeast Texas forests, covering 43 percent of the timberland. This is true despite a 5 percent decrease in pine type area. Hardwood forest types account for 35 percent of timberland, a slight increase since 1986. The increase for hardwood types has occurred because of an 17 percent increase for bottomland hardwoods; upland hardwoods have decreased by 7 percent. The biggest change in upland forests is the 11 percent increase for the oak-pine type.

Planted pine stands have shown a substantial increase of 33 percent since 1986. They now cover **1,262,800** acres, accounting for 44 percent of the pine-type area.

A notable change in stand size distribution is the increase for sapling-seedling stands. There is now 21 percent more area in these stands. Poletimber stands have also increased, but by a smaller 9 percent. These increases contrast with a decrease in the area of sawtimber stands (15 percent).

Table II-Components of annual change in the volume of live trees by inventory *period and species* group, southeast Texas counties, 1992

Inventory period and species group	Gross growth		
	Net growth	Mortality	Removals
	----- Million cubic feet -----		
1975 to 1985			
Softwoods	284.7	48.0	319.4
Hardwoods	104.1	55.3	101.8
Total	388.8	103.3	421.2
1986 to 1992			
Softwoods	317.4	36.2	358.2
Hardwoods	82.0	42.7	93.5
Total	399.5	78.9	451.7

Stand Structure

While the number of live trees at least 5.0 inches d.b.h. has increased a small amount, softwoods are responsible for virtually all of the increase. Softwoods have increased 7 percent, while hardwoods have decreased by a small amount. The increases in merchantable-size softwoods have occurred solely because of changes in the number of poletimber-size trees; sawtimber-size softwoods have decreased in number. While the total number of hardwoods has decreased, the number of trees at least 19.0 inches in d.b.h. has increased somewhat.

Just over one-half the average basal area is hardwood, about the same as in 1986. Average basal area has decreased slightly since the previous survey, with both softwoods and hardwoods contributing to the decrease. The decrease in softwood basal area has occurred from a reduction in sawtimber-size trees; the hardwood decrease occurred in both poletimber- and sawtimber-size trees.

Inventory

Softwood live-tree volume has decreased 6 percent since 1986. Most of the volume is in loblolly pines, which showed a small 3 percent decrease. Shortleaf pine, however, has decreased 24 percent. Longleaf pine has also continued to decrease 6 percent during this 6-year period.

Total hardwood live-tree volume shows a small decrease since the last survey. No major changes are evident for any species.

Countering the trends for total volume, the sawtimber volume of high-quality timber-tree grades 1 and 2 has increased since 1986. For softwoods, this increase is 17 percent; for hardwoods, 27 percent.

The average timberland acre in southeast Texas now has 1,210 cubic feet of live-timber volume. Softwoods account for 62 percent of total live-tree inventory.

Components of Change

The average net annual growth of live-tree volume for the period 1986-1992 was 60 cubic feet per acre per year, slightly higher than the 58 cubic feet per acre per year for the 1975-1986 period. Total softwood live-tree net growth increased 11 percent over the previous period, while hardwood growth decreased 21 percent.

Along with the increase in softwood growth is a 12 percent increase in removals. Hardwood removals showed a small decrease (8 percent) over the previous period.

A notable change in mortality has occurred since the previous period, with similar decreases for both softwoods and hardwoods. Softwood live-tree mortality decreased 25 percent over the previous period, while hardwood mortality decreased by 23 percent.

The net growth and removals trends indicate a decreasing inventory. Softwoods are declining at an annual average of 40.8 million cubic feet, and hardwoods are declining by 11.5 million cubic feet. The current average annual changes contrast with the somewhat smaller decline for softwoods during the 1975-1986 period (35.6 million cubic feet) and the small increase for hardwoods (1.5 million cubic feet).

Conclusions

It is obvious that changes are occurring in the forests of southeast Texas. Timber inventory is declining. The softwood inventory decline has occurred in spite of a modest increase in softwood growth; there has been a similar increase in softwood removals. Average annual softwood removals are now 13 percent higher than growth for live trees.

Hardwood removals are also higher than growth, but by a much smaller margin than for softwoods. The decrease in hardwood growth has contributed to this situation.

Some fundamental changes in stand characteristics are becoming obvious. The area of pine forest types and upland hardwood types is decreasing, while the oak-pine type and bottomland hardwood **types** are increasing. Harvesting activity has caused a reduction in both softwood and hardwood sawtimber-size trees. Some sawtimber stands have not been adversely affected: high-quality trees—both softwoods and hardwoods—have actually increased since the previous inventory.

APPENDIX

Definition of Terms

Dimension Classes of Trees

Poletimbertrees-Softwoods 5.0 inches to 8.9 inches in diameter at breast height (d.b.h.) and hardwoods 5.0 to 10.9 inches in d.b.h.

Rough, rotten, and salvable dead trees—See “tree classes.”

Saplings-Trees 1.0 inches to 4.9 inches in d.b.h.

Sawtimber trees—Trees 9.0 inches and larger in d.b.h. for softwoods, and 11.0 inches and larger for hardwoods.

Seedlings-Trees less than 1.0 inch in d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwoods, and greater than 0.5 inch in diameter at ground level for **longleaf** pine.

Forest Land Classes

Forest land—Land at least **16.7-percent** stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest uses. Minimum area considered for classification is 1 acre. Forest land is divided into timberland, reserved timberland, and woodland.

Reserved timberland—Productive public forest land withdrawn from timber utilization through statute or administrative regulations.

Timberland—Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization. Timberland is synonymous with “commercial forest land” in prior reports.

Woodland—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Forest Types

Elm-ash-cottonwood—Forests in which elms, ashes, or cottonwoods, singly or in combination, comprise a plurality of the stocking. Common associates include willows, sycamore, American beech, and maples.

Loblolly-shortleaf pine—Forest in which pines (except **longleaf** and slash pine) and eastern redcedar, singly or in combination, comprise a plurality of the stocking. Common associates include oaks, hickories, and gums.

Longleaf-slash pine—Forests in which **longleaf** or slash pine, singly or in combination, comprise a plurality of the stocking. Common associates include other southern pines, oaks, and gums.

Nontyped-Timberland currently unoccupied by any live trees or seedlings; for example, very recent **clearcut** areas.

Oak-gum-cypress-Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprise a plurality of the stocking except where pines comprise 25 to 49 percent, in which case the stand would be classified oak-pine. Common associates include cottonwoods, willows, ashes, elms, hackberry, and maples.

Oak-hickory-Forests in which upland oaks or hickories, singly or in combination, comprise a plurality of the stocking, except where pines comprise 25 to 49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elms, maples, and black walnut.

Oak-pine-Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking, but in which softwoods, except cypress, comprise 25 to 49 percent of the stocking. Common associates include gums, hickories, and yellow-poplar.

Growth Classes

Gross growth—Total increase in stand volume computed on growing-stock trees or live trees at least 5.0 inches in d.b.h. Gross growth equals survivor growth, plus ingrowth, plus growth on removals, plus growth on mortality, plus cull increment (for growing stock computations). Gross growth includes mortality.

Net Change—Increase or decrease in stand volume computed on growing-stock trees or live trees at least 5.0 inches in d.b.h. Net change is equal to net growth minus removals.

Net growth—Increase in stand volume computed on growing-stock trees or live trees at least 5.0 inches in d.b.h. Net growth is equal to gross growth minus mortality.

Miscellaneous Definitions

Average annual mortality—Average annual sound-wood volume of growing-stock or live trees dying from natural causes for the intersurvey period.

Average annual removals—Average net annual volume of growing-stock or live trees removed from the inventory by harvesting, cultural operations (such as timber-stand improvement), land clearing, or changes in land use for the intersurvey period.

Average net annual growth—Average net annual volume increase of growing-stock or live trees for the intersurvey period.

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 in square feet per acre.

Cull increment—The change in growing-stock volume due to growing-stock, rough, or rotten trees changing tree class between surveys.

D.b.h. (diameter at breast height)-Tree diameter in inches, outside bark, usually measured at 4.5 feet above ground.

Diameter classes-The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the **12-inch** class includes trees 11 .0 inches through 12.9 inches in **d.b.h.**

D.o.b. (diameter outside bark)-Stem diameter including bark.

Log grades-A classification of logs based on external characteristics as indicators of quality or value.

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

Natural stands-Stands with no evidence of artificial regeneration. **This** includes those stands established by seed-tree regeneration methods.

Plantations-Planted or artificially seeded stands.

Removals-The net volume of growing-stock or live trees removed from the inventory by harvesting, cultural operations (such as timber stand improvement), land clearing, or changes in land use.

Sawlog portion-That portion of the bole of a sawtimber tree between a 1-foot stump and the **sawlog** top.

Sawlog top-The point on the bole of a sawtimber tree above which a **sawlog** cannot be produced. The minimum **sawlog** top is 7.0 inches d.o.b. for softwoods and 9.0 inches **d.o.b.** for hardwoods.

Select red oaks--A group of several red oak species composed of cherrybark, Shumard, and northern red oaks. Other red oak species are included in the "other red oaks" group.

Select white oaks-A group of several white oak species composed of white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks. Other white oak species are included in the "other white oaks" group.

Site class-A classification of forest land in terms of potential capacity to grow crops of industrial wood.

Tree grade-A classification of the **sawlog** portion of **sawtimber** trees based on: (1) the grade of the butt log or (2) the ability to produce at least one **12-foot** or two 8-foot logs in the upper section of the **sawlog** portion.

Upper-stem portion-That part of the main stem of a **sawtimber** tree above the **sawlog** top to a diameter outside bark of 4.0 inches or to the point where the main stem breaks into limbs.

Ownership Classes

Farmer-owned land-Lands operated as a unit of 10 acres or more and from which the sale of agricultural products totals \$1,000 or more annually.

Forest industry land-Lands owned by companies or individuals operating wood-using plants (either primary or secondary).

National forest land-Federal lands that have been legally designated as national forests or purchase units and other lands under the administration of the Forest Service, including experimental areas.

Nonindustrial private land (corporate)-Lands privately owned by private corporations **other** than forest industries and incorporated farms.

Nonindustrial private land (individual)--Lands privately owned by individuals other than forest industries or farmers.

Other Federal land-Federal lands other than National Forests.

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

Stand-size Classes

Nonstocked stands-Stands less than 16.7 percent stocked **with** live trees.

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

Sapling-seedling stands-Stands at least 16.7 percent stocked with live trees, with more than half of **this** stocking in saplings or seedlings.

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

Stocking

Stocking is a measure of the extent to which the growth potential of the site is utilized by trees or preempted by vegetative cover. Stocking is determined by comparing the stand density in terms of number of trees or basal area with a specified standard. Therefore, full stocking is 100 percent of the stocking standard.

The tabulation below shows the density standard in terms of trees per acre by size class required for full stocking.

D.b.h. (Inches)	Number of trees	D.b.h. (Inches)	Number of trees
Seedlings	600	16	72
2	560	18	60
4	460	20	51
6	340	22	42
8	240	24	36
10	155	26	31
12	115	28	27
14	90	30	24

Arbitrarily defined stocking categories are defined as follows.

Optimally stocked-Stands 61 to 100 percent stocked **with** growing-stock trees. **These** stands are growing toward a fully stocked condition (ideal space required for each tree increases with age). Optimum growth and bole form occur in this range.

Overstocked-Stands greater than 100 percent stocked with growing-stock trees. These stands will become stagnant with mortality of individuals increasing as stocking increases over 100 percent.

Understocked-Stands 0 to 60 percent stocked with growing-stock trees. These stands will take a very long time to reach full stocking. Meanwhile, poor bole form will result, and much of the productivity will be placed on heavy limbs instead of on the bole.

Tree Classes

Commercial species-Tree species currently or potentially suitable for industrial wood products.

Cull trees-Rough or rotten trees.

Growing-stock trees-Living trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings. Trees must contain at least one **12-foot** or two b-foot logs in the **sawlog** portion currently or potentially (if too small to qualify) to be classed as growing stock. The log(s) must meet dimension and merchantability standards to qualify. Trees must also have currently or potentially one-third of the gross board-foot volume in sound wood.

Hardwoods-Dicotyledonous trees, usually broad leaved and deciduous.

Live trees-All trees that are alive. Included are all size classes, all tree classes, and both commercial and noncommercial species.

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

Rotten trees-Live trees of commercial species that are unmerchantable for **sawlogs** currently or potentially because of rot deduction in the **sawlog** section. See definition of **growing-stock trees**.

Rough trees-Live trees of commercial species that are unmerchantable for **sawlogs** currently or potentially because of roughness or poor form in the **sawlog** section. Also included are all live trees of noncommercial species. See definition of **growing-stock trees**.

ing-stock trees.

Salvable dead, trees-Standing or downed dead trees that were formerly growing stock and are considered merchantable. Trees must be at least 5.0 inches in d.b.h. to qualify.

Softwoods—Coniferous trees, usually evergreen, having leaves that are needles or scalelike.

Volume

Volume of cull-The cubic-foot volume of sound wood in rough and rotten trees at least 5.0 inches in d.b.h. from a 1-foot stump to a minimum **4.0-inch** top d.o.b. of the central stem or to the point where the central stem breaks into limbs.

Volume of growing stock-The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches in d.b.h. from a 1-foot stump to a minimum **4.0-inch** top d.o.b. of the central stem or to the point where the central stem breaks into limbs.

Volume of live trees-The cubic-foot volume of sound wood in growing-stock, rough, and rotten trees at least 5.0 inches in d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem or to the point where the central stem breaks into limbs.

Volume of sawlog portion of sawtimber trees-The cubic-foot volume of sound wood in the **sawlog** portion of sawtimber trees. Volume is net of deductions for rot, sweep, and other defects that affect use for lumber.

Volume of sawtimber-The board-foot volume (**International 1/4-inch Rule**) of sound wood in the **sawlog** portion of sawtimber trees. Volume is net of deductions for rot, sweep, and other defects that affect use for lumber.

Volume of timber-The cubic-foot volume of sound wood in growing-stock, rough, rotten, and salvable dead trees at least 5.0 inches in d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem or to the point where the central stem breaks into limbs.

Table 1 .-Area by county and land class, southeast Texas counties, 1992

County	All land*	Forest land			Reserved timberland	Nonforest land
		Total	Timberland	Woodland		
----- <i>Thousand acres</i> -----						
Angelina	516.2	380.9	370.1	...	10.8	135.3
Chambers	394.3	12.9	12.9	...	...	381.4
Grimes	511.6	154.0	154.0	...	...	357.6
Hardin	574.8	495.3	449.6	...	45.8	79.5
Harris	1,110.0	267.0	267.0	...	...	842.9
Houston	790.0	384.8	381.2	...	3.6	405.2
Jasper	589.5	520.6	508.9	...	11.8	68.9
Jefferson	599.9	73.4	72.3	...	1.1	526.5
Leon	690.3	303.2	286.7	16.5	...	387.1
Liberty	751.2	386.9	385.4	...	1.6	364.3
Madison	302.3	86.9	86.9	...	...	215.4
Montgomery	670.3	460.5	456.7	...	3.8	209.7
Newton	598.6	534.0	534.0	...	...	64.6
Orange	231.8	128.1	126.9	...	1.2	103.6
Polk	679.3	554.0	537.4	...	16.7	125.3
Sabine	310.8	276.2	265.2	...	11.0	34.6
San Augustine	335.3	283.7	278.4	...	5.3	51.6
San Jacinto	366.2	282.9	282.9	...	...	83.3
Trinity	442.6	352.2	352.2	...	...	90.4
Tyler	590.4	515.0	502.5	...	12.5	75.4
Walker	503.0	320.9	320.9	...	...	182.0
Waller	329.0	71.3	71.3	...	...	257.7
All counties	11,887.4	6,845.0	6,703.3	16.5	125.1	5,042.4

*From the U.S. Bureau of the Census.

Table Z.—Area of timberland by county and ownership class, southeast Texas counties, 1992

county	All Ownerships	National forest	Misc. federal	State	County and municipal	Forest industry*	Farmer	Corporate+	Individual+
<i>Thousand acres</i>									
Angelina	370.1	43.2	...	.	...	183.1	...	6.5	137.3
Chambers	12.9	...	4.3	...	...	...	...	...	8.6
Grimes	154.0	...	...	.	...	18.5	92.4	...	43.1
Hardin	449.6	...	.	...	.	334.3	5.8	34.6	74.9
Harris	267.0	...	5.8	5.8	17.4	5.8	11.6	110.3	110.3
Houston	381.2	89.5	...	...	...	54.0	43.2	10.8	183.6
Jasper	508.9	18.1	...	6.2	...	378.9	6.2	6.2	93.2
Jefferson	72.3	...	...	.	...	5.6	16.7	11.1	38.9
Leon	286.7	...	...	5.5	5.5	...	71.7	5.5	198.5
Liberty	385.4	...	5.4	...	...	165.9	5.4	37.5	171.3
Madison	86.9	...	.	...	...	...	73.6	13.4	...
Montgomery	456.7	40.6	5.3	5.3	...	10.5	5.3	147.5	242.3
Newton	534.0	1.8	...	5.3	...	416.3	21.1	5.3	84.3
Orange	126.9	...	...	...	...	44.2	...	16.6	66.2
Polk	537.4	...	.	...	...	392.9	...	17.3	127.1
Sabine	265.2	82.9	...	...	...	129.5	.	4.8	48.0
San Augustine	278.4	51.2	.	...	...	141.3	6.1	...	73.7
San Jacinto	282.9	58.6	...	...	6.2	93.4	12.5	24.9	87.2
Trinity	352.2	66.7	...	...	...	212.5	6.6	13.3	53.1
Tyler	502.5	...	...	5.8	...	368.1	5.8	23.4	99.3
Walker	320.9	50.7	...	16.9	...	28.1	5.6	135.1	84.4
Waller	71.3	...	...	...	...	5.9	...	11.9	53.5
All counties	6,703.3	509.3	20.7	50.8	29.2	2,988.9	389.5	635.9	2,079.0

*Includes land leased to forest industry.

†Indian land will be classed as corporate or individual as defined by the Bureau of Indian Affairs.

Table 3.—Area of timberland by county and forest type group, southeast Texas counties, 1992

County	Total	Forest type group							
		Longleaf-slash pine		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural	Planted	Natural				
-----Thousand acres-----									
Angelina	370.1	6.5	6.2	65.0	136.2	103.9	19.6	32.7	...
Chambers	12.9	...	...	...	...	8.6	...	4.3	...
Grimes	154.0	...	...	6.2	37.0	18.5	55.5	37.0	...
Hardin	449.6	23.1	5.8	138.3	69.2	103.7	63.4	46.1	...
Harris	267.0	...	...	...	75.5	34.8	116.1	40.6	...
Houston	381.2	5.4	1...	18.2	107.6	101.2	76.6	72.2	...
Jasper	508.9	37.3	7.3	62.1	88.0	152.7	87.0	74.5	...
Jefferson	72.3	...	...	...	5.6	5.6	11.1	50.1	...
Leon	286.7	...	...	...	5.5	5.5	204.0	66.2	5.5
Liberty	385.4	...	...	32.1	21.4	85.6	96.3	149.9	...
Madison	86.9	...	...	...	6.7	6.7	46.8	26.7	...
Montgomery	456.7	...	...	28.4	155.9	168.6	82.7	21.1	...
Newton	534.0	52.7	10.5	110.7	89.6	101.9	126.5	42.2	...
Orange	126.9	...	...	5.5	11.0	33.1	38.6	38.6	...
Polk	537.4	...	...	196.5	115.6	98.2	63.6	63.6	...
Sabine	265.2	3.8	3.8	45.9	98.0	43.9	69.9	.	...
San Augustine	278.4	...	...	98.3	71.6	22.5	47.1	38.9	...
San Jacinto	282.9	...	...	38.7	103.0	81.7	40.8	18.7	...
Trinity	352.2	...	...	108.5	77.7	99.7	26.6	39.8	...
Tyler	502.5	35.1	11.7	105.2	93.5	116.9	81.8	58.4	...
Walker	320.9	...	...	39.4	177.3	42.2	31.0	14.1	16.9
Waller	71.3	...	...	...	23.8	23.8	5.9	17.8	...
All counties	6,703.3	163.8	45.2	1,099.0	1,569.5	1,459.2	1,390.8	953.5	22.4

Table 4.—Area of timberland by county and stand-size class, southeast Texas counties, 1992

County	All classes	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
<i>----- Thousand acres -----</i>					
Angelina	370.1	207.0	65.0	91.5	6.5
Chambers	12.9	8.6	...	4.3	..
Grimes	154.0	73.9	37.0	43.1	...
Hardin	449.6	92.2	86.5	270.9	.
Harris	267.0	116.1	23.2	110.3	17.4
Houston	381.2	214.2	55.0	112.0	...
Jasper	508.9	231.9	99.4	177.6	...
Jefferson	72.3	22.3	22.3	27.8	...
Leon	286.7	104.7	104.7	77.2	...
Liberty	385.4	192.7	58.9	133.8	...
Madison	86.9	46.8	6.7	33.4	...
Montgomery	456.7	256.0	98.5	102.2	...
Newton	534.0	202.0	131.7	200.2	...
Orange	126.9	60.7	11.0	55.2	.
Polk	537.4	161.8	167.6	208.0	...
Sabine	265.2	135.0	36.3	93.9	...
San Augustine	278.4	108.5	81.9	88.0	...
San Jacinto	282.9	137.6	44.3	101.0	...
Trinity	352.2	135.3	66.4	150.5	..
Tyler	502.5	181.1	93.5	227.9	...
Walker	320.9	194.2	70.4	56.3	.
Waller	71.3	41.6	11.9	11.9	5.9
All counties	6,703.3	2,924.3	1,372.1	2,377.1	29.9

Table 5.—Area of timberland by county and site class, southeast Texas counties, 1992

County	All classes	Site Class (<i>Cubic feet/acre/year</i>)				
		>165	120-165	85-120	50-85	<50
<i>----- Thousand acres -----</i>						
Angelina	370.1	25.8	174.7	143.5	26.2	..
Chambers	12.9	...	4.3	8.6	...	...
Grimes	154.0	6.2	30.8	30.8	80.1	6.2
Hardin	449.6	23.1	138.3	201.7	74.9	11.5
Harris	267.0	17.4	40.6	110.3	98.7	..
Houston	381.2	29.0	141.0	143.4	62.4	5.4
Jasper	508.9	55.9	166.2	212.3	68.3	6.2
Jefferson	72.3	5.6	11.1	44.5	11.1	...
Leon	286.7	5.5	11.0	44.1	77.2	148.8
Liberty	385.4	69.6	101.7	74.9	123.1	16.1
Madison	86.9	...	13.4	20.1	53.5	...
Montgomery	456.7	54.8	172.8	165.9	47.4	15.8
Newton	534.0	84.3	207.3	168.6	68.5	5.3
Orange	126.9	11.0	55.2	49.7	11.0	...
Polk	537.4	28.9	173.3	277.3	57.8	.
Sabine	265.2	51.4	132.6	66.8	14.4	...
San Augustine	278.4	36.8	126.9	104.4	10.2	.
San Jacinto	282.9	22.8	96.1	114.1	43.6	6.2
Trinity	352.2	42.1	79.8	172.8	57.6	.
Tyler	502.5	35.1	222.1	198.7	46.7	...
Walker	320.9	8.5	140.7	112.6	47.9	11.3
Waller	71.3	...	11.9	35.6	23.8	.
All counties	6,703.3	613.6	2,251.8	2,500.8	1,104.4	232.8

Table 6.—*Area of timberland by county and stocking class of growing-stock trees, southbas Texas counties, 1992*

County	All classes	Stocking class (Percent)				
		>130	100-130	60-100	16.7-60	<16.7
----- <i>Thousand acres</i> -----						
Angelina	370.1	19.2	135.8	156.2	52.3	6.5
Chambers	12.9	...	...	4.3	4.3	4.3
Grimes	154.0	...	6.2	55.5	92.4	...
Hardin	449.6	17.3	144.1	230.5	57.6	.
Harris	267.0	...	23.2	92.9	69.7	81.3
Houston	381.2	5.4	88.0	211.2	71.2	5.4
Jasper	508.9	22.3	122.7	289.4	68.3	6.2
Jefferson	72.3	...	16.7	16.7	11.1	27.8
Leon	286.7	.	11.0	148.8	115.8	11.0
Liberty	385.4	...	48.2	224.8	107.0	5.4
Madison	86.9	...	6.7	40.1	33.4	6.7
Montgomery	456.7	12.6	121.7	243.4	68.5	10.5
Newton	534.0	21.1	175.7	263.5	68.5	5.3
Orange	126.9	11.0	11.0	49.7	55.2	...
Polk	537.4	28.9	196.5	213.8	98.2	...
Sabine	265.2	35.3	88.4	112.7	28.8	...
San Augustine	278.4	47.1	126.9	86.0	18.4	.
San Jacinto	282.9	38.0	39.4	174.3	31.1	.
Trinity	352.2	15.5	121.8	166.1	42.1	6.6
Tyler	502.5	52.6	99.3	257.1	93.5	...
Walker	320.9	19.7	67.6	152.0	81.6	...
Waller	71.3	...	17.8	41.6	5.9	5.9
All counties	6,703.6	346.1	1,668.6	3,230.5	1,275.1	183.0

Table 'I.-Area of timberland by forest type and ownership class, southeast Texas counties, 1992

Forest type	All ownerships	National forest	Other public	Forest industry	Forest industry- leased	Other private
<i>Thousand acres</i>						
Longleaf-slash pine	209.0	21.0	...	159.4	...	28.6
Loblolly-shortleaf pine	2,668.5	351.1	28.2	1,355.8	11.5	922.0
Softwood total	2,877.5	372.1	28.2	1,515.2	11.5	950.5
Oak-pine	1,459.2	85.5	28.7	683.1	...	661.8
Oak-hickory	1,390.8	28.0	5.5	429.4	5.3	922.7
Oak-gum-cypress	953.5	23.8	32.6	344.4	...	552.7
Elm-ash-cottonwood	22.4	...	5.6	...	...	16.8
Hardwood total	3,825.8	137.3	72.5	1,456.9	5.3	2,153.9
All types	6,703.3	509.3	100.7	2,972.2	16.8	3,104.4

Table 8.-Area of timberland by ownership and stocking class of growing-stock trees, southeast Texas counties, 1992

Ownership class	All classes	Stocking class (Percent)				
		>130	100-130	60-100	16.7-60	<16.7
<i>Thousand acres</i>						
National forest	509.3	56.8	238.1	196.3	18.1	...
Other public	100.7	5.6	5.3	51.7	33.8	4.3
Forest industry	2,972.2	220.5	894.3	1,411.9	420.6	24.8
Forest industry-leased	16.8	...	11.5	5.3	...	..
Other private	3,104.4	63.2	519.5	1,565.2	802.6	153.9
All ownerships	6,703.3	346.1	1,668.6	3,230.5	1,275.1	183.0

Table 9.—Area of timberland by forest type and stand-size class, southeast Texas counties, 1992

Forest type	All classes	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
----- <i>Thousand acres</i> -----					
Longleaf-slash pine	209.0	103.0	66.8	39.2	..
Loblolly-shortleaf pine	2,668.5	1,204.4	647.9	810.4	5.8
Softwood total	2,877.5	1,307.4	714.7	849.6	5.8
Oak-pine	1,459.2	649.9	212.4	596.9	..
Oak-hickory	1,390.8	386.8	289.3	696.6	18.1
Oak-gum-cypress	953.5	574.1	150.0	222.8	5.9
Elm-ash-cottonwood	22.4	5.5	5.6	11.3	..
Hardwood total	3,825.8	1,616.9	657.4	1,527.5	24.1
All types	6,703.3	2,924.3	1,372.1	2,377.1	29.9

Table 10.—*Number of live trees on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	All classes	Diameter class (Inches at breast height)											≥29.0
		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	
----- Thousand trees -----													
Longleaf-slash pines	75,095	23,608	18,570	13,205	9,446	5,323	2,540	1,304	502	379	110	109	...
Shortleaf-loblolly pines	1,210,216	553,446	277,622	164,453	96,394	42,563	26,756	18,185	13,638	8,404	4,231	4,259	265
Cypress	3,737	..	1,164	850	395	353	358	174	157	146	117	24	..
Other softwoods	10,001	5,526	1,647	904	467	631	305	273	108	86	30	23	...
Total softwoods	1,299,049	582,579	297,840	179,726	107,157	48,911	29,953	20,120	14,421	9,026	4,517	4,509	289
Select white oaks	51,688	32,256	6,156	3,766	3,269	2,046	1,173	1,101	577	564	265	459	55
Select red oaks	45,110	24,819	10,351	3,540	1,846	1,090	1,000	686	488	344	332	518	97
Other white oaks	127,950	59,023	20,331	17,802	11,255	8,735	4,133	2,749	1,550	950	603	725	94
Other red oaks	452,852	327,002	54,214	23,302	13,470	11,330	6,894	5,401	4,038	2,553	1,732	2,529	387
Hickory	58,916	32,144	10,465	6,639	3,546	2,721	1,422	912	587	214	135	122	9
Hard maple	2,335	1,751	..	422	...	47	76	...	15	23	..	..	..
Soft maple	76,642	59,401	7,191	5,128	2,555	1,569	443	110	77	91	33	45	...
Beech	9,960	6,605	1,013	98	269	344	505	312	333	193	116	159	12
Sweetgum	493,070	340,998	78,058	35,464	18,514	9,561	4,199	3,081	1,471	662	514	498	51
Tupelo-blackgum	151,612	101,166	25,189	11,488	6,446	2,613	1,279	1,336	905	535	286	330	41
Ash	66,067	48,226	8,385	4,140	1,511	1,404	530	814	451	302	179	103	23
Cottonwood-aspen	1,509	981	..	442	...	38	30	...	...	...	...	12	5
Basswood	4,113	2,177	1,607	117	...	77	55	59	..	22	..	..	...
Black walnut	3,031	2,761	..	105	55	39	51	...	17	...	...	..	3
Other hardwoods	520,529	373,689	91,108	27,301	14,493	6,654	3,161	1,852	863	641	311	397	59
Total hardwoods	2,065,386	1,412,999	314,068	139,755	77,229	48,268	24,952	18,412	11,371	7,094	4,505	5,897	836
Noncommercial	420,062	327,815	60,277	20,533	8,149	2,000	716	355	136	41	21	21	...
All species	3,784,497	2,323,394	672,184	340,014	192,535	99,179	55,621	38,888	25,929	16,161	9,043	10,426	1,125

Table 11.—*Number of growing-stock trees on timberland by species and diameter class, southeast Texas counties, 1992*

Species	All classes	Diameter class (Inches at breast height)											≥29.0
		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	
----- Thousand trees -----													
Longleaf-slash pines	70,560	22,468	16,056	12,535	9,282	5,323	2,508	1,304	486	379	110	109	...
Shortleaf-loblolly pines	1,077,160	463,270	246,374	157,182	94,141	41,233	26,322	18,055	13,555	8,369	4,210	4,200	250
Cypress	3,278	..	952	779	300	353	299	174	157	146	103	15	..
Other softwoods	8,495	4,451	1,647	904	396	451	242	207	76	86	19	16	..
Total softwoods	1,159,494	490,190	264,078	171,572	104,597	47,307	29,424	19,865	14,290	8,990	4,486	4,429	265
Select white oaks	31,629	15,998	4,564	2,672	2,839	1,797	1,064	970	515	543	236	397	35
Select red oaks	29,296	13,416	6,965	3,314	1,608	1,020	794	608	400	317	301	470	83
Other white oaks	59,099	20,467	5,662	10,915	8,170	6,517	2,877	2,033	989	637	342	462	28
Other red oaks	291,299	196,068	39,740	16,946	10,878	9,218	5,596	4,287	3,242	2,000	1,269	1,810	245
Hickory	29,436	13,609	4,765	3,975	2,501	1,965	1,100	709	494	121	106	87	5
Hard maple	931	570	..	301	...	...	46	...	15	..	..	...	...
Soft maple	27,372	17,411	4,125	3,058	1,555	754	295	67	46	35	12	14	..
Beech	4,586	3,062	..	..	269	223	331	208	226	136	46	80	5
Sweetgum	298,876	194,591	44,312	26,603	15,722	8,422	3,529	2,862	1,327	599	452	415	44
Tupelo-blackgum:	54,280	26,210	10,136	7,187	4,905	2,222	982	1,039	730	423	207	226	12
Ash	34,264	24,721	3,323	2,176	1,128	1,134	415	678	300	227	113	47	3
Cottonwood-aspen	982	491	..	442	...	38	...	...	...	...	...	6	5
Basswood	2,376	536	1,607	117	..	43	55	19	...	...	...	..	...
Black walnut	172	...	..	105	...	39	28	...	..	..	...	...	..
Other hardwoods	180,600	106,628	40,291	15,360	9,454	4,531	1,601	1,284	576	433	180	226	36
Total hardwoods	1,045,199	633,778	165,490	93,169	59,030	37,922	18,713	14,762	8,860	5,471	3,265	4,240	499
All species	2,204,692	1,123,968	429,568	264,742	163,627	85,229	48,137	34,627	23,150	14,461	7,750	8,669	764

Table 12.—Volume of growing stock on timberland by species and diameter class, southeast Texas counties, 1992

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	
Million cubic feet												
Longleaf-slash pines	314.4	32.5	59.9	68.8	53.8	41.7	18.7	20.5	8.3	10.4	.	.
Shortleaf-loblolly pines	4,553.2	398.3	553.4	526.6	573.8	584.4	617.9	481.9	311.8	456.2	.	48.9
Cypress	53.1	2.2	3.7	3.3	5.0	6.6	5.3	7.7	8.3	8.3	.	2.7
Other softwoods	21.7	1.5	1.8	5.2	3.2	4.4	1.9	2.3	0.7	0.7	.	.
Total softwoods	4,942.4	434.5	618.8	603.9	635.8	637.1	643.8	512.4	329.1	475.5	.	51.6
Select white oaks	176.5	7.5	16.8	20.1	18.7	23.4	17.3	24.8	12.7	29.3	.	5.9
Select red oaks	152.0	7.9	9.6	10.2	13.8	13.8	13.4	13.7	16.4	39.6	.	13.8
Other white oaks	277.3	24.5	39.5	53.7	38.1	37.3	23.9	19.2	13.1	25.2	.	2.8
Other red oaks	762.0	40.7	59.0	92.8	88.8	92.3	94.4	77.4	62.0	124.9	.	29.7
Hickory	98.2	9.0	11.8	17.4	15.5	14.1	12.0	4.5	6.3	6.9	.	0.6
Hard maple	2.0	0.7	...	...	0.7	...	0.5	...	...	...	.	...
Soft maple	31.7	8.4	7.3	6.8	4.6	1.4	1.1	1.4	0.3	0.5	.	...
Beech	32.9	...	1.8	2.2	5.1	4.5	7.0	4.9	2.0	4.8	.	0.6
Sweetgum	518.4	62.1	89.9	90.4	62.4	74.5	46.1	26.9	24.9	33.2	.	7.9
Tupelo-blackgum	164.6	16.2	23.5	21.9	15.1	23.0	22.2	15.9	10.7	14.5	.	1.4
Ash	67.2	6.0	6.0	10.9	5.7	14.1	8.1	8.4	4.8	2.9	.	0.3
Cottonwood-aspen	1.8	0.6	...	0.4	...	...	...	...	...	0.4	.	0.4
Basswood	1.9	0.4	...	0.3	0.9	0.4	...	...	...	...	.	...
Black walnut	1.0	0.3	...	0.3	0.3	...	...	...	...	...	.	...
Other hardwoods	238.0	37.5	49.7	41.2	24.5	28.1	16.1	14.6	7.9	13.5	.	5.0
Total hardwoods	2,525.6	221.9	314.9	368.5	294.2	327.0	262.3	211.7	161.1	295.5	.	68.6
All species	7,468.0	656.3	933.7	972.4	930.1	964.0	906.1	724.1	490.2	771.0	.	120.2

Table 13.—Volume of growing stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, southeast Texas counties, 1992

Species	All classes	Diameter class (Inches at breast height)								229.0
		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		
----- Million cubic feet -----										
Longleaf-slash pines	195.4	55.9	47.7	38.8	17.3	19.2	7.5	9.1	.	.
Shortleaf-loblolly pines	3,254.6	423.1	514.3	536.3	574.4	447.0	288.5		425.5	45.6
Cypress	42.7	2.1	4.1	6.0	4.9	7.2	7.8		8.0	2.6
Other softwoods	16.8	4.7	2.8	4.2	1.6	2.2	0.7	0.7	.	.
Total softwoods	3,509.6	485.8	568.8	585.3	598.3	475.5	304.4		443.2	48.2
Select white oaks	109.9	...	14.7	19.7	13.6	21.3	10.7		24.9	4.9
Select red oaks	109.4	...	10.4	11.0	11.9	12.2	15.0		36.1	12.9
Other white oaks	140.0	...	32.1	32.4	21.3	17.2	11.7		22.6	2.7
Other red oaks	487.5	...	66.2	77.7	82.0	67.6	55.0		111.7	27.3
Hickory	51.4	...	12.7	12.1	10.6	4.2	5.4		6.0	0.6
Hard maple	1.0	...	0.7	...	0.3	...	...		...	...
Soft maple	6.9	...	3.1	0.9	1.0	1.2	0.3		0.5	...
Beech	24.2	...	3.8	3.6	6.0	4.3	1.8		4.2	0.5
Sweetgum	234.7	...	45.0	62.9	40.9	24.5	23.2		30.8	7.2
Tupelo-blackgum	88.8	...	10.6	19.4	19.7	14.3	9.8		13.6	1.4
Ash	38.1	.	4.3	11.4	7.2	7.6	4.5		2.7	0.3
Cottonwood-aspen	0.8	...	...	...	...	...	...		0.4	0.4
Basswood	0.9	...	0.6	0.2	...	...	...		.	...
Black walnut	0.2	...	0.2	...	...	...	...		...	...
Other hardwoods	94.3	...	18.8	23.8	14.5	13.1	6.8		12.3	5.0
Total hardwoods	1,388.0	...	223.2	275.0	229.1	187.6	144.3		265.7	63.1
All species	4,897.6	485.8	792.1	860.3	827.4	663.1	448.7		708.9	111.3

Table 14.—Volume of sawtimber on timberland by species and diameter class, southeast Texas counties, 1992

Species	All classes	Diameter class (<i>Inches at breast height</i>)							≥29.0
		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	
<i>----- Million board feet -----</i>									
Longleaf-slash pines	1,188.9	309.5	291.0	244.0	109.8	124.0	49.4	61.2	...
Shortleaf-loblolly pines	20,653.0	2,309.1	3,095.8	3,382.5	3,744.7	2,940.5	1,936.8	2,921.0	322.4
Cypress	235.1	9.9	21.0	30.7	25.1	42.0	44.3	45.9	16.2
Other softwoods	89.6	25.6	14.6	23.1	9.2	10.9	2.9	3.2	...
Total softwoods	22,166.5	2,654.1	3,422.4	3,680.4	3,888.8	3,117.4	2,033.5	3,031.3	338.6
Select white oaks	676.0	...	83.2	114.0	81.9	136.4	66.4	162.8	31.3
Select red oaks	660.2	...	57.1	61.5	68.8	73.3	90.9	226.2	82.3
Other white oaks	839.7	...	177.0	186.6	130.7	106.6	74.9	146.6	17.2
Other red oaks	2,880.8	...	353.1	436.2	481.0	408.3	341.4	688.0	172.8
Hickory	305.1	...	71.0	68.7	62.0	24.9	35.4	39.1	3.9
Hard maple	6.2	...	4.2	...	2.0	...	...	...	...
Soft maple	37.9	...	16.7	5.1	6.0	6.8	1.4	2.0	...
Beech	150.4	...	20.9	21.3	38.1	27.1	11.5	28.7	2.9
Sweetgum	1,366.2	...	246.4	357.3	235.0	143.7	138.2	190.4	55.1
Tupelo-blackgum	495.9	...	53.4	105.1	107.2	81.1	58.8	83.0	7.4
Ash	213.6	...	23.1	62.7	40.9	44.4	25.0	16.1	1.4
Cottonwood-aspen	5.0	...	...	...	...	...	...	2.2	2.8
Basswood	4.9	...	3.4	1.5	...	...	...	...	...
Black walnut	1.3	...	1.3	...	...	...	...	...	...
Other hardwoods	546.5	...	106.7	136.0	87.8	75.0	40.4	73.0	27.5
Total hardwoods	8,189.6	...	1,217.5	1,556.1	1,341.4	1,127.6	884.2	1,658.0	404.8
All species	30,356.1	2,654.1	4,639.9	5,236.5	5,230.2	4,245.1	2,917.7	4,689.3	743.4

Table 15.—Volume of growing stock and sawtimber on timberland by county and species group, southeast Texas counties, 1992

County	Growing stock						Sawtimber					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine						Pine					
	All species	Planted	Natural	Other	Soft*	Hard+	All species	Planted	Natural	Other	Soft'	Hard+
	<i>Million cubic feet</i>						<i>Million board feet</i>					
Angelina	601.1	96.8	381.0	0.3	40.8	82.1	2,629.0	290.1	1,932.7	...	95.7	310.5
Chambers	8.3	...	6.6	...	0.3	1.4	36.7	...	30.8	...	...	5.9
Grimes	89.8	2.6	37.1	6.7	7.6	35.8	332.0	3.4	164.2	24.1	9.4	131.0
Hardin	312.2	81.7	97.3	1.9	45.3	86.0	926.9	149.1	369.2	7.0	79.3	322.4
Harris	214.7	...	141.2	7.7	27.8	38.0	928.5	...	687.2	32.2	84.4	124.7
Houston	523.2	28.6	313.7	9.7	62.9	108.3	2,411.8	44.1	1,742.4	50.3	192.9	382.0
Jasper	644.8	90.9	302.7	7.6	88.5	155.2	2,664.8	278.2	1,556.0	29.5	194.0	607.1
Jefferson	48.0	...	8.1	3.7	17.3	18.9	193.5	...	49.7	15.5	47.6	80.7
Leon	195.9	...	20.9	2.3	46.0	126.7	596.2	...	105.4	7.4	125.3	358.1
Liberty	357.3	22.3	90.4	8.9	94.8	140.9	1,371.7	64.6	475.8	42.7	270.7	518.0
Madison	57.8	...	12.2	1.7	15.9	28.0	179.8	...	51.2	4.9	32.4	91.4
Montgomery	702.1	43.5	479.2	...	59.0	120.3	3,143.4	104.5	2,513.3	...	125.9	399.6
Newton	536.6	125.3	221.3	4.7	83.6	101.7	1,922.5	206.1	1,066.2	25.2	252.9	372.4
Orange	125.9	8.3	56.6	3.9	12.9	44.2	549.0	28.5	293.6	11.6	42.6	172.7
Polk	535.2	149.6	243.4	3.1	49.4	89.6	1,794.2	110.7	1,220.7	14.6	142.1	306.1
Sabine	463.1	49.9	311.8	...	30.0	71.4	2,143.2	108.9	1,700.7	...	73.0	260.7
San Augustine	363.8	80.3	170.9	...	56.6	55.9	1,248.6	81.5	835.9	...	113.9	217.2
San Jacinto	371.8	21.1	228.3	9.7	61.3	51.4	1,536.2	29.0	1,157.4	44.2	162.1	143.5
Trinity	382.5	63.9	218.5	...	35.2	65.0	1,775.7	133.5	1,247.2	...	113.0	282.0
Tyler	397.7	75.9	170.2	2.4	59.1	90.2	1,602.8	120.1	880.9	14.0	186.9	401.0
Walker	436.0	39.2	308.2	0.4	34.9	53.4	1,885.5	124.3	1,512.3	1.5	67.7	179.7
Waller	100.3	...	68.2	...	8.1	24.1	484.0	...	372.4	...	26.9	84.7
All counties	7,468.0	979.8	3,887.8	74.7	937.2	1,588.4	30,356.1	1,876.6	19,965.2	324.7	2,438.4	5,751.3

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 16.—*Volume of timber on timberland by class of timber and species group, southeast Texas counties, 1992*

Class of timber	All species	Softwood			Hardwood	
		Pine			Soft*	Hard+
		Planted	Natural	Other		
----- Million cubic feet -----						
Sawtimber trees						
Sawlog portion	4,897.6	329.7	3,120.3	59.6	422.9	965.1
Upper-stem portion	611.9	63.2	310.3	5.9	73.1	159.2
Total	5,509.5	393.0	3,430.7	65.5	496.0	1,124.4
Poletimber trees	1,958.5	586.8	457.2	9.2	441.2	464.0
All growing-stock trees	7,468.0	979.0	3,887.0	74.7	937.2	1,588.4
Rough trees						
Sawtimber size	248.5	5.9	18.3	4.5	50.9	169.0
Poletimber size	299.7	5.9	22.1	0.8	96.4	174.4
Total	548.2	11.8	40.5	5.3	147.3	343.3
Rotten trees						
Sawtimber size	86.9	...	0.6	2.2	27.4	56.6
Poletimber size	10.9	0.2	0.2	...	4.0	6.5
Total	97.7	0.2	0.8	2.2	31.5	63.1
Salvable dead trees						
Sawtimber size	36.5	1.1	28.2	...	1.1	6.1
Poletimber size	6.1	0.3	3.8	...	0.8	1.9
Total	43.2	1.3	32.0	...	1.9	8.0
All classes	8,157.1	993.1	3,961.1	82.3	1,117.9	2,002.8

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 17.—*Volume of live trees and growing stock on timberland by ownership class and species group, southeast Texas counties, 1992*

Ownership class	Live trees						Growing stock					
	Softwood				Hardwood		Softwood				Hardwood	
	Pine			Other	Soft*	Hard†	Pine			Soft'	Hard+	
	All species	Planted	Natural				All species	Planted	Natural			Other
----- Million cubic feet -----												
National forest	1,269.6	122.9	914.9	.	84.5	147.4	1,238.6	122.4	909.1	.	74.8	132.2
Other public	115.2		68.4	...	17.6	29.2	103.2	...	68.0	.	14.7	20.5
Forest industry	2,653.2	749.9	864.5	40.7	398.4	599.6	2,471.9	740.8	857.6	37.9	332.8	502.7
Forest industry-leased	4.8	3.6		...	0.4	0.8	4.8	3.6	...	...	0.4	0.8
Other private	407.1	115.4	2,081.3	41.5	615.0	1,217.9	3649.5	113.0	2,053.0	36.8	514.5	932.2
All ownerships	8,113.9	991.8	3,929.1	82.3	1,116.0	1,994.8	7,468.0	979.8	3,887.8	74.7	937.2	1,588.4

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 18.—Average net annual growth of growing stock and sawtimber on timberland by county and species group, southeast Texas counties, 1986-1992

County	Growing stock						Sawtimber					
	Softwood			Hardwood			Softwood			Hardwood		
	All <i>species</i>	Pine			Soft'	Hard†	All <i>species</i>	Pine			Soft'	Hard+
		Planted	Natural	Other				Planted	Natural	Other		
----- Million cubic feet -----						----- Million board feet -----						
Angelina	39.0	9.6	23.7	...	2.0	3.7	197.7	32.7	135.7	...	5.9	23.3
Chambers	0.3	...	0.4	...	...	-0.1	3.8	...	3.4	...	...	0.4
Grimes	4.9	0.5	2.9	0.3	0.3	0.8	25.7	1.2	18.5	1.8	0.2	4.0
Hardin	23.4	10.1	7.5	...	1.8	3.9	74.3	20.6	32.5	0.2	3.2	17.8
Harris	11.1	0.8	7.7	-0.1	0.9	1.9	53.9	4.2	44.6	-0.6	-0.6	6.3
Houston	24.6	3.6	13.3	1.0	2.1	4.5	125.9	6.5	81.7	6.1	11.0	20.7
Jasper	34.3	10.4	14.4	0.4	2.5	6.5	149.8	36.1	77.0	1.7	8.0	27.0
Jefferson	2.7	...	0.6	0.2	0.8	1.2	13.6	...	4.3	0.7	2.7	5.9
Leon	9.8	...	1.9	0.2	3.1	4.6	37.4	...	11.6	0.1	7.6	18.2
Liberty	13.9	2.2	4.6	0.2	1.2	5.7	59.2	9.1	23.3	1.4	0.1	25.4
Madison	3.1	.	1.8	0.2	0.7	1.1	13.8	...	7.4	0.8	2.5	3.1
Montgomery	28.0	3.9	19.1	...	1.7	3.2	144.6	6.8	118.6	...	5.4	13.8
Newton	30.7	17.3	8.6	...	1.5	3.3	108.0	41.6	45.4	0.2	4.8	16.1
Orange	6.6	0.7	2.5	0.2	0.8	2.4	34.0	3.9	13.4	0.5	3.3	12.9
Polk	40.7	16.1	19.0	0.2	1.8	3.7	121.2	12.6	85.3	0.8	6.5	16.1
Sabine	26.5	6.2	15.9	...	1.7	2.7	126.3	15.0	96.3	...	4.3	10.6
San Augustine	26.5	12.2	8.9	...	2.7	2.7	87.6	17.5	46.8	...	6.5	16.8
San Jacinto	13.3	3.1	7.4	0.1	2.2	0.6	48.9	2.0	37.8	0.1	1.3	1.7
Trinity	22.0	9.5	8.3	...	1.7	2.5	84.3	17.8	50.7	...	3.5	12.3
Tyler	15.2	6.5	7.1	0.1	-0.1	1.7	72.9	12.8	43.4	0.3	3.8	12.5
Walker	21.7	3.9	15.6	...	1.6	0.5	107.2	10.5	90.1	...	3.3	3.3
Wailer	5.0	...	3.8	...	0.2	1.0	33.8	...	28.2	...	0.7	4.9
All counties	403.7	116.6	195.2	2.8	31.1	58.0	1,724.0	251.0	1,096.0	14.0	89.9	273.0

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 19.—Average annual removals of growing stock and sawtimber on timberland by county and species group, southeast Texas counties, 1986–1992

County	Growing stock						Sawtimber					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine						Pine					
	All species	Planted	Natural	Other	Soft*	Hard†	All species	Planted	Natural	Other	Soft*	Hard†
	<i>Million cubic feet</i>						<i>Million board feet</i>					
Angelina	33.1	5.6	24.4	..	1.4	1.7	140.1	13.7	115.6	...	4.1	6.6
Chambers	2.2	.	2.0	.	...	0.1	11.5	...	10.8	.	...	0.7
Grimes	3.1	0.6	3.1	...	0.1	...	13.2	2.4	10.8	.	.	...
Hardin	21.1	3.8	17.9	.	1.5	4.5	107.2	8.7	84.5	...	1.2	12.9
Harris	5.7		3.8	...	1.4	0.6	27.9	...	21.4	...	3.7	2.8
Houston	24.0	1.7	16.9	...	2.6	2.8	114.1	8.4	91.7	...	4.8	9.2
Jasper	31.5	9.1	22.1	...	1.4	4.9	143.2	17.2	108.9	...	4.5	12.6
Jefferson	6.7		6.2	...	0.1	0.3	37.9	.	37.1	...	0.8	...
Leon	3.6		2.8	.	0.1	0.7	17.0	...	14.6	...	0.2	2.2
Liberty	25.6	1.1	11.2		6.4	6.9	93.4	2.1	58.7	.	12.1	20.6
Madison	1.5	...	1.1	...	0.3	0.1	6.9	...	4.5	...	1.8	0.6
Montgomery	26.6	1.9	20.8	.	1.8	2.2	122.4	4.6	107.8	...	4.7	5.3
Newton	35.0	11.1	17.7		1.4	4.9	138.9	40.6	82.1	...	1.8	13.9
Orange	11.4	1.1	5.5		1.3	3.4	54.1	4.9	31.5	.	2.7	15.0
Polk	49.1	2.6	41.8	.	2.5	2.3	224.9	5.1	206.7	.	6.7	6.5
Sabine	21.4	2.6	19.4	...	1.2	4.1	139.8	15.0	105.4	...	3.1	16.3
San Augustine	17.4	...	14.5	...	0.8	2.1	81.3	...	74.8	...	1.0	5.5
San Jacinto	15.9	2.2	11.3		1.0	1.3	58.6	2.0	50.1	...	2.7	3.8
Trinity	29.2	5.3	21.1	.	1.1	1.6	116.8	9.3	102.3	.	1.9	3.3
Tyler	33.5	1.4	21.8	...	3.8	6.5	145.3	3.2	116.8	...	9.2	16.1
Walker	19.1	2.2	13.9	...	1.2	1.8	80.9	1.7	71.2	.	3.3	4.7
Waller	3.5	...	3.4	...	...	0.1	17.6	...	17.6	...	...	...
All counties	439.4	52.4	302.9	...	31.3	52.8	1,893.1	139.0	1,525.3	...	70.4	158.4

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 20.—Average net annual growth and average annual removals of growing stock on timberland by species, southeast Texas counties, 1986–1992

Species	Growth	Removals
----- Million cubic feet -----		
Yellow pines	311.8	355.3
Other softwoods	2.8	...
Total softwoods	314.6	355.3
Select white-red oaks	13.8	11.4
Other white-red oaks	36.6	36.8
Hickory	3.6	1.7
Hard maple	0.1	0.1
Sweetgum	18.2	20.7
Ash-walnut-black cherry	2.4	0.9
Other hardwoods	14.5	12.4
Total hardwoods	89.1	84.1
All species	403.7	439.4

Table 21.—Average net annual growth and average annual removals of sawtimber on timberland by species, southeast Texas counties, 1986-1 992

Species	Growth	Removals
----- Million board feet -----		
Yellow pines	1,347.1	1,664.3
Other softwoods	14.0	.
Total softwoods	1,361.0	1,664.3
Select white-red oaks	63.5	42.1
Other white-red oaks	184.7	105.5
Hickory	8.4	3.5
Hard maple	0.7	0.1
Sweetgum	56.5	48.6
Ash-walnut-black cherry	10.6	2.9
Other hardwoods	38.7	26.2
Total hardwoods	362.9	228.8
All species	1,724.0	1,893.1

Table 22.—Average annual mortality of growing stock and sawtimber on timberland by species, southeast Texas counties, 19861992

Species	Growing stock	Sawtimber
	Million cubic feet	Million boardfeet
Yellow pines	33.3	140.3
Other softwoods	.	...
Total softwoods	33.3	140.3
Select white-red oaks	2.7	13.0
Other white-red oaks	10.8	36.9
Hickory	0.7	3.6
Sweetgum	3.9	12.4
Ash-walnut-black cherry	0.6	0.8
Other hardwoods	4.9	17.2
Total hardwoods	23.5	84.0
All species	56.8	224.3

Table 23.-Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, southeast Texas counties, 1986-1992

Ownership class	Growth						Removals					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine						Pine					
	All species	Planted	Natural	Other	Soft*	Hard†	All species	Planted	Natural	Other	Soft*	Hard†
	<i>Million cubic feet</i>											
National forest	40.4	9.8	24.3	...	2.8	3.5	26.6	0.7	22.9	...	1.2	1.8
Other public	2.9	0.1	2.6	...	...	0.2	4.7	1.7	2.6	..	0.4	...
Forest industry	182.5	91.7	58.4	0.9	10.4	21.0	227.8	40.5	147.5	.	12.7	27.1
Forest industry-leased	1.0	0.5	0.3	...	...	0.2	3.5	0.1	1.6	..	0.3	1.6
Other private	176.9	14.6	109.7	1.9	17.7	33.0	176.7	9.4	128.4	...	16.6	22.3
All ownerships	403.7	116.6	195.2	2.8	31.1	58.0	439.4	52.4	302.9	.	31.3	52.8

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 24.-Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, southeast Texas counties, 1986-1992

Ownership class	Growth						Removals					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine						Pine					
	All species	Planted	Natural	Other	Soft*	Hard†	All species	Planted	Natural	Other	Soft*	Hard†
	<i>Million cubic feet</i>											
National forest	227.7	28.7	172.8	...	10.0	16.1	143.0	4.1	132.0	..	1.8	5.1
Other public	13.8	0.5	12.1	...	1.0	0.1	26.7	11.1	14.3	.	1.3	...
Forest industry	593.4	180.3	282.0	3.9	25.8	101.4	948.0	98.7	744.9	...	28.6	75.8
Forest industry-leased	2.4	0.4	0.6	...	.	1.3	10.6	0.3	4.4	...	0.4	5.5
Other private	886.7	41.0	628.5	10.0	53.1	154.1	764.9	24.9	629.6	...	38.4	72.1
All ownerships	1,724.0	251.0	1,096.0	14.0	89.9	273.0	1,893.1	139.0	1,525.3	...	70.4	158.4

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

†Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 25.-Volume of sawtimber on timberland by species and tree grade, southeast Texas counties, 1992

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
	<i>Million board feet</i>					
Yellow pines	21,841.8	6,904.6	5,722.3	9,075.5	.	139.5
Cypress	235.1	92.9	46.6	89.4	..	6.2
Redcedar	89.6	76.6	...	...	...	13.0
Total softwoods	22,166.5	7,074.1	5,768.9	9,164.9	...	158.6
Select white-red oaks	1,336.2	281.2	208.1	429.8	361.7	55.4
Other white-red oaks	3,720.5	348.2	436.7	1,428.4	1,196.1	311.2
Hickory	305.1	24.4	32.3	105.8	121.9	20.6
Hard maple	6.2	...	.	1.9	4.3	...
Sweetgum	1,366.2	267.4	266.1	476.2	280.3	76.2
Tupelo and blackgum	495.9	73.1	106.1	170.9	104.4	41.3
Ash-walnut-black cherry	221.3	33.7	67.4	71.9	27.2	21.1
Other hardwoods	738.1	35.7	58.3	236.2	328.3	79.7
Total hardwoods	8,189.6	1,063.6	1,175.0	2,921.3	2,424.2	605.5
All species	30,356.1	8,137.7	6,943.9	12,086.1	2,424.2	764.2

Table 26.-Area of timberland by stand age, forest type group, and stand origin, southeast Texas counties, 1992

Stand age class	Pine		Oak-pine		Other hardwood types	
	Planted	Natural	Planted	Natural	Planted	Natural
<i>Years</i>	<i>Thousand acres</i>					
1-10	502.9	77.7	244.5	43.4	73.0	120.4
11-20	447.5	32.4	30.2	.	11.7	6.1
21-30	86.3	15.9	29.3	...	...	...
31-40	34.7	18.1	.	.	...	...
41-50	.	22.3	...	4.4	.	.
>50	5.6	26.5	...	5.6	...	...
Mixed	185.8	1,421.8	62.1	1,039.5	27.6	2,127.8
Total	1,262.8	1,614.7	366.2	1,093.0	112.3	2,254.3

Table 27.-Volume of softwood growing stock on timberland by county and forest type group, southeast Texas counties, 1992

County	Total	Forest type group						
		Longleaf-slash pine		Loblolly-shortleaf pine		Oak- pine	Oak-- hickory	Oak--gum-- cypress
		Planted	Natural	Planted	Natural			
----- Million cubic feet -----								
Angelina	478.1	15.6	22.3	73.9	291.3	64.2	...	10.8
Chambers	6.6			...	...	6.6	...	...
Grimes	46.3	.	.	1.1	33.3	9.4	2.5	...
Hardin	180.9	31.7	6.8	45.4	40.7	47.6	4.2	4.4
Harris	148.9			...	105.4	26.6	7.4	9.5
Houston	352.1	5.2	...	13.6	243.6	80.1	6.6	3.0
Jasper	401.2	54.0	29.8	25.9	158.6	104.5	8.0	20.3
Jefferson	11.8					6.1	2.0	3.7
Leon	23.2		...		17.7	0.4	3.9	1.3
Liberty	121.6			21.8	13.7	62.3	11.7	12.0
Madison	13.9			.	12.2	1.2	0.5	...
Montgomery	522.7	.		43.5	320.5	136.1	20.5	2.1
Newton	351.3	47.0	18.0	72.7	141.0	44.1	22.9	5.7
Orange	68.8	...		3.2	9.8	33.6	4.8	17.4
Polk	396.2			144.9	185.4	52.8	6.0	7.1
Sabine	361.7	10.1	7.2	39.5	244.8	43.5	16.6	...
San Augustine	251.3			80.3	131.0	33.6	4.0	2.4
San Jacinto	259.2			17.3	175.7	51.0	5.8	9.3
Trinity	282.4			59.6	170.9	47.0	0.5	4.5
Tyler	248.4	18.1	9.9	50.5	84.5	57.9	20.9	6.6
Walker	347.8		...	39.2	272.6	31.2	4.5	0.4
Waller	68.2			...	43.6	24.0	.	0.6
All counties	4,942.4	181.7	94.0	732.4	2,696.2	963.7	153.2	121.1

Table 28.-Volume of hardwood growing stock on timberland by county and forest type group, southeast Texas counties, 1992

County	Total	Forest type group							
		Longleaf-slash pine		Loblolly-shortleaf pine		Oak-- pine	Oak- hickory	Oak--gum-- cypress	Elm--ash-- cottonwood
		Planted	Natural	Planted	Natural				
----- Million cubic feet -----									
Angelina	122.9	0.6	5.6	5.4	35.4	42.1	9.6	24.3	...
Chambers	1.8		.	...	.	1.6	...	0.2	...
Grimes	43.4			...	2.8	2.5	21.6	16.5	...
Hardin	131.3	1.5		1.8	4.2	33.3	29.3	61.1	...
Harris	65.7	...	...		6.4	10.8	41.4	1.2	...
Houston	171.2	0.6	.	1.7	32.8	40.4	33.8	61.8	...
Jasper	243.6	2.2	0.9	1.5	26.7	72.1	27.7	112.5	...
Jefferson	36.2	.	...	...	...	9.6	6.6	20.0	...
Leon	172.1		...	...	0.5	1.3	103.0	64.2	3.8
Liberty	235.7		.	1.2	2.1	52.4	53.2	126.8	...
Madison	43.9	...	...	1..	0.7	5.5	14.2	23.5	...
Montgomery	179.3	.	...	0.4	40.5	76.7	44.1	17.7	...
Newton	185.3	1.2	2.0	4.1	24.0	32.2	66.5	55.4	.
Orange	57.1			...	2.3	19.3	13.0	22.5	...
Polk	139.0		...	2.0	24.3	30.9	21.9	59.9	...
Sabine	101.4		0.9	1.3	29.2	28.2	41.8	.	...
San Augustine	112.5			4.2	23.1	11.2	9.9	64.1	...
San Jacinto	112.7		...	0.4	28.2	36.5	25.0	22.6	...
Trinity	100.2		.	0.8	18.6	16.3	6.9	57.5	...
Tyler	149.2	0.2	...	5.1	6.0	36.4	28.3	73.3	...
Walker	88.3		.	2.7	22.1	19.3	13.3	22.5	8.4
Waller	32.1	.	...	...	8.4	8.6	7.0	8.1	...
All counties	2,525.6	6.4	9.3	32.7	338.3	587.0	618.2	921.7	12.1

Table 29.-Volume of softwood growing stock in the *sawlog* portion of sawtimber trees on timberland by forest type group. southeast Texas counties, 1992

County	Total	Forest type group						
		Longleaf-slash pine		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress
		Planted	Natural	Planted	Natural			
----- Million cubic feet -----								
Angelina	343.6	13.6	20.1	33.7	220.0	46.5	.	9.7
Chambers	5.4		.		...	5.4		...
Grimes	33.5			.	25.0	7.0	1.5	...
Hardin	86.9	21.9	3.2	3.1	20.4	31.4	3.3	3.5
Harris	121.9			.	85.4	22.4	6.3	7.8
Houston	281.5	2.4		3.7	205.0	65.2	3.6	1.8
Jasper	296.4	31.4	26.2	11.8	123.0	80.2	7.4	16.5
Jefferson	10.6		...	.	...	5.8	1.8	2.9
Leon	18.6			...	15.3	0.3	2.3	0.7
Liberty	92.9			12.3	10.0	50.6	9.5	10.4
Madison	9.3			...	8.4	0.6	0.3	...
Montgomery	404.2		...	18.3	261.1	106.2	16.5	2.1
Newton	213.1	18.0	7.5	16.8	112.9	33.2	19.9	4.7
Orange	55.0			1.7	8.0	28.7	2.6	14.0
Polk	213.3		...	21.1	149.8	34.8	3.6	4.1
Sabine	278.4	9.8	5.7	7.8	205.2	36.0	13.9	...
San Augustine	144.4			14.4	97.1	29.3	2.5	1.0
San Jacinto	201.6		...	2.8	145.1	42.0	4.2	7.4
Trinity	215.8			21.3	151.1	39.6		3.8
Tyler	165.1	8.7	8.0	11.5	70.2	43.9	16.3	6.5
Walker	258.5			21.0	211.2	22.4	3.5	0.3
Waller	59.4				36.7	22.1	.	0.6
All counties	3,509.6	105.8	70.7	201.2	2,160.9	753.9	119.0	98.0

Table 30.—*Volume of hardwood growing stock in the sawlog portion of sawtimber trees on timberland by forest type group, southeast Texas counties, 1992*

County	Total	Forest type group							
		Longleaf-slash pine		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash cottonwood
		Planted	Natural	Planted	Natural				
----- Million cubic feet -----									
Angelina	67.9	0.5	4.3	0.6	17.3	23.3	4.2	17.6	..
Chambers	0.9	...	...	...	...	0.9	...	...	...
Grimes	24.6	...	...	...	1.6	1.3	10.5	11.1	...
Hardin	70.8	...	...	1.3	0.3	15.8	15.7	37.7	..
Harris	36.2	...	...	...	3.4	3.9	24.1	4.8	..
Houston	92.4	0.5	.	0.5	15.3	17.7	15.6	42.8	...
Jasper	133.2	1.1	0.3	0.5	7.1	36.8	10.0	77.5	...
Jefferson	21.8	...	.	...	...	6.7	3.8	11.3	...
Leon	82.5	1..	...	...	...	1.1	45.6	32.7	3.0
Liberty	131.7	...	...	...	0.7	26.9	26.2	83.9	...
Madison	20.9	...	...	...	...	3.3	4.4	13.2	...
Montgomery	89.5	...	...	0.4	17.7	36.8	26.3	8.3	...
Newton	106.1	0.3	1.4	1.3	9.3	16.3	38.5	39.1	...
Grange	31.2	...	...	...	0.4	10.5	9.5	16.7	..
Polk	76.9	..	1..	0.3	6.4	15.4	12.7	42.1	..
Sabine	54.0	..	0.4	0.3	16.1	15.9	21.3	...	..
San Augustine	56.8	...	...	1.0	8.1	5.0	2.9	39.9	...
San Jacinto	56.2	...	...	0.2	12.6	17.3	12.3	13.8	...
Trinity	65.2	...	...	0.5	5.9	9.7	4.5	44.6	...
Tyler	95.9	...	...	1.4	3.0	16.8	18.1	56.5	...
Walker	42.2	...	...	1.4	7.7	9.5	6.9	14.4	2.2
Waller	19.1	...	...	...	4.4	3.6	5.6	5.5	...
All counties	1,388.0	2.5	6.4	9.5	137.3	294.6	318.9	613.6	5.2

Table 31.—*Volume of timber on timberland by county, class of timber; and species group, southeast Texas counties, 1992*

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
<i>— Million cubic feet —</i>							
Angelina	619.9	478.1	122.9	2.6	15.7	.	0.6
Chambers	10.5	6.6	1.8	0.2	1.7	.	0.4
Grimes	115.1	46.3	43.4	2.5	21.9	...	0.9
Hardin	345.3	180.9	131.3	3.6	24.3	...	5.2
Harris	243.9	148.9	65.7	5.3	20.8	0.2	3.0
Houston	560.2	352.1	111.2	3.8	25.1	0.4	7.7
Jasper	695.6	401.2	243.6	4.7	34.2	1.9	10.1
Jefferson	61.2	11.8	36.2	0.2	10.2	..	2.8
Leon	250.3	23.2	172.7	...	49.2	...	5.2
Liberty	410.1	121.6	235.7	1.2	45.9	...	5.7
Madison	69.5	13.9	43.9	0.4	9.4	..	1.9
Montgomery	752.1	522.1	179.3	3.3	39.8	0.3	6.7
Newton	579.8	351.3	185.3	4.6	32.1	..	6.6
Orange	143.6	68.8	57.1	1.0	14.4	...	2.3
Polk	568.2	396.2	139.0	2.0	23.0	..	8.0
Ssbine	481.2	361.7	101.4	2.1	12.9	.	3.0
San Augustine	378.4	251.3	112.5	2.8	10.8	.	1.0
San Jacinto	397.3	259.2	112.7	5.9	16.7	0.3	2.6
Trinity	406.3	282.4	100.2	6.1	15.3	...	2.4
Tyler	440.7	248.4	149.2	1.8	24.7	.	16.5
Walker	476.0	347.8	88.3	3.6	35.1	.	1.3
Waller	108.5	68.2	32.1	.	7.6	...	0.6
All counties	8,113.9	4,942.4	2,525.6	57.6	490.6	3.1	94.6

Table 32.-Number of live trees on timberland by detailed species and diameter class, southeast Texas counties, 1992

Species	All classes	Diameter class (Inches at breast height)												≥29.0
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11 & 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9		
----- Thousand trees -----														
Longleaf pine	15,693	4,755	2,658	2,811	2,601	852	712	570	331	288	56	58	...	
Slash pine	59,402	18,853	15,912	10,394	6,844	4,470	1,827	734	171	91	54	52	...	
Shortleaf pine	68,976	17,422	14,277	9,202	7,693	6,045	5,479	3,741	2,804	1,563	500	241	10	
Loblolly pine	1,141,240	536,024	263,345	155,251	88,701	36,518	21,277	14,444	10,834	6,842	3,730	4,019	255	
Redcedar	10,001	5,526	1,647	904	467	631	305	273	108	86	30	23	...	
Cypress	3,737	.	...	1,164	850	395	353	358	174	157	146	117	24	
Total softwoods	1,299,049	582,579	297,840	179,726	107,157	48,911	29,953	20,120	14,421	9,026	4,517	4,509	289	
Select white oaks	51,688	32,256	6,156	3,766	3,269	2,046	1,173	1,101	577	564	265	459	55	
Select red oaks	45,110	24,819	10,351	3,540	1,846	1,090	1,000	686	488	344	332	518	97	
Other white oaks	127,950	59,023	20,331	17,802	11,255	8,735	4,133	2,749	1,550	950	603	725	94	
Other red oaks	452,852	327,002	54,214	23,302	13,470	11,330	6,894	5,401	4,038	2,553	1,732	2,529	387	
Sweet pecan	3,336	2,054	.	749	233	125	56	45	15	24	10	25	...	
Water hickory	8,990	3,990	1,545	1,448	888	289	250	316	138	36	47	38	5	
Other hickories	46,590	26,101	8,920	4,442	2,426	2,307	1,115	551	434	153	78	59	4	
Persimmon	11,340	7,752	2,774	553	154	79	12	17	...	.	.	..	..	
Hard maple	2,335	1,751	.	422	...	47	76	.	15	23	...	.	...	
Soft maple	73,691	57,212	6,628	4,980	2,555	1,517	443	110	77	91	33	45	...	
Boxelder	2,952	2,189	563	147	.	52	.	...	.	.	...	...	..	
Beech	9,960	6,605	1,013	98	269	344	505	312	333	193	116	159	12	
Sweetgum	493,070	340,998	78,058	35,464	18,514	9,561	4,199	3,081	1,471	662	514	498	51	
Blackgum	143,197	100,086	22,620	9,690	5,622	2,078	788	980	544	355	183	214	36	
Other gums/tupelos	8,415	1,080	2,569	1,798	824	535	491	356	360	180	102	115	5	
White ash	24,952	17,675	4,429	1,342	315	417	230	239	159	84	30	32	...	
Other ashes	41,115	30,552	3,956	2,797	1,196	987	299	575	291	218	148	72	23	
Sycamore	5,744	2,609	2,002	549	135	75	58	104	47	27	19	105	15	
Cottonwood	1,509	981	..	442	.	38	30	..	...	...	.	12	5	
Basswood	4,113	2,177	1,607	117	...	77	55	59	...	22	.	..	...	
Magnolia	11,592	8,746	1,026	735	189	199	168	223	92	160	17	27	9	
Sweetbay	38,171	24,797	9,186	1,667	919	1,082	297	123	33	23	20	24	.	
Willow	9,964	4,595	3,633	507	764	286	87	18	44	12	9	7	3	
Black walnut	3,031	2,761	.	105	55	39	51	...	17	.	...	...	3	
Black cherry	8,654	7,567	.	462	316	245	29	24	...	11	.	...	...	
American elm	17,761	10,448	3,384	1,471	1,107	439	309	226	122	81	68	94	11	
Other elms	177,565	130,330	25,812	11,064	5,632	2,366	1,166	652	278	135	68	47	16	
River birch	5,558	3,169	1,516	307	324	79	84	.	.	26	31	20	..	
Hackberry	31,058	14,851	9,672	2,804	1,863	687	397	347	180	129	67	59	5	
Other locusts	12,365	8,708	2,305	414	616	112	100	55	33	11	11	..	..	
Sassafras	23,549	19,718	1,797	1,446	448	84	49	...	...	...	...	8	...	
Dogwood	60,337	49,942	8,781	1,285	280	49	..	..	..	.	.	..	.	
Holly	59,935	41,441	13,036	2,846	1,632	619	302	42	17	...	...	.	...	
Other commercial	46,936	39,018	6,183	1,192	115	254	105	22	16	25	...	5	...	
Total hardwoods	2,065,386	1,412,999	314,068	139,755	77,229	48,268	24,952	18,412	11,371	7,094	4,505	5,897	836	
Noncommercial	420,062	327,815	60,277	20,533	8,149	2,000	716	355	136	41	21	21	..	
All species	3,784,497	2,323,394	672,184	340,014	192,535	99,179	55,621	38,888	25,929	16,161	9,043	10,426	1,125	

Table 33.—*Number of growing-stock trees on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	All classes	Diameter class (<i>Inches at breast height</i>)									
		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
		----- <i>Thousand trees</i> -----									
Longleaf pine	8,227	2,811	2,548	852	712	570	331	288	56	58	...
Slash pine	23,809	9,724	6,733	4,470	1,796	734	154	91	54	52	.
Shortleaf pine	35,503	7,856	7,344	6,045	5,413	3,741	2,804	1,563	491	241	6
Loblolly pine	332,012	149,326	86,797	35,187	20,908	14,314	10,751	6,806	3,719	3,960	244
Redcedar	2,397	904	396	451	242	207	76	86	19	16	...
Cypress	3,278	952	779	300	353	299	174	157	146	103	15
Total softwoods	405,226	171,572	104,597	47,307	29,424	19,865	14,290	8,990	4,486	4,429	265
Select white oaks	11,067	2,672	2,839	1,797	1,064	970	515	543	236	397	35
Select red oaks	8,915	3,314	1,608	1,020	794	608	400	317	301	470	83
Other white oaks	32,970	10,915	8,170	6,517	2,877	2,033	989	637	342	462	28
Other red oaks	55,491	16,946	10,878	9,218	5,596	4,287	3,242	2,000	1,269	1,810	245
Sweet pecan	649	360	172	...	56	23	15	11	.	11	...
Water hickory	2,433	758	753	289	197	217	108	36	38	33	5
Other hickories	7,980	2,856	1,576	1,676	847	469	371	73	69	43	...
Persimmon	420	216	154	38	12	...	...	...	.	..	...
Hard maple	362	301	1..	...	46	...	15	...	...	...	...
Soft maple	5,637	2,911	1,555	702	295	67	46	35	12	14	...
Boxelder	199	147	...	52	...	...	...	...	...	...	...
Beech	1,524	...	269	223	331	208	226	136	46	80	5
Sweetgum	59,973	26,603	15,722	8,422	3,529	2,862	1,327	599	452	415	44
Blackgum	15,049	6,702	4,082	1,723	613	812	452	317	155	182	12
Other gums/tupelos	2,884	485	824	499	370	227	278	106	52	44	...
White ash	2,057	848	272	347	198	185	109	60	20	19	...
Other ashes	4,163	1,328	856	787	217	492	191	167	93	29	3
Sycamore	755	310	135	75	25	82	31	27	10	45	15
Cottonwood	491	442	..	38	...	...	...	...	...	6	5
Basswood	233	117	...	43	55	19	...	...	...	..	...
Magnolia	1,075	352	64	153	138	140	75	113	9	27	5
Sweetbay	2,843	1,178	617	804	150	61	15	...	10	7	...
Willow	1,553	426	764	286	...	18	32	12	9	7	...
Black walnut	172	105	...	39	28	...	...	...	...	...	...
Black cherry	771	344	186	206	.	24	...	11	..	...	...
American elm	2,414	856	664	320	130	180	105	43	36	78	4
Other elms	14,292	6,792	4,187	1,626	792	533	190	97	46	15	13
River birch	839	307	324	79	84	...	...	26	10	8	...
Hackberry	3,607	1,531	983	496	162	167	94	94	49	31	...
Other locusts	745	211	467	...	...	38	17	11	...	...	...
Sassafras	1,109	884	190	...	26	.	...	..	...	8	...
Dogwood	718	565	152	...	..	...	...	...	...	...	...
Holly	2,342	1,295	568	366	54	42	17	.	..	...	...
Other commercial	200	91	...	81	27	..	...	..	..	...	...
Total hardwoods	245,931	93,169	59,030	37,922	18,713	14,762	8,860	5,471	3,265	4,240	499
All species	651,157	264,742	163,627	85,229	48,137	34,627	23,150	14,461	7,750	8,669	764

Table 34.—*Volume of growing stock on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	Diameter class (Inches at breast height)									
	All classes	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 22.9
<i>— Million cubic feet —</i>										
Longleaf pine	103.1	7.0	15.6	10.0	15.3	17.7	13.1	15.3	3.7	5.4
Slash pine	211.4	25.4	44.3	58.8	38.5	24.0	5.6	5.2	4.6	4.9
Shortleaf pine	753.1	26.9	61.3	93.5	137.0	135.6	137.8	97.6	38.1	24.1
Loblolly pine	3,800.1	371.4	492.1	433.1	436.8	448.8	480.1	384.3	273.7	432.0
Redcedar	21.7	1.5	1.8	5.2	3.2	4.4	1.9	2.3	0.7	0.7
Cypress	53.1	2.2	3.7	3.3	5.0	6.6	5.3	7.7	8.3	8.3
Total softwoods	4,942.4	434.5	618.8	603.9	635.8	637.1	643.8	512.4	329.1	475.5
Select white oaks	176.5	7.5	16.8	20.1	18.7	23.4	17.3	24.8	12.7	29.3
Select red oaks	152.0	1.9	9.6	10.2	13.8	13.8	13.4	13.7	16.4	39.6
Other white oaks	271.3	24.5	39.5	53.7	38.1	37.3	23.9	19.2	13.1	25.2
Other red oaks	762.0	40.7	59.0	92.8	88.8	92.3	94.4	77.4	62.0	124.9
Sweet pecan	4.3	0.8	1.0		0.7	0.4	0.3	0.4		0.8
Water hickory	26.8	2.2	4.0	3.6	2.9	4.6	3.0	1.2	2.1	2.7
Other hickories	67.0	6.1	6.8	13.8	11.9	9.1	8.7	3.0	4.3	3.5
Persimmon	2.0	0.1	0.7	0.4	0.3	.	...	..	...	.
Hard maple	2.0	0.7	...	...	0.7	...	0.5	.	.	...
Soft maple	31.1	8.2	7.3	6.4	4.6	1.4	1.1	1.4	0.3	0.5
Boxelder	0.6	0.2		0.4	...	.	...	...	.	..
Beech	32.9	...	1.8	2.2	5.1	4.5	1.0	4.9	2.0	4.8
Sweetgum	518.4	62.1	89.9	90.4	62.4	74.5	46.1	26.9	24.9	33.2
Blackgum	129.6	15.5	20.9	17.4	10.1	18.4	13.6	12.2	8.2	11.9
Other gums/tupelos	34.9	0.7	2.6	4.5	5.0	4.6	8.6	3.7	2.5	2.6
White ash	20.9	2.0	1.3	3.2	3.0	3.7	3.4	2.4	0.8	1.0
Other ashes	46.3	3.9	4.7	1.7	2.7	10.4	4.7	6.0	4.0	1.8
Sycamore	13.2	1.2	0.7	0.5	0.5	2.1	1.1	0.9	0.4	3.8
Cottonwood	1.8	0.6		0.4	...	...		.		0.4
Basswood	1.9	0.4	...	0.3	0.9	0.4	...	...	...	...
Magnolia	15.9	0.6	0.3	1.5	2.0	3.1	1.9	4.0	0.4	1.8
Sweetbay	19.5	2.8	3.3	7.9	3.1	1.0	0.4	...	0.6	0.3
Willow	10.1	1.1	3.8	2.9		0.3	0.7	0.5	0.5	0.3
Black walnut	1.0	0.3	...	0.3	0.3	.	...	..	...	...
Black cherry	4.3	0.7	0.9	1.6		0.7	...	0.5	..	.
American elm	27.2	2.3	3.4	3.1	2.2	4.0	3.7	1.6	1.4	4.1
Other elms	91.7	16.9	23.2	14.6	11.7	11.7	5.2	3.3	2.6	1.3
River birch	6.1	0.8	2.1	0.9	1.2		.	0.8	0.3	0.2
Hackberry	26.4	3.8	4.7	4.2	2.2	3.4	2.2	2.8	1.7	1.5
Other locusts	4.1	0.5	2.1		...	0.8	0.5	0.3	.	
Sassafras	3.6	1.9	1.1	...	0.4		...	...	...	0.2
Dogwood	1.5	1.0	0.5		.	...	...	...	...	...
Holly	11.3	3.0	3.0	3.3	0.7	0.9	0.4	.	.	...
Other commercial	1.1	0.2	..	0.5	0.4	.	.	.	.	.
Total hardwoods	2,525.6	221.9	314.9	368.5	294.2	327.0	262.3	211.7	161.1	295.5
All species	7,468.0	656.3	933.1	972.4	930.1	964.0	906.1	724.1	490.2	771.0

Table 35.—*Volume of growing stock in the sawlog portion of sawtimber trees on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	Diameter class (Inches at breast height)								
	All classes	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
<i>Million cubic feet</i>									
Longleaf pine	72.3	7.9	13.4	16.6	12.1	14.5	3.2	4.5	.
Slash pine	123.1	48.0	34.2	22.2	5.2	4.7	4.3	4.5	.
Shortleaf pine	609.2	77.2	124.9	126.7	128.9	91.6	35.6	23.1	1.2
Loblolly pine	2,645.4	345.9	389.4	409.6	445.5	355.4	252.9	402.4	44.3
Redcedar	16.8	4.7	2.8	4.2	1.6	2.2	0.7	0.7	.
Cypress	42.7	2.1	4.1	6.0	4.9	7.2	7.8	8.0	2.6
Total softwoods	3,509.6	485.8	568.8	585.3	598.3	475.5	304.4	443.2	48.2
Select white oaks	109.9		14.7	19.7	13.6	21.3	10.7	24.9	4.9
Select red oaks	109.4		10.4	11.0	11.9	12.2	15.0	36.1	12.9
Other white oaks	140.0		32.1	32.4	21.3	17.2	11.7	22.6	2.7
Other red oaks	487.5	...	66.2	77.7	82.0	67.6	55.0	111.7	27.3
Sweet pecan	2.3		0.4	0.4	0.3	0.4		0.8	..
Water hickory	14.5		2.2	4.0	2.6	1.2	1.9	2.0	0.6
Other hickories	34.7		10.1	7.7	7.6	2.6	3.5	3.2	..
Persimmon	0.2		0.2	...	...	...	...	.	.
Hard maple	1.0		0.7		0.3	..	.	..	...
Soft maple	6.9	...	3.1	0.9	1.0	1.2	0.3	0.5	...
Beech	24.2		3.8	3.6	6.0	4.3	1.8	4.2	0.5
Sweetgum	234.7		45.0	62.9	40.9	24.5	23.2	30.8	7.2
Blackgum	66.3		7.3	15.8	12.0	11.0	7.6	11.3	1.4
Other gums/tupelos	22.5	...	3.3	3.6	7.7	3.3	2.3	2.4	..
White ash	12.4		2.4	3.0	2.9	2.2	0.8	1.0	..
Other ashes	25.7		1.9	8.3	4.3	5.4	3.8	1.7	0.3
Sycamore	9.9		0.5	1.9	0.9	0.9	0.3	3.6	1.9
Cottonwood	0.8			...	...	...	...	0.4	0.4
Basswood	0.9		0.6	0.2	...	...	...	...	...
Magnolia	12.1		1.7	2.7	1.8	3.7	0.4	1.5	0.3
Sweetbay	4.8		2.6	0.9	0.4	...	0.6	0.3	...
Willow	2.0	.		0.3	0.6	0.5	0.3	0.2	..
Black walnut	0.2		0.2	...	...	...	...	...	...
Black cherry	1.1			0.6	..	0.5	...	...	.
American elm	15.9		1.7	3.3	3.3	1.2	1.1	3.7	1.6
Other elms	30.5		8.7	9.7	4.6	2.9	2.2	1.3	1.2
River birch	2.0		0.8	...	...	0.7	0.3	0.1	...
Hackberry	11.9	.	1.6	2.9	2.1	2.4	1.5	1.3	..
Other locusts	1.4			0.7	0.4	0.3	...	...	..
Sassafras	0.5		0.3	...	...	...	.	0.2	...
Holly	1.7		0.5	0.8	0.4		.	...	...
Other commercial	0.3		0.3	...	...	.	...	.	..
Total hardwoods	1,388.0	..	223.2	275.0	229.1	187.6	144.3	265.7	63.1
All species	4,897.6	485.8	792.1	860.3	827.4	663.1	448.7	708.9	111.3

Table K-Volume of live trees on timberland by detailed species and class of timber, southeast Texas counties, 1992

Species	All live	Growing stock	Rough	Rotten
<i>----- Million cubic feet -----</i>				
Longleaf pine	103.4	103.1	0.3	...
Slash pine	214.3	211.4	3.0	...
Shortleaf pine	761.3	753.1	8.0	0.3
Loblolly pine	3,841.8	3,800.1	41.0	0.7
Redcedar	25.1	21.7	3.3	0.2
Cypress	57.1	53.1	2.1	2.0
Total softwoods	5,003.1	4,942.4	57.6	3.1
Select white oaks	192.0	176.5	13.3	2.2
Select red oaks	165.1	152.0	10.7	2.4
Other white oaks	359.8	277.3	74.0	8.6
Other red oaks	892.4	762.0	97.1	33.3
Sweet pecan	7.8	4.3	3.5	...
Water hickory	31.8	26.8	4.7	0.2
Other hickories	82.5	67.0	12.5	2.9
Persimmon	2.7	2.0	0.6	0.1
Hard maple	3.4	2.0	1.1	0.3
Soft maple	50.0	31.1	16.6	2.3
Boxelder	0.6	0.6	...	...
Beech	46.6	32.9	6.0	7.8
Sweetgum	574.8	518.4	48.0	8.4
Blackgum	151.2	129.6	17.9	3.7
Other gums/tupelos	45.4	34.9	4.6	5.8
White ash	25.2	20.9	3.9	0.4
Other ashes	58.6	46.3	9.6	2.8
Sycamore	16.4	13.2	2.3	0.9
Cottonwood	2.3	1.8	0.5	...
Basswood	2.8	1.9	0.2	0.7
Magnolia	19.1	15.9	1.0	2.1
Sweetbay	27.0	19.5	5.2	2.4
Willow	11.2	10.1	1.2	...
Black walnut	2.0	1.0	0.9	0.2
Black cherry	5.5	4.3	0.9	0.3
American elm	35.5	27.2	7.5	0.7
Other elms	119.5	91.7	26.7	1.0
River birch	6.9	6.1	0.3	0.5
Hackberry	40.2	26.4	11.6	2.2
Other locusts	7.4	4.1	2.6	0.7
Sassafras	5.5	3.6	1.8	0.2
Dogwood	2.8	1.5	1.1	0.1
Holly	20.9	11.3	8.7	0.9
Other commercial	4.2	1.1	2.6	0.6
Total hardwoods	3,019.2	2,525.6	398.9	94.6
Noncommercial	91.7	...	91.7	...
All species	8,113.9	7,468.0	548.2	97.7

Table 37.—*Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	All classes	Diameter class (<i>Inches at breast height</i>)							
		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
<i>----- Million board feet -----</i>									
Longleaf pine	33.0	4.8	8.8	9.2	3.4	6.8	.	...	...
Slash pine	75.4	7.6	3.5	26.8	3.7	11.3	17.6	5.0	...
Shortleaf pine	1,731.9	117.8	296.5	344.1	422.4	345.8	104.3	91.9	9.0
Loblolly pine	5,064.3	190.0	448.0	649.8	850.6	774.2	741.5	1,252.7	157.5
Redcedar	76.6	17.2	14.6	23.1	9.2	9.2	1.9	1.4	...
Cypress	92.9	1.8	1.3	8.6	14.6	21.4	13.5	25.3	6.4
Total softwoods	7,074.1	339.2	772.8	1,061.7	1,303.8	1,168.6	878.8	1,376.3	172.9
Select white oaks	104.7	.	.	...	11.4	16.4	20.8	52.2	3.8
Select red oaks	176.5	...	.	...	5.1	12.2	25.1	76.2	57.8
Other white oaks	30.2	...	...	...	1.7	4.4	8.6	15.5	..
Other red oaks	318.0	...	...	...	11.0	42.9	62.6	154.0	47.5
Sweet pecan	3.6	.	.	...	...	1.7	...	1.8	...
Water hickory	2.9	...	1..	..	1.4	...	...	1.5	...
Other hickories	18.0	.	...	...	.	4.9	6.1	6.9	...
Soft maple	2.9	.	...	...	...	2.9	.	..	..
Sweetgum	267.4	...	...	...	47.5	36.2	54.2	86.4	43.1
Blackgum	49.1	...	...	.	8.0	10.0	14.8	16.3	...
Other gums/tupelos	24.0	.	...	...	3.4	6.5	7.0	7.1	...
White ash	13.3	...	...	...	..	3.6	3.5	6.2	...
Other ashes	20.3	...	...	...	5.9	6.8	2.7	4.5	0.5
Sycamore	4.3	.	...	...	.	...	...	3.2	1.1
Cottonwood	2.8	...	...	...	...	...	...	...	2.8
American elm	11.3	...	...	.	7.5	1.6	..	2.1	...
Other elms	11.4	...	...	...	0.7	5.8	3.3	1.6	...
River birch	2.9	...	...	.	...	2.9	..	..	...
Total hardwoods	1,063.6	.	...	...	103.6	158.9	208.8	435.6	156.7
All species	8,137.7	339.2	772.8	1,061.7	1,407.3	1,327.5	1,087.6	1,811.9	329.7

Table 38.—*Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class, southeast Texas counties, 1992*

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.&12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	≥29.0
<i>----- Million board feet -----</i>									
Longleaf pine	56.8		5.0	5.5	10.1	24.0	2.9	9.3	.
Slash pine	164.1	48.4	35.0	40.9	10.9	8.0	5.9	14.9	..
Shortleaf pine	1,253.5	115.7	273.7	269.6	238.9	198.0	101.7	55.9	.
Loblolly pine	4,247.9	268.2	496.4	652.6	826.1	671.0	454.6	801.1	77.9
Cypress	46.6	3.0	1.9	6.9	2.0	1.8	10.9	10.3	9.8
Total softwoods	5,768.9	435.3	812.0	975.6	1,088.0	902.9	576.0	891.5	87.6
Select white oaks	93.2			11.1	11.0	16.7	10.1	42.2	2.2
Select red oaks	114.9			11.1	19.4	20.8	15.8	40.7	7.0
Other white oaks	74.1		..	9.8	15.6	15.3	1.8	30.5	1.1
Other red oaks	362.6			55.0	77.5	64.2	41.3	106.0	18.5
Sweet pecan	2.0		..		2.0		...	...	...
Water hickory	1.2			7.2		...	...	...	...
Other hickories	23.0			5.6	8.4		2.9	6.2	..
Soft maple	1.7				1.7	.		.	.
Beech	1.9	..		..	...	...		1.9	..
Sweetgum	266.1			97.5	64.8	27.3	26.0	47.5	2.9
Blackgum	71.2			24.4	13.7	15.0	2.5	15.7	...
Other gums/tupelos	34.9			3.2	27.4	4.3	...	.	.
White ash	26.8		..	6.4	12.1	8.3	.		..
Other ashes	40.6			14.0	2.3	15.1	6.1	3.2	...
Sycamore	8.8			5.4	...	...		3.4	...
Sweetbay	3.3			...			3.3		.
American elm	21.9			8.8	...	.	4.6	.	8.5
Other elms	9.2	...		6.8	...	...	2.5	...	.
Hackberry	9.3	.		2.6	2.7	3.9	...		.
Other locusts	2.2		...	2.2	.	...			...
Total hardwoods	1,175.0		..	271.2	258.6	190.8	117.0	297.2	40.2
All species	6,943.9	435.3	812.0	1,246.8	1,346.6	1,093.7	693.0	1,188.7	127.9

Table 39.—Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, southeast Texas counties, 1992

Species	All classes	Diameter class (Inches at breast height)							229.0
		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.& 28.9	
----- Million board feet -----									
Longleaf pine	350.2	37.0	66.5	87.0	60.2	59.1	18.5	22.0	.
Slash pine	497.4	206.7	171.1	74.5	18.7	11.7	4.6	10.1	...
Shortleaf pine	969.6	210.0	220.1	215.7	203.0	79.8	35.6	5.4	.
Loblolly pine	7,258.3	1,391.2	1,345.2	1,235.7	1,184.3	857.6	487.7	684.8	71.8
Cypress	89.4	5.0	17.7	15.2	6.0	18.9	19.9	6.6	..
Total softwoods	9,164.9	1,849.9	1,820.7	1,628.1	1,472.2	1,027.0	566.2	728.9	71.8
Select white oaks	245.5		46.2	51.9	30.4	49.7	13.1	36.3	17.9
Select red oaks	184.3		34.4	36.6	11.2	19.0	21.6	44.9	16.6
Other white oaks	336.5		60.2	86.7	50.4	41.5	27.5	59.2	10.9
Other red oaks	1,092.0		184.9	174.2	220.6	151.1	116.1	193.6	51.5
Sweet pecan	4.x		2.5	...	.	...	.	2.3	...
Water hickory	26.6	.	12.0	8.2		..	3.8	2.5	..
Other hickories	74.4		28.8	18.5	12.6	5.5	8.0	1.0	.
Persimmon	1.5		1.5			..	.	.	.
Hard maple	1.9		1.9	..I		...		.	...
Soft maple	8.8		5.5	3.3	.		.		...
Beech	28.8	...		3.R	13.0	4.8	3.0	4.2	.
Sweetgum	476.2		156.9	147.0	58.6	50.2	33.6	26.2	3.8
Blackgum	133.6	...	25.9	31.7	15.5	24.1	16.4	16.5	5.5
Other gums/tupelos	35.3		13.9	11.8	1.8	4.5	2.3	1.0	...
White ash	20.9		11.4	7.6	.	1.9	...	.	.
Other ashes	43.2		5.6	19.5	2.3	5.3	8.4	2.2	..
Sycamore	2x.3		3.0	3.6	5.2	1.7	...	6.4	8.5
Basswood	3.4	...	3.4	...	...			.	...
Magnolia	19.3		2.5	5.8	4.5	6.5		...	.
Sweetbay	11.4		1.8	1.4	.	..	.	2.1	.
Willow	1.5		...	1.5	.	...		.	..
Black walnut	1.3		1.3		...	.	.	..	...
Black cherry	6.5		...	3.5	.	3.0	...	.	.
American elm	10.7		10.2	5.3	8.9	1.3		5.0	...
Other elms	75.0		31.1	23.0	10.9	4.0	.	..	6.0
River birch	5.9		2.6	...	...	1.3	2.0	...	...
Hackberry	14.3		8.4	2.0	2.4	1.6		..	...
Other locusts	1.5				1.5	...	.	..	...
Sassafras	2.6		1.7	...	.	.		0.9	...
Holly	1.8	...	1.8	...	...	...	...	...	..
Other commercial	1.5	ll	1.5	...	...	...	...	...	...
Total hardwoods	2,921.3	..	666.9	646.9	449.9	376.9	255.6	404.3	120.7
All species	12,086.1	1,849.9	2,487.6	2,275.0	1,922.1	1,403.9	821.9	1,133.2	192.6

Table 40.—Volume of sawtimber for tree grade 4 on timberland by derailed species and diameter class, southeast Texas counties, 1992

Species	All classes	Diameter class (Inches <i>at breast height</i>)							
		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
----- <i>Million board feet</i> -----									
Select white oaks	205.6	...	35.5	50.5	20.3	49.1	17.3	26.0	38.1
Select red oaks	156.1	..	22.8	13.8	30.2	16.7	24.4	48.3	
Other white oaks	324.0	...	101.2	71.3	54.3	37.3	30.0	26.8	
Other red oaks	872.1	...	142.6	189.2	140.9	112.9	91.8	156.6	
Water hickory	44.1	..		6.0	10.7	4.9	8.7	9.8	
Other hickories	77.8		25.7	10.8	24.0	4.3	5.9	7.1	
Hard maple	4.3		2.3		2.0	.		..	
Soft maple	19.9		11.2	1.8	4.3	2.6			
Beech	110.7	.	19.2	17.5	23.4	22.3	8.2	20.3	
Sweetgum	280.7		73.1	96.0	52.1	17.4	22.7	16.8	
Blackgum	88.6		11.0	25.8	25.4	8.0	6.9	11.5	
Other gums/tupelos	15.x		1.0	1.1	5.9	2.4	2.6	2.6	
White ash	5.9		2.3	1.7	1.9	.	.		
Other ashes	21.3		2.2	6.9	10.3	1.9		.	
Sycamore	10.5				...	3.0	.	7.5	
Cottonwood	2.2			...		.		2.2	
Basswood	1.5			1.5	...		...		
Magnolia	33.9		5.1	8.8	2.4	10.7	2.8	4.1	
Sweetbay	11.9	.	7.6	1.7	2.6			.	
Willow	10.6			...	3.7	3.2	2.2	1.5	
American elm	17.9			4.4	4.1	5.0	2.7	1.6	
Other elms	62.3		14.5	18.6	15.1	6.3	5.0	2.8	
River birch	2.1		2.1						
Hackberry	37.3			9.4	6.9	7.4	5.3	8.3	
Other locusts	2.1			2.1	.	.			
Holly	5.6		0.9	4.7		.		.	
Total hardwoods	2,424.2		480.3	543.5	440.5	315.6	236.5	353.7	54.1
All species	2,424.2		480.3	543.5	440.5	315.6	236.5	353.7	54.1

Table 41.—Volume of sawtimber on timberland by species and ownership class, southeast Texas counties, 1992

Species	All ownerships	National forest	Other public	Forest industry	Forest industry- leased	Other private
<i>--- Million board feet ---</i>						
Yellow pines	21,841.8	5,728.4	352.9	5,469.9	4.6	10,286.1
Cypress	235.1		...	168.1		67.0
Redcedar	89.6				.	89.6
Total softwoods	22,166.5	5728.4	352.9	5,638.0	4.6	10,442.6
Select white-red oaks	1,336.2	180.3	18.2	575.1		562.6
Other white-red oaks	3,720.5	222.1	39.9	1,120.8	.	2,337.8
Hickory	305.1	32.0	9.8	109.4	2.7	151.3
Hard maple	6.2	2.3		.		3.9
Sweetgum	1,366.2	177.4	8.6	474.8		705.4
Tupelo and blackgum	495.9	23.8	1.9	285.8		184.4
Ash-walnut-black cherry	221.3	13.5	4.6	39.2	.	164.0
Other hardwoods	738.1	39.5	5.1	298.7		394.9
Total hardwoods	8,189.6	690.9	88.0	2903.8	2.7	4,504.1
All species	30,356.1	6,419.3	440.9	8,541.8	7.3	14,946.7

Table 42.—Average net annual growth, average annual removals, and average annual mortality of live trees by county and species group, southeast Texas counties, 1992

County	Net Growth			Removals			Mortality		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood	All species	Softwood	Hardwood
<i>— Million cubic feet —</i>									
Angelina	38.5	33.5	5.0	33.4	30.2	3.2	4.4	3.1	1.3
Chambers	0.7	0.6	0.1	2.4	2.2	0.2	0.1	0.1	..
Grimes	5.6	3.9	1.6	3.7	3.7	0.1	0.9	0.2	0.7
Hardin	22.0	11.7	4.3	28.2	21.7	6.5	5.4	2.6	2.7
Harris	12.7	8.4	4.4	6.1	3.8	2.3	3.7	1.5	2.3
Houston	24.1	17.7	6.5	24.5	18.9	5.7	3.4	1.3	2.1
Jasper	34.6	25.8	8.9	38.7	31.4	7.3	6.6	4.2	2.5
Jefferson	1.8	0.8	1.0	6.8	6.2	0.5	0.9	...	0.9
Leon	10.5	2.0	8.5	3.9	2.8	1.0	3.2	0.1	3.0
Liberty	12.9	7.1	5.8	21.3	12.6	14.6	5.8	0.4	5.3
Madison	3.4	2.0	1.4	1.6	1.1	0.4	0.9	0.1	0.7
Montgomery	27.4	22.6	4.8	21.6	22.9	4.8	7.2	3.7	3.5
Newton	29.0	26.6	2.4	36.1	29.1	7.0	8.5	4.2	4.3
Orange	5.4	2.9	2.6	11.6	6.7	4.9	1.3	0.7	0.6
Polk	40.8	35.5	5.3	50.1	44.7	5.4	4.8	2.8	2.0
Sabine	26.7	22.1	4.6	27.8	22.1	5.7	2.0	1.3	0.7
San Augustine	24.6	21.4	3.2	17.1	14.5	3.2	4.1	1.1	3.1
San Jacinto	12.0	11.0	1.0	16.4	13.7	2.6	2.6	1.4	1.2
Trinity	21.6	18.4	3.2	29.8	26.7	3.1	4.5	2.6	1.9
Tyler	16.1	13.4	2.1	34.7	23.3	11.4	3.3	1.4	1.8
Walker	24.2	20.2	4.0	19.9	16.4	3.5	4.6	3.2	1.5
Waller	4.6	3.8	0.9	3.5	3.4	0.1	0.7	0.1	0.6
All counties	399.5	317.4	82.0	451.7	358.2	93.5	78.9	36.2	42.1

Table 43.—Average net annual growth, average annual removals, and average annual mortality of live trees by ownership class and species group, southeast Texas counties, 1992

Ownership class	Net Growth			Removals			Mortality		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood	All species	Softwood	Hardwood
<i>— Million cubic feet —</i>									
National forest	38.9	33.9	5.0	21.2	23.8	3.4	11.3	7.6	3.7
Other public	3.1	2.6	0.5	4.8	4.3	0.5	1.7	1.3	0.4
Forest industry	178.0	152.7	25.3	234.1	189.2	44.9	28.6	12.5	16.0
Forest industry-leased	1.0	0.7	0.2	3.5	1.6	1.9	0.1	0.1	0.1
Other private	178.5	127.5	51.0	182.2	139.3	42.9	31.2	14.7	22.5
All ownerships	399.5	317.4	82.0	451.7	358.2	93.5	78.9	36.2	42.7

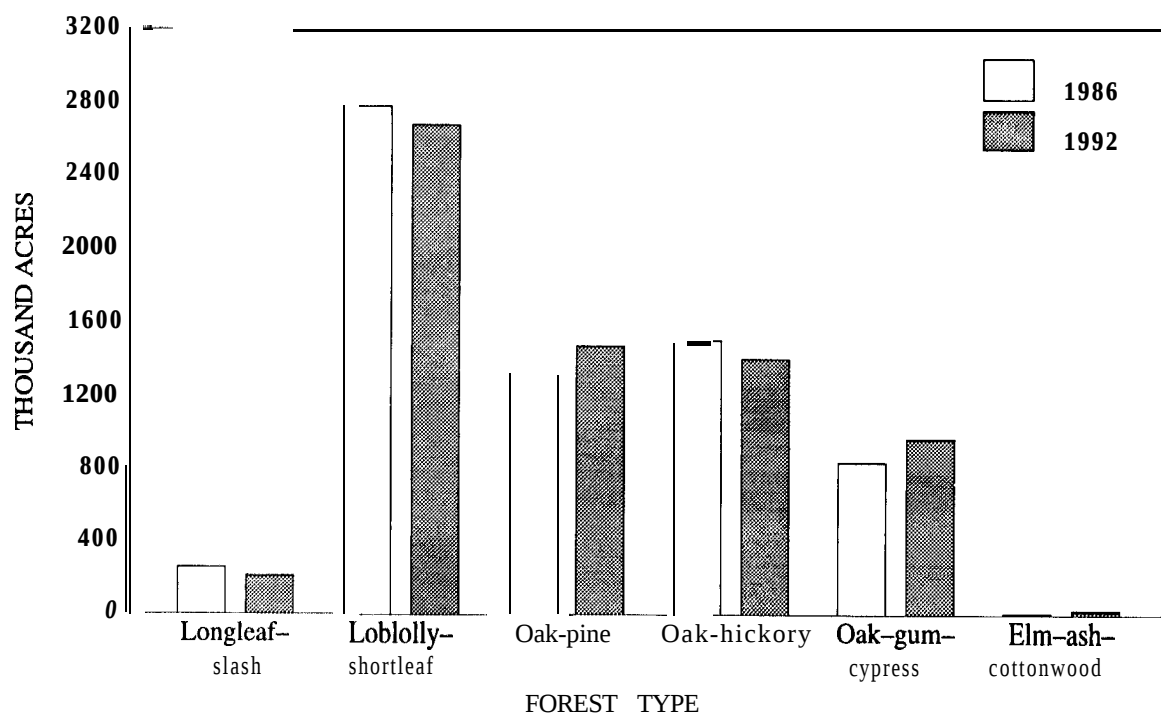


Figure 1.-Area of timberland by forest type, southeast Texas, 1986 and 1992.

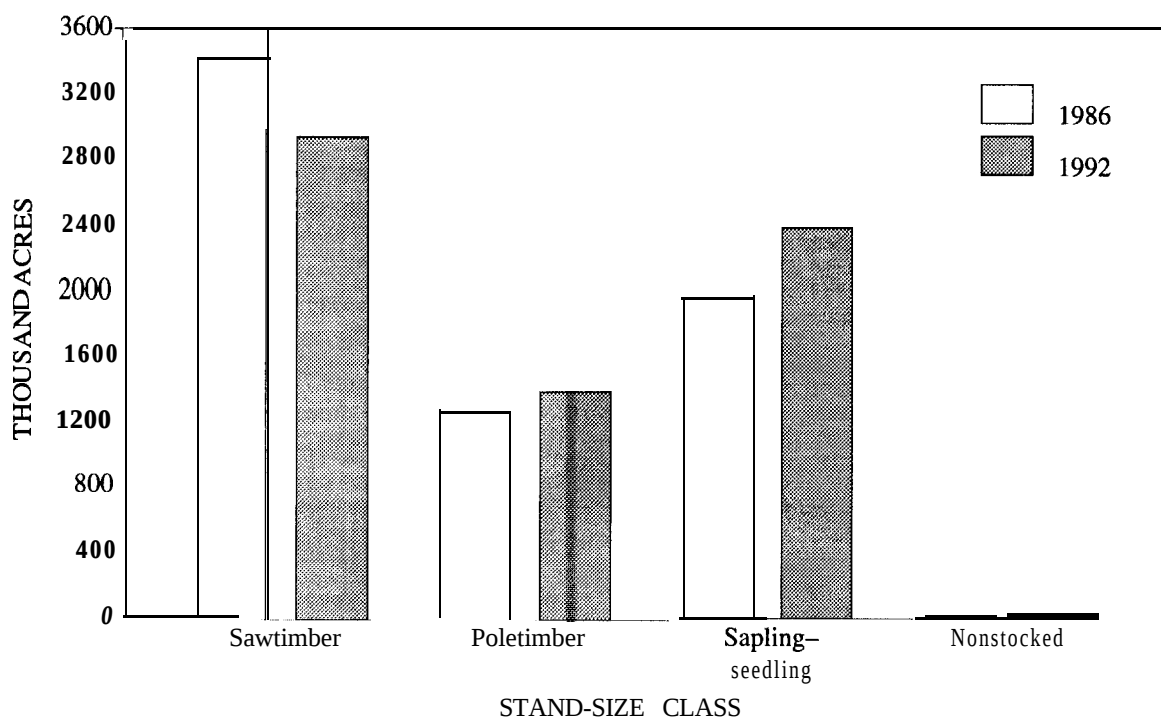


Figure 2.-Area of timberland by stand-size class, southeast Texas, 1986 and 1992.

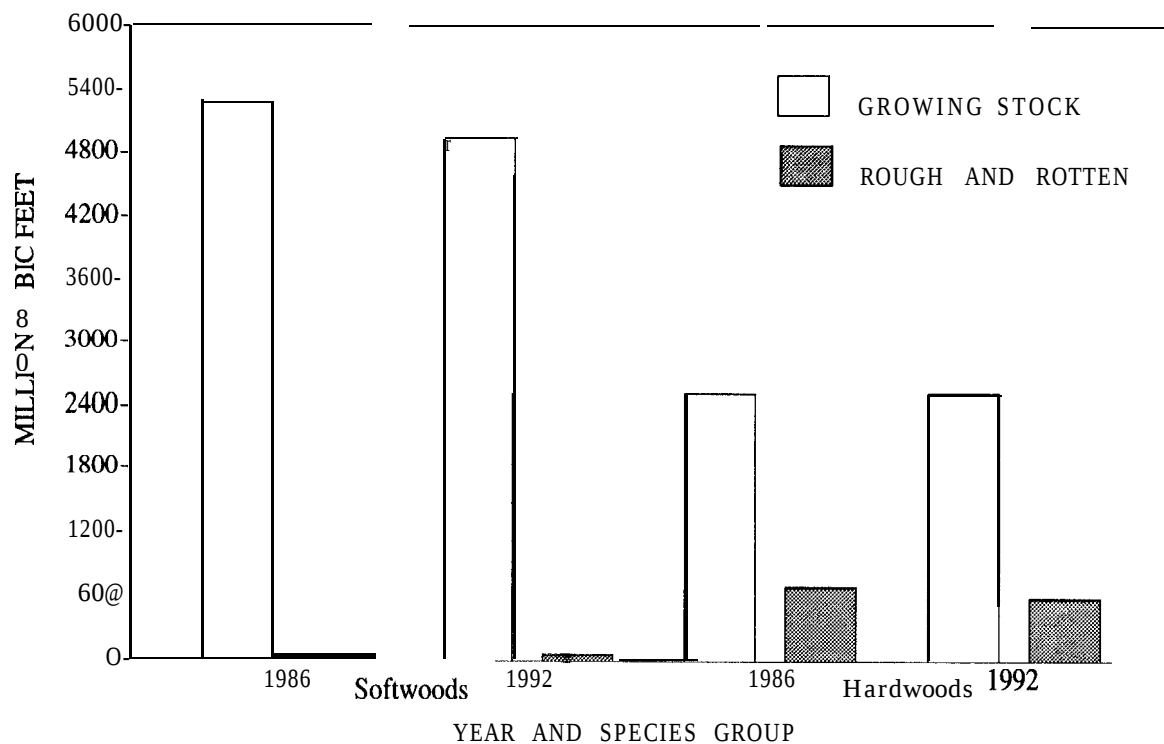


Figure 3.-Volume of live trees on timberland by species group and class of timber, southeast Texas, 1986 and 1992.

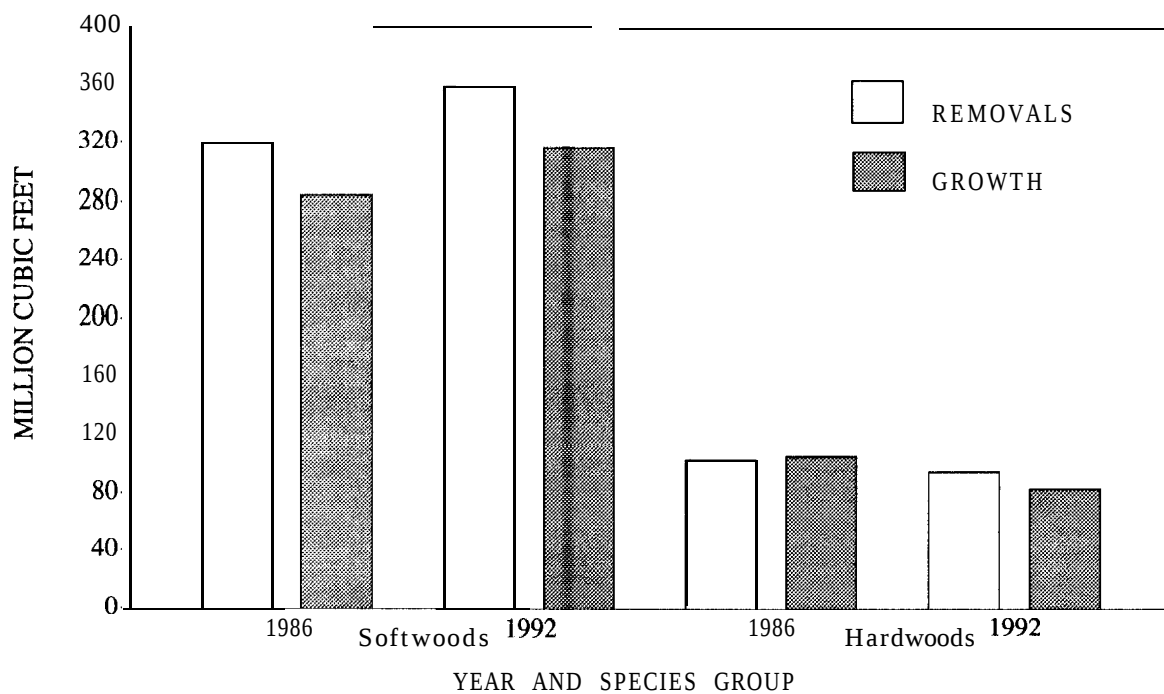


Figure 4.-Average net annual growth and average annual removals of live trees on timberland by species group, southeast Texas, 1986 and 1992.

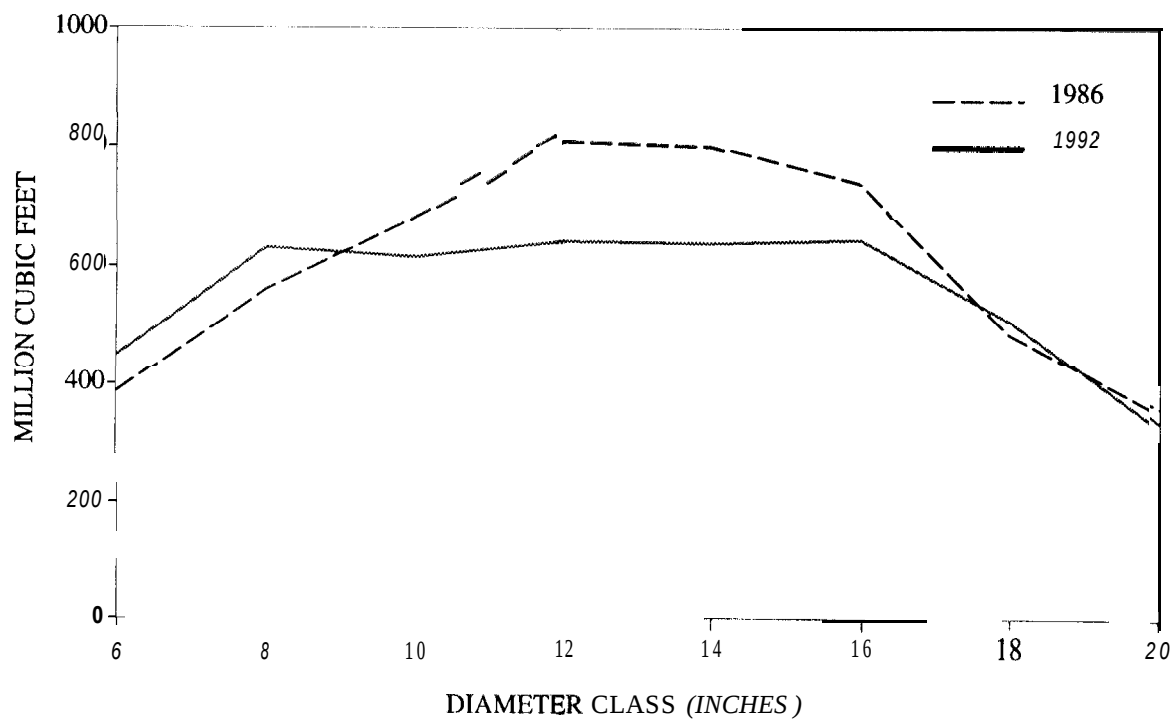


Figure 5.—Volume of live *softwood* trees on timberland by diameter class, southeast Texas, 1986 and 1992.

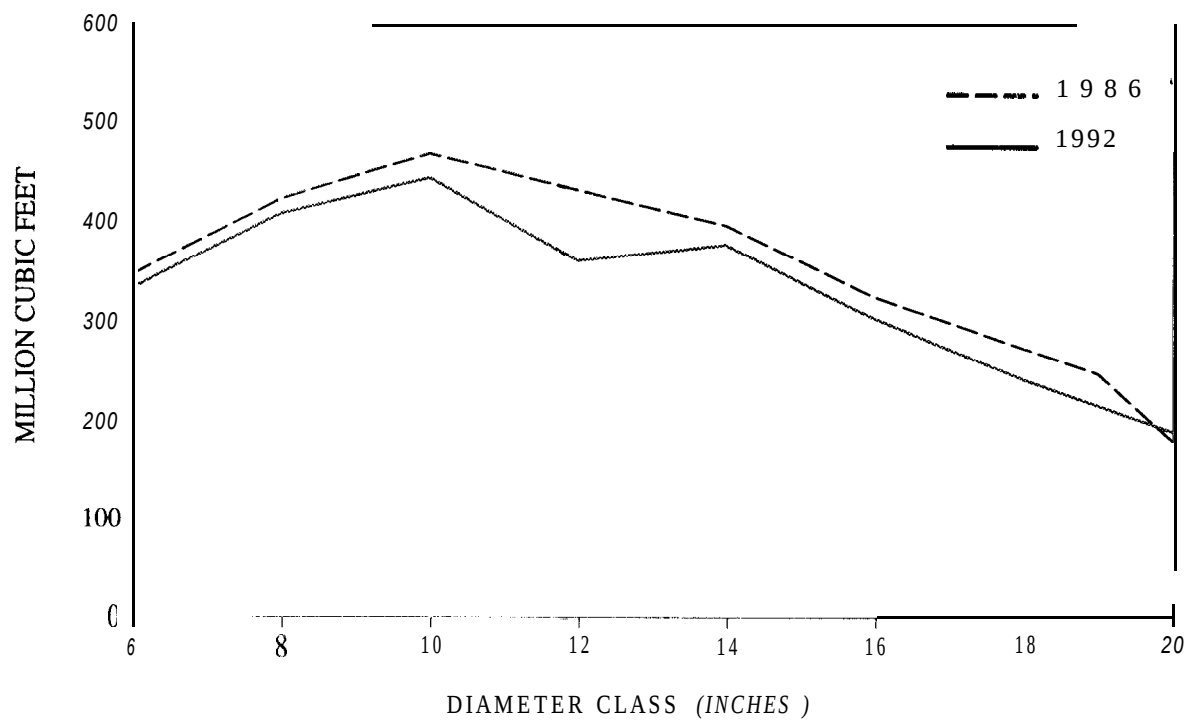


Figure 6.—Volume of live *hardwood* trees on timberland by diameter class, southeast Texas, 1986 and 1992.

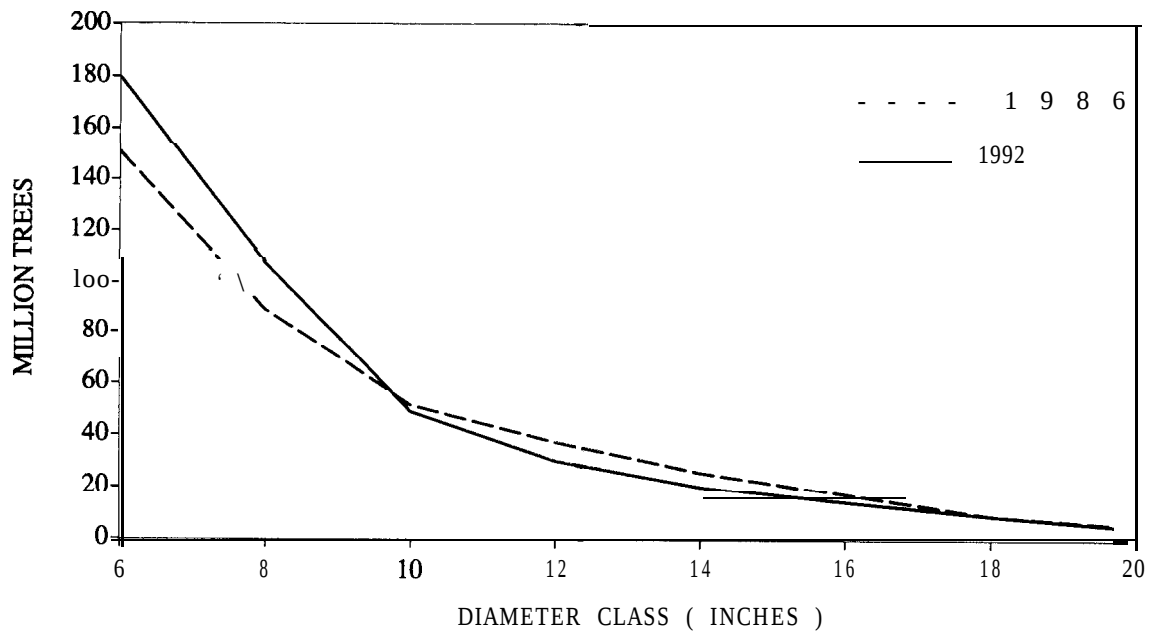


Figure 7.—*Number of live softwood trees on timberland by diameter class, southeast Texas, 1986 and 1992.*

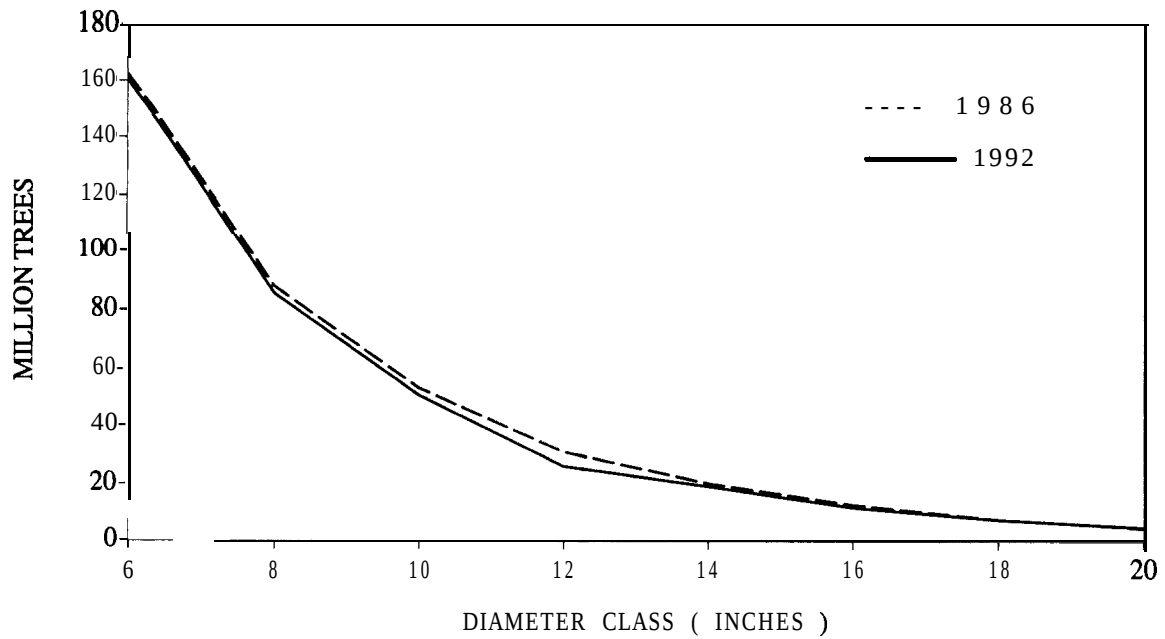


Figure 8.—*Number of live hardwood trees on timberland by diameter class, southeast Texas, 1986 and 1992.*

Kelly, John F.; Miller, Patrick E.; Hartsell, Andrew J. 1992. Forest statistics for southeast Texas counties—1992. Resour. Bull. SO-172. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 38 p.

Tabulates forest resource information from a new inventory of the southeast counties of Texas.

Keywords: Area, forest type, ownership, stand size, volume.