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Forest Statistics for West-Central Tennessee Counties — 1989

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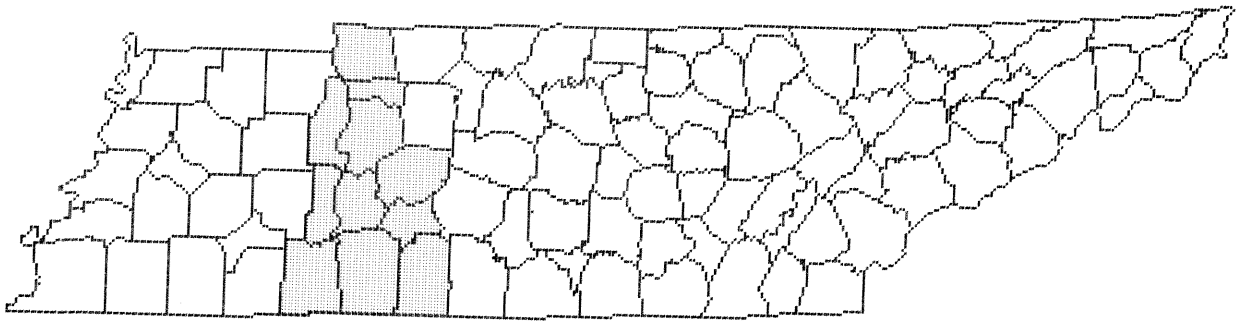

SUMMARY

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

- Timberland now covers 2,333.7 thousand acres, a 7 percent increase since 1980.
- Sixty-nine percent of the unit is covered by timberland.
- Ninety-four percent of the unit's timberland is privately owned.
- Forest industry controls over one-fifth of the unit's timberland.
- Hardwood forest types occupy 90 percent of the unit's timberland.
- The number of softwood growing-stock trees increased 5 percent, while hardwood numbers declined 27 percent.
- Softwood growing-stock volume increased 3 percent to 161.1 million cubic feet and hardwood growing-stock volume climbed 22 percent to 2368.1 million cubic feet.
- Hardwood grade 1 volume decreased 40 percent since 1980.
- Growing-stock growth decreased 4 percent, while sawtimber growth increased 4 percent.
- Growing-stock mortality tripled and sawtimber mortality quadrupled since 1980.
- Softwood removals doubled due to increased yellow pine harvests, while only sawtimber removals increased for hardwoods.
- Growth exceeds removals by 2 to 1 for hardwoods, but growth equals removals for softwoods.

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.

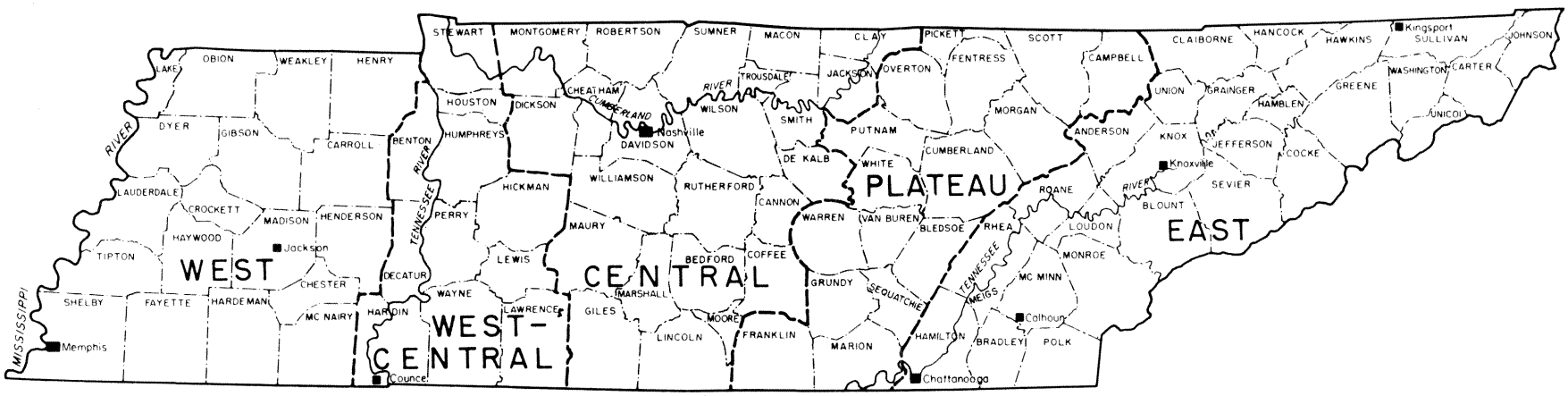

Figure I.-The forest survey regions of Tennessee.

Forest Statistics for West-Central Tennessee Counties – 1989

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INTRODUCTION

Tabulated results were derived from data obtained during a recent inventory of 11 counties comprising the West-Central 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-Central Unit of Tennessee (with a sampling error of 3.5 percent) is

$$2{,}529.1 \pm 1.96(0.035 \times 2{,}529.1) = 2{,}529.1 \pm 173.5$$

where 1.96 is the number of standard deviations. This confidence interval indicates a 95-percent degree of confidence that the range, 2,355.6 to 2,702.6 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 Hardin, Lawrence, and Wayne counties is 6.4 percent. Thus, the 95 percent confidence interval for growing-stock volume is 765.6 ± 96.0 million cubic feet.

Ownership information is obtained through the 3-mile grid 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.

Table I—*Sampling errors*[1] *for timberland, growing stock, and sawtimber, West-Central Tennessee Counties, 1989*

County	Timberland	Growing stock			Sawtimber volume
		Volume	Growth	Removals	
	Percent				
Benton	2.9	13.5	19.5	37.0	18.3
Decatur	3.4	10.9	12.5	28.4	14.2
Hardin	2.5	14.5	11.2	29.0	21.0
Hickman	1.7	8.3	13.6	17.6	11.4
Houston	1.9	16.4	13.9	...	21.5
Humphreys	2.7	10.2	16.3	33.7	13.4
Lawrence	1.6	15.0	13.3	21.6	19.4
Lewis	2.8	12.9	13.2	30.8	19.2
Perry	1.1	9.4	12.9	18.2	10.1
Stewart	2.9	11.2	15.2	18.8	13.6
Wayne	1.9	7.7	9.7	17.6	10.7
All Counties	0.7	3.5	4.7	8.0	4.8

[1]By random-sampling formula.

In order to achieve greater compatibility among Forest Inventory and Analysis Projects, a new tree classification system has been in effect since the 1988 Arkansas survey. Tree grade 5 is used to designate 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-Central Unit of Tennessee falls mainly within the western Highland Rim and is characteristically hilly with broken terrain and poor soils. As a consequence, the unit has always been heavily forested and remains so today with 69 percent of its area in timberland. However, areas of more fertile soils are found in stream bottoms and in unflooded portions of the Tennessee River Valley, and serve as focal points of agricultural development. Since the 1960's, agricultural and other land uses have been gaining at the expense of the unit's timberlands. However, a 7-percent increase in timberland since 1980 has reversed this trend, bringing the total timberland in the unit to 2,333.7 thousand acres.

Most of the timberland in the unit is privately held with only 6 percent in public ownership. In a pattern seen in other units of the state, timberland ownership by farmers declined appreciably, while sizable gains were made in individual and corporate holdings since 1980. The forest industry has its largest presence in this unit of the state, controlling over one-fifth of all timberland. Although forest industry ownership increased only slightly since 1980, there has been a shifting in the types of forests owned. The area in pine and oak-pine stands more than doubled since 1980, while the area in hardwood stands declined. This shifting is a reflection of forest industry's emphasis on pine management as hardwood stands on pine sites are converted to pine plantations.

Since 1980, roughly 60 thousand acres of pine plantations have been established in the unit, bringing the total to 136 thousand acres. As a consequence, planted softwood stands now outnumber natural stands by 2 to 1. Although these trends in the softwood forests are significant, the unit remains predominantly a hardwood unit. Upland hardwood forest types alone account for 87 percent of the unit's timberland. When combined with the bottomland hardwoods, the only forest type group to decline in acreage since 1980, hardwood forests occupy 90 percent of the unit's timberland.

The shifting of the softwood forest from a natural to plantation based resource has greatly affected its stand-size distribution. Since 1980, the area in sawtimber-sized stands has remained essentially unchanged, while the areas in pole and sapling-sized stands have increased by over one-third. The stand-size distribution of the rejuvenating softwood forest contrasts with the stand-size distribution of the maturing hardwood and mixed forests. Since 1980, 132 thousand additional acres of hardwood and mixed forests have been classified as sawtimber-sized, while the areas in pole and sapling-sized stands have remained essentially unchanged.

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

	Tree grade 5		
	Excluded from growing stock	Included in growing stock	Percent change
Softwood:			
Growing-stock volume	157.3	161.1	2.4
Rough and rotten volume	9.8	6.0	-38.8
Growing-stock growth	8.0	8.4	5.0
Hardwood:			
Growing-stock volume	2252.4	2368.1	5.1
Rough and rotten volume	310.2	194.6	-37.3
Growing-stock growth	70.1	82.6	17.8
Softwood:			
Sawtimber volume	409.3	415.2	1.4
Sawtimber growth	27.0	27.7	2.6
Hardwood:			
Sawtimber volume	6219.6	6549.3	5.3
Sawtimber growth	285.0	320.6	12.5

Timber Inventory

The impacts of the changing stand-size distributions on the unit's forests are extremely evident in the inventory statistics. In the rejuvenating softwood resource, the increases in softwood growing-stock numbers in the smaller size classes due to the planting of loblolly pine and natural regeneration of redcedar and Virginia pine have been offset by intensive harvesting of larger softwoods, especially shortleaf pine. As a result, softwood growing-stock numbers increased only 5 percent since 1980. Similarly, the intense harvesting of the larger trees and concentration of smaller trees below the 5-inch threshold, resulted in the softwood growing-stock volume increasing only 3 percent to 161.1 million cubic feet. A large part of the increase was due to an influx of smaller softwoods into the 6-inch class. The concentration of softwood removals in the larger size classes is evident in the 2-percent decline in softwood sawtimber inventory since 1980. Much of the loss was concentrated in natural shortleaf and planted loblolly pines. Since 1980, pine volume has declined in plantations and remained stable in natural stands. However, planted pine volume increased and natural pine volume decreased on forest industry lands, while the opposite is true on other private timberlands.

The hardwood resource followed the expected trends of a maturing forest. Hardwood growing-stock numbers declined 27 percent since 1980 with all of the loss in the 6-inch and smaller size classes. At the same time, the number of sawtimber-sized trees increased by 31 percent. As a result, hardwood growing-stock volume climbed 22 percent to 2368.1 million cubic feet and sawtimber volume jumped by one-third.

With 94 percent of the unit's sawtimber volume in hardwoods, the quality associated with this resource is of special concern. Even though hardwood sawtimber volumes have been increasing, quality has been decreasing. Since 1980, the volume in grade 1 fell 40 percent, reducing the proportion of the hardwood sawtimber volume in grade 1 from 12 to 6 percent.

Growth, Removals, and Mortality

On an annual basis, net growth for the unit averaged 91.0 million cubic feet for growing stock and 348.3 million board feet for sawtimber. These growth figures reflect the physical change in the inventory over the survey period as well as a growing-stock definition change initiated since the 1980 survey. As a result, these growth estimates are not directly comparable to past growth estimates. Using comparable growth estimates that exclude the definition change (table II), net growth decreased 4 percent for growing stock and increased 4 percent for sawtimber. The stand dynamics of the rejuvenating softwood and maturing hardwood resources, which checked both survivor growth and ingrowth, were partially responsible for the diminished growth rates of the unit. The other culprit was the significant increase in mortality since 1980. Growing-stock mortality tripled and sawtimber mortality quadrupled mainly due to bark beetle outbreaks in the yellow pine resource and high mortality in the oak species due to disease and weather, a possible reference to the impacts of oak decline in the unit.

The impacts of the already diminished growth rates on the unit's forests were heightened by an increase in removals since 1980. On an average annual basis, growing-stock removals increased 8 percent to 51.2 million cubic feet and sawtimber removals increased 29 percent to 191.8 million board feet. These totals obscure the fact that softwood removals almost doubled for growing stock and more than doubled for sawtimber. All of these increases were due to increased harvests of yellow pines. As a result of this intensive harvesting, softwood removals equaled growth over the period, explaining the stagnated softwood inventory volume. Hardwood removals were concentrated in the sawtimber portions of the inventory as evidenced by the 1-percent decline in growing-stock removals and 20-percent increase in sawtimber removals. When this knowledge is added to the reduction in grade 1 hardwood volume, it would appear that high-grading is reducing the quality of the maturing hardwood resource. However, growth still exceeds removals by a 2 to 1 margin.

Overall, the forests of the unit are in a state of flux. The softwood resource is being rejuvenated as generally mature stands are replaced by younger plantations. As a result, softwood inventories have remained essentially unchanged since 1980, but should increase in the future as the younger stands move across the 5-inch growing-stock threshold. At the same time, the hardwood resource is maturing, but concentration of removals in larger and higher grade trees is threatening the quality of this resource.

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 removals. – 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 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 use.

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 l-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 inch 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-Central Tennessee Counties, 1989*

County	All land[1]	Forest land				Nonforest land
		Total	Timberland[2]	Woodland[3]	Reserved timberland	
	Thousand acres					
Benton	279.1	172.7	172.7	...	...	106.4
Decatur	220.8	134.8	134.8	...	...	86.0
Hardin	380.9	219.9	219.9	...	...	161.0
Hickman	391.8	297.2	297.2	...	...	94.6
Houston	132.4	94.2	94.2	...	...	38.3
Humphreys	356.2	241.2	241.2	...	...	115.0
Lawrence	395.4	199.8	199.8	...	...	195.5
Lewis	180.8	158.0	158.0	...	...	22.9
Perry	271.1	223.6	223.6	...	...	47.5
Stewart	316.1	219.7	219.7	...	...	96.5
Wayne	470.7	372.6	372.6	...	...	98.1
All counties	3395.5	2333.7	2333.7	...	...	1061.8

[1]From U.S. Bureau of the Census.
[2]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.
[3]Forest land incapable of producing 20 cubic feet of industrial wood per acre per year under natural conditions because of adverse site conditions.

Table 2–*Area of timberland by county and ownership class, West-Central Tennessee Counties, 1989*

County	All ownerships	National forest	Misc. federal	State	County and municipal	Forest industry[1]	Farmer	Corporate[2]	Individual[2]
	Thousand acres								
Benton	172.7	...	19.2	...	...	12.8	38.4	6.4	95.9
Decatur	134.8	...	5.4	5.4	...	...	43.1	16.2	64.7
Hardin	219.9	...	9.6	...	...	38.2	76.5	14.3	81.3
Hickman	297.2	...	...	...	...	72.9	89.7	28.0	106.5
Houston	94.2	...	...	...	...	...	21.7	7.2	65.2
Humphreys	241.2	...	...	...	...	6.0	54.3	18.1	162.8
Lawrence	199.8	...	...	20.7	...	27.6	103.4	6.9	41.3
Lewis	158.0	...	5.9	5.9	...	46.8	23.4	5.9	70.2
Perry	223.6	...	5.7	...	...	63.1	68.8	22.9	63.1
Stewart	219.7	...	62.8	6.3	...	69.0	25.1	...	56.5
Wayne	372.6	...	...	...	...	145.3	56.8	31.6	139.0
All counties	2333.7	...	108.5	38.2	...	481.7	601.3	157.5	946.5

[1]Includes land leased to forest industry.
[2]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, West-Central Tennessee Counties, 1989*

County	Total	Forest type group				
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
		Planted	Natural			
	Thousand acres					
Benton	172.7	12.8	...	12.8	140.7	6.4
Decatur	134.8	5.4	...	5.4	118.6	5.4
Hardin	219.9	33.5	14.3	38.2	100.4	33.5
Hickman	297.2	5.6	...	...	291.6	...
Houston	94.2	...	...	...	94.2	...
Humphreys	241.2	...	...	...	241.2	...
Lawrence	199.8	...	...	6.9	186.1	6.9
Lewis	158.0	5.9	...	5.9	134.6	11.7
Perry	223.6	...	11.5	5.7	200.7	5.7
Stewart	219.7	...	6.3	...	213.4	...
Wayne	372.6	25.3	12.6	18.9	309.5	6.3
All counties	2333.7	88.4	44.7	93.8	2030.9	75.9

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

County	All classes	Stand-size class		
		Sawtimber	Poletimber	Sapling-seedling
	Thousand acres			
Benton	172.7	51.2	76.8	44.8
Decatur	134.8	75.5	48.5	10.8
Hardin	219.9	76.5	109.9	33.5
Hickman	297.2	106.5	173.8	16.8
Houston	94.2	36.2	29.0	29.0
Humphreys	241.2	108.6	90.5	42.2
Lawrence	199.8	62.0	82.7	55.1
Lewis	158.0	58.5	64.4	35.1
Perry	223.6	68.8	114.7	40.1
Stewart	219.7	125.5	50.2	43.9
Wayne	372.6	101.1	195.8	75.8
All counties	2333.7	870.4	1036.2	427.1

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

County	All classes	Site class (cubic feet/acre/year)				
		>165	120-165	85-120	50-85	<50
	Thousand acres					
Benton	172.7	...	6.4	57.6	89.5	19.2
Decatur	134.8	5.4	27.0	43.1	48.5	10.8
Hardin	219.9	4.8	43.0	109.9	57.4	4.8
Hickman	297.2	5.6	16.8	100.9	162.6	11.2
Houston	94.2	...	14.5	21.7	57.9	...
Humphreys	241.2	6.0	...	48.2	108.6	78.4
Lawrence	199.8	6.9	13.8	34.5	96.5	48.2
Lewis	158.0	...	...	29.3	105.3	23.4
Perry	223.6	...	11.5	51.6	114.7	45.9
Stewart	219.7	...	12.6	50.2	75.3	81.6
Wayne	372.6	...	25.3	56.8	221.1	69.5
All counties	2333.7	28.7	170.8	603.9	1137.4	392.9

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

County	All classes	Stocking class (percent)				
		>130	100-130	60-100	16.7-60	<16.7
	Thousand acres					
Benton	172.7	...	38.4	102.3	32.0	...
Decatur	134.8	5.4	16.2	107.9	5.4	...
Hardin	219.9	4.8	23.9	157.7	33.5	...
Hickman	297.2	...	39.3	235.5	22.4	...
Houston	94.2	...	14.5	72.4	7.2	...
Humphreys	241.2	6.0	36.2	156.8	42.2	...
Lawrence	199.8	6.9	27.6	144.7	20.7	...
Lewis	158.0	...	35.1	117.0	5.9	...
Perry	223.6	...	22.9	154.8	45.9	...
Stewart	219.7	...	12.6	163.2	37.7	6.3
Wayne	372.6	...	63.2	259.0	50.5	...
All counties	2333.7	23.1	329.7	1671.4	303.3	6.3

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

Forest type[1]	All ownerships	National forest	Other public	Forest industry	Forest industry-leased	Other private
	Thousand acres					
Loblolly-shortleaf pine	133.1	...	6.3	55.0	4.8	67.0
Softwood total	133.1	...	6.3	55.0	4.8	67.0
Oak-pine	93.8	...	...	23.3	...	70.6
Oak-hickory	2030.9	...	128.7	398.7	...	1503.5
Oak-gum-cypress	75.9	...	11.7	...	...	64.2
Hardwood total	2200.6	...	140.4	421.9	...	1638.3
All types	2333.7	...	146.7	476.9	4.8	1705.3

[1]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-Central Tennessee Counties, 1989*

Ownership class	All classes	Stocking class (percent)				
		>130	100-130	60-100	16.7-60	<16.7
	Thousand acres					
Other public	146.7	...	18.5	96.7	25.2	6.3
Forest industry	476.9	4.8	90.9	332.5	48.8	...
Forest industry-leased	4.8	...	...	4.8	...	...
Other private	1705.3	18.3	220.3	1237.4	229.3	...
All ownerships	2333.7	23.1	329.7	1671.4	303.3	6.3

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

Forest type[1]	All classes	Stand-size class		
		Sawtimber	Poletimber	Sapling-seedling
	Thousand acres			
Loblolly-shortleaf pine	133.1	33.2	53.4	46.5
Softwood total	133.1	33.2	53.4	46.5
Oak-pine	93.8	19.7	31.8	42.4
Oak-hickory	2030.9	767.1	936.7	327.1
Oak-gum-cypress	75.9	50.4	14.3	11.2
Hardwood total	2200.6	837.2	982.8	380.6
All types	2333.7	870.4	1036.2	427.1

[1]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-Central Tennessee Counties, 1989*

Species	All classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Thousand trees												
Shortleaf-loblolly pine	51594	16601	14624	11146	5755	1959	963	422	101	23	...	...	...
Other yellow pines	3666	438	526	1541	508	257	174	172	50	...	...	...	...
Cypress	66	...	...	...	49	...	...	...	...	9	8	...	...
Other softwoods	37919	22931	9580	3416	752	587	419	126	45	62	...	...	...
Total softwoods	93245	39970	24729	16103	7065	2803	1557	720	195	95	8	...	...
Select white oaks	114392	27927	23187	18328	13741	11990	8410	6095	2756	1191	469	278	21
Select red oaks	15771	5139	2111	2049	1948	1570	1108	871	455	315	89	103	15
Other white oaks	69949	19739	13676	12765	9750	6045	3635	2455	1094	453	215	124	...
Other red oaks	51642	17272	3774	6979	7662	5322	4502	3347	1411	693	347	322	11
Hickory	138738	69410	28831	15064	11605	7130	3961	1859	512	171	131	65	...
Hard maple	48959	35283	6634	3063	1667	950	732	364	173	56	9	27	...
Soft maple	52593	35597	10431	3103	1138	1262	564	205	204	48	8	23	9
Beech	16921	9929	1757	1317	1046	781	519	487	272	250	194	294	74
Sweetgum	47073	24637	8699	5172	4471	1656	1307	666	350	71	20	23	...
Tupelo-blackgum	156067	130050	18335	4500	1459	845	407	286	85	48	28	24	...
Ash	31608	19951	6779	1977	1484	609	350	247	151	40	19	...	3
Basswood	52	...	...	...	...	45	...	...	...	...	...	7	...
Yellow-poplar	51362	28845	9749	3627	2913	2111	1538	1040	722	416	177	210	14
Black walnut	3702	1093	1155	375	256	438	239	...	72	55	11	7	...
Other hardwoods	238718	180193	38688	11451	4264	1958	841	530	342	202	122	118	8
Total hardwoods	1037546	605064	173805	89771	63404	42711	28113	18453	8598	4008	1839	1625	155
Noncommercial	216011	150465	48876	12789	2966	663	210	23	19	...	...	...	...
All species	1346803	795498	247411	118664	73434	46178	29880	19196	8812	4103	1847	1625	155

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

Species	All classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Thousand trees												
Shortleaf-loblolly pine	46702	12410	14038	11146	5699	1924	939	422	101	23	...	...	...
Other yellow pines	2903	...	526	1450	346	210	174	147	50	...	...	...	...
Cypress	66	...	...	...	49	...	...	...	...	9	8	...	...
Other softwoods	30570	18038	8072	2815	620	526	335	126	15	24	...	...	...
Total softwoods	80241	30448	22635	15411	6714	2660	1449	695	165	57	8	...	...
Select white oaks	97994	19109	18128	17163	13468	11773	7858	5968	2674	1165	439	242	5
Select red oaks	13128	2954	2111	1778	1877	1542	1077	849	441	301	89	96	12
Other white oaks	51381	8914	8785	11920	9355	5632	3155	2104	912	399	127	79	...
Other red oaks	44373	12346	3279	6521	7319	5026	4086	3163	1383	662	292	287	11
Hickory	97156	34780	24553	13941	11152	6724	3607	1652	461	133	110	43	...
Hard maple	26649	17184	3346	2671	1566	869	528	297	135	40	...	12	...
Soft maple	17796	10740	3566	1616	522	683	326	182	125	37	...	...	...
Beech	6619	2183	664	784	982	661	350	330	272	126	147	97	23
Sweetgum	30629	11786	6078	4463	4388	1608	1241	642	334	46	20	23	...
Tupelo-blackgum	53899	34388	12720	4030	1275	772	378	244	52	22	10	9	...
Ash	15829	8850	2928	1550	1222	531	312	247	151	25	10	...	3
Yellow-poplar	46313	26597	7679	3327	2712	2077	1447	980	706	416	167	188	14
Black walnut	1765	...	579	375	131	401	179	...	72	26	...	...	...
Other hardwoods	113915	78134	22268	6524	3663	1577	686	416	261	177	92	109	8
Total hardwoods	617444	267966	116684	76661	59629	39876	25231	17074	7979	3575	1504	1187	77
All species	697685	298414	139319	92072	66343	42536	26680	17769	8144	3632	1513	1187	77

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

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 & larger
	Million cubic feet										
Shortleaf-loblolly pine	120.8	24.7	35.3	23.4	20.2	12.5	3.7	0.9	...	...	...
Other yellow pines	14.2	2.8	1.6	2.5	3.0	3.1	1.2	...	...	...	...
Cypress	1.0	...	0.3	...	...	...	...	0.3	0.5	...	...
Other softwoods	25.0	6.9	3.7	5.6	5.0	2.8	0.4	0.7	...	...	...
Total softwoods	161.1	34.4	40.9	31.5	28.2	18.3	5.4	1.9	0.5	...	...
Select white oaks	718.2	43.3	81.1	129.9	138.8	147.8	89.0	48.6	23.5	15.1	1.1
Select red oaks	113.3	4.2	11.4	18.6	20.3	20.4	14.2	11.5	4.0	6.8	1.9
Other white oaks	273.7	29.4	51.0	55.6	48.3	42.9	24.1	13.5	5.6	3.4	...
Other red oaks	353.9	18.3	43.5	51.7	66.2	72.2	41.0	26.0	14.7	19.1	1.2
Hickory	297.6	30.5	62.3	70.0	65.2	41.4	14.7	4.8	5.6	3.1	...
Hard maple	45.3	6.6	7.9	8.7	8.1	7.2	4.6	1.6	...	0.6	...
Soft maple	26.9	4.8	3.1	6.3	4.9	3.7	3.0	1.3	...	...	...
Beech	55.8	1.8	4.5	6.3	6.0	8.2	8.2	5.1	7.1	6.4	2.2
Sweetgum	121.4	12.1	26.4	20.7	26.9	18.7	12.2	2.1	0.8	1.5	...
Tupelo-blackgum	35.5	8.5	6.6	7.5	5.4	4.5	1.5	0.8	0.2	0.6	...
Ash	35.4	4.3	7.6	5.9	5.1	6.1	4.3	1.2	0.5	...	0.4
Yellow-poplar	182.4	8.5	18.2	26.0	28.9	25.7	26.9	21.0	9.9	15.1	2.1
Black walnut	10.2	0.5	1.0	3.8	2.0	...	1.9	1.0	...	...	...
Other hardwoods	98.3	13.7	20.8	15.3	11.3	10.2	8.3	6.8	4.1	6.6	1.3
Total hardwoods	2368.1	186.3	345.3	426.4	437.2	408.9	254.0	145.3	76.1	78.4	10.2
All species	2529.1	220.7	386.2	457.9	465.5	427.2	259.4	147.2	76.6	78.4	10.2

Table 13—*Volume of growing stock in the saw-log portion of sawtimber[1] trees on timberland by species and diameter class, West-Central Tennessee Counties, 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 cubic feet								
Shortleaf-loblolly pine	51.6	18.5	17.9	11.2	3.2	0.8	...	...	...
Other yellow pines	8.1	1.7	2.5	2.8	1.1	...	...	...	...
Cypress	0.7	...	...	...	...	0.2	0.4	...	...
Other softwoods	12.2	4.5	4.3	2.4	0.4	0.6	...	...	...
Total softwoods	72.6	24.6	24.7	16.5	4.7	1.6	0.4	...	...
Select white oaks	369.6	...	100.2	120.3	74.6	41.2	20.1	12.5	0.7
Select red oaks	63.4	...	14.8	16.4	11.7	9.6	3.6	5.8	1.5
Other white oaks	107.8	...	35.1	35.0	19.4	10.9	4.4	3.0	...
Other red oaks	194.9	...	49.5	59.4	35.0	22.1	12.0	16.0	0.9
Hickory	105.6	...	48.2	34.0	12.0	3.7	5.1	2.5	...
Hard maple	16.3	...	5.9	5.5	3.5	1.1	...	0.4	...
Soft maple	9.5	...	3.3	2.7	2.5	1.0	...	...	...
Beech	34.4	...	4.3	6.4	7.0	4.0	5.5	5.4	1.9
Sweetgum	48.7	...	19.0	15.3	10.5	1.9	0.8	1.2	...
Tupelo-blackgum	10.3	...	4.1	3.8	1.1	0.6	0.2	0.5	...
Ash	13.5	...	3.3	4.8	3.6	0.9	0.5	...	0.4
Yellow-poplar	107.1	...	20.5	21.1	22.8	18.7	8.8	13.8	1.5
Black walnut	3.7	...	1.4	...	1.5	0.8	...	...	...
Other hardwoods	38.4	...	7.5	8.1	7.0	5.4	3.5	5.7	1.1
Total hardwoods	1123.1	...	317.2	332.9	212.1	121.8	64.4	66.9	7.9
All species	1195.7	24.6	341.9	349.3	216.8	123.5	64.8	66.9	7.9

[1]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, West-Central Tennessee Counties, 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								
Shortleaf-loblolly pine	305.8	99.5	110.1	69.9	21.1	5.3	...	...	...
Other yellow pines	43.3	8.8	13.4	15.1	6.0	...	...	...	...
Cypress	3.1	...	...	...	...	0.9	2.2	...	...
Other softwoods	63.1	22.8	22.1	13.2	1.9	3.2	...	...	...
Total softwoods	415.2	131.0	145.5	98.2	29.0	9.3	2.2	...	...
Select white oaks	2149.8	...	546.3	690.9	447.1	252.7	129.5	79.0	4.3
Select red oaks	368.6	...	82.7	94.4	68.3	59.4	18.8	35.8	9.2
Other white oaks	621.1	...	191.7	201.1	115.3	67.9	26.9	18.1	...
Other red oaks	1143.5	...	268.8	340.8	208.3	137.1	76.3	106.5	5.6
Hickory	614.7	...	273.4	197.9	72.5	22.6	32.3	16.1	...
Hard maple	95.7	...	32.3	32.7	20.4	7.3	...	3.0	...
Soft maple	54.0	...	18.1	16.0	14.1	5.7	...	...	...
Beech	205.1	...	24.1	37.4	40.9	25.2	35.2	29.8	12.5
Sweetgum	280.4	...	108.6	91.3	59.9	10.1	3.5	7.0	...
Tupelo-blackgum	57.9	...	22.1	21.5	6.3	3.4	1.2	3.3	...
Ash	77.2	...	17.7	27.3	20.7	5.9	3.0	...	2.6
Yellow-poplar	639.0	...	115.9	120.8	136.3	115.1	54.4	85.9	10.7
Black walnut	20.9	...	7.2	...	8.8	4.9	...	...	...
Other hardwoods	221.5	...	41.3	47.0	40.4	31.4	20.1	33.5	7.9
Total hardwoods	6549.3	...	1749.9	1919.2	1259.2	748.7	401.3	417.9	52.9
All species	6964.5	131.0	1895.5	2017.4	1288.2	758.1	403.6	417.9	52.9

Table 15–*Volume of growing stock and sawtimber on timberland by county and species group, West-Central Tennessee Counties, 1989*

County	Growing stock						Sawtimber					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Benton	175.9	13.4	0.4	0.7	33.4	128.0	444.8	11.1	1.0	1.6	67.9	363.2
Decatur	206.5	17.8	3.0	3.9	45.0	136.9	672.3	78.6	10.1	11.7	124.2	447.7
Hardin	258.3	24.4	36.3	5.2	60.2	132.2	689.2	30.6	125.1	12.9	159.0	361.6
Hickman	345.6	8.1	4.8	0.7	56.0	276.0	906.3	29.1	6.7	3.2	164.2	703.1
Houston	113.9	...	...	0.5	21.7	91.8	359.3	...	...	1.6	60.0	297.6
Humphreys	272.4	...	1.7	1.8	43.4	225.5	783.6	...	8.4	4.4	116.9	653.9
Lawrence	173.3	...	...	...	44.1	129.3	481.0	...	...	...	149.0	331.9
Lewis	164.9	...	1.6	...	20.2	143.0	430.5	...	4.9	...	59.1	366.5
Perry	247.9	...	1.8	5.6	28.0	212.5	628.9	...	6.6	7.0	84.5	530.8
Stewart	236.4	...	...	6.2	63.1	167.0	770.5	...	...	22.0	177.5	571.0
Wayne	334.0	5.8	15.8	1.4	40.9	270.1	798.2	...	36.8	1.7	81.4	678.3
All counties	2529.1	69.5	65.5	26.1	455.9	1912.2	6964.5	149.4	199.7	66.2	1243.8	5305.5

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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, West-Central Tennessee Counties, 1989*

Class of timber	All species	Softwood			Hardwood	
		Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet					
Sawtimber trees:						
Saw-log portion	1195.7	26.0	33.7	12.9	212.3	910.8
Upper-stem portion	300.1	5.2	5.7	2.3	51.4	235.6
Total	1495.8	31.2	39.4	15.2	263.7	1146.3
Poletimber trees	1033.3	38.4	26.0	10.9	192.2	765.8
All growing-stock trees	2529.1	69.5	65.5	26.1	455.9	1912.2
Rough trees:						
Sawtimber size	67.9	0.6	0.6	1.7	11.4	53.6
Poletimber size	91.2	0.2	0.6	1.4	21.3	67.6
Total	159.0	0.9	1.2	3.1	32.7	121.1
Rotten trees:						
Sawtimber size	38.8	...	...	0.8	6.9	31.1
Poletimber size	2.6	...	...	...	1.0	1.6
Total	41.4	...	...	0.8	8.0	32.7
Salvable dead trees:						
Sawtimber size	8.8	...	...	...	0.5	8.3
Poletimber size	8.7	...	...	...	0.7	8.0
Total	17.5	...	...	...	1.2	16.3
All classes	2747.1	70.4	66.7	29.9	497.8	2082.4

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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-Central Tennessee Counties, 1989*

Ownership class	Live trees						Growing stock					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet											
Other public	206.4	...	...	7.8	29.0	169.6	191.4	...	...	7.4	24.4	159.6
Forest industry	464.0	21.2	6.6	3.5	82.9	349.8	434.8	20.6	6.3	3.3	79.6	325.0
Forest industry-leased	3.6	3.3	...	...	...	0.3	3.3	3.1	...	...	...	0.1
Other private	2055.6	45.8	60.1	18.6	384.7	1546.3	1899.7	45.8	59.2	15.4	351.9	1427.4
All ownerships	2729.6	70.4	66.7	29.9	496.6	2066.0	2529.1	69.5	65.5	26.1	455.9	1912.2

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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-Central Tennessee Counties, 1989*

County	Growing stock						Sawtimber					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Benton	10.0	0.6	0.3	0.1	2.3	6.7	30.3	0.6	0.5	0.2	3.4	25.6
Decatur	9.7	1.0	...	0.2	2.7	5.9	39.2	7.0	...	0.2	7.2	24.9
Hardin	12.0	3.4	0.6	0.2	2.5	5.3	37.8	10.2	2.9	0.2	7.6	16.9
Hickman	7.2	...	0.1	0.1	1.5	5.6	34.9	0.5	0.3	0.3	5.0	28.7
Houston	3.7	...	...	0.1	0.9	2.7	15.7	...	...	0.2	3.8	11.7
Humphreys	8.1	...	0.1	...	2.0	6.0	34.1	...	0.7	-0.3	7.1	26.6
Lawrence	5.5	...	...	...	1.5	4.0	22.3	...	0.3	...	7.6	14.4
Lewis	6.4	...	0.1	...	0.7	5.6	23.8	...	0.1	...	3.0	20.7
Perry	11.2	...	0.1	0.2	1.6	9.3	43.3	...	0.7	0.7	7.5	34.4
Stewart	8.0	...	...	...	2.9	5.1	31.4	...	...	-0.1	11.3	20.2
Wayne	9.3	0.3	1.1	0.1	1.3	6.5	35.6	1.2	1.1	...	3.9	29.3
All counties	91.0	5.4	2.3	0.8	19.9	62.7	348.3	19.5	6.6	1.5	67.4	253.3

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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 net annual removals of growing stock and sawtimber on timberland by county and species group, West-Central Tennessee Counties, 1989*

County	Growing stock						Sawtimber					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Benton	1.9	0.1	0.6	...	...	1.2	6.3	0.4	0.9	...	...	5.0
Decatur	2.9	...	...	...	0.6	2.3	12.8	...	...	...	2.3	10.5
Hardin	6.1	1.7	1.6	...	0.5	2.3	26.5	4.7	9.3	...	2.0	10.6
Hickman	5.5	...	...	0.1	0.9	4.5	22.2	...	...	0.3	2.8	19.1
Houston	...	...	...	...	...	...	...	...	...	...	...	...
Humphreys	3.2	...	...	0.1	0.4	2.8	12.8	...	...	...	1.6	11.3
Lawrence	5.4	...	0.5	...	1.3	3.5	21.1	...	1.1	...	6.9	13.1
Lewis	3.5	...	0.1	...	0.1	3.2	8.3	...	0.5	...	0.5	7.3
Perry	4.9	...	...	...	0.8	4.1	20.8	...	...	...	3.4	17.4
Stewart	4.4	...	...	...	1.0	3.5	22.2	...	...	...	4.2	18.0
Wayne	13.5	3.0	0.7	...	0.8	9.1	38.9	7.2	2.2	...	2.6	26.9
All counties	51.2	4.7	3.5	0.1	6.3	36.5	191.8	12.2	14.0	0.3	26.2	139.1

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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, West-Central Tennessee Counties, 1989*

Species	Growth	Removals
	Million cubic feet	
Yellow pines	7.6	8.2
Other softwoods	0.8	0.1
Total softwoods	8.4	8.4
Select white-red oaks	30.2	16.3
Other white-red oaks	18.5	12.2
Hickory	6.5	6.3
Hard maple	2.6	0.9
Sweetgum	6.7	0.8
Ash-walnut-black cherry	2.4	0.4
Yellow-poplar	8.4	4.2
Other hardwoods	7.3	1.7
Total hardwoods	82.6	42.8
All species	91.0	51.2

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

Species	Growth	Removals
	Million board feet	
Yellow pines	26.2	26.2
Other softwoods	1.5	0.3
Total softwoods	27.7	26.5
Select white-red oaks	128.6	65.5
Other white-red oaks	79.6	44.9
Hickory	22.7	21.3
Hard maple	6.9	3.9
Sweetgum	18.3	2.2
Ash-walnut-black cherry	4.2	2.0
Yellow-poplar	34.7	18.7
Other hardwoods	25.6	6.7
Total hardwoods	320.6	165.3
All species	348.3	191.8

Table 22–*Average annual mortality of growing stock and sawtimber on timberland by species, West-Central Tennessee Counties, 1989*

Species	Growing stock	Sawtimber
	Million cubic feet	*Million board feet*
Yellow pines	2.0	4.2
Other softwoods	0.3	...
Total softwoods	2.3	4.2
Select white-red oaks	3.9	7.7
Other white-red oaks	9.1	22.4
Hickory	3.7	7.7
Hard maple	...	...
Sweetgum	0.8	1.0
Ash-walnut-black cherry	0.7	0.9
Yellow-poplar	1.4	4.3
Other hardwoods	3.1	7.0
Total hardwoods	22.7	51.0
All species	25.0	55.2

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

Ownership class	Growth						Removals					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet											
Other public	3.2	...	...	0.1	0.4	2.7	1.2	...	...	...	...	1.2
Forest industry	16.2	2.0	0.9	...	3.2	10.1	16.1	1.4	0.8	...	1.3	12.7
Forest industry-leased	0.2	0.2	...	...	...	...	...	...	...	...	...	...
Other private	71.4	3.1	1.4	0.7	16.3	49.9	33.9	3.3	2.7	0.1	5.0	22.6
All ownerships	91.0	5.4	2.3	0.8	19.9	62.7	51.2	4.7	3.5	0.1	6.3	36.5

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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-Central Tennessee Counties, 1989*

Ownership class	Growth						Removals					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million board feet											
Other public	14.1	...	...	-0.2	2.4	11.9	6.1	...	...	...	...	6.1
Forest industry	56.5	2.5	0.8	0.4	12.7	40.0	50.1	4.4	2.9	...	4.3	38.5
Forest industry-leased	0.8	0.8	...	...	...	...	...	...	...	...	...	...
Other private	276.8	16.2	5.8	1.2	52.2	201.3	135.6	7.9	11.1	0.3	21.9	94.5
All ownerships	348.3	19.5	6.6	1.5	67.4	253.3	191.8	12.2	14.0	0.3	26.2	139.1

[1]Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.
[2]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-Central Tennessee Counties, 1989*

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
	Million board feet					
Yellow pines	349.0	75.3	19.5	250.8	...	3.5
Cypress	3.1	2.2	...	...	...	0.9
Redcedar	63.1	61.6	...	...	...	1.5
Total softwoods	415.2	139.1	19.5	250.8	...	5.9
Select white-red oaks	2518.3	180.1	513.8	1386.1	356.3	82.1
Other white-red oaks	1764.7	81.5	277.8	1013.7	315.1	76.5
Hickory	614.7	9.6	79.3	373.2	108.7	43.9
Hard maple	95.7	...	...	59.3	30.5	5.9
Sweetgum	280.4	4.4	51.8	165.4	37.6	21.2
Tupelo and blackgum	57.9	...	10.8	32.2	10.9	3.9
Ash-walnut-black cherry	112.5	8.0	40.2	46.2	13.4	4.7
Yellow-poplar	639.0	73.7	142.1	277.8	115.5	29.9
Other hardwoods	466.1	8.7	65.9	173.8	156.0	61.7
Total hardwoods	6549.3	366.1	1181.6	3527.8	1144.0	329.7
All species	6964.5	505.2	1201.1	3778.5	1144.0	335.6

Supplemental Tables 26-40

Table 26–*Area of timberland by stand age, forest type group and type of regeneration, West-Central Tennessee Counties, 1989*

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
	Thousand acres					
1-10	29.6	...	19.1	...	12.6	23.5
11-20	25.4	...	...	...	...	...
21-30	9.6	...	4.8	...	...	17.9
31-40	11.8	...	...	...	...	...
41-50	5.6	...	...	...	...	...
>50	...	...	...	...	...	...
Mixed	6.4	44.7	11.2	58.8	...	2052.8
Total	88.4	44.7	35.0	58.8	12.6	2094.2

Table 27–*Volume of softwood growing stock on timberland by forest type, West-Central Tennessee Counties, 1989*

County	Total	Forest type group				
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum cypress
		Planted	Natural			
	Million cubic feet					
Benton	14.5	12.0	...	2.0	0.4	...
Decatur	24.7	17.8	...	3.3	3.6	...
Hardin	66.0	21.9	14.7	20.6	7.8	1.0
Hickman	13.7	8.9	...	...	4.8	...
Houston	0.5	...	...	...	0.5	...
Humphreys	3.5	...	...	...	3.5	...
Lawrence	...	...	...	...	...	...
Lewis	1.6	...	...	...	1.6	...
Perry	7.4	...	2.9	0.4	4.2	...
Stewart	6.2	...	5.4	...	0.8	...
Wayne	23.0	5.1	6.9	3.2	7.9	...
All counties	161.1	65.6	29.8	29.5	35.1	1.0

Table 28–*Volume of hardwood growing stock on timberland by forest type, West-Central Tennessee Counties, 1989*

County	Total	Forest type group				
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
		Planted	Natural			
	Million cubic feet					
Benton	161.4	0.4	...	1.9	157.5	1.6
Decatur	181.8	6.7	...	4.5	161.4	9.2
Hardin	192.4	2.2	4.6	21.9	115.4	48.2
Hickman	332.0	0.4	...	...	331.6	...
Houston	113.4	...	...	...	113.4	...
Humphreys	268.8	...	...	...	268.8	...
Lawrence	173.3	...	...	...	162.0	11.3
Lewis	163.2	...	...	...	147.9	15.3
Perry	240.5	...	1.8	2.2	232.0	4.5
Stewart	230.1	...	3.7	...	226.4	...
Wayne	311.0	...	2.8	5.5	298.6	4.1
All counties	2368.1	9.7	12.9	36.1	2215.3	94.2

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

County	Total	Forest type group				
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
		Planted	Natural			
	Million cubic feet					
Benton	2.7	2.2	...	0.3	0.2	...
Decatur	16.1	12.3	...	1.9	1.9	...
Hardin	28.7	5.9	9.7	9.1	3.3	0.7
Hickman	7.4	6.2	...	...	1.2	...
Houston	0.3	...	...	...	0.3	...
Humphreys	2.4	...	...	...	2.4	...
Lawrence	...	...	...	...	...	...
Lewis	0.7	...	...	...	0.7	...
Perry	2.6	...	1.0	...	1.6	...
Stewart	4.3	...	3.9	...	0.4	...
Wayne	7.4	...	4.1	0.4	2.9	...
All counties	72.6	26.5	18.7	11.8	15.0	0.7

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

County	Total	Forest type group				
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
		Planted	Natural			
	Million cubic feet					
Benton	75.2	...	...	0.4	74.8	...
Decatur	96.2	1.6	...	2.5	85.7	6.3
Hardin	85.7	0.6	1.3	8.7	51.3	23.8
Hickman	147.6	...	...	...	147.6	...
Houston	60.6	...	...	...	60.6	...
Humphreys	132.9	...	...	...	132.9	...
Lawrence	88.2	...	...	...	78.6	9.7
Lewis	72.8	...	...	...	63.7	9.1
Perry	103.1	...	...	0.3	100.3	2.5
Stewart	125.4	...	2.4	...	123.1	...
Wayne	135.4	...	1.0	2.2	130.0	2.3
All counties	1123.1	2.2	4.8	14.0	1048.6	53.6

Table 31–*Volume of timber on timberland by county, class of timber and species group, West-Central Tennessee Counties, 1989*

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
	Million cubic feet						
Benton	192.8	14.5	161.4	0.1	12.6	...	4.2
Decatur	217.8	24.7	181.8	0.3	7.7	0.3	2.9
Hardin	284.1	66.0	192.4	2.0	16.1	0.2	7.4
Hickman	380.4	13.7	332.0	0.8	28.6	...	5.4
Houston	122.3	0.5	113.4	...	7.6	...	0.8
Humphreys	289.3	3.5	268.8	0.3	13.1	0.2	3.3
Lawrence	184.9	...	173.3	...	9.6	...	1.9
Lewis	176.9	1.6	163.2	...	9.4	...	2.7
Perry	270.3	7.4	240.5	0.6	16.5	...	5.3
Stewart	257.1	6.2	230.1	0.7	18.1	...	1.9
Wayne	353.9	23.0	311.0	0.3	14.6	...	4.9
All counties	2729.6	161.1	2368.1	5.2	153.9	0.8	40.7

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

Species	All classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Thousand trees												
Shortleaf pine	9229	1456	2755	1994	1577	700	400	268	57	23	...	...	...
Loblolly pine	42364	15145	11869	9152	4177	1259	563	154	44	...	...	...	...
Virginia pine	3666	438	526	1541	508	257	174	172	50	...	...	...	...
Redcedar	37919	22931	9580	3416	752	587	419	126	45	62	...	...	...
Cypress	66	...	...	...	49	...	...	...	...	9	8	...	...
Total softwoods	93245	39970	24729	16103	7065	2803	1557	720	195	95	8	...	...
Select white oaks	114392	27927	23187	18328	13741	11990	8410	6095	2756	1191	469	278	21
Select red oaks	15771	5139	2111	2049	1948	1570	1108	871	455	315	89	103	15
Other white oaks	69949	19739	13676	12765	9750	6045	3635	2455	1094	453	215	124	...
Other red oaks	51642	17272	3774	6979	7662	5322	4502	3347	1411	693	347	322	11
Other hickories	138738	69410	28831	15064	11605	7130	3961	1859	512	171	131	65	...
Persimmon	14027	11974	1028	701	69	172	83	...	...	...	...	...	...
Hard maple	48959	35283	6634	3063	1667	950	732	364	173	56	9	27	...
Soft maple	46597	33909	7681	2628	799	818	471	143	72	33	8	23	9
Boxelder	5996	1687	2749	475	340	443	93	61	132	15	...	...	...
Beech	16921	9929	1757	1317	1046	781	519	487	272	250	194	294	74
Sweetgum	47073	24637	8699	5172	4471	1656	1307	666	350	71	20	23	...
Blackgum	156008	130050	18335	4500	1400	845	407	286	85	48	28	24	...
Other gums/tupelos	58	...	...	...	58	...	...	...	...	...	...	...	...
White ash	15365	12125	1047	866	736	188	177	175	29	...	19	...	3
Other ashes	16244	7826	5731	1111	748	421	173	72	122	40	...	...	...
Sycamore	2144	...	579	315	294	390	32	141	154	66	71	92	8
Basswood	52	...	...	...	...	45	...	...	...	...	...	7	...
Yellow-poplar	51362	28845	9749	3627	2913	2111	1538	1040	722	416	177	210	14
Magnolia	192	...	...	116	76	...	...	...	...	...	...	...	...
Willow	1806	1726	...	...	49	...	...	19	...	12	...	...	...
Black walnut	3702	1093	1155	375	256	438	239	...	72	55	11	7	...
Black cherry	27487	17430	6023	2203	1334	310	38	50	36	42	11	9	...
American elm	11692	10574	...	451	256	146	77	95	33	37	11	12	...
Other elms	31649	24613	3219	2004	1052	331	327	43	30	13	18	...	...
River birch	532	...	494	...	...	37	...	...	...	...	...	...	...
Hackberry	6262	2815	1542	880	506	186	101	120	73	23	11	4	...
Black locust	1011	...	575	374	...	46	...	...	15	...	...	...	...
Other locusts	316	...	...	103	203	...	...	...	...	10	...	...	...
Sassafras	32773	27949	2884	1267	198	291	123	62	...	...	...	...	...
Dogwood	103556	79382	21295	2672	157	51	...	...	...	...	...	...	...
Other commercial	5272	3730	1047	365	70	...	59	...	...	...	...	...	...
Total hardwoods	1037546	605064	173805	89771	63404	42711	28113	18453	8598	4008	1839	1625	155
Noncommercial	216011	150465	48876	12789	2966	663	210	23	19	...	...	...	...
All species	1346803	795498	247411	118664	73434	46178	29880	19196	8812	4103	1847	1625	155

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

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 & larger
	Thousand trees										
Shortleaf pine	4940	1994	1522	700	376	268	57	23	...	...	...
Loblolly pine	15314	9152	4177	1224	563	154	44	...	...	...	...
Virginia pine	2377	1450	346	210	174	147	50	...	...	...	...
Redcedar	4461	2815	620	526	335	126	15	24	...	...	...
Cypress	66	...	49	...	...	...	...	9	8	...	...
Total softwoods	27159	15411	6714	2660	1449	695	165	57	8	...	...
Select white oaks	60756	17163	13468	11773	7858	5968	2674	1165	439	242	5
Select red oaks	8063	1778	1877	1542	1077	849	441	301	89	96	12
Other white oaks	33681	11920	9355	5632	3155	2104	912	399	127	79	...
Other red oaks	28748	6521	7319	5026	4086	3163	1383	662	292	287	11
Other hickories	37822	13941	11152	6724	3607	1652	461	133	110	43	...
Persimmon	747	492	...	172	83	...	...	...	...	...	...
Hard maple	6119	2671	1566	869	528	297	135	40	...	12	...
Soft maple	2829	1381	407	543	290	143	43	22	...	...	...
Boxelder	661	235	115	140	35	39	82	15	...	...	...
Beech	3772	784	982	661	350	330	272	126	147	97	23
Sweetgum	12765	4463	4388	1608	1241	642	334	46	20	23	...
Blackgum	6792	4030	1275	772	378	244	52	22	10	9	...
White ash	1962	769	650	188	140	175	29	...	10	...	3
Other ashes	2088	782	572	343	173	72	122	25	...	...	...
Sycamore	1440	315	294	308	32	124	139	66	61	92	8
Yellow-poplar	12036	3327	2712	2077	1447	980	706	416	167	188	14
Magnolia	76	...	76	...	...	...	...	...	...	...	...
Willow	80	...	49	...	...	19	...	12	...	...	...
Black walnut	1185	375	131	401	179	...	72	26	...	...	...
Black cherry	2805	1264	1132	266	38	22	36	28	11	9	...
American elm	887	308	256	146	46	72	15	26	11	7	...
Other elms	3409	1750	921	331	327	43	15	13	10	...	...
River birch	37	...	...	37	...	...	...	...	...	...	...
Hackberry	1370	495	506	146	69	74	56	23	...	...	...
Black locust	272	226	...	46	...	...	...	...	...	...	...
Other locusts	242	103	130	...	...	...	...	10	...	...	...
Sassafras	933	609	71	128	64	62	...	...	...	...	...
Dogwood	969	813	157	...	...	...	...	...	...	...	...
Other commercial	246	148	70	...	27	...	...	...	...	...	...
Total hardwoods	232793	76661	59629	39876	25231	17074	7979	3575	1504	1187	77
All species	259952	92072	66343	42536	26680	17769	8144	3632	1513	1187	77

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

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 & larger
	Million cubic feet										
Shortleaf pine	43.6	6.2	10.6	9.0	7.2	7.6	2.1	0.9	...	...	...
Loblolly pine	77.2	18.6	24.7	14.4	13.1	4.8	1.6	...	...	...	...
Virginia pine	14.2	2.8	1.6	2.5	3.0	3.1	1.2	...	...	...	...
Redcedar	25.0	6.9	3.7	5.6	5.0	2.8	0.4	0.7	...	...	...
Cypress	1.0	...	0.3	...	...	...	...	0.3	0.5	...	...
Total softwoods	161.1	34.4	40.9	31.5	28.2	18.3	5.4	1.9	0.5	...	...
Select white oaks	718.2	43.3	81.1	129.9	138.8	147.8	89.0	48.6	23.5	15.1	1.1
Select red oaks	113.3	4.2	11.4	18.6	20.3	20.4	14.2	11.5	4.0	6.8	1.9
Other white oaks	273.7	29.4	51.0	55.6	48.3	42.9	24.1	13.5	5.6	3.4	...
Other red oaks	353.9	18.3	43.5	51.7	66.2	72.2	41.0	26.0	14.7	19.1	1.2
Other hickories	297.6	30.5	62.3	70.0	65.2	41.4	14.7	4.8	5.6	3.1	...
Persimmon	4.2	1.1	...	1.6	1.6	...	...	...	...	...	...
Hard maple	45.3	6.6	7.9	8.7	8.1	7.2	4.6	1.6	...	0.6	...
Soft maple	21.5	4.2	2.4	5.4	4.5	3.0	1.2	0.7	...	...	...
Boxelder	5.4	0.5	0.7	0.9	0.4	0.6	1.8	0.5	...	...	...
Beech	55.8	1.8	4.5	6.3	6.0	8.2	8.2	5.1	7.1	6.4	2.2
Sweetgum	121.4	12.1	26.4	20.7	26.9	18.7	12.2	2.1	0.8	1.5	...
Blackgum	35.5	8.5	6.6	7.5	5.4	4.5	1.5	0.8	0.2	0.6	...
White ash	16.0	2.0	3.8	2.2	2.2	4.1	0.8	...	0.5	...	0.4
Other ashes	19.4	2.3	3.8	3.7	2.9	1.9	3.5	1.2	...	...	...
Sycamore	27.6	1.0	1.9	3.3	0.5	3.4	4.6	2.4	3.2	6.0	1.3
Yellow-poplar	182.4	8.5	18.2	26.0	28.9	25.7	26.9	21.0	9.9	15.1	2.1
Magnolia	0.5	...	0.5	...	...	...	...	...	...	...	...
Willow	1.1	...	0.3	...	...	0.4	...	0.4	...	...	...
Black walnut	10.2	0.5	1.0	3.8	2.0	...	1.9	1.0	...	...	...
Black cherry	15.0	2.7	6.9	2.0	0.5	0.4	1.1	0.9	0.2	0.3	...
American elm	8.6	0.7	1.6	2.0	0.8	1.1	0.5	1.2	0.4	0.3	...
Other elms	20.7	3.6	5.4	3.3	5.7	1.4	0.4	0.5	0.3	...	...
River birch	0.4	...	...	0.4	...	...	...	...	...	...	...
Hackberry	9.8	1.0	2.2	1.2	0.7	2.2	1.6	0.9	...	...	...
Black locust	0.9	0.5	...	0.3	...	...	...	...	...	...	...
Other locusts	1.6	0.4	0.8	...	...	...	...	0.4	...	...	...
Sassafras	5.2	1.4	0.4	1.2	1.1	1.3	...	...	...	...	...
Dogwood	1.5	1.2	0.3	...	...	...	...	...	...	...	...
Other commercial	1.1	0.2	0.6	...	0.4	...	...	...	...	...	...
Total hardwoods	2368.1	186.3	345.3	426.4	437.2	408.9	254.0	145.3	76.1	78.4	10.2
All species	2529.1	220.7	386.2	457.9	465.5	427.2	259.4	147.2	76.6	78.4	10.2

Table 35–*Volume of growing stock in the saw-log portion of sawtimber trees on timberland by detailed species and diameter class, West-Central Tennessee Counties, 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 cubic feet								
Shortleaf pine	22.9	7.2	6.4	6.8	1.8	0.8	...	...	...
Loblolly pine	28.7	11.3	11.6	4.5	1.4	...	...	...	...
Virginia pine	8.1	1.7	2.5	2.8	1.1	...	...	...	...
Redcedar	12.2	4.5	4.3	2.4	0.4	0.6	...	...	...
Cypress	0.7	...	...	...	...	0.2	0.4	...	...
Total softwoods	72.6	24.6	24.7	16.5	4.7	1.6	0.4	...	...
Select white oaks	369.6	...	100.2	120.3	74.6	41.2	20.1	12.5	0.7
Select red oaks	63.4	...	14.8	16.4	11.7	9.6	3.6	5.8	1.5
Other white oaks	107.8	...	35.1	35.0	19.4	10.9	4.4	3.0	...
Other red oaks	194.9	...	49.5	59.4	35.0	22.1	12.0	16.0	0.9
Other hickories	105.6	...	48.2	34.0	12.0	3.7	5.1	2.5	...
Persimmon	1.1	...	1.1	...	...	...	...	...	...
Hard maple	16.3	...	5.9	5.5	3.5	1.1	...	0.4	...
Soft maple	6.9	...	3.0	2.4	1.0	0.5	...	...	...
Boxelder	2.5	...	0.3	0.4	1.5	0.4	...	...	...
Beech	34.4	...	4.3	6.4	7.0	4.0	5.5	5.4	1.9
Sweetgum	48.7	...	19.0	15.3	10.5	1.9	0.8	1.2	...
Blackgum	10.3	...	4.1	3.8	1.1	0.6	0.2	0.5	...
White ash	6.3	...	1.4	3.3	0.7	...	0.5	...	0.4
Other ashes	7.2	...	1.9	1.4	2.9	0.9	...	...	...
Sycamore	18.1	...	0.2	2.8	4.1	2.0	2.9	5.1	1.1
Yellow-poplar	107.1	...	20.5	21.1	22.8	18.7	8.8	13.8	1.5
Willow	0.7	...	...	0.3	...	0.3	...	...	...
Black walnut	3.7	...	1.4	...	1.5	0.8	...	...	...
Black cherry	2.5	...	0.4	0.3	0.8	0.7	0.1	0.3	...
American elm	3.4	...	0.6	0.8	0.4	1.0	0.3	0.3	...
Other elms	5.8	...	3.7	1.1	0.3	0.4	0.2	...	...
Hackberry	4.3	...	0.5	1.8	1.4	0.6	...	...	...
Other locusts	0.3	...	...	...	...	0.3	...	...	...
Sassafras	1.9	...	0.7	1.1	...	...	...	...	...
Other commercial	0.3	...	0.3	...	...	...	...	...	...
Total hardwoods	1123.1	...	317.2	332.9	212.1	121.8	64.4	66.9	7.9
All species	1195.7	24.6	341.9	349.3	216.8	123.5	64.8	66.9	7.9

Table 36–*Volume of timber on timberland by species and class of timber, West-Central Tennessee Counties, 1989*

Species	All live	Growing stock	Rough	Rotten
	Million cubic feet			
Shortleaf pine	44.0	43.6	0.5	...
Loblolly pine	77.5	77.2	0.3	...
Virginia pine	15.5	14.2	1.3	...
Redcedar	28.9	25.0	3.1	0.8
Cypress	1.0	1.0	...	...
Total softwoods	167.0	161.1	5.2	0.8
Select white oaks	736.4	718.2	16.6	1.6
Select red oaks	116.2	113.3	2.3	0.6
Other white oaks	296.1	273.7	16.9	5.5
Other red oaks	367.8	353.9	9.5	4.4
Other hickories	312.5	297.6	11.7	3.1
Persimmon	5.1	4.2	0.9	...
Hard maple	52.4	45.3	6.6	0.5
Soft maple	30.3	21.5	7.2	1.6
Boxelder	9.7	5.4	3.9	0.4
Beech	79.7	55.8	7.7	16.2
Sweetgum	125.0	121.4	2.7	0.9
Blackgum	40.3	35.5	2.8	1.9
Other gums/tupelos	0.2	...	0.2	...
White ash	17.1	16.0	1.1	...
Other ashes	21.4	19.4	1.8	0.2
Sycamore	29.0	27.6	1.4	...
Basswood	0.5	...	0.2	0.3
Yellow-poplar	187.1	182.4	3.3	1.4
Magnolia	0.7	0.5	0.2	...
Willow	1.1	1.1	...	...
Black walnut	12.7	10.2	2.0	0.5
Black cherry	18.0	15.0	2.9	...
American elm	10.0	8.6	1.2	0.2
Other elms	22.1	20.7	1.2	0.2
River birch	0.4	0.4	...	...
Hackberry	12.8	9.8	2.6	0.4
Black locust	1.1	0.9	0.2	0.1
Other locusts	1.8	1.6	0.2	...
Sassafras	8.4	5.2	2.6	0.6
Dogwood	3.6	1.5	2.1	...
Other commercial	1.5	1.1	0.3	0.1
Total hardwoods	2521.1	2368.1	112.4	40.7
Noncommercial	41.5	...	41.5	...
All species	2729.6	2529.1	159.0	41.4

Table 37–*Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, West-Central Tennessee Counties, 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								
Shortleaf pine	20.0	7.6	8.3	4.2	...	...	...	...	...
Loblolly pine	55.3	6.4	34.2	10.9	3.7	...	...	...	...
Redcedar	61.6	22.8	22.1	13.2	1.9	1.7	...	...	...
Cypress	2.2	...	...	...	...	...	2.2	...	...
Total softwoods	139.1	36.7	64.6	28.3	5.6	1.7	2.2	...	...
Select white oaks	158.0	...	...	...	45.5	53.3	42.9	16.4	...
Select red oaks	22.1	...	...	...	...	7.4	7.0	3.6	4.1
Other white oaks	30.8	...	...	...	3.5	18.2	2.8	6.4	...
Other red oaks	50.7	...	...	...	6.8	25.3	14.0	4.5	...
Other hickories	9.6	...	...	...	5.5	...	...	4.1	...
Sweetgum	4.4	...	...	...	4.4	...	...	...	...
White ash	3.0	...	...	...	...	...	3.0	...	...
Sycamore	6.8	...	...	...	...	...	...	6.8	...
Yellow-poplar	73.7	...	...	...	13.1	21.8	10.5	25.4	2.9
Willow	2.0	...	...	...	...	2.0	...	...	...
Black walnut	5.1	...	...	...	3.0	2.0	...	...	...
Total hardwoods	366.1	...	...	...	81.9	129.8	80.2	67.2	7.0
All species	505.2	36.7	64.6	28.3	87.5	131.5	82.4	67.2	7.0

Table 38–*Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class, West-Central Tennessee Counties, 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								
Shortleaf pine	9.7	5.8	0.6	...	3.3	...	...	...	...
Loblolly pine	9.8	5.4	2.7	...	1.8	...	...	...	...
Total softwoods	19.5	11.1	3.3	...	5.1	...	...	...	...
Select white oaks	460.3	...	...	175.4	148.0	81.5	28.6	22.5	4.3
Select red oaks	53.4	...	...	9.3	10.7	12.0	1.6	19.9	...
Other white oaks	91.5	...	...	42.9	34.2	14.5	...	...	...
Other red oaks	186.3	...	...	47.4	62.9	24.6	24.0	27.3	...
Other hickories	79.3	...	...	39.9	16.8	4.4	11.7	6.5	...
Boxelder	2.6	...	...	...	2.6	...	...	...	...
Beech	6.8	...	...	...	4.0	...	2.8	...	...
Sweetgum	51.8	...	...	29.4	18.3	2.3	1.8	...	...
Blackgum	10.8	...	...	4.8	2.0	0.7	...	3.3	...
White ash	12.0	...	...	9.2	2.8	...	...	...	...
Other ashes	20.8	...	...	1.9	13.0	5.9	...	...	...
Sycamore	46.5	...	...	8.6	8.1	6.1	5.8	10.0	7.9
Yellow-poplar	142.1	...	...	21.4	32.5	32.0	23.5	32.7	...
Black cherry	7.4	...	...	...	3.3	4.1	...	...	...
American elm	3.8	...	...	...	...	3.8	...	...	...
Other elms	4.5	...	...	2.6	1.9	...	...	...	...
Hackberry	1.7	...	...	...	...	1.7	...	...	...
Total hardwoods	1181.6	...	...	392.6	361.2	193.7	99.8	122.2	12.2
All species	1201.1	11.1	3.3	392.6	366.2	193.7	99.8	122.2	12.2

Table 39–*Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, West-Central Tennessee Counties, 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								
Shortleaf pine	102.8	25.1	26.2	37.7	8.5	5.3	...	...	...
Loblolly pine	106.6	49.2	36.5	17.1	3.8	...	...	...	...
Virginia pine	41.4	8.8	13.4	13.2	6.0	...	...	...	...
Total softwoods	250.8	83.1	76.1	68.0	18.3	5.3	...	...	...
Select white oaks	1179.9	...	427.8	396.3	199.9	100.3	37.7	17.8	...
Select red oaks	206.2	...	54.6	62.3	48.5	32.9	5.0	2.9	...
Other white oaks	368.7	...	156.9	129.3	47.6	20.3	14.6	...	...
Other red oaks	645.0	...	205.7	213.4	69.6	61.0	26.8	63.2	5.2
Other hickories	373.2	...	213.3	119.6	18.7	9.8	9.7	2.1	...
Persimmon	2.1	...	2.1	...	...	...	...	...	...
Hard maple	59.3	...	18.1	19.7	19.1	...	...	2.3	...
Soft maple	15.9	...	6.2	7.4	2.3	...	...	...	...
Boxelder	6.5	...	1.3	1.9	3.3	...	...	...	...
Beech	52.5	...	1.6	8.2	13.4	5.4	12.2	7.1	4.5
Sweetgum	165.4	...	83.6	41.0	33.9	5.6	...	1.3	...
Blackgum	32.2	...	17.4	9.5	2.6	2.7	...	...	...
White ash	10.5	...	4.8	3.1	...	...	...	...	2.6
Other ashes	18.3	...	7.8	6.3	4.3	...	...	...	...
Sycamore	42.2	...	1.2	6.9	14.4	5.0	8.9	5.9	...
Yellow-poplar	277.8	...	86.9	70.2	51.8	35.0	13.6	13.6	6.8
Willow	1.7	...	...	1.7	...	...	...	...	...
Black walnut	13.5	...	4.9	...	5.7	2.9	...	...	...
Black cherry	3.9	...	1.9	...	2.0	...	...	...	...
American elm	9.5	...	3.7	4.1	...	...	1.7	...	...
Other elms	21.6	...	17.3	4.3	...	...	...	...	...
Hackberry	14.7	...	1.3	6.7	4.3	2.4	...	...	...
Sassafras	5.6	...	3.8	1.8	...	...	...	...	...
Other commercial	1.4	...	1.4	...	...	...	...	...	...
Total hardwoods	3527.8	...	1323.8	1113.5	541.4	283.4	130.2	116.4	19.1
All species	3778.5	83.1	1399.9	1181.6	559.7	288.6	130.2	116.4	19.1

Table 40–*Volume of sawtimber for tree grade 4 on timberland by detailed species and diameter class, West-Central Tennessee Counties, 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	288.0	...	111.9	101.1	42.6	12.3	12.4	7.7	...
Select red oaks	68.2	...	28.1	22.8	4.0	4.7	3.0	5.6	...
Other white oaks	89.4	...	27.1	21.0	21.1	12.2	5.7	2.4	...
Other red oaks	225.6	...	61.1	73.0	53.0	22.7	6.8	9.1	...
Other hickories	108.7	...	53.0	28.1	14.2	6.8	4.2	2.4	...
Hard maple	30.5	...	12.9	10.7	1.3	5.6	...	...	...
Soft maple	17.4	...	9.0	5.4	3.1	...	...	...	...
Boxelder	2.2	...	...	...	2.2	...	...	...	...
Beech	106.9	...	22.5	28.2	16.9	16.8	11.1	6.9	4.7
Sweetgum	37.6	...	15.7	18.2	...	...	...	3.7	...
Blackgum	10.9	...	4.7	6.2	...	...	...	...	...
White ash	7.7	...	2.4	5.3	...	...	...	...	...
Other ashes	2.7	...	2.7	...	...	...	...	...	...
Sycamore	5.1	...	...	...	...	...	...	5.1	...
Yellow-poplar	115.5	...	26.2	25.4	31.1	21.4	2.2	9.1	...
Black walnut	1.6	...	1.6	...	...	...	...	...	...
Black cherry	1.4	...	...	1.4	...	...	...	...	...
American elm	7.6	...	...	...	2.7	2.5	...	2.5	...
Other elms	5.4	...	3.9	...	...	...	1.6	...	...
Hackberry	7.8	...	1.1	4.5	2.1	...	...	...	...
Other locusts	1.9	...	...	...	...	1.9	...	...	...
Sassafras	1.7	...	...	1.7	...	...	...	...	...
Total hardwoods	1144.0	...	383.7	353.1	194.3	106.8	46.9	54.5	4.7
All species	1144.0	...	383.7	353.1	194.3	106.8	46.9	54.5	4.7

Graphics

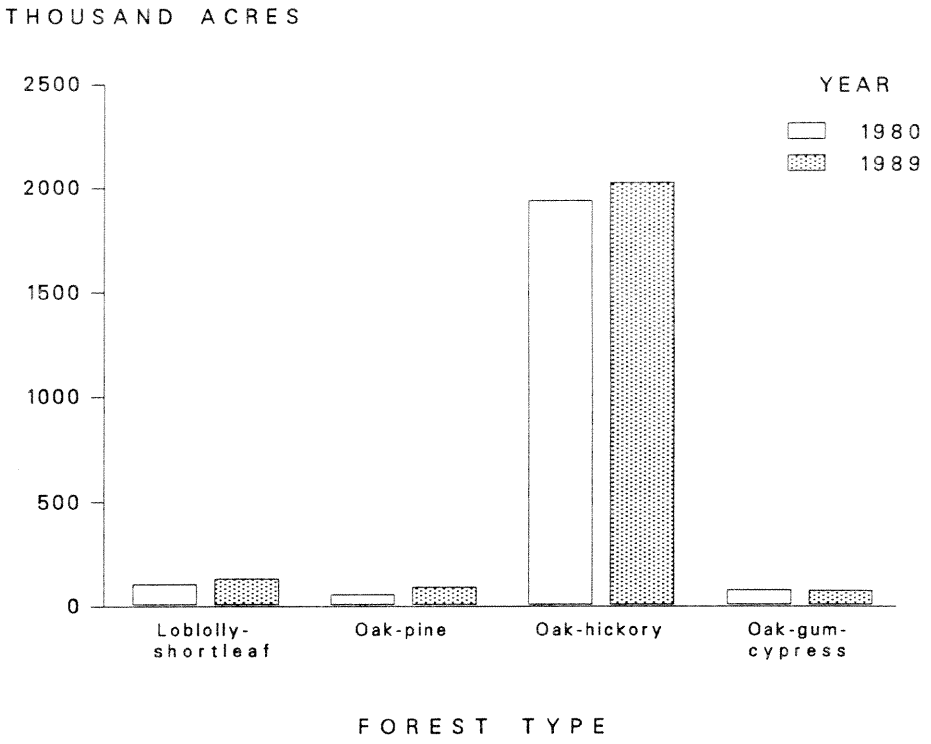

Figure 1.--Area of timberland by forest type, West-Central Tennessee, 1980 and 1989.

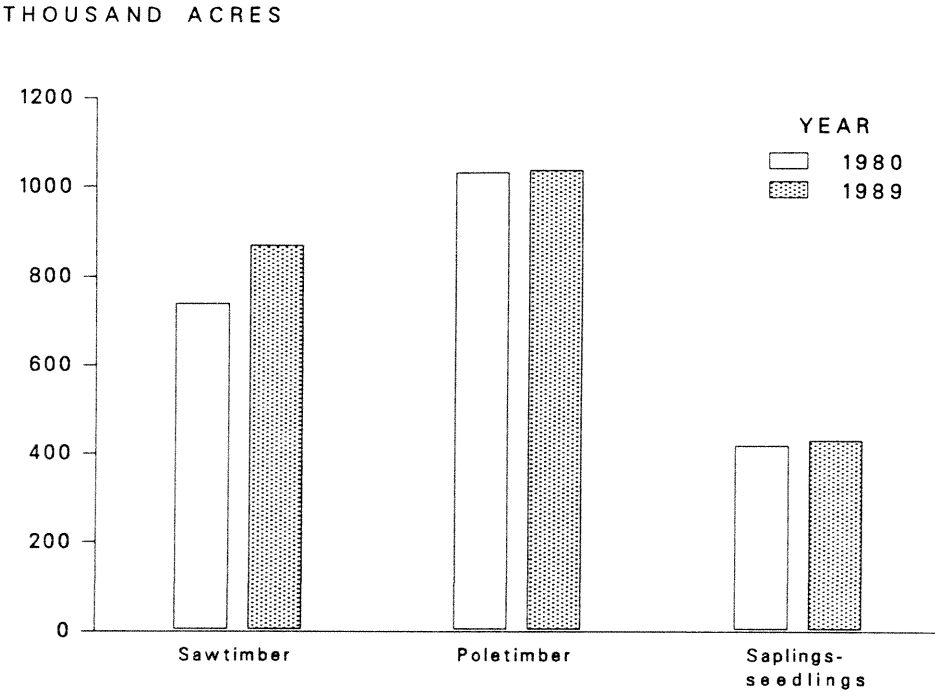

Figure 2.--Area of timberland by stand-size class, West-Central Tennessee, 1980 and 1989.

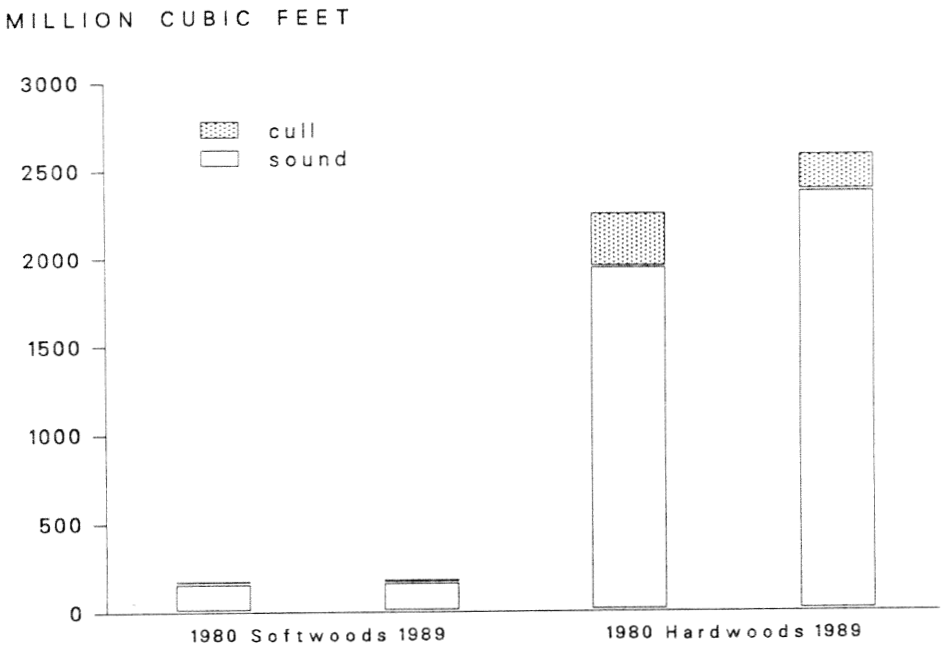

Figure 3.--Volume of timber on timberland by species group and class of timber, West-Central Tennessee, 1980 and 1989.

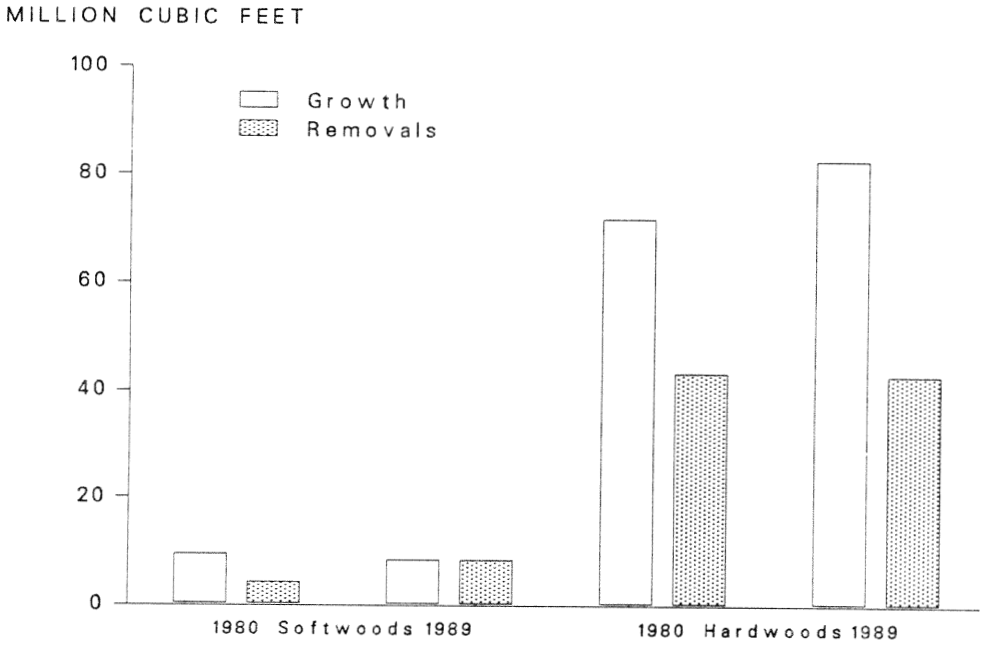

Figure 4.--Average net annual growth and average annual removals of growing stock on timberland by species group, West-Central Tennessee, 1980 and 1989.

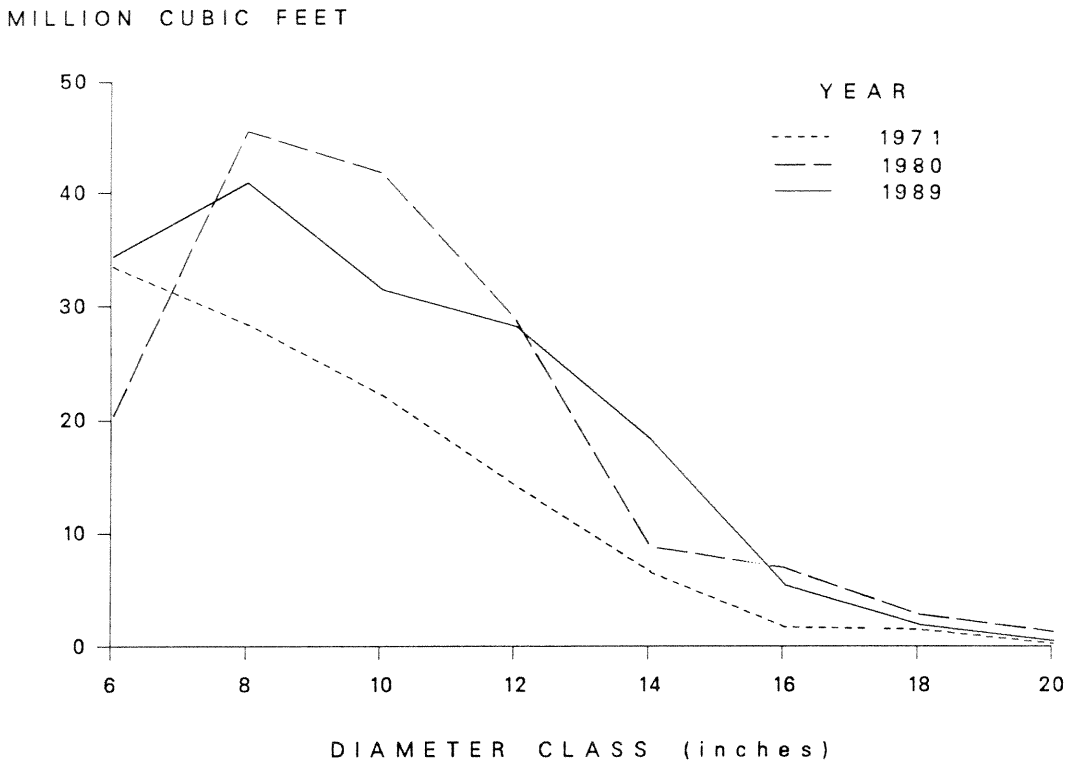

Figure 5.--Volume of softwood growing stock on timberland by diameter class, West-Central Tennessee, 1971, 1980, and 1989.

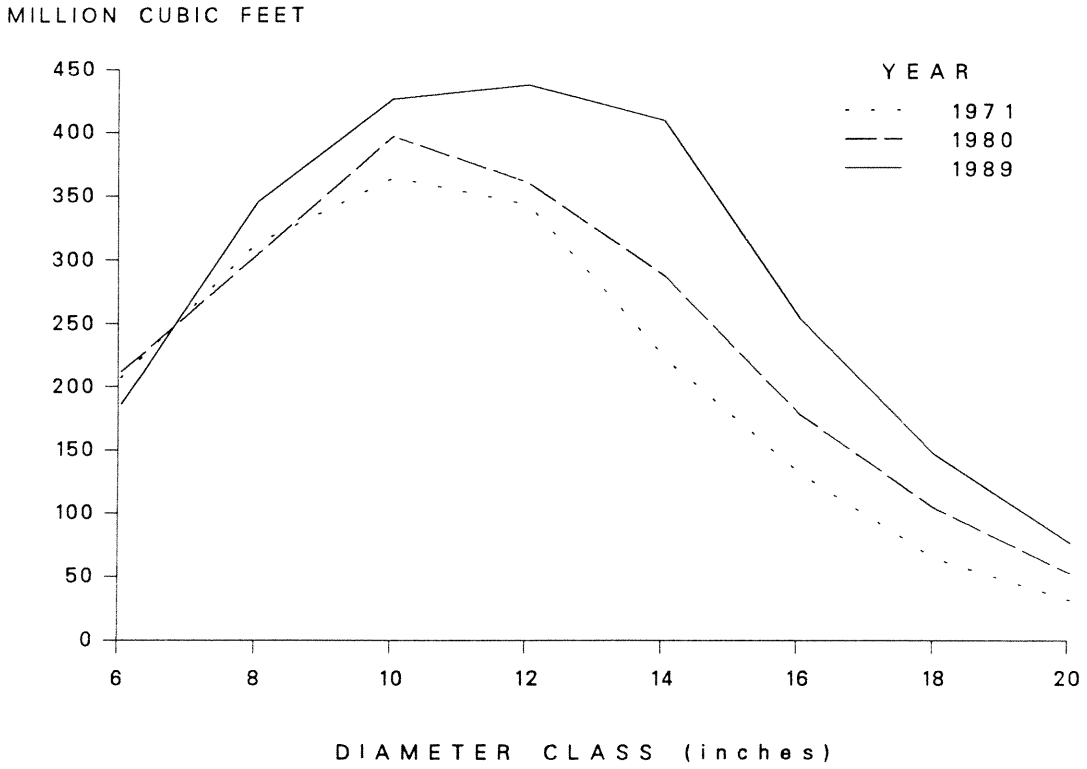

Figure 6.--Volume of hardwood growing stock on timberland by diameter class, West-Central Tennessee, 1971, 1980, and 1989.

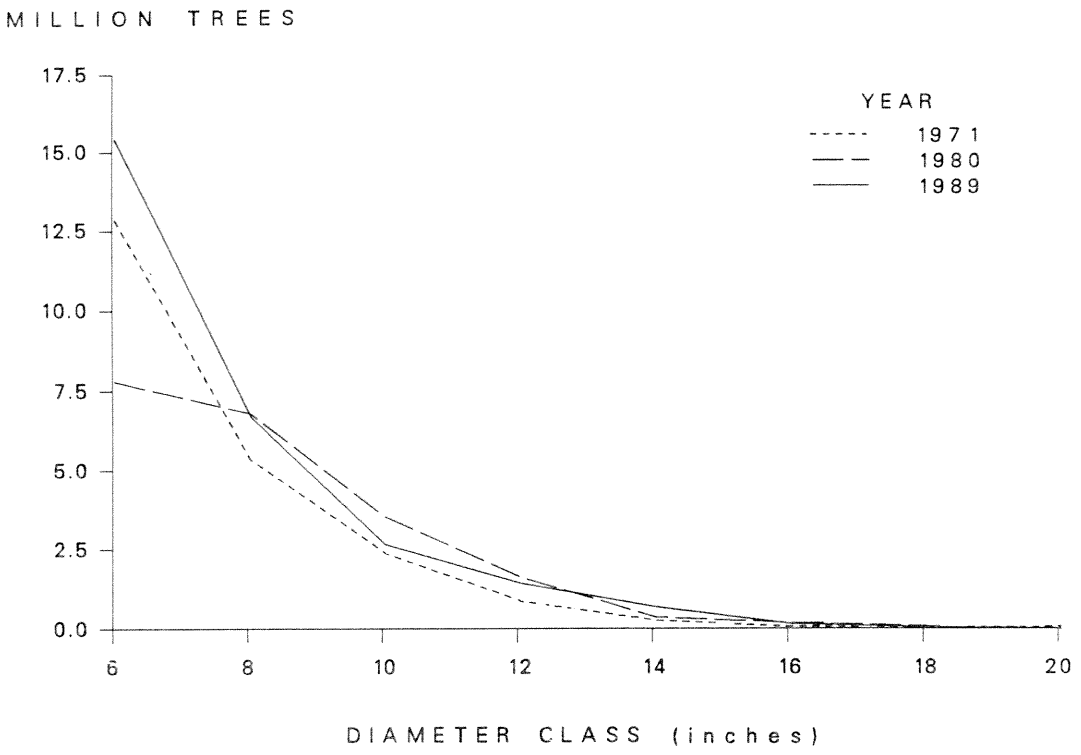

Figure 7.--Number of softwood growing-stock trees on timberland by diameter class, West-Central Tennessee, 1971, 1980, and 1989.

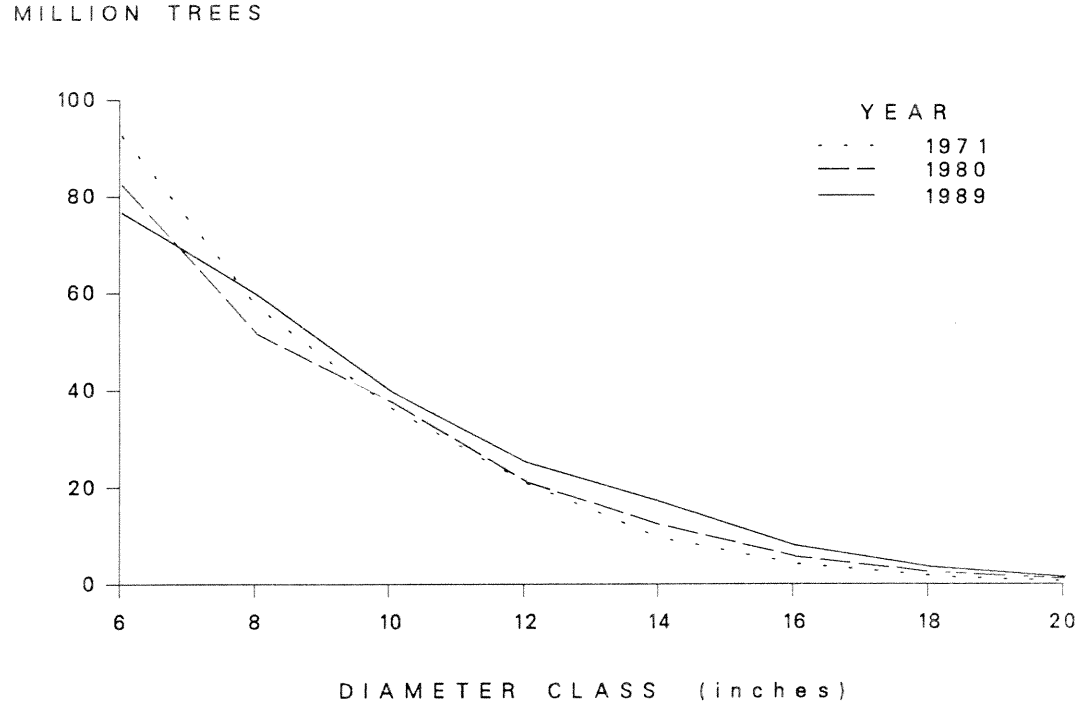

Figure 8.--Number of hardwood growing-stock trees on timberland by diameter class, West-Central Tennessee, 1971, 1980, and 1989.

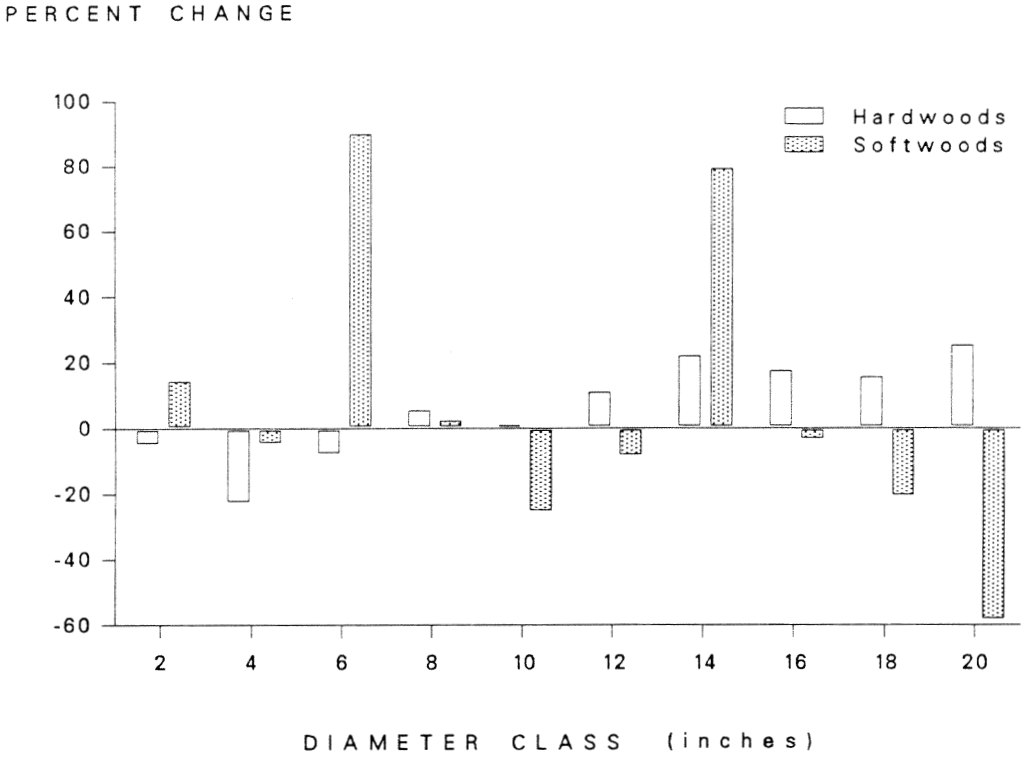

Figure 9.--Percent change in the number of live trees on timberland by species group and diameter class, West-Central Tennessee, 1980 and 1989.

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May, Dennis M.; Vissage, John S. 1989. Forest Statistics for West-Central Tennessee Counties–1989. Resource Bull. SO-145. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 33 p.

Tabulates forest resource information from a new inventory of the West-Central Unit of Tennessee.

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