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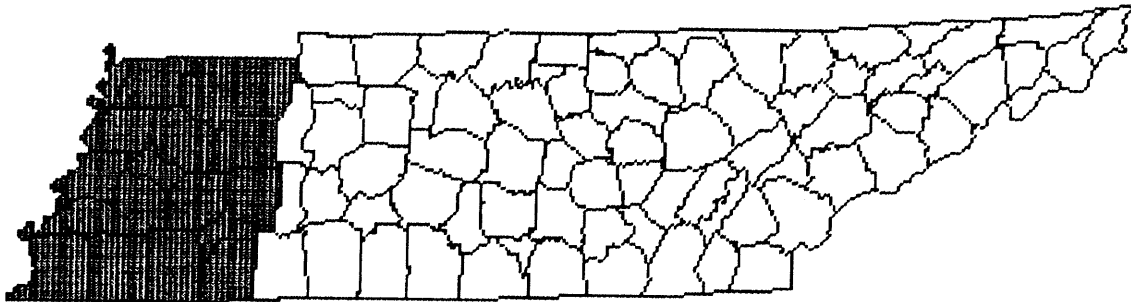
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# Forest Statistics for West Tennessee Counties - 1989

Dennis M. May and John S. Vissage



## SUMMARY

The 1989 survey of the West Unit of Tennessee revealed the following:

- Timberland now covers 1,970.0 thousand acres, an 8.5 percent decline since 1980.
- Bottomland hardwood types fell 14.4 percent since 1980.
- Timberland acres in other federal ownership doubled to 71.2 thousand acres.
- Timberland acres held by farmers fell 22.6 percent to 678.5 thousand acres.
- Sawtimber-sized stands have increased and now comprise 58.9 percent of all timberland acres.
- Hardwood growing stock numbers are down 23.7 percent and softwood growing stock numbers are up 12.5 percent since 1980.
- Volume in grade 1 and 2 trees fell 25.3 percent since 1980.
- Net growth is up for growing stock and sawtimber even though mortality increased 23.6 percent for growing stock and 51.6 percent for sawtimber.
- Hardwood removals dropped by more than half, while softwood removals more than doubled.

## FOREWORD

The Southern Forest Survey, an activity of the Southern Forest Experiment Station Forest Inventory and Analysis work unit, covers the States of Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas, and the island of Puerto Rico.

This survey is part of the nationwide Forest Survey originally authorized by the McSweeney-McNary Act of 1928. More recent legislation pertinent to the survey mission includes the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978. The survey mission is to develop, analyze, and maintain renewable forest resource information. This information is essential for formulation of forest policies and programs.

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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.

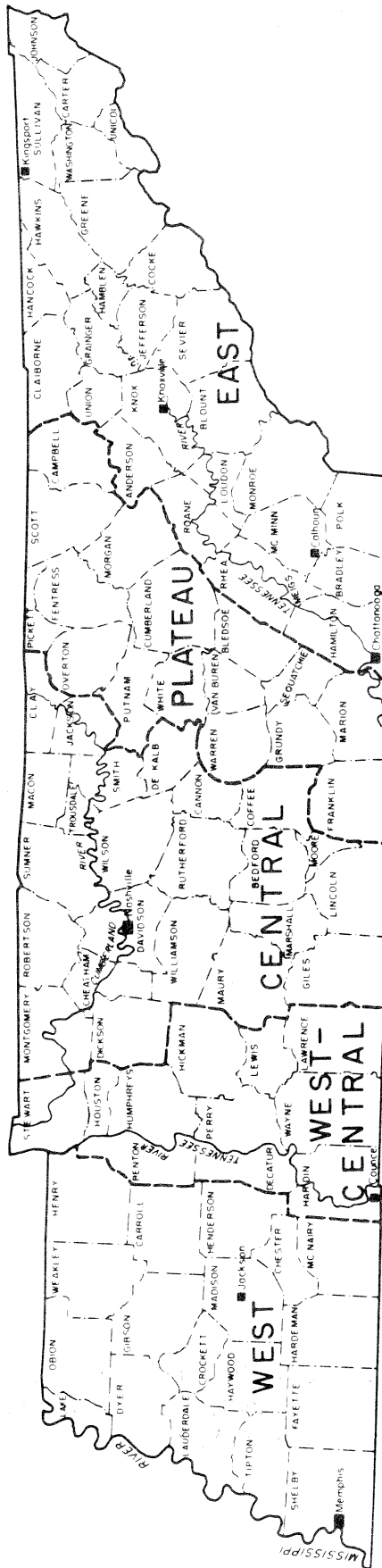


Figure I.-The forest survey regions of Tennessee.

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## INTRODUCTION

Tabulated results were derived from data obtained during a recent inventory of 18 counties comprising the West Unit of Tennessee (fig. I). Tables 1-25 were developed to provide compatibility among Forest Inventory and Analysis Projects. Tables 26-40 are supplementary tables and may change from unit to unit or State to State to address specific resource issues.

Data on forest acreage and timber volume were secured by a three-step process. A forest-nonforest classification using aerial photographs was accomplished for points representing approximately 230 acres. These photo classifications were adjusted based on ground observations at sample locations representing approximately 3,840 acres. Finally,

field measurements were made at forest locations on the intersections of grid lines spaced 3 miles apart. At these forest locations, per-acre estimates were obtained from trees measured on ten 37.5 basal area factor prism points.

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, equal to one standard deviation for the sample data, may be used to construct confidence intervals for population estimates. For example, at the 95 percent confidence level, the confidence interval for growing-stock volume (in million cubic feet) in the West Unit of Tennessee (with a sampling error of 7.0 percent) is

$$2,748.6 \pm 1.96(0.070 \times 2,748.6) = 2,748.6 \pm 377.1$$

**Table I—Sampling errors<sup>1</sup> for timberland, growing stock, and sawtimber, West Tennessee Counties, 1989**

County	Growing stock				Sawtimber volume
	Timberland	Volume	Growth	Removals	
----- <i>Percent</i> -----					
Carroll	1.8	14.4	9.6	46.7	21.7
Chester	1.7	15.2	26.2	33.2	20.4
Dyer <sup>3</sup>	1.1	28.2	(2)	32.8	30.2
Fayette	1.8	20.2	18.0	29.7	26.3
Hardeman	1.7	14.1	16.6	34.6	18.3
Haywood	1.8	16.4	(2)	16.9	19.9
Henderson	2.7	14.8	19.9	35.4	17.8
Henry	2.1	15.4	22.6	33.8	18.4
Lauderdale <sup>4</sup>	1.4	24.8	30.0	(2)	17.3
McNairy	2.5	15.0	10.7	27.5	18.3
Madison	2.3	12.9	14.1	(2)	15.4
Obion	2.0	17.9	20.8	27.6	19.5
Shelby	1.3	16.2	16.6	...	21.0
Weakley	2.2	17.8	(2)	44.9	22.0
All counties	0.5	7.0	7.3	13.3	7.5

<sup>1</sup>By random-sampling formula.

<sup>2</sup>Sampling error greater than 50.

<sup>3</sup>Crockett, Gibson, and Lake combined with Dyer.

<sup>4</sup>Tipton combined with Lauderdale.

where 1.96 is the number of standard deviations. This confidence interval indicates a 95-percent degree of confidence that the range, 2,371.5 to 3,125.7 million cubic feet, will contain the true growing-stock inventory volume.

Sampling errors for sub-groups of counties in the unit may be estimated by the following formula:

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

where:

SE = standard error of estimate  
(expressed as a percent)

X = variable of interest  
(area or volume)

g = group of counties to be combined

t = total for the Unit.

For example, the sampling error estimate of growing-stock volume for Fayette, Hardeman, and McNairy counties is 13.6 percent. Thus, the 95 percent confidence interval for growing-stock volume is  $732.6 \pm 195.3$  million cubic feet.

Ownership information is obtained by the same systematic sample outlined above. County

courthouse records are used to obtain ownership information for each forested plot. An expansion factor representing timberland area in that county is then applied to the ownership group the plot represents. Next, the ownership groups are totaled for each county. Thus, acreages reported at the county level are estimates and may not exactly match known totals for each ownership category within that county.

In order to achieve greater compatibility among Forest Inventory and Analysis Projects, a new tree grading classification has been in effect since the 1988 Arkansas survey. Tree grade 5 is used for trees currently or prospectively capable of producing at least one 12-foot log or two 8-foot logs in the saw-log portion but not able to produce a 12-foot log in the butt 16 feet. These trees, formerly classed as rough or rotten, are now included in growing stock. Table II shows the impact of this change on volume and growth.

## HIGHLIGHTS

### Area

The West Unit of Tennessee encompasses the counties from the Mississippi River east to the uplands overlooking the Tennessee River. The unit is sparsely forested with only a third of

**Table II—Changes in volume and growth estimates due to inclusion of tree grade 5 in growing-stock inventory, West Tennessee counties, 1989**

	Tree grade 5		
	Excluded from growing stock	Included in growing stock	Percent change
----- Million cubic feet -----			
Softwood:			
Growing-stock volume	331.8	336.9	1.5
Rough and rotten volume	21.2	16.1	-24.1
Growing-stock growth	10.6	11.2	5.7
Hardwood:			
Growing-stock volume	2240.9	2411.6	7.6
Rough and rotten volume	450.6	280.0	-37.9
Growing-stock growth	82.5	102.9	24.7
----- Million board feet -----			
Softwood:			
Sawtimber volume	1174.6	1193.4	1.6
Sawtimber growth	31.1	33.4	7.4
Hardwood:			
Sawtimber volume	7753.2	8408.1	8.4
Sawtimber growth	346.3	424.2	22.5



its area being classified as timberland. Most of the timberland is restricted to stream margins and uplands not suited to agriculture. Over the years, the area of timberland has fluctuated inversely with the farm economy. Currently, the unit supports 1,970.0 thousand acres of timberland, an 8.5-percent decline since the 1980 survey. Much of this decline can be attributed to agricultural landclearings in the Northwest portion of the unit. Supporting this is a 14.4-percent decline in bottomland forest types (oak-gum-cypress and elm-ash-cottonwood) along with a 9.8-percent decline in the oak-hickory forest types since 1980. Even with these declines, hardwood forest types still predominate, accounting for more than four-fifths of the total timberland area.

Most of the timberland in the unit is privately held with less than 10.0 percent in public ownership. In the private ownership category, farmer ownership changed most significantly since the 1980 survey, falling 22.6 percent to 678.5 thousand acres. This loss is in line with the agriculture landclearing occurring in the unit. Interestingly, of the 162.3 thousand acres of privately held timberland owned by forest industry, almost half is in bottomland hardwood types with another quarter in upland hardwood (oak-hickory) types. This contrasts with the general pine preference expressed by forest industry in other units of the Midsouth and is a reflection of the importance of the hardwood resource in this unit. The most significant change in the public ownership category was the doubling of other federal ownership to 71.2 thousand acres.

Although shrinking in size since the last survey, timberlands in the unit have been maturing, shifting toward sawtimber-sized stands and away from pole and sapling-sized stands. Sawtimber stands now comprise 58.9 percent of all timberland acres, whereas in 1980 they only accounted for 48.7 percent.

### **Timber Inventory**

With the general maturation of the unit's timberland, a shift towards fewer and larger trees of greater volume would be expected. Such is the case with the hardwood growing-stock portion of the inventory, which experienced a 23.7-percent

reduction in numbers and a 22.0 percent rise in volume to 2,411.6 million cubic feet. The reduction in numbers was concentrated in size classes smaller than 10 inches, while the rise in volume was concentrated in the 10-inch and larger size classes. In contrast, the 12.5-percent increase in softwood growing-stock numbers occurred across most size classes as did the 17.8-percent rise in volume to 336.9 million cubic feet. Almost all of this volume increment was associated with the yellow pine component of the softwood inventory. The same general trend of increasing numbers and volumes held for the sawtimber portion of the inventory, which increased 7.5 percent to 1,193.4 million board feet for softwood and 22.6 percent to 8,408.1 million board feet for hardwood. The relatively small increase in softwood sawtimber volume is the result of the decline in cypress volume since 1980; both yellow pine and cedar volumes increased.

Higher inventory volumes should not in themselves be interpreted as an ideal situation, especially in a unit dominated by hardwoods. Quality, as expressed by tree grade, is also important when assessing current forest conditions. Unfortunately, in the West Unit volume increases have not been accompanied by quality increases. In fact, between 1980 and 1989, volume in grades 1 and 2 fell 25.3 percent, while volume in grades 3 and 4 rose 47.5 percent. All of the 24.7 percent decrease in grade 1 softwood volume can be attributed to one species—cypress. In contrast, the 43.4-percent reduction in grade 1 hardwood volume occurred across all species, except for yellow-poplar, which experienced a 47.6 percent increase in grade 1 volume since 1980.

### **Growth, Removals, and Mortality**

The increasing inventory of the unit is the result of a favorable growth-to-drain situation over the survey period. On an average annual basis, net growth for the unit is 114.1 million cubic feet for growing stock and 457.6 million board feet for sawtimber. These figures are inflated due to the definition change initiated since the 1980 survey. Using comparable net growth figures (table II), net growth increased 12.4 percent for growing stock and 6.7 percent for

sawtimber since 1980. The contribution of net growth to the increasing inventory could have been significantly larger had it not been for the 23.6-percent rise in growing-stock mortality and 51.6-percent rise in sawtimber mortality since 1980. Bark beetle-caused mortality of sawtimber-sized pines resulted in much of the increase in softwood mortality, while hardwood mortality jumped appreciably for oaks and sweetgums. The oaks died of weather and disease factors, possibly due to the impacts of oak decline; and beavers were responsible for much of the increase in sweetgum mortality.

The increase in mortality was more than compensated for by the 48.4-percent reduction in removals. On an average annual basis, removals only reached 34.6 million cubic feet for growing stock and 136.3 million board feet for sawtimber. Interestingly, hardwood removals fell by more than half, while softwood removals more than doubled. These removal figures reflect the depressed economy of the early eighties, which surely impacted the production levels of the timber products industry and the rate of agricultural landclearings in the farming sector. The drop in removals resulted in a favorable growth-to-removals ratio, approximately 3 to 1, which explains the increase in the inventory since 1980.

With the unit's forests maturing and supporting larger inventory volumes with favorable growth-to-removal ratios, the future would seem to be bright. However, the deteriorating quality of the resource in this predominantly hardwood unit could easily cast a shadow on this otherwise bright future.

## DEFINITION OF TERMS

*Average net annual growth.*—Average net annual volume increase for the inter-survey period.

*Average annual mortality.*—Average annual sound-wood volume of growing-stock trees dying from natural causes.

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

*Commercial species.*—Tree species which normally develop into trees suitable for industrial wood products.

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

*Growing-stock trees.*—Live trees of commercial species. Rough and rotten trees are excluded.

*Growing-stock volume.*—The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches in diameter at breast height, from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs.

*Live trees.*—Commercial and noncommercial tree species of sapling size or larger.

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

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

*Planted stands.*—Stands with some evidence of planting or direct seeding.

*Poletimber trees.*—Growing-stock trees at least 5.0 inches in diameter at breast height, but smaller than sawtimber size.

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

*Rotten trees.*—Live trees of commercial species that do not contain at least one 12-foot log or two 8-foot logs in the saw-log portion, now or prospectively, primarily because of rot.

*Rough trees.*—Live trees of commercial species that do not contain at least one 12-foot log or two 8-foot logs in the saw-log portion, now or prospectively, primarily because of roughness or poor form. Also included are all live trees of noncommercial species.

*Saplings.*—Growing-stock trees at least 1.0 inches but less than 5.0 inches in diameter at breast height.

*Sawtimber trees.*—Live trees that contain at least one 12-foot log, or two 8-foot logs in the saw-log portion, and meet regional specifications for freedom from defect. Softwoods must be at



least 9.0 inches in diameter at breast height and hardwoods at least 11.0 inches in diameter at breast height.

*Sawtimber volume.* — Sound-wood volume of the saw-log portion of growing-stock sawtimber trees in board feet, International 1/4-inch rule and in cubic feet.

*Seedlings.* — Growing-stock trees less than 1.0 inches in diameter at breast height and greater than one foot tall for hardwoods, greater than six inches tall for softwoods, and greater than one-half inch in diameter at ground level for longleaf pine.

*Select red oaks.* — A classification of several red oak species composed of: cherrybark, Shumard, and northern red oaks.

*Select white oaks.* — A classification of several white oak species composed of: white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks.

*Site class.* — A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

*Stand-size class.* — A classification of forest land based on the diameter class of live trees on the sampled area; that is, sawtimber, poletimber, or sapling and seedling.

*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.

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

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

## CORE TABLES 1-25

**Table 1—Area by county and land class, West Tennessee, 1989**

County	All land <sup>1</sup>	Forest land				Nonforest land
		Total	Timberland <sup>2</sup>	Woodland <sup>3</sup>	Reserved timberland	
----- <i>Thousand acres</i> -----						
Carroll	383.7	169.1	169.1	...	...	214.7
Chester	184.7	99.4	99.4	...	...	85.3
Crockett <sup>4</sup>	...	...	...	...	...	...
Dyer <sup>4</sup>	996.2	111.1	111.1	...	...	885.2
Fayette	451.5	152.0	152.0	...	...	299.5
Gibson <sup>4</sup>	...	...	...	...	...	...
Hardeman	429.0	247.1	247.1	...	...	181.9
Haywood	341.6	71.2	71.2	...	...	270.4
Henderson	332.8	158.4	158.4	...	...	174.4
Henry <sup>4</sup>	358.3	176.1	176.1	...	...	182.2
Lake	...	...	...	...	...	...
Lauderdale <sup>5</sup>	594.3	146.7	145.5	...	1.2	447.6
McNairy	359.4	224.4	224.4	...	...	135.0
Madison	357.2	140.7	140.7	...	...	216.6
Obion	352.2	67.6	67.6	...	...	284.6
Shelby	493.8	111.6	111.6	...	...	382.2
Tipton <sup>5</sup>	...	...	...	...	...	...
Weakley	372.1	96.1	95.9	...	0.2	276.0
All counties	6007.0	1971.4	1970.0	...	1.4	4035.6

<sup>1</sup>From U.S. Bureau of the Census.

<sup>2</sup>Forest land (formerly termed commercial forest land) that is producing or capable of producing at least 20 cubic feet of industrial wood per acre per year. Includes areas which may be inaccessible or inoperable by current standards. Excludes reserved timberlands.

<sup>3</sup>Forest land incapable of producing 20 cubic feet of industrial wood per acre per year under natural conditions because of adverse site conditions.

<sup>4</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>5</sup>Tipton included in Lauderdale.

**Table 2—Area of timberland by county and ownership class, West Tennessee, 1989**

County	All ownerships	National forest	Misc. federal	State	County and municipal	Forest industry <sup>1</sup>	Farmer	Corporate <sup>2</sup>	Individual <sup>2</sup>
<i>----- Thousand acres -----</i>									
Carroll	169.1	...	5.8	11.7	...	11.7	23.3	...	116.6
Chester	99.4	...	...	9.9	...	19.9	29.8	5.0	34.8
Dyer <sup>3</sup>	111.1	...	...	22.2	...	11.1	55.5	11.1	11.1
Fayette	152.0	...	...	...	...	...	86.9	32.6	32.6
Hardeman	247.1	...	...	6.2	...	18.5	98.8	6.2	117.4
Haywood	71.2	...	...	...	...	17.8	41.5	...	11.9
Henderson	158.4	...	22.6	5.7	...	...	73.6	...	56.6
Henry	176.1	...	13.0	...	...	6.5	45.6	6.5	104.3
Lauderdale <sup>4</sup>	145.5	...	16.2	...	...	24.3	80.9	...	24.3
McNairy	224.4	...	...	5.8	...	40.3	40.3	...	138.1
Madison	140.7	...	...	6.1	...	...	36.7	6.1	91.7
Obion	67.6	...	6.1	6.1	...	12.3	24.6	...	18.4
Shelby	111.6	...	...	19.7	13.1	...	26.3	...	52.5
Weakley	95.9	...	7.4	...	...	...	14.8	7.4	66.4
All counties	1970.0	...	71.2	93.4	13.1	162.3	678.5	74.8	876.6

<sup>1</sup>Includes land leased to forest industry.

<sup>2</sup>Indian land will be classed as corporate or individual as defined by the Bureau of Indian Affairs.

<sup>3</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>4</sup>Tipton included in Lauderdale.

**Table 3—Area of timberland by county and forest type group, West Tennessee, 1989**

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
----- <i>Thousand acres</i> -----							
Carroll	169.1	5.8	...	5.8	122.4	35.0	...
Chester	99.4	5.0	5.0	29.8	49.7	5.0	5.0
Dyer <sup>1</sup>	111.1	...	...	...	66.6	44.4	...
Fayette	152.0	...	21.7	10.9	108.6	10.9	...
Hardeman	247.1	18.5	12.4	30.9	154.4	30.9	...
Haywood	71.2	...	...	...	11.9	59.3	...
Henderson	158.4	17.0	28.3	5.7	84.9	22.6	...
Henry	176.1	6.5	...	...	123.9	45.6	...
Lauderdale <sup>2</sup>	145.5	...	...	...	72.8	40.4	32.3
McNairy	224.4	5.8	40.3	40.3	120.8	17.3	...
Madison	140.7	...	6.1	24.5	61.2	48.9	...
Obion	67.6	...	...	...	30.7	36.8	...
Shelby	111.6	...	...	...	59.1	45.9	6.6
Weakley	95.9	7.4	...	...	44.3	44.3	...
All counties	1970.0	66.0	113.7	147.8	1111.2	487.4	43.9

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 4—Area of timberland by county and stand-size class, West Tennessee, 1989**

County	All classes	Stand-size class		Sapling- seedling
		Sawtimber	Poletimber	
----- <i>Thousand acres</i> -----				
Carroll	169.1	93.3	70.0	5.8
Chester	99.4	29.8	39.8	29.8
Dyer <sup>1</sup>	111.1	100.0	...	11.1
Fayette	152.0	108.6	32.6	10.9
Hardeman	247.1	117.4	80.3	49.4
Haywood	71.2	53.4	5.9	11.9
Henderson	158.4	90.5	45.3	22.6
Henry	176.1	91.3	32.6	52.2
Lauderdale <sup>2</sup>	145.5	113.2	8.1	24.3
McNairy	224.4	69.0	97.8	57.5
Madison	140.7	91.7	30.6	18.3
Obion	67.6	55.3	12.3	...
Shelby	111.6	72.2	32.8	6.6
Weakley	95.9	73.8	7.4	14.8
All counties	1970.0	1159.5	495.4	315.2

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 5—Area of timberland by county and site class, West Tennessee, 1989**

County	All classes	Site class (cubic feet/acre/year)				
		> 165	120-165	85-120	50-85	< 50
----- <i>Thousand acres</i> -----						
Carroll	169.1	...	29.1	81.6	46.6	11.7
Chester	99.4	5.0	5.0	59.7	19.9	9.9
Dyer <sup>1</sup>	111.1	11.1	11.1	22.2	66.6	...
Fayette	152.0	21.7	21.7	32.6	54.3	21.7
Hardeman	247.1	6.2	43.2	68.0	111.2	18.5
Haywood	71.2	5.9	23.7	35.6	5.9	...
Henderson	158.4	11.3	17.0	79.2	45.3	5.7
Henry	176.1	...	13.0	71.7	78.3	13.0
Lauderdale <sup>2</sup>	145.5	16.2	40.4	48.5	40.4	...
McNairy	224.4	...	11.5	109.3	69.0	34.5
Madison	140.7	24.5	18.3	30.6	48.9	18.3
Obion	67.6	18.4	...	49.1	...	...
Shelby	111.6	39.4	13.1	26.3	32.8	...
Weakley	95.9	14.8	22.1	36.9	22.1	...
All counties	1970.0	174.4	269.5	751.2	641.5	133.4

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 6—Area of timberland by county and stocking classes of growing-stock trees, West Tennessee, 1989**

County	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
----- <i>Thousand acres</i> -----						
Carroll	169.1	...	17.5	134.1	17.5	...
Chester	99.4	...	29.8	59.7	9.9	...
Dyer <sup>1</sup>	111.1	...	11.1	55.5	44.4	...
Fayette	152.0	...	32.6	86.9	32.6	...
Hardeman	247.1	...	43.2	129.7	74.1	...
Haywood	71.2	...	5.9	53.4	11.9	...
Henderson	158.4	...	28.3	118.8	11.3	...
Henry	176.1	...	32.6	97.8	45.6	...
Lauderdale <sup>2</sup>	145.5	...	8.1	72.8	56.6	8.1
McNairy	224.4	5.8	34.5	149.6	34.5	...
Madison	140.7	...	18.3	110.1	12.2	...
Obion	67.6	...	12.3	43.0	12.3	...
Shelby	111.6	...	19.7	72.2	19.7	...
Weakley	95.9	...	14.8	59.0	22.1	...
All counties	1970.0	5.8	308.8	1242.6	404.8	8.1

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 7—Area of timberland by forest type and ownership class, West Tennessee, 1989**

Forest type <sup>1</sup>	All ownerships	National forest	Other public	Forest industry	Forest industry-leased	Other private
----- Thousand acres -----						
Loblolly-shortleaf pine	179.7	...	17.0	11.5	...	151.2
Softwood total	179.7	...	17.0	11.5	...	151.2
Oak-pine	147.8	...	16.9	31.8	...	99.1
Oak-hickory	1111.2	...	41.7	42.0	...	1027.5
Oak-gum-cypress	487.4	...	87.4	63.0	5.9	331.1
Elm-ash-cottonwood	43.9	...	14.6	8.1	...	21.1
Hardwood total	1790.3	...	160.7	144.9	5.9	1478.8
All types	1970.0	...	177.7	156.4	5.9	1630.0

<sup>1</sup>Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

**Table 8—Area of timberland by ownership and stocking classes of growing-stock trees, West Tennessee, 1989**

Ownership class	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
----- <i>Thousand acres</i> -----						
Other public	177.7	...	34.5	113.1	30.1	...
Forest industry	156.4	5.8	45.4	79.8	25.4	...
Forest industry-leased	5.9	...	...	5.9	...	...
Other private	1630.0	...	228.9	1043.7	349.4	8.1
All ownerships	1970.0	5.8	308.8	1242.6	404.8	8.1

**Table 9—Area of timberland by forest type and stand-size class, West Tennessee, 1989**

Forest type <sup>1</sup>	Stand-size class			
	All classes	Sawtimber	Poletimber	Sapling-seedling
----- Thousand acres -----				
Loblolly-shortleaf pine	179.7	105.5	39.3	34.9
Softwood total	179.7	105.5	39.3	34.9
Oak-pine	147.8	32.4	57.4	58.0
Oak-hickory	1111.2	638.0	288.4	184.9
Oak-gum-cypress	487.4	352.8	102.1	32.5
Elm-ash-cottonwood	43.9	30.8	8.1	5.0
Hardwood total	1790.3	1054.0	456.1	280.3
All types	1970.0	1159.5	495.4	315.2

<sup>1</sup>Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

**Table 10—Number of live trees on timberland by species and diameter class, West Tennessee, 1989**

Species	Diameter class (inches at breast height)												
	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
----- Thousand trees -----													
Shortleaf-loblolly pine	69919	21281	18028	12780	7678	4723	3078	1609	535	145	54	8	...
Other yellow pines	456	456	...	...	...	...	...	...	...	...	...	...	...
Cypress	1814	...	563	...	196	136	31	143	176	104	109	239	116
Other softwoods	60837	35918	16841	5161	1626	776	389	86	...	39	...	...	...
Total softwoods	133026	57655	35433	17941	9500	5636	3499	1839	710	288	163	246	116
Select white oaks	67394	34633	14306	6012	3506	2894	2127	1476	801	735	380	482	42
Select red oaks	16957	4407	2573	1930	2505	1582	991	978	686	366	321	525	94
Other white oaks	31670	15159	4337	3767	2295	2344	1239	1327	502	305	177	214	4
Other red oaks	67771	25296	11103	6119	6324	6626	3748	3324	2011	1602	654	806	159
Hickory	74271	45149	10803	5558	3988	3238	2310	1648	741	479	195	156	5
Hard maple	18129	9240	5036	1716	885	476	261	261	113	85	...	53	4
Soft maple	83721	47390	14216	9074	5479	3701	1632	917	613	412	93	167	26
Beech	12614	7100	2253	1151	432	296	409	318	130	179	125	168	53
Sweetgum	90410	47709	17265	7955	4608	5083	3092	2001	1529	483	347	292	47
Tupelo-blackgum	48780	34174	4158	3956	2754	1453	1067	596	328	142	119	34	...
Ash	31556	17341	3317	3799	1930	2391	1237	563	453	314	154	51	6
Cottonwood-aspen	1318	...	602	274	...	48	62	21	78	55	22	69	86
Basswood	753	598	...	155	...	...	...	...	...	...	...	...	...
Yellow-poplar	27948	12933	4746	1859	2360	1674	1449	1073	788	404	358	290	13
Black walnut	763	...	...	100	236	182	145	48	43	...	10	...	...
Other hardwoods	266455	179831	48815	18317	8477	4893	2275	1733	841	449	318	404	103
Total hardwoods	840512	480959	143529	71741	45779	36881	22043	16285	9656	6010	3273	3710	644
Noncommercial	99206	76691	13226	4730	3008	882	450	45	44	53	59	19	...
All species	1072743	615306	192187	94413	58287	43398	25992	18169	10410	6351	3495	3975	760



**Table 11—Number of growing-stock trees on timberland by species and diameter class, West Tennessee, 1989**

Species	Diameter class (inches at breast height)												
	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>----- Thousand trees -----</i>													
Shortleaf-loblolly pine	55256	12651	13771	11557	7348	4526	3078	1609	520	145	43	8	...
Other yellow pines	456	456	...	...	...	...	...	...	...	...	...	...	...
Cypress	1648	...	563	...	121	136	31	118	139	88	109	239	104
Other softwoods	53302	32165	15292	3524	1359	520	338	65	...	39	...	...	...
Total softwoods	110662	45271	29625	15081	8828	5183	3448	1792	659	272	152	246	104
Select white oaks	43453	15558	11545	4555	3273	2742	2101	1476	726	663	349	437	25
Select red oaks	13911	2154	2045	1930	2505	1486	991	892	671	353	321	498	66
Other white oaks	20905	7734	2715	3065	1910	2187	1205	1105	445	266	136	131	4
Other red oaks	53716	15848	8908	5218	6263	6291	3455	3135	1773	1415	603	695	113
Hickory	41041	17784	6853	4618	3857	2965	2051	1531	709	375	171	121	5
Hard maple	6712	2572	1239	1103	885	394	117	240	63	69	...	29	...
Soft maple	32646	14153	5568	5010	2799	2529	1085	640	353	287	69	132	20
Beech	7348	4369	561	762	432	254	303	209	97	138	80	110	32
Sweetgum	52299	20465	8788	6760	4138	4728	2967	1930	1443	444	337	252	47
Tupelo-blackgum	16241	6154	2593	2685	1753	1075	917	510	276	142	109	27	...
Ash	18440	8691	1129	2765	1322	1954	1138	517	430	314	131	44	6
Cottonwood-aspen	1305	...	602	274	...	48	62	21	78	42	22	69	86
Basswood	155	...	...	155	...	...	...	...	...	...	...	...	...
Yellow-poplar	25233	10644	4746	1771	2160	1674	1449	1012	757	392	349	275	5
Black walnut	621	...	...	100	147	182	91	48	43	...	10	...	...
Other hardwoods	93085	47344	19596	11268	6345	3758	1797	1291	635	375	274	339	63
Total hardwoods	427109	173471	76889	52041	37788	32267	19730	14557	8500	5274	2961	3160	472
All species	537771	218743	106515	67122	46616	37450	23178	16349	9159	5545	3113	3406	576

**Table 12—Volume of growing stock on timberland by species and diameter class, West Tennessee, 1989**

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	21.0-28.9	29.0 & larger
<i>----- Million cubic feet -----</i>											
Shortleaf-loblolly pine	247.2	28.6	44.8	50.5	55.5	40.0	18.4	6.5	2.4	0.4	...
Cypress	65.5	...	0.9	2.1	0.4	2.7	4.7	4.5	6.2	24.6	19.5
Other softwoods	24.3	6.9	6.5	4.3	4.2	1.2	...	1.1	...	...	...
Total softwoods	336.9	35.5	52.2	56.9	60.2	43.9	23.1	12.1	8.7	25.0	19.5
Select white oaks	248.4	11.5	20.6	30.7	38.4	39.1	24.9	30.5	18.5	31.8	2.5
Select red oaks	183.6	5.3	14.5	15.2	18.2	23.2	24.6	15.3	17.1	40.4	9.9
Other white oaks	116.6	7.2	9.6	21.2	19.0	22.7	12.5	9.5	6.4	7.9	0.5
Other red oaks	462.0	14.5	35.3	67.4	57.5	69.6	55.0	61.8	33.0	51.4	16.4
Hickory	205.1	11.2	21.8	33.6	37.9	38.0	24.2	17.1	10.1	10.1	1.0
Hard maple	28.7	2.9	5.5	4.8	2.7	5.3	2.5	2.8	...	2.2	...
Soft maple	124.2	12.6	16.7	27.4	17.1	14.4	11.5	10.8	3.2	9.2	1.3
Beech	41.3	2.1	2.4	2.7	5.6	5.3	2.9	5.4	4.5	7.3	3.0
Sweetgum	331.0	14.0	25.7	53.8	57.7	53.2	54.6	23.3	19.7	22.3	6.6
Tupelo-blackgum	72.8	6.8	9.3	10.3	15.0	11.3	8.6	5.2	5.0	1.4	...
Ash	116.3	6.7	9.6	22.9	21.5	15.5	13.9	14.8	7.1	3.1	1.3
Cottonwood-aspen	33.5	0.4	...	0.4	1.2	0.7	3.4	2.2	1.5	7.0	16.8
Basswood	0.2	0.2	...	...	...	...	...	...	...	...	...
Yellow-poplar	187.4	4.6	13.9	18.7	26.2	28.2	29.3	20.2	21.8	24.2	0.3
Black walnut	7.4	0.3	1.2	1.6	1.6	1.2	0.9	...	0.6	...	...
Other hardwoods	253.1	31.0	34.3	42.1	30.0	31.2	20.3	15.3	16.0	26.1	6.8
Total hardwoods	2411.6	131.4	220.6	352.8	349.8	359.0	288.9	234.1	164.5	244.3	66.3
All species	2748.6	166.9	272.8	409.7	409.9	402.9	312.0	246.3	173.1	269.3	85.8

**Table 13—Volume of growing stock in the saw-log portion of sawtimber<sup>1</sup> trees on timberland by species and diameter class, East Tennessee, 1989**

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 & larger
----- Million cubic feet -----									
Shortleaf-loblolly pine	144.1	38.5	47.6	34.3	15.8	5.6	2.0	0.3	...
Cypress	59.6	1.7	0.3	2.1	3.9	4.0	5.9	23.1	18.6
Other softwoods	9.0	3.4	3.5	1.1	...	1.0	...	...	...
Total softwoods	212.7	43.6	51.4	37.5	19.7	10.6	7.9	23.4	18.6
Select white oaks	152.7	...	28.4	32.2	21.1	26.2	16.2	26.4	2.3
Select red oaks	124.0	...	14.2	18.7	21.3	12.7	14.0	35.2	7.9
Other white oaks	65.1	...	15.0	19.0	10.8	8.1	5.3	6.5	0.4
Other red oaks	286.7	...	42.0	56.8	47.6	54.2	28.4	43.8	13.9
Hickory	113.1	...	27.9	31.1	21.2	14.2	9.1	8.9	0.7
Hard maple	12.3	...	1.5	4.3	2.1	2.2	...	2.1	...
Soft maple	55.1	...	12.4	11.4	9.6	9.6	2.9	8.0	1.2
Beech	28.7	...	4.2	4.3	2.6	4.2	3.6	6.9	2.9
Sweetgum	198.8	...	41.5	44.3	47.6	21.1	17.8	20.7	5.8
Tupelo-blackgum	37.5	...	10.8	9.2	7.4	4.4	4.4	1.3	...
Ash	64.1	...	15.5	13.2	11.9	12.8	6.5	2.8	1.3
Cottonwood-aspen	29.7	...	1.0	0.6	3.0	2.0	1.3	6.5	15.3
Yellow-poplar	127.3	...	19.3	23.7	26.0	18.3	19.2	20.6	0.3
Black walnut	3.6	...	1.3	0.9	0.8	...	0.6	...	...
Other hardwoods	120.4	...	21.7	25.0	17.0	12.7	14.1	23.4	6.4
Total hardwoods	1419.1	...	256.7	294.7	250.0	202.6	143.4	213.2	58.5
All species	1631.8	43.6	308.1	332.2	269.7	213.2	151.3	236.6	77.1

<sup>1</sup>That part of the bole of sawtimber trees between a 1-foot stump and saw-log top.

**Table 14—Volume of sawtimber on timberland by species and diameter class, East Tennessee, 1989**

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 & larger
----- Million board feet -----									
Shortleaf-loblolly pine	815.3	199.3	266.8	202.2	96.5	35.2	13.3	1.9	...
Cypress	334.3	9.3	1.1	11.1	23.1	21.7	32.5	134.0	101.6
Other softwoods	43.8	16.2	17.3	5.4	...	5.0	...	...	...
Total softwoods	1193.4	224.8	285.2	218.7	119.6	61.9	45.8	135.9	101.6
Select white oaks	913.7	...	158.4	185.8	127.7	160.7	101.9	168.3	10.9
Select red oaks	755.4	...	79.7	108.4	127.4	76.4	90.5	219.4	53.6
Other white oaks	376.9	...	79.4	108.6	63.9	48.4	35.3	38.6	2.7
Other red oaks	1693.2	...	226.3	317.0	278.0	329.8	177.9	271.8	92.4
Hickory	676.8	...	157.4	181.3	128.7	91.5	57.6	54.8	5.5
Hard maple	73.9	...	8.8	24.6	12.7	14.2	...	13.6	...
Soft maple	308.1	...	65.7	63.9	55.2	53.7	19.2	44.0	6.5
Beech	168.5	...	23.7	21.9	15.1	26.2	23.3	42.2	16.1
Sweetgum	1170.3	...	232.2	255.4	283.4	127.7	106.8	127.0	37.9
Tupelo-blackgum	206.3	...	57.3	48.6	43.5	23.7	26.0	7.2	...
Ash	371.8	...	84.7	80.4	68.9	78.1	37.3	16.1	6.4
Cottonwood-aspen	191.9	...	5.5	3.9	19.2	11.9	7.9	44.2	99.4
Yellow-poplar	768.7	...	108.5	137.6	155.8	110.1	121.7	132.8	2.0
Black walnut	21.3	...	7.6	5.4	4.6	...	3.6	...	...
Other hardwoods	711.4	...	118.1	141.8	99.2	77.9	90.3	144.0	40.2
Total hardwoods	8408.1	...	1413.2	1684.6	1483.3	1230.4	899.2	1324.0	373.4
All species	9601.6	224.8	1698.4	1903.3	1602.9	1292.3	945.0	1459.9	475.0

**Table 15—Volume of growing stock and sawtimber on timberland by county and species group, West Tennessee, 1989**

County	Growing stock						Sawtimber					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine		Other	Soft <sup>1</sup>	Hard <sup>2</sup>		Pine		Soft <sup>1</sup>	Hard <sup>2</sup>	
		Planted	Natural					Planted	Natural			Other
----- Million cubic feet -----												
Carroll	252.5	7.1	10.1	1.5	95.3	138.5	804.9	31.6	49.2	2.3	267.5	454.3
Chester	104.0	10.8	18.7	1.1	29.3	44.1	296.3	37.9	76.2	1.9	62.8	117.5
Dyer <sup>3</sup>	192.6	...	...	24.0	54.5	114.2	847.9	...	...	123.6	243.6	480.7
Fayette	201.7	...	14.6	6.2	37.7	143.2	638.1	...	34.2	10.6	102.2	491.1
Hardeman	297.7	28.1	25.3	5.3	76.2	162.9	955.3	108.3	87.7	10.9	222.3	526.2
Haywood	122.5	...	...	...	43.0	79.5	488.5	...	...	...	157.0	331.5
Henderson	214.6	26.9	9.4	3.2	71.3	103.7	646.4	75.9	23.2	5.9	197.7	343.8
Henry	231.1	2.2	...	0.6	109.0	119.2	835.8	9.2	...	...	402.3	424.4
Lauderdale <sup>4</sup>	219.5	...	...	20.0	113.0	86.5	936.3	...	...	105.4	473.8	357.1
McNairy	233.2	4.0	72.1	2.4	49.1	105.5	610.2	...	227.6	4.7	110.1	267.7
Madison	209.2	...	1.2	6.9	68.6	132.6	729.1	...	1.4	18.3	238.6	470.8
Obion	141.4	...	...	12.9	49.4	79.2	613.1	...	...	67.1	172.8	373.1
Shelby	189.0	...	...	1.7	130.6	56.8	678.8	...	...	7.8	478.7	192.4
Weakley	139.7	16.0	0.6	4.1	45.9	73.0	520.8	50.0	2.8	19.7	150.2	298.1
All counties	2748.6	95.2	152.0	89.7	972.9	1438.7	9601.6	312.9	502.4	378.2	3279.5	5128.6

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

<sup>3</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>4</sup>Tipton included in Lauderdale.

**Table 16—Volume of timber on timberland by class of timber and species group, West Tennessee, 1989**

Class of timber	All species	Softwood			Hardwood	
		Pine			Soft <sup>1</sup>	Hard <sup>2</sup>
		Planted	Natural	Other		
----- Million cubic feet -----						
Sawtimber trees:						
Saw-log portion	1631.8	55.8	88.3	68.6	556.0	863.1
Upper-stem portion	324.3	12.4	17.2	6.9	108.1	179.6
Total	1956.1	68.2	105.6	75.5	664.2	1042.7
Poletimber trees	792.5	27.0	46.4	14.3	308.7	396.1
All growing-stock trees	2748.6	95.2	152.0	89.7	972.9	1438.7
Rough trees:						
Sawtimber size	108.5	0.4	1.2	4.2	36.8	65.9
Poletimber size	130.3	1.6	1.6	4.7	59.6	62.7
Total	238.8	2.1	2.8	8.9	96.4	128.6
Rotten trees:						
Sawtimber size	51.5	...	...	2.3	28.6	20.6
Poletimber size	5.7	...	...	...	3.2	2.5
Total	57.2	...	...	2.3	31.8	23.1
Salvable dead trees:						
Sawtimber size	20.7	2.3	3.5	0.4	9.1	5.5
Poletimber size	5.7	...	1.9	0.2	1.3	2.3
Total	26.4	2.3	5.5	0.5	10.4	7.8
All classes	3071.0	99.5	160.3	101.5	1111.5	1598.1

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>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, West Tennessee, 1989**

Ownership class	Live trees						Growing stock							
	All species	Softwood			Hardwood		All species	Softwood			Hardwood			
		Pine	Planted	Natural	Other	Soft <sup>1</sup>		Hard <sup>2</sup>	Pine	Planted	Natural	Other	Soft <sup>1</sup>	Hard <sup>2</sup>
----- Million cubic feet -----														
Other public	364.1	15.7	15.8	46.9	167.2	118.5	308.8	15.5	15.8	43.2	129.8	104.4		
Forest industry	238.1	7.8	15.6	19.1	75.9	119.7	221.7	7.3	15.1	17.4	66.6	115.2		
Forest industry-leased	14.7	...	...	...	4.9	9.8	13.8	...	...	...	4.9	9.0		
Other private	2427.6	73.7	123.4	35.0	853.2	1342.3	2204.2	72.4	121.1	29.1	771.6	1210.1		
All ownerships	3044.6	97.3	154.8	100.9	1101.2	1590.4	2748.6	95.2	152.0	89.7	972.9	1438.7		

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>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, West Tennessee, 1989**

County	Growing stock						Sawtimber								
	All species	Softwood			Hardwood		All species	Softwood			Hardwood				
		Planted	Natural	Other	Soft <sup>1</sup>	Hard <sup>2</sup>		Planted	Natural	Other	Soft <sup>1</sup>	Hard <sup>2</sup>			
													Pine		
----- Million cubic feet -----						----- Million board feet -----									
Carroll	12.7	0.1	0.5	...	5.4	6.7	51.4	0.9	2.2	-0.2	19.6	28.8			
Chester	2.6	...	0.4	...	0.6	1.6	7.4	0.1	-0.5	0.1	1.6	6.1			
Dyer <sup>3</sup>	2.3	...	...	...	-0.1	2.4	14.4	...	...	...	0.8	13.5			
Fayette	10.5	...	0.8	0.1	2.5	7.0	38.9	...	2.9	0.6	7.3	28.0			
Hardeman	11.0	0.6	2.1	0.4	2.0	5.8	35.8	4.0	6.4	0.8	3.2	21.4			
Haywood	4.3	...	...	...	2.3	1.9	10.2	...	...	...	6.6	3.6			
Henderson	7.6	-0.2	1.3	...	2.7	3.9	31.4	0.2	3.1	...	11.3	16.9			
Henry	10.3	...	...	...	6.5	3.8	53.0	...	...	...	35.7	17.3			
Lauderdale <sup>4</sup>	9.5	...	...	0.5	4.7	4.2	36.6	...	...	2.4	16.3	17.9			
McNairy	12.0	0.6	2.6	0.2	3.5	5.2	36.7	0.6	6.1	0.1	10.4	19.5			
Madison	9.2	...	0.1	0.4	3.1	5.6	39.8	...	0.2	1.1	14.1	24.4			
Obion	5.8	...	...	0.2	1.7	3.9	32.5	...	...	0.9	8.5	23.1			
Shelby	12.7	...	...	...	8.8	3.8	52.6	...	...	0.1	38.6	14.0			
Weakley	3.6	0.6	0.1	...	-0.2	3.1	16.9	1.2	0.1	...	-0.2	15.7			
All counties	114.1	1.6	7.8	1.9	43.8	59.1	457.6	7.0	20.5	5.9	173.8	250.4			

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

<sup>3</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>4</sup>Tipton included in Lauderdale.

**Table 19—Average net annual removals of growing stock and sawtimber on timberland by county and species group, West Tennessee, 1989**

County	Growing stock						Sawtimber					
	Softwood			Hardwood			Softwood			Hardwood		
	All species	Pine		Other	Soft <sup>1</sup>	Hard <sup>2</sup>	All species	Pine		Other	Soft <sup>1</sup>	Hard <sup>2</sup>
		Planted	Natural					Planted	Natural			
----- Million cubic feet -----						----- Million board feet -----						
Carroll	0.6	...	0.1	...	...	0.4	2.0	...	0.2	...	...	1.8
Chester	0.2	0.2	...	...	...	0.1	0.9	0.7	...	...	...	0.2
Dyer <sup>3</sup>	4.6	...	...	...	2.5	2.1	21.1	...	...	...	11.2	9.9
Fayette	0.9	...	...	...	...	0.8	2.7	...	...	...	...	2.7
Hardeman	4.6	...	0.1	0.2	1.9	2.4	16.9	...	0.3	1.1	7.1	8.4
Haywood	1.3	...	...	...	0.2	1.1	5.0	...	...	...	1.2	3.8
Henderson	3.4	...	...	0.1	1.6	1.7	12.3	...	...	...	4.6	7.7
Henry	1.6	...	...	...	0.9	0.7	5.4	...	...	...	2.1	3.3
Lauderdale <sup>4</sup>	1.3	...	...	...	0.3	1.0	6.5	...	...	...	0.9	5.6
McNairy	6.1	0.8	1.8	0.1	1.1	2.3	23.4	...	7.8	0.3	4.7	10.6
Madison	1.6	...	...	...	0.5	1.2	7.5	...	...	...	2.2	5.3
Obion	3.2	...	...	...	0.2	3.1	15.2	...	...	...	0.5	14.7
Shelby	...	...	...	...	...	...	...	...	...	...	...	...
Weakley	5.2	2.7	...	...	1.2	1.4	17.3	5.0	...	...	4.9	7.5
All counties	34.6	3.6	2.0	0.4	10.3	18.3	136.3	5.7	8.2	1.3	39.4	81.5

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

<sup>3</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>4</sup>Tipton included in Lauderdale.

**Table 20—Average net annual growth and average annual removals of growing stock on timberland by species, West Tennessee, 1989**

Species	Growth	Removals
----- Million cubic feet -----		
Yellow pines	9.4	5.6
Other softwoods	1.9	0.4
Total softwoods	11.2	6.0
Select white-red oaks	19.2	7.1
Other white-red oaks	23.1	7.4
Hickory	7.7	2.5
Hard maple	2.0	0.1
Sweetgum	15.1	3.8
Ash-walnut-black cherry	5.3	1.1
Yellow-poplar	12.2	1.6
Other hardwoods	18.4	5.0
Total hardwoods	102.9	28.6
All species	114.1	34.6

**Table 21—Average net annual growth and average annual removals of sawtimber on timberland by species, West Tennessee, 1989**

Species	Growth	Removals
----- Million board feet -----		
Yellow pines	27.5	13.9
Other softwoods	5.9	1.3
Total softwoods	33.4	15.3
Select white-red oaks	85.6	36.0
Other white-red oaks	100.7	32.7
Hickory	26.5	10.0
Hard maple	6.6	...
Sweetgum	67.2	15.3
Ash-walnut-black cherry	18.6	2.3
Yellow-poplar	55.1	6.7
Other hardwoods	63.9	18.0
Total hardwoods	424.2	121.0
All species	457.6	136.3

**Table 22—Average annual mortality of growing stock and sawtimber on timberland by species, West Tennessee, 1989**

Species	Growing stock	Sawtimber
----- Million cubic feet ----- Million board feet -----		
Yellow pines	2.6	7.0
Other softwoods	0.4	0.8
Total softwoods	2.9	7.8
Select white-red oaks	3.2	11.9
Other white-red oaks	5.9	13.5
Hickory	0.9	2.4
Sweetgum	4.3	17.0
Ash-walnut-black cherry	1.0	1.3
Yellow-poplar	0.3	1.3
Other hardwoods	8.8	29.6
Total hardwoods	24.3	77.1
All species	27.2	84.9

**Table 23—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, West Tennessee, 1989**

Ownership class	Growth						Removals						
	Softwood				Hardwood		Softwood				Hardwood		
	All species	Pine			Other	Soft <sup>1</sup>	Hard <sup>2</sup>	All species	Pine			Soft <sup>1</sup>	Hard <sup>2</sup>
		Planted	Natural	Other					Planted	Natural	Other		
----- Million cubic feet -----													
Other public	7.2	-0.1	0.7	0.1	4.4	2.0	...	...	...	...	...	...	
Forest industry	6.3	0.5	1.4	0.7	0.5	3.2	5.4	0.8	0.7	0.2	1.5	2.1	
Forest industry-leased	1.9	...	...	...	0.6	1.3	...	...	...	...	...	...	
Other private	98.8	1.1	5.7	1.1	38.3	52.6	29.3	2.8	1.3	0.2	8.8	16.1	
All ownerships	114.1	1.6	7.8	1.9	43.8	59.1	34.6	3.6	2.0	0.4	10.3	18.3	

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>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, West Tennessee, 1989**

Ownership class	Growth						Removals					
	Softwood				Hardwood		Softwood				Hardwood	
	All species	Pine		Other	Soft <sup>1</sup>	Hard <sup>2</sup>	All species	Pine		Other	Soft <sup>1</sup>	Hard <sup>2</sup>
		Planted	Natural					Planted	Natural			
		----- Million board feet -----										
Other public	29.2	-2.3	0.2	0.5	19.9	10.8	...	...	...	...	...	...
Forest industry	14.5	0.7	0.8	2.7	-4.5	14.9	16.1	...	2.6	1.1	5.0	7.5
Forest industry-leased	6.9	...	...	...	1.4	5.4	...	...	...	...	...	...
Other private	407.1	8.6	19.5	2.7	157.1	219.3	120.1	5.7	5.7	0.3	34.4	74.1
All ownerships	457.6	7.0	20.5	5.9	173.8	250.4	136.3	5.7	8.2	1.3	39.4	81.5

<sup>1</sup>Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

<sup>2</sup>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, West Tennessee, 1989**

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
----- Million board feet -----						
Yellow pines	815.3	93.5	107.3	609.9	...	4.6
Cypress	334.3	90.8	80.9	159.6	...	3.1
Redcedar	43.8	32.7	...	...	...	11.2
Total softwoods	1193.4	217.0	188.1	769.4	...	18.9
Select white-red oaks	1669.1	269.4	371.0	600.9	325.1	102.8
Other white-red oaks	2070.1	204.0	307.6	832.7	585.9	139.8
Hickory	676.8	38.4	122.0	268.7	210.5	37.3
Hard maple	73.9	...	...	27.5	38.7	7.6
Sweetgum	1170.3	142.7	244.9	497.4	201.9	83.4
Tupelo and blackgum	206.3	8.4	25.4	106.6	43.1	22.7
Ash-walnut-black cherry	424.6	44.8	104.7	161.3	80.7	33.1
Yellow-poplar	768.7	102.4	171.6	251.7	211.8	31.1
Other hardwoods	1348.4	217.2	122.2	339.7	472.2	197.1
Total hardwoods	8408.1	1027.3	1469.3	3086.5	2170.0	655.0
All species	9601.6	1244.3	1657.5	3855.9	2170.0	673.8

## Supplemental Tables 26-40

**Table 26**—Area of timberland by stand age, forest type group and type of regeneration, West Tennessee, 1989

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
----- Thousand acres -----						
1-10	6.2	...	...	5.0	11.9	25.2
11-20	...	...	16.9	...	...	8.1
21-30	13.6	5.8	...	...	...	...
31-40	17.1	...	...	...	...	...
41-50	...	...	...	...	...	...
>50	6.2	...	...	...	...	6.1
Mixed	22.9	108.0	11.9	114.1	6.6	1584.6
Total	66.0	113.7	28.8	119.0	18.5	1624.0

**Table 27**—Volume of softwood growing stock on timberland by forest type, West Tennessee, 1989

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
----- <i>Million cubic feet</i> -----							
Carroll	18.7	7.1	...	5.7	5.9	...	...
Chester	30.6	9.5	2.0	16.4	2.8	...	...
Dyer <sup>1</sup>	24.0	...	...	...	...	24.0	...
Fayette	20.7	...	14.3	2.7	3.7	...	...
Hardeman	58.6	26.7	15.4	7.6	6.9	2.1	...
Haywood	...	...	...	...	...	...	...
Henderson	39.5	26.9	10.7	1.3	0.3	0.2	...
Henry	2.9	2.2	...	...	0.6	...	...
Lauderdale <sup>2</sup>	20.0	...	...	...	...	16.6	3.4
McNairy	78.5	3.8	54.7	15.7	3.7	0.6	...
Madison	8.1	...	3.2	2.3	1.8	0.8	...
Obion	12.9	...	...	...	...	12.9	...
Shelby	1.7	...	...	...	0.4	1.3	...
Weakley	20.8	16.0	...	...	0.9	3.8	...
All counties	336.9	92.2	100.2	51.7	27.1	62.3	3.4

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 28—Volume of hardwood growing stock on timberland by forest type, West Tennessee, 1989**

County	Forest type group						
	Total	Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
----- <i>Million cubic feet</i> -----							
Carroll	233.7	1.1	...	6.8	170.9	54.9	...
Chester	73.4	0.8	0.4	17.5	50.4	3.9	0.3
Dyer <sup>1</sup>	168.7	...	...	...	109.2	59.5	...
Fayette	180.9	...	6.8	7.8	138.6	27.8	...
Hardeman	239.1	1.4	2.1	11.6	176.9	47.1	...
Haywood	122.5	...	...	...	9.7	112.8	...
Henderson	175.0	3.5	10.0	3.8	115.8	41.9	...
Henry	228.2	0.6	...	...	160.0	67.5	...
Lauderdale <sup>2</sup>	199.5	...	...	...	97.6	59.1	42.8
McNairy	154.7	0.3	10.6	20.9	98.2	24.7	...
Madison	201.1	...	0.7	8.8	115.6	76.0	...
Obion	128.5	...	...	...	71.1	57.4	...
Shelby	187.4	...	...	...	98.0	80.5	8.9
Weakley	118.9	0.9	...	...	45.9	72.1	...
All counties	2411.6	8.6	30.6	77.2	1457.9	785.4	51.9

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 29—Volume of softwood growing stock in the saw-log portion of sawtimber trees on timberland by forest type, West Tennessee, 1989**

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
----- Million cubic feet -----							
Carroll	13.5	5.5	...	4.4	3.6	...	...
Chester	20.7	6.7	0.8	11.2	2.0	...	...
Dyer <sup>1</sup>	23.0	...	...	...	...	23.0	...
Fayette	8.5	...	5.8	0.9	1.8	...	...
Hardeman	35.0	17.6	9.8	2.6	3.7	1.3	...
Haywood	...	...	...	...	...	...	...
Henderson	20.5	14.4	5.2	0.9	...	...	...
Henry	1.8	1.8	...	...	...	...	...
Lauderdale <sup>2</sup>	17.9	...	...	...	...	14.6	3.4
McNairy	41.0	0.3	32.0	6.4	1.8	0.6	...
Madison	4.0	...	2.2	0.3	1.0	0.5	...
Obion	11.7	...	...	...	...	11.7	...
Shelby	1.5	...	...	...	0.4	1.1	...
Weakley	13.4	9.6	...	...	0.5	3.3	...
All counties	212.7	55.9	55.8	26.6	14.7	56.3	3.4

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 30—Volume of hardwood growing stock in the saw-log portion of sawtimber trees on timberland by forest type, West Tennessee, 1989**

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
----- Million cubic feet -----							
Carroll	121.2	0.8	...	4.8	90.8	24.8	...
Chester	33.2	0.5	0.4	8.6	22.1	1.6	...
Dyer <sup>1</sup>	117.4	...	...	...	73.9	43.5	...
Fayette	101.4	...	1.2	4.5	82.6	13.2	...
Hardeman	128.5	0.4	0.9	5.4	96.0	25.8	...
Haywood	81.2	...	...	...	6.6	74.5	...
Henderson	92.0	1.7	3.6	1.1	61.0	24.6	...
Henry	142.1	...	...	...	93.3	48.8	...
Lauderdale <sup>2</sup>	135.1	...	...	...	66.3	42.8	26.1
McNairy	66.3	0.2	3.1	7.2	46.8	9.1	...
Madison	120.3	...	...	2.9	68.4	49.0	...
Obion	92.8	...	...	...	55.0	37.8	...
Shelby	111.4	...	...	...	61.6	44.0	5.8
Weakley	76.1	...	...	...	27.2	48.9	...
All counties	1419.1	3.6	9.1	34.4	851.6	488.5	31.9

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 31—Volume of timber on timberland by county, class of timber and species group, West Tennessee, 1989**

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
----- Million cubic feet -----							
Carroll	272.2	18.7	233.7	0.1	18.8	...	0.8
Chester	109.7	30.6	73.4	1.0	4.0	...	0.6
Dyer <sup>1</sup>	209.0	24.0	168.7	...	16.4	...	...
Fayette	228.4	20.7	180.9	2.7	18.6	...	5.4
Hardeman	329.5	58.6	239.1	1.1	26.3	...	4.5
Haywood	130.5	...	122.5	...	6.6	...	1.3
Henderson	251.5	39.5	175.0	2.7	25.8	0.6	7.8
Henry	256.5	2.9	228.2	0.3	19.5	...	5.6
Lauderdale <sup>2</sup>	252.4	20.0	199.5	1.9	15.6	1.7	13.7
McNairy	251.8	78.5	154.7	1.6	13.5	...	3.5
Madison	223.7	8.1	201.1	0.7	11.9	...	1.9
Obion	153.6	12.9	128.5	0.8	9.5	...	1.9
Shelby	215.9	1.7	187.4	0.4	24.5	...	1.9
Weakley	159.8	20.8	118.9	0.4	13.9	...	5.8
All counties	3044.6	336.9	2411.6	13.8	225.0	2.3	54.9

<sup>1</sup>Crockett, Gibson, and Lake included in Dyer.

<sup>2</sup>Tipton included in Lauderdale.

**Table 32—Number of live trees on timberland by detailed species and diameter class, West Tennessee, 1989**

Species	Diameter class (inches at breast height)												
	All classes	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
<i>----- Thousand trees -----</i>													
Shortleaf pine	33590	10733	10770	3822	3321	1773	1837	794	426	74	31	8	...
Loblolly pine	36329	10547	7258	8957	4356	2950	1241	815	109	71	23	...	...
Virginia pine	456	456	...	...	...	...	...	...	...	...	...	...	...
Redcedar	60837	35918	16841	5161	1626	776	389	86	...	39	...	...	...
Cypress	1814	...	563	...	196	136	31	143	176	104	109	239	116
Total softwoods	133026	57655	35433	17941	9500	5636	3499	1839	710	288	163	246	116
Select white oaks	67394	34633	14306	6012	3506	2894	2127	1476	801	735	380	482	42
Select red oaks	16957	4407	2573	1930	2505	1582	991	978	686	366	321	525	94
Other white oaks	31670	15159	4337	3767	2295	2344	1239	1327	502	305	177	214	4
Other red oaks	67771	25296	11103	6119	6324	6626	3748	3324	2011	1602	654	806	159
Sweet pecan	799	676	...	...	...	51	...	32	21	...	...	13	5
Water hickory	198	...	...	...	...	59	72	53	...	13	...	...	...
Other hickories	73274	44473	10803	5558	3988	3128	2237	1562	720	466	195	142	...
Persimmon	17032	10892	3385	1783	711	122	67	21	31	...	20	...	...
Hard maple	18129	9240	5036	1716	885	476	261	261	113	85	...	53	4
Soft maple	68457	39628	12351	6939	3622	2736	1266	778	466	384	93	167	26
Boxelder	15264	7762	1865	2135	1857	965	366	140	146	28	...	...	...
Beech	12614	7100	2253	1151	432	296	409	318	130	179	125	168	53
Sweetgum	90410	47709	17265	7955	4608	5083	3092	2001	1529	483	347	292	47
Blackgum	45274	32415	3595	3741	2332	1322	1008	426	263	74	79	17	...
Other gums/tupelos	3506	1759	563	214	421	131	58	170	64	68	40	17	...
White ash	9493	6044	528	1429	440	348	334	165	71	51	51	26	6
Other ashes	22063	11297	2789	2370	1491	2043	902	398	382	263	103	25	...
Sycamore	4559	1159	1723	249	140	430	101	235	147	80	84	153	59
Cottonwood	1318	...	602	274	...	48	62	21	78	55	22	69	86
Basswood	753	598	...	155	...	...	...	...	...	...	...	...	...
Yellow-poplar	27948	12933	4746	1859	2360	1674	1449	1073	788	404	358	290	13
Magnolia	18	...	...	...	...	...	...	...	...	18	...	...	...
Sweetbay	343	...	...	305	...	38	...	...	...	...	...	...	...
Willow	7845	2984	1054	1267	869	823	251	212	66	84	72	135	28
Black walnut	763	...	...	100	236	182	145	48	43	...	10	...	...
Black cherry	26642	13806	8728	2364	924	376	212	62	100	42	10	17	...
American elm	19131	10604	3882	2030	942	839	261	311	178	24	24	32	3
Other elms	66382	51879	6991	3836	2120	823	397	231	32	43	10	15	4
River birch	5659	2328	...	1711	449	448	339	156	83	70	44	30	...
Hackberry	6796	2686	1945	231	538	591	241	349	123	49	33	...	9
Black locust	1862	1565	...	...	88	...	66	40	48	25	21	8	...
Other locusts	1276	566	...	...	362	83	124	95	17	14	...	14	...
Sassafras	13440	9275	2993	1023	63	86	...	...	...	...	...	...	...
Dogwood	84161	63336	16806	3310	606	102	...	...	...	...	...	...	...
Holly	5442	5232	...	...	76	78	56	...	...	...	...	...	...
Other commercial	5870	3517	1308	207	590	52	158	20	16	...	...	...	...
Total hardwoods	840512	480959	143529	71741	45779	36881	22043	16285	9656	6010	3273	3710	644
Noncommercial	99206	76691	13226	4730	3008	882	450	45	44	53	59	19	...
All species	1072743	615306	192187	94413	58287	43398	25992	18169	10410	6351	3495	3975	760

**Table 33—Number of growing-stock trees on timberland by detailed species and diameter class, West Tennessee, 1989**

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	21.0-28.9	29.0 & larger
<i>----- Thousand trees -----</i>											
Shortleaf pine	11825	3705	3203	1773	1837	794	411	74	20	8	...
Loblolly pine	17010	7852	4145	2753	1241	815	109	71	23	...	...
Redcedar	5845	3524	1359	520	338	65	...	39	...	...	...
Cypress	1085	...	121	136	31	118	139	88	109	239	104
Total softwoods	35765	15081	8828	5183	3448	1792	659	272	152	246	104
Select white oaks	16349	4555	3273	2742	2101	1476	726	663	349	437	25
Select red oaks	9712	1930	2505	1486	991	892	671	353	321	498	66
Other white oaks	10455	3065	1910	2187	1205	1105	445	266	136	131	4
Other red oaks	28960	5218	6263	6291	3455	3135	1773	1415	603	695	113
Sweet pecan	123	...	...	51	...	32	21	...	...	13	5
Water hickory	185	...	...	59	72	53	...	...	...	...	...
Other hickories	16096	4618	3857	2855	1978	1445	688	375	171	108	...
Persimmon	2604	1684	660	122	67	21	31	...	20	...	...
Hard maple	2901	1103	885	394	117	240	63	69	...	29	...
Soft maple	10088	4053	1949	1895	900	550	262	259	69	132	20
Boxelder	2837	958	850	634	185	90	91	28	...	...	...
Beech	2418	762	432	254	303	209	97	138	80	110	32
Sweetgum	23046	6760	4138	4728	2967	1930	1443	444	337	252	47
Blackgum	6611	2560	1468	944	917	340	212	74	79	17	...
Other gums/tupelos	883	126	285	131	...	170	64	68	30	9	...
White ash	2606	1218	385	348	308	141	71	51	51	26	6
Other ashes	6014	1547	936	1605	830	376	359	263	80	18	...
Sycamore	1233	154	69	244	101	235	115	68	84	136	27
Cottonwood	703	274	...	48	62	21	78	42	22	69	86
Basswood	155	155	...	...	...	...	...	...	...	...	...
Yellow-poplar	9843	1771	2160	1674	1449	1012	757	392	349	275	5
Magnolia	18	...	...	...	...	...	...	18	...	...	...
Sweetbay	246	208	...	38	...	...	...	...	...	...	...
Willow	3489	1267	750	776	251	183	31	36	60	117	18
Black walnut	621	100	147	182	91	48	43	...	10	...	...
Black cherry	3024	1650	858	290	60	41	67	42	...	17	...
American elm	3294	1027	865	755	261	178	141	24	24	17	3
Other elms	5196	1826	1970	728	397	207	16	30	10	8	4
River birch	2832	1464	378	317	307	156	83	70	34	23	...
Hackberry	1192	114	197	366	136	196	105	49	20	...	9
Black locust	140	...	...	...	31	40	15	25	21	8	...
Other locusts	520	...	233	83	124	35	17	14	...	14	...
Sassafras	968	866	63	39	...	...	...	...	...	...	...
Dogwood	854	802	52	...	...	...	...	...	...	...	...
Holly	76	...	76	...	...	...	...	...	...	...	...
Other commercial	459	207	176	...	60	...	16	...	...	...	...
Total hardwoods	176749	52041	37788	32267	19730	14557	8500	5274	2961	3160	472
All species	212514	67122	46616	37450	23178	16349	9159	5545	3113	3406	576



**Table 34—Volume of growing-stock trees on timberland by detailed species and diameter class, West Tennessee, 1989**

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	21.0-28.9	29.0 & larger
<i>----- Million cubic feet -----</i>											
Shortleaf pine	127.7	9.9	20.2	21.3	36.0	21.8	14.2	2.9	1.0	0.4	...
Loblolly pine	119.5	18.6	24.7	29.2	19.5	18.2	4.2	3.6	1.4	...	...
Redcedar	24.3	6.9	6.5	4.3	4.2	1.2	...	1.1	...	...	...
Cypress	65.5	...	0.9	2.1	0.4	2.7	4.7	4.5	6.2	24.6	19.5
Total softwoods	336.9	35.5	52.2	56.9	60.2	43.9	23.1	12.1	8.7	25.0	19.5
Select white oaks	248.4	11.5	20.6	30.7	38.4	39.1	24.9	30.5	18.5	31.8	2.5
Select red oaks	183.6	5.3	14.5	15.2	18.2	23.2	24.6	15.3	17.1	40.4	9.9
Other white oaks	116.6	7.2	9.6	21.2	19.0	22.7	12.5	9.5	6.4	7.9	0.5
Other red oaks	462.0	14.5	35.3	67.4	57.5	69.6	55.0	61.8	33.0	51.4	16.4
Sweet pecan	3.9	...	...	0.3	...	0.7	0.6	...	...	1.3	1.0
Water hickory	2.9	...	...	0.7	1.3	0.9	...	...	...	...	...
Other hickories	198.3	11.2	21.8	32.6	36.6	36.4	23.7	17.1	10.1	8.9	...
Persimmon	13.4	4.0	3.4	1.4	1.3	0.7	1.2	...	1.4	...	...
Hard maple	28.7	2.9	5.5	4.8	2.7	5.3	2.5	2.8	...	2.2	...
Soft maple	102.2	10.3	11.4	21.5	14.5	12.7	8.3	9.9	3.2	9.2	1.3
Boxelder	22.0	2.3	5.3	5.9	2.6	1.7	3.3	1.0	...	...	...
Beech	41.3	2.1	2.4	2.7	5.6	5.3	2.9	5.4	4.5	7.3	3.0
Sweetgum	331.0	14.0	25.7	53.8	57.7	53.2	54.6	23.3	19.7	22.3	6.6
Blackgum	60.3	6.5	8.0	8.9	15.0	7.1	6.9	3.1	3.8	1.0	...
Other gums/tupelos	12.5	0.3	1.3	1.4	...	4.2	1.7	2.1	1.2	0.4	...
White ash	29.8	2.6	2.3	3.4	5.7	4.6	2.4	2.3	3.1	2.1	1.3
Other ashes	86.5	4.1	7.3	19.5	15.8	10.9	11.4	12.5	4.0	1.0	...
Sycamore	37.9	0.4	0.6	2.8	2.0	6.1	4.0	2.7	5.0	10.5	3.7
Cottonwood	33.5	0.4	...	0.4	1.2	0.7	3.4	2.2	1.5	7.0	16.8
Basswood	0.2	0.2	...	...	...	...	...	...	...	...	...
Yellow-poplar	187.4	4.6	13.9	18.7	26.2	28.2	29.3	20.2	21.8	24.2	0.3
Magnolia	0.8	...	...	...	...	...	...	0.8	...	...	...
Sweetbay	1.2	0.7	...	0.4	...	...	...	...	...	...	...
Willow	41.5	2.8	4.1	8.9	4.0	4.3	1.2	1.7	3.7	9.5	1.4
Black walnut	7.4	0.3	1.2	1.6	1.6	1.2	0.9	...	0.6	...	...
Black cherry	18.2	4.6	4.2	3.2	0.6	1.0	1.6	2.0	...	1.0	...
American elm	34.2	3.4	5.1	7.7	4.2	4.7	4.5	0.9	1.4	1.9	0.5
Other elms	39.0	5.5	10.6	8.5	6.2	4.9	0.6	1.2	0.7	0.1	0.7
River birch	29.9	5.0	2.9	4.0	5.1	4.1	2.6	3.0	1.7	1.6	...
Hackberry	18.3	0.4	1.1	3.9	2.6	3.9	3.1	1.9	0.9	...	0.6
Black locust	4.1	...	...	...	0.5	1.0	0.5	0.6	1.2	0.3	...
Other locusts	7.4	...	0.9	1.0	2.7	0.5	0.6	0.6	...	1.1	...
Sassafras	3.2	2.5	0.4	0.4	...	...	...	...	...	...	...
Dogwood	1.5	1.2	0.3	...	...	...	...	...	...	...	...
Holly	0.3	...	0.3	...	...	...	...	...	...	...	...
Other commercial	2.3	0.6	0.5	...	0.9	...	0.3	...	...	...	...
Total hardwoods	2411.6	131.4	220.6	352.8	349.8	359.0	288.9	234.1	164.5	244.3	66.3
All species	2748.6	166.9	272.8	409.7	409.9	402.9	312.0	246.3	173.1	269.3	85.8

**Table 35—Volume of growing stock in the saw-log portion of sawtimber trees on timberland by detailed species and diameter class, West Tennessee, 1989**

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 & larger
----- Million cubic feet -----									
Shortleaf pine	82.9	17.1	31.5	18.7	12.2	2.5	0.7	0.3	...
Loblolly pine	61.2	21.4	16.2	15.6	3.6	3.1	1.3	...	...
Redcedar	9.0	3.4	3.5	1.1	...	1.0	...	...	...
Cypress	59.6	1.7	0.3	2.1	3.9	4.0	5.9	23.1	18.6
Total softwoods	212.7	43.6	51.4	37.5	19.7	10.6	7.9	23.4	18.6
Select white oaks	152.7	...	28.4	32.2	21.1	26.2	16.2	26.4	2.3
Select red oaks	124.0	...	14.2	18.7	21.3	12.7	14.0	35.2	7.9
Other white oaks	65.1	...	15.0	19.0	10.8	8.1	5.3	6.5	0.4
Other red oaks	286.7	...	42.0	56.8	47.6	54.2	28.4	43.8	13.9
Sweet pecan	2.7	...	...	0.6	0.5	...	...	0.9	0.7
Water hickory	1.7	...	1.0	0.7	...	...	...	...	...
Other hickories	108.6	...	26.9	29.8	20.7	14.2	9.1	8.0	...
Persimmon	3.9	...	0.9	0.6	1.1	...	1.3	...	...
Hard maple	12.3	...	1.5	4.3	2.1	2.2	...	2.1	...
Soft maple	48.3	...	10.5	10.1	7.0	8.8	2.9	8.0	1.2
Boxelder	6.7	...	1.9	1.4	2.6	0.8	...	...	...
Beech	28.7	...	4.2	4.3	2.6	4.2	3.6	6.9	2.9
Sweetgum	198.8	...	41.5	44.3	47.6	21.1	17.8	20.7	5.8
Blackgum	30.0	...	10.8	6.0	6.1	2.6	3.5	1.0	...
Other gums/tupelos	7.5	...	...	3.2	1.3	1.8	1.0	0.3	...
White ash	18.7	...	4.3	4.1	2.1	2.0	2.8	1.9	1.3
Other ashes	45.4	...	11.1	9.1	9.8	10.8	3.7	0.9	...
Sycamore	29.0	...	1.4	4.7	3.6	2.6	4.1	9.4	3.3
Cottonwood	29.7	...	1.0	0.6	3.0	2.0	1.3	6.5	15.3
Yellow-poplar	127.3	...	19.3	23.7	26.0	18.3	19.2	20.6	0.3
Magnolia	0.5	...	...	...	...	0.5	...	...	...
Willow	22.4	...	2.9	3.4	1.0	1.3	3.6	8.8	1.4
Black walnut	3.6	...	1.3	0.9	0.8	...	0.6	...	...
Black cherry	5.2	...	0.3	0.8	1.4	1.7	...	0.9	...
American elm	14.7	...	3.0	3.8	3.8	0.7	1.3	1.6	0.4
Other elms	10.9	...	4.1	3.8	0.5	1.1	0.7	0.1	0.7
River birch	14.3	...	3.8	3.5	2.0	2.3	1.3	1.4	...
Hackberry	10.7	...	2.2	3.1	2.5	1.5	0.7	...	0.6
Black locust	3.5	...	0.5	0.8	0.2	0.5	1.1	0.3	...
Other locusts	4.2	...	1.9	0.5	0.5	0.5	...	0.8	...
Other commercial	1.0	...	0.7	...	0.3	...	...	...	...
Total hardwoods	1419.1	...	256.7	294.7	250.0	202.6	143.4	213.2	58.5
All species	1631.8	43.6	308.1	332.2	269.7	213.2	151.3	236.6	77.1

**Table 36—Volume of timber on timberland by species and class of timber,  
West Tennessee, 1989**

Species	All live	Growing stock	Rough	Rotten
----- Million cubic feet -----				
Shortleaf pine	129.4	127.7	1.7	...
Loblolly pine	122.7	119.5	3.2	...
Redcedar	31.1	24.3	6.2	0.6
Cypress	69.8	65.5	2.7	1.7
Total softwoods	353.0	336.9	13.8	2.3
Select white oaks	261.8	248.4	12.1	1.3
Select red oaks	188.7	183.6	3.8	1.3
Other white oaks	129.1	116.6	9.9	2.6
Other red oaks	491.7	462.0	23.4	6.3
Sweet pecan	3.9	3.9	...	...
Water hickory	3.5	2.9	0.6	...
Other hickories	211.7	198.3	10.7	2.7
Persimmon	13.6	13.4	0.3	...
Hard maple	35.9	28.7	6.6	0.5
Soft maple	137.3	102.2	27.0	8.1
Boxelder	34.2	22.0	11.8	0.4
Beech	54.3	41.3	7.6	5.4
Sweetgum	347.5	331.0	12.2	4.3
Blackgum	72.2	60.3	10.5	1.3
Other gums/tupelos	14.4	12.5	1.4	0.5
White ash	31.2	29.8	1.0	0.5
Other ashes	95.9	86.5	8.4	1.0
Sycamore	51.7	37.9	3.0	10.8
Cottonwood	33.9	33.5	0.5	...
Basswood	0.2	0.2	...	...
Yellow-poplar	192.3	187.4	2.6	2.3
Magnolia	0.8	0.8	...	...
Sweetbay	1.5	1.2	0.4	...
Willow	46.3	41.5	3.7	1.2
Black walnut	8.3	7.4	0.7	0.1
Black cherry	22.4	18.2	2.5	1.7
American elm	40.5	34.2	5.8	0.5
Other elms	43.8	39.0	4.7	...
River birch	33.0	29.9	2.8	0.3
Hackberry	25.7	18.3	7.1	0.3
Black locust	4.5	4.1	0.3	...
Other locusts	8.8	7.4	0.9	0.5
Sassafras	3.7	3.2	0.5	...
Dogwood	6.8	1.5	4.9	0.4
Holly	1.2	0.3	0.8	0.2
Other commercial	4.5	2.3	2.1	0.1
Total hardwoods	2657.0	2411.6	190.5	54.9
Noncommercial	34.6	...	34.6	...
All species	3044.6	2748.6	238.8	57.2

**Table 37—Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, West Tennessee, 1989**

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 & larger
<i>----- Million board feet -----</i>									
Shortleaf pine	77.1	5.6	19.1	22.6	27.3	2.5	...	...	...
Loblolly pine	16.5	0.6	4.3	11.6	...	...	...	...	...
Redcedar	32.7	14.4	14.5	3.8	...	...	...	...	...
Cypress	90.8	...	...	...	7.3	8.3	20.4	54.8	...
Total softwoods	217.0	20.5	37.9	38.0	34.6	10.8	20.4	54.8	...
Select white oaks	110.2	...	...	...	...	43.6	13.9	47.0	5.7
Select red oaks	159.2	...	...	...	5.9	5.8	9.7	106.5	31.3
Other white oaks	26.2	...	...	...	5.2	2.4	3.1	15.5	...
Other red oaks	177.8	...	...	...	...	36.6	9.3	85.7	46.3
Sweet pecan	11.7	...	...	...	...	...	...	6.3	5.5
Other hickories	26.6	...	...	...	2.2	12.0	9.4	3.0	...
Soft maple	8.9	...	...	...	3.2	2.2	...	3.4	...
Boxelder	12.5	...	...	...	9.5	3.0	...	...	...
Sweetgum	142.7	...	...	...	51.4	14.7	31.4	32.4	12.8
Blackgum	8.4	...	...	...	...	2.0	4.5	1.9	...
White ash	7.9	...	...	...	...	...	3.3	4.7	...
Other ashes	36.8	...	...	...	3.2	27.2	2.9	3.6	...
Sycamore	42.0	...	...	...	...	3.3	3.7	25.7	9.3
Cottonwood	120.3	...	...	...	5.3	4.9	4.3	25.4	80.4
Yellow-poplar	102.4	...	...	...	15.5	9.3	28.4	49.2	...
Willow	5.3	...	...	...	...	...	...	5.3	...
American elm	14.0	...	...	...	...	4.5	3.6	5.9	...
River birch	14.1	...	...	...	...	1.6	4.2	8.3	...
Total hardwoods	1027.3	...	...	...	101.6	173.1	131.7	429.7	191.3
All species	1244.3	20.5	37.9	38.0	136.2	183.8	152.1	484.5	191.3

**Table 38—Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class, West Tennessee, 1989**

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 & larger
<i>----- Million board feet -----</i>									
Shortleaf pine	26.0	2.4	13.5	2.6	7.4	...	...	...	...
Loblolly pine	81.3	13.6	15.7	17.4	16.7	17.9	...	...	...
Cypress	80.9	...	...	2.7	3.5	3.1	2.6	16.9	52.1
Total softwoods	188.1	16.0	29.3	22.7	27.7	21.0	2.6	16.9	52.1
Select white oaks	185.4	...	...	39.2	39.9	43.7	24.9	37.7	...
Select red oaks	185.6	...	...	21.9	47.0	13.8	36.9	55.5	10.6
Other white oaks	44.9	...	...	16.6	9.5	9.3	3.3	3.5	2.7
Other red oaks	262.7	...	...	28.6	65.2	94.5	26.4	40.5	7.5
Sweet pecan	2.7	...	...	...	2.7	...	...	...	...
Other hickories	119.3	...	...	34.6	35.0	22.6	8.1	19.1	...
Soft maple	18.0	...	...	7.5	3.8	4.4	...	2.2	...
Beech	5.8	...	...	...	...	3.6	2.2	...	...
Sweetgum	244.9	...	...	57.3	91.3	44.1	17.9	34.3	...
Blackgum	25.4	...	...	8.3	14.4	2.7	...	...	...
White ash	23.5	...	...	7.0	3.0	6.8	...	6.7	...
Other ashes	63.8	...	...	26.5	16.0	18.5	2.9	...	...
Sycamore	46.2	...	...	11.2	10.1	8.1	6.8	10.0	...
Cottonwood	16.9	...	...	...	4.2	3.0	...	9.7	...
Yellow-poplar	171.6	...	...	18.7	35.5	37.5	37.6	40.3	2.0
Magnolia	3.4	...	...	...	...	3.4	...	...	...
Willow	11.4	...	...	3.8	...	3.8	...	3.9	...
Black walnut	3.6	...	...	...	...	...	3.6	...	...
Black cherry	13.7	...	...	...	3.2	10.6	...	...	...
American elm	7.7	...	...	...	7.7	...	...	...	...
River birch	11.3	...	...	6.5	...	3.0	1.8	...	...
Black locust	1.5	...	...	...	...	1.5	...	...	...
Total hardwoods	1469.3	...	...	287.7	388.3	334.8	172.4	263.3	22.8
All species	1657.5	16.0	29.3	310.4	416.0	355.7	175.1	280.2	74.9

**Table 39—Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, West Tennessee, 1989**

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 & larger
<i>----- Million board feet -----</i>									
Shortleaf pine	376.0	84.3	147.1	86.6	39.5	11.8	4.7	1.9	...
Loblolly pine	233.9	91.7	65.1	59.8	5.6	3.1	8.6	...	...
Cypress	159.6	9.3	1.1	8.4	10.4	10.3	9.4	62.3	48.3
Total softwoods	769.4	185.3	213.3	154.9	55.5	25.2	22.8	64.3	48.3
Select white oaks	380.2	...	92.5	99.8	65.2	44.9	34.9	41.1	1.8
Select red oaks	220.7	...	37.2	59.0	30.6	38.7	27.4	25.2	2.6
Other white oaks	170.7	...	41.3	64.2	22.3	19.1	22.0	1.8	...
Other red oaks	662.0	...	138.0	157.5	145.0	87.3	66.9	64.0	3.2
Sweet pecan	3.5	...	...	3.5	...	...	...	...	...
Water hickory	3.6	...	1.2	2.4	...	...	...	...	...
Other hickories	261.5	...	81.2	88.1	34.9	26.2	18.3	12.9	...
Persimmon	11.0	...	4.6	...	6.3	...	...	...	...
Hard maple	27.5	...	...	10.8	9.4	...	...	7.3	...
Soft maple	83.0	...	18.2	22.9	6.6	20.3	4.1	7.8	3.1
Boxelder	3.3	...	1.8	...	1.5	...	...	...	...
Beech	17.9	...	...	3.4	2.2	...	5.0	7.3	...
Sweetgum	497.4	...	158.0	136.4	100.9	39.7	36.6	22.2	3.8
Blackgum	85.2	...	31.6	21.8	6.6	6.2	14.9	4.0	...
Other gums/tupelos	21.4	...	...	9.2	4.2	2.3	4.5	1.2	...
White ash	35.5	...	9.6	6.2	...	...	13.3	...	6.4
Other ashes	113.3	...	54.9	17.0	20.5	14.0	6.9	...	...
Sycamore	42.2	...	8.1	10.2	2.8	2.7	10.5	3.1	4.8
Cottonwood	20.3	...	2.9	3.9	...	4.0	3.5	3.0	3.0
Yellow-poplar	251.7	...	56.8	60.7	51.5	27.8	32.4	22.7	...
Willow	43.1	...	2.4	...	4.1	4.7	16.6	15.4	...
Black walnut	4.6	...	...	...	4.6	...	...	...	...
Black cherry	7.8	...	1.1	4.0	2.8	...	...	...	...
American elm	29.2	...	11.3	11.2	6.7	...	...	...	...
Other elms	30.6	...	11.5	12.2	2.9	...	4.0	...	...
River birch	27.8	...	11.5	4.9	5.6	3.5	2.3	...	...
Hackberry	22.0	...	3.8	6.1	7.9	4.1	...	...	...
Black locust	8.0	...	3.2	1.6	1.3	1.9	...	...	...
Other commercial	1.5	...	1.5	...	...	...	...	...	...
Total hardwoods	3086.5	...	784.0	817.0	546.4	347.3	324.1	239.0	28.7
All species	3855.9	185.3	997.3	971.8	601.9	372.4	346.9	303.3	77.0



**Table 40—Volume of sawtimber for tree grade 4 on timberland by detailed species and diameter class, West Tennessee, 1989**

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
----- Million board feet -----									
Select white oaks	191.9	...	64.7	43.3	16.5	22.7	21.8	22.9	...
Select red oaks	133.2	...	42.5	24.0	27.3	9.1	10.5	14.3	5.4
Other white oaks	118.7	...	32.2	25.1	26.9	13.7	6.9	13.8	...
Other red oaks	467.3	...	80.7	115.5	49.2	100.4	60.2	51.4	10.0
Water hickory	5.8	...	4.7	1.1	...	...	...	...	...
Other hickories	204.6	...	68.4	45.8	41.3	25.0	18.8	5.4	...
Persimmon	12.4	...	...	3.7	...	...	8.7	...	...
Hard maple	38.7	...	8.8	10.5	3.3	9.8	...	6.3	...
Soft maple	114.3	...	27.1	16.3	22.0	11.5	12.4	25.0	...
Boxelder	22.9	...	9.7	6.2	5.0	1.9	...	...	...
Beech	99.7	...	21.1	15.1	11.8	18.1	16.0	17.6	...
Sweetgum	201.9	...	64.2	46.6	29.5	25.9	9.8	22.9	3.0
Blackgum	34.5	...	19.2	1.6	12.0	1.7	...	...	...
Other gums/tupelos	8.6	...	...	3.6	0.6	4.4	...	...	...
White ash	39.2	...	13.9	13.5	10.0	1.7	...	...	...
Other ashes	24.2	...	4.2	3.6	13.4	3.0	...	...	...
Sycamore	27.4	...	...	4.2	3.5	...	...	12.7	7.0
Cottonwood	4.3	...	...	...	4.3	...	...	...	...
Yellow-poplar	211.8	...	47.4	58.3	48.6	27.6	12.8	17.1	...
Willow	61.0	...	9.4	15.9	2.9	...	2.6	24.3	5.9
Black walnut	13.0	...	7.6	5.4	...	...	...	...	...
Black cherry	4.3	...	0.8	...	...	...	...	3.5	...
American elm	29.4	...	3.4	8.8	9.0	...	4.1	4.1	...
Other elms	20.1	...	8.2	4.5	...	2.7	...	...	4.6
River birch	13.4	...	4.1	3.9	2.5	2.9	...	...	...
Hackberry	31.4	...	4.4	11.3	2.3	5.3	4.2	...	4.0
Black locust	7.4	...	...	3.0	...	...	4.4	...	...
Other locusts	25.8	...	11.1	2.7	3.4	2.9	...	5.8	...
Other commercial	2.8	...	2.8	...	...	...	...	...	...
Total hardwoods	2170.0	...	560.5	493.6	345.3	290.5	193.0	247.2	39.9
All species	2170.0	...	560.5	493.6	345.3	290.5	193.0	247.2	39.9

## Graphics

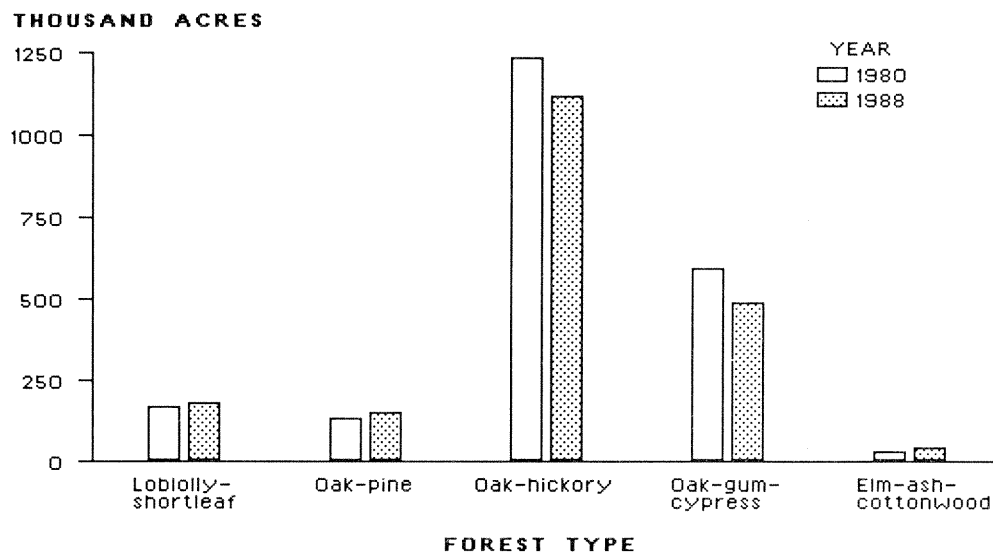


Figure 1.--Area of timberland by forest type, West Tennessee, 1980 and 1988.

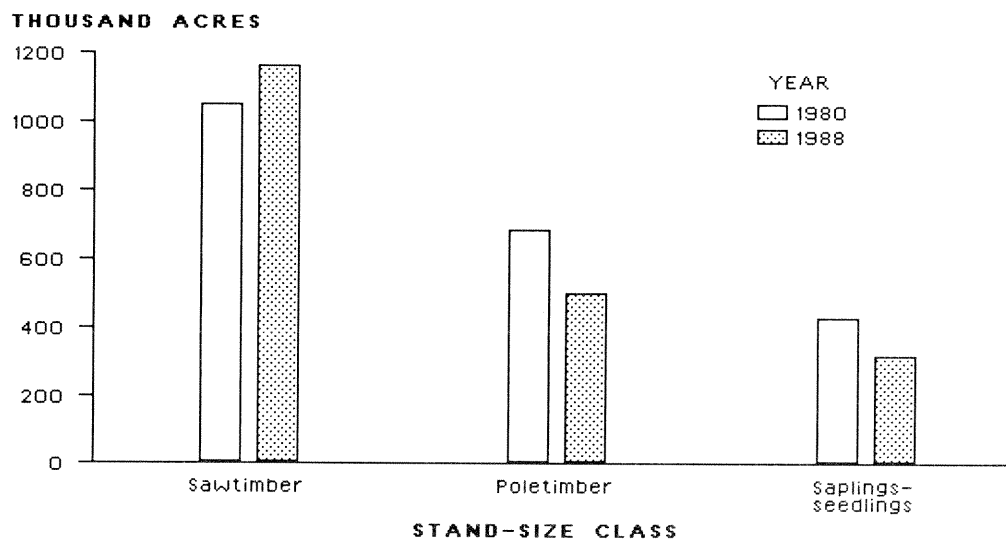


Figure 2.--Area of timberland by stand-size class, West Tennessee, 1980 and 1988

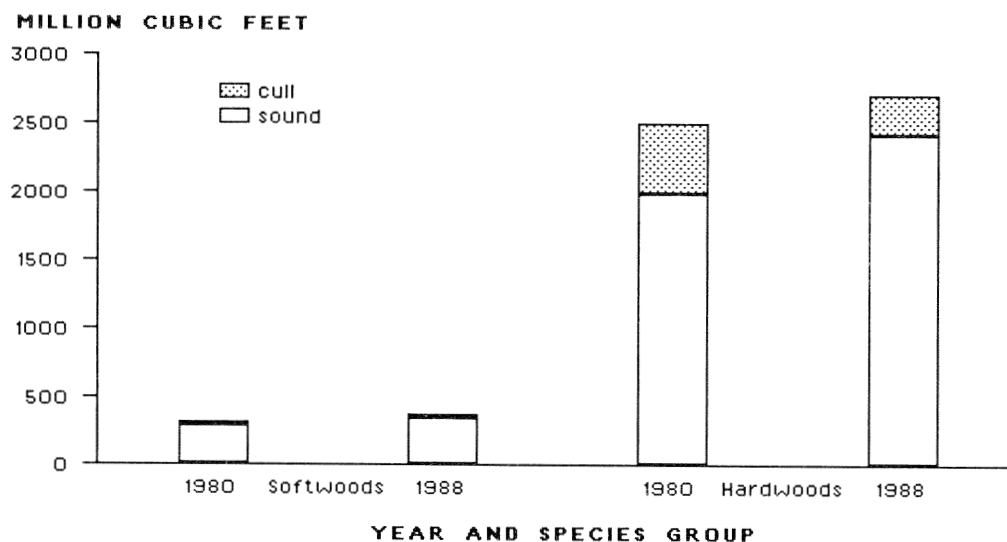


Figure 3.--Volume of timber on timberland by species group and class of timber, West Tennessee, 1980 and 1988.

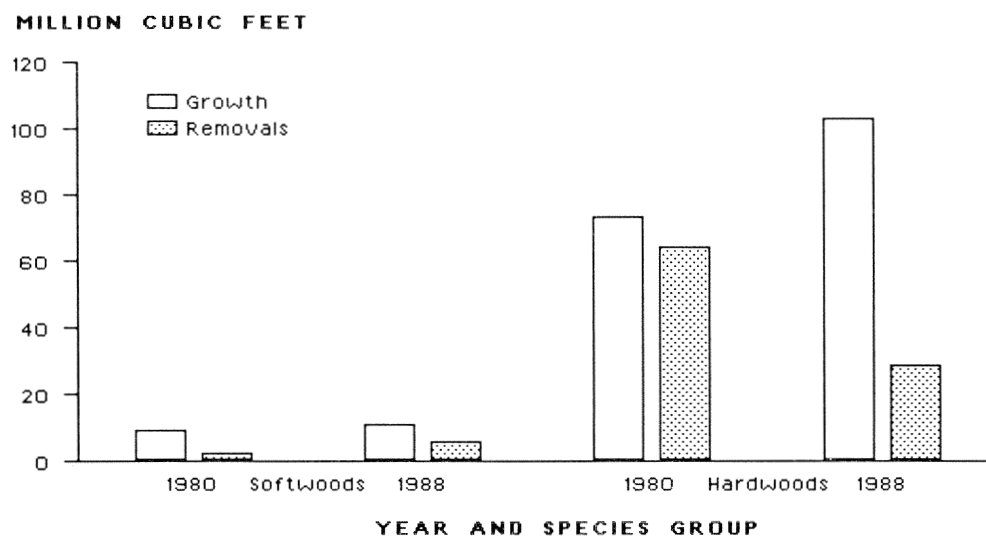


Figure 4.--Average net annual growth and average annual removals of growing stock on timberland by species group, West Tennessee, 1980 and 1988.

# MILLION CUBIC FEET



Figure 5.--Volume of softwood growing stock on timberland by diameter class, West Tennessee, 1971, 1980, and 1988.

# MILLION CUBIC FEET

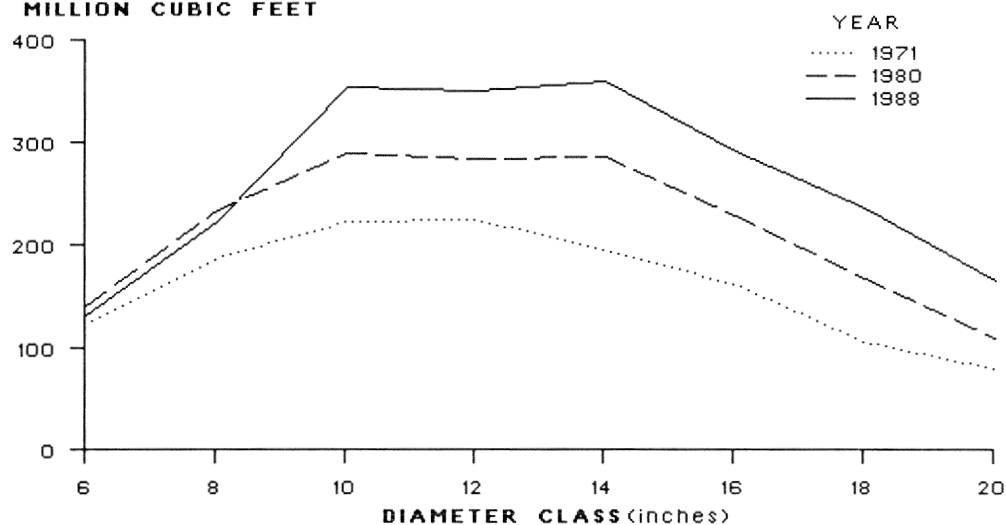


Figure 6.--Volume of hardwood growing stock on timberland by diameter class, West Tennessee, 1971, 1980, and 1988.

# MILLION TREES

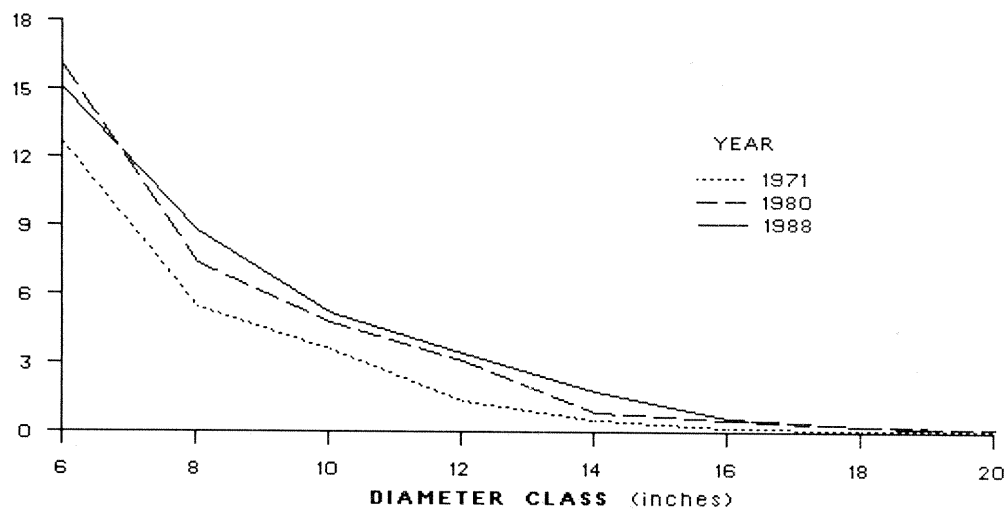


Figure 7.--Number of softwood growing-stock trees on timberland by diameter class, West Tennessee, 1971, 1980, and 1988.

# MILLION TREES

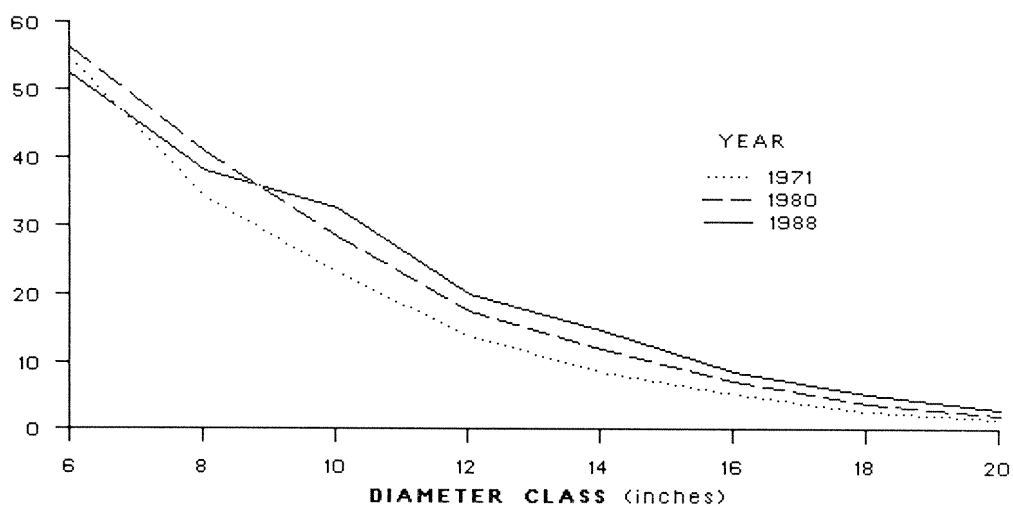


Figure 8.--Number of hardwood growing-stock trees on timberland by diameter class, West Tennessee, 1971, 1980, and 1988.

# PERCENT CHANGE



Figure 9.--Percent change in the number of live trees on timberland by species group and diameter class, West Tennessee, 1980 and 1988.