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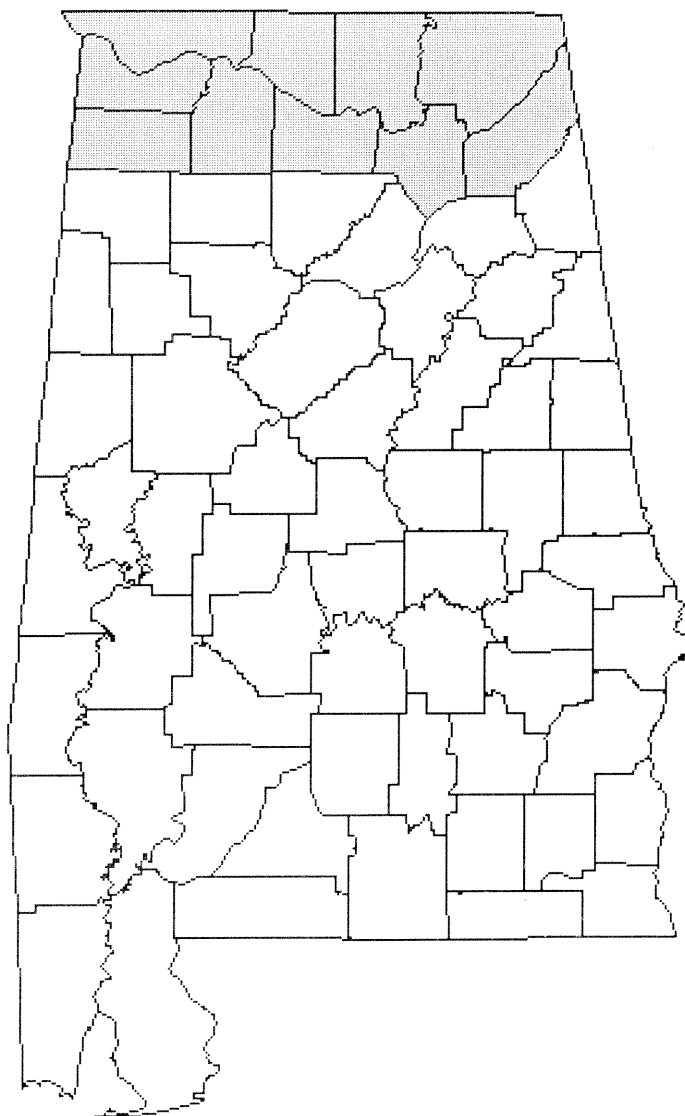
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Forest Statistics for North Alabama Counties – 1990

William H. McWilliams, K. L. Duncan, and John S. Vissage



SUMMARY

The 1990 forest inventory of North Alabama revealed the following:

- Timberland area is 2,105.1 thousand acres, a decrease of 4 percent.
- The distribution of live-tree volume shows that the large increases that took place in all but the 6-inch class between 1972 and 1982 have abated. Past declines in the 6-inch class have continued for both hardwoods and softwoods.
- Live-tree volume totals 2,515.0 million cubic feet, about the same as in 1982.
- Hardwood sawtimber volume is 4,992.7 million board feet, an increase of 16 percent.
- Net growth is nearly double the removals of live hardwoods.
- Removals of live softwoods increased by 42 percent, and now represent nearly half of total removals.
- The growth-to-removals relationship is tight for live softwoods, with removals exceeding growth in six of the 10 counties.

FOREWORD

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

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

ACKNOWLEDGMENTS

The SO-FIA gratefully acknowledges the cooperation and excellent assistance provided by the Alabama Forestry Commission and Champion International in collecting field data. Appreciation is also expressed for the cooperation of other public agencies and private landowners in providing access to measurement plots.

The following members of the SO-FIA field staff completed the field measurements:

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¹Core 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.

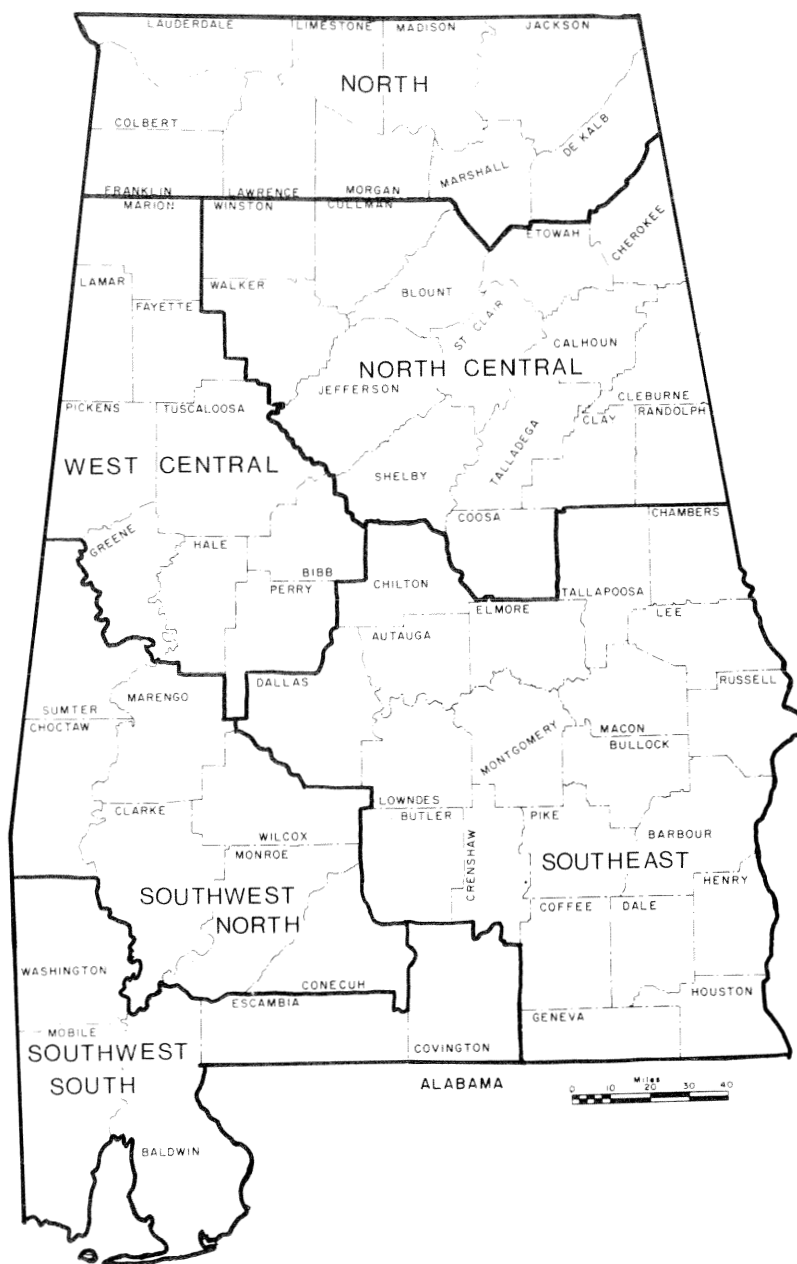


Figure I.—Forest survey regions in Alabama.

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INTRODUCTION

Tabulated results were derived from data obtained during a recent forest inventory of North Alabama (fig. 1). Core tables (1 to 25) are compatible among Forest Inventory and Analysis units in the Eastern U.S. Other tables (26 to 43) supplement the information contained in the core tables. Comparisons are made between results of the 1990 inventory and a previous inventory conducted in 1982.

METHODS

The SO-FIA uses a two-phase sample of temporary aerial-photo points and a systematic grid of permanent ground plots. The area of forested land was determined by photointerpretation of temporary points and field checks of permanent plots. Field measurements were conducted on a subset of permanent plots spaced 3 miles apart. Tree data were collected on measurement plots that were forested at the time of the current inventory, or were forested at the time of the previous inventory.

Each measurement plot consisted of 10 satellite points spread over an acre of forest. At each point, trees 5.0 inches in diameter at breast height and larger were selected for measurement on a variable-radius plot defined by a 37.5 BAF prism. Trees from 1.0 to 4.9 inches in diameter were tallied on 1/275 acre fixed plots at the first three points and at any remaining points where no trees 5.0 inches in diameter or larger were tallied. If no trees greater than 1.0 inch were tallied at a point, then seedlings were tallied. Several

plot-level measurements relating to timber and non-timber assessment were also collected.

Tree data were used to estimate volumes, basal area, number of trees, and other per-acre variables. Ownership information was obtained for each measurement plot using tax records and other sources. Per acre estimates were expanded using county-level factors derived as part of the forest area determination. Thus, estimates at the county level may not match exactly with known totals for a particular variable.

In order to achieve greater compatibility among Forest Inventory and Analysis units, a modified tree classification system has been in effect since the 1988 inventory of Arkansas. Tree grade 5 is used to designate trees capable of producing at least one 12-foot log or two 8-foot logs in the saw-log portion, but not capable of producing a gradable 12-foot log in the butt 16-foot section. These trees - formerly classed as rough or rotten - are now included in growing stock. Any comparisons with previous estimates of growing stock are based on data that has been reprocessed to account for the change in definition. Because of the revised definition, and to better assess changes in whole-forest conditions; analysis of trends in inventory volume, growth, removals, and mortality will focus on live trees.

SAMPLING ERROR

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,

Table I—Sampling errors¹ for timberland, live trees, growing stock, and sawtimber, North Alabama Counties, 1990

County	Timberland	Live-trees			Growing stock			Sawtimber volume
		Volume	Growth	Removals	Volume	Growth	Removals	
-----Percent-----								
Colbert	1.2	9.8	16.9	38.9	10.1	20.8	39.0	15.2
De Kalb	2.2	11.5	18.1	29.2	12.0	16.2	28.9	18.0
Franklin	2.3	10.9	14.0	29.8	11.0	13.5	29.9	15.4
Jackson	1.4	6.2	10.0	48.9	6.6	12.6	48.2	9.8
Lauderdale	2.2	11.8	20.1	42.8	12.0	17.9	45.4	16.0
Lawrence	2.1	9.3	14.6	46.1	9.7	15.2	46.7	13.9
Limestone	2.1	12.5	27.8	(2)	13.0	29.5	49.5	16.1
Madison	2.3	10.9	21.8	(2)	12.1	19.3	(2)	17.3
Marshall	2.4	12.1	15.2	48.9	12.7	14.3	48.8	19.1
Morgan	2.0	8.7	18.6	37.7	9.2	16.5	37.7	13.2
All counties	0.6	3.4	5.4	13.6	3.6	5.5	13.6	5.1

¹By random-sampling formula.

²Sampling error greater than 50.

may be used to compute confidence intervals for population estimates. For example, at the 95 percent confidence level, the confidence interval for live-tree volume (in million cubic feet) is:

$$2,515.0 \pm 1.96(0.034 \times 2,515.0) = 2,515.0 \pm 167.6$$

where 1.96 is the number of standard deviations. This confidence interval indicates a 95-percent degree of confidence that the range, 2,347.4 to 2,682.6 million cubic feet, will contain the true live-tree inventory volume.

The results are reported for individual counties so that users may combine counties as desired. It is not recommended that individual county data be used in isolation. The user should combine data for as many counties as possible. Sampling error for a combination of counties may be estimated using 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 estimate of sampling error for live-tree volume in De Kalb, Jackson, Limestone, Madison, Marshall, and Morgan counties is 4.2 percent. The 95 percent confidence interval for live-tree volume is $1,631.9 \pm 134.3$ million cubic feet.

RESULTS

Area

The North Alabama survey region encompasses 10 northern-tier counties that neighbor the Tennessee River. The terrain is diverse, including parts of the East Gulf Coastal Plain, Highland Rim, and Cumberland Plateau physiographic sections. Forests cover 2.1 million acres or 48 percent of the land area. Nearly all of the forest area is classified as timberland capable of producing industrial wood products. The area of timberland decreased by 4 percent due to competing land uses, which includes the reclassification of 13,720 acres as reserved timberland. This acreage was added to the Sipsey National Wilderness located in the Bankhead National Forest. Overall, the timberland base has been stable through time; remaining between 2.1 and 2.2 million acres since the SO-FIA inventory process was initiated in the 1930's.

Ninety-one percent of the timberland is privately owned. Nonindustrial private owners, comprised mainly of farmers and miscellaneous individuals, control 85 percent

of the timberland. Nonindustrial private timberland decreased slightly, due to a decrease in farmer-owned timberland. Forest industry owns a minor 6 percent of the timberland. Public timberland is 9 percent of the region total. Most of the public timberland is located in State-owned parks and a portion of the Bankhead National Forest in Lawrence county.

Oak-hickory is the predominate forest type, with two-thirds of the timberland area. Oak-hickory stands are most prevalent north of the Tennessee River. The oak-hickory forest type increased by 6 percent since 1982 and now totals 1.4 million acres. The remaining timberland consists primarily of loblolly-shortleaf and oak-pine stands. Oak-gum-cypress forests occupy 5 percent of the timberland, occurring on sites along the rivers and creeks that form the Tennessee River watershed.

Inventory

The volume of live trees did not change significantly, totaling 2.5 billion cubic feet. The volume of live trees includes the merchantable sound-wood volume of growing-stock trees, rough trees, and rotten trees. The growing-stock component of live-tree volume - the volume of trees with good management potential - increased by 4 percent. A 4 percent decrease in the volume of softwood growing stock was offset by an 8 percent increase in hardwood growing stock. Rough and rotten trees are 9 percent of the live tree volume.

The volume of live trees is dominated by hardwoods. Hardwood volume is three-fourths of the total, or 1.9 billion cubic feet. Red oak, white oak, and hickory are the most abundant species, with 65 percent of the hardwood volume. Sweetgum and yellow-poplar volumes are also significant.

Shifts in the distribution of live-tree volume by diameter class indicate that the hardwood resource has matured over the past eight years. With the exception of the 10-inch class, volumes either decreased or remained level in the 6- through 14-inch diameter classes. Volume increased in the 16-inch and larger classes. This pattern is quite different from the shifts that occurred between 1972 and 1982, when large increases in volume were apparent in the 10-inch and larger classes. The more recent changes were accompanied by a 16 percent increase in hardwood sawtimber volume.

Softwoods represent one-fourth of the live-tree volume. Loblolly pine contributes roughly half of the softwood volume. Virginia pine has the second highest percentage (24 percent), followed by shortleaf pine (14 percent), redcedar (8 percent), and other miscellaneous species (2 percent). The distribution of live-tree volume by diameter showed little change across most diameter classes. This contrasts large increases in volume that took place in the mid-range diameter classes between 1972 and 1982.

Components of Change

Changes in the inventory of live trees depend on three components: gross growth, mortality, and removals. Annual estimates of change are based on the period from the year of the previous inventory through the year prior to the present

Table II— *Components of annual change in the volume of live trees by inventory period and species group, North Alabama Counties, 1990*

Inventory period and species group	Gross growth		Removals
	Net growth	Mortality	
----- Million cubic feet -----			
1972 to 1981:			
Softwoods	28.6	6.7	20.0
Hardwoods	58.1	17.0	34.3
Total	86.7	23.7	54.2
1982 to 1989:			
Softwoods	31.2	10.1	28.3
Hardwoods	63.1	21.7	32.4
Total	94.3	31.8	60.7

inventory. Gross growth of live trees was 126.1 million cubic feet for the period prior to 1990, an increase of 14 percent (table II). Increases were apparent for both softwoods and hardwoods. Net growth, which equals gross growth minus mortality, increased by 9 percent. The lower percentage increase for net growth resulted from an increase in mortality.

Removals of live trees increased by 12 percent. The overall increase was due to expansion of softwood removals. Hardwood removals remained level for the period. Softwood removals are approaching the volume of hardwood removals. From 1972 to 1981, softwood removals averaged 37 percent of total removals. Softwood removals averaged 47 percent of the total from 1982 to 1989.

The ratio of growth-to-removals is one measure of a forest's capacity to expand in volume. A ratio greater than 1.0:1.0 usually indicates increases in volume. For the current inventory period, the growth-to-removals ratio was 1.6:1.0; remaining constant since the previous inventory period. For hardwoods, the ratio increased from 1.7:1.0 to 1.9:1.0. The softwood ratio decreased from 1.4:1.0 to 1.1:1.0. Six of the 10 counties had softwood ratios less than 1.0:1.0.

CONCLUSIONS

The outlook for forest-related resources continues to show promise in North Alabama; however, the resource was far less dynamic between 1982 and 1990 than it was between 1972 and 1982. During the previous inventory period, live-tree volume increased sharply across all but the 6-inch diameter class. The 1990 inventory has shown no significant change in live-tree volume. This has occurred with little change in the structure of the timberland base, indicating a maturing of the region's forest. Increased removals have tightened the margin between growth and removals for softwoods. The margin for hardwoods has improved due to increased growth concurrent with decreased removals.

DEFINITION OF TERMS

Average net annual growth. — Average net annual volume increase for the inventory period.

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

Average annual removals. — Average net annual volume of 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 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.

Live-tree volume. — The cubic-foot volume of sound wood in live 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.

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 evidence of planting or direct seeding.

Poletimber trees. — Live 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. — Live 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. — Live 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, North Alabama Counties, 1990

County	All land ¹	Forest land				Nonforest land
		Total	Timberland ²	Woodland ³	Reserved timberland	
----- <i>Thousand acres</i> -----						
Colbert	377.0	209.2	209.2	...	...	167.8
De Kalb	498.4	221.2	221.2	...	...	277.2
Franklin	411.3	262.1	262.1	...	...	149.3
Jackson	684.6	430.4	430.4	...	...	254.1
Lauderdale	423.3	164.9	164.9	...	...	258.4
Lawrence	443.8	215.3	194.8	...	20.5	228.4
Limestone	357.7	90.0	90.0	...	...	267.7
Madison	515.6	187.3	187.3	...	...	328.4
Marshall	363.0	173.8	173.8	...	...	189.3
Morgan	368.2	171.4	171.4	...	...	196.8
All counties	4442.9	2125.6	2105.1	...	20.5	2317.3

¹From U.S. Bureau of the Census.

²Forest 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 timberland.

³Forest 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, North Alabama Counties, 1990

County	All ownerships	National forest	Misc. federal	State	County and municipal	Forest industry ¹	Farmer	Corporate ²	Individual ²
----- Thousand acres -----									
Colbert	209.2	...	...	10.7	...	10.7	48.3	37.6	101.9
De Kalb	221.2	...	6.0	6.0	...	6.0	101.6	6.0	95.7
Franklin	262.1	1.1	4.9	...	...	78.8	88.6	19.7	68.9
Jackson	430.4	...	27.6	5.5	...	16.6	121.4	71.7	187.6
Lauderdale	164.9	...	...	...	...	13.2	98.9	...	52.8
Lawrence	194.8	72.9	10.6	...	...	...	84.8	10.6	15.9
Limestone	90.0	...	10.0	...	...	...	60.0	10.0	10.0
Madison	187.3	...	8.5	8.5	...	...	59.6	17.0	93.6
Marshall	173.8	...	5.6	5.6	...	...	78.5	5.6	78.5
Morgan	171.4	...	15.1	...	...	...	110.9	5.0	40.3
All counties	2105.1	74.0	88.3	36.3	...	125.2	852.7	183.2	745.3

¹Includes land leased to forest industry.

²Indian 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, North Alabama Counties, 1990

County	Forest type group						
	Total	White-red-jack pine	Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
			Planted	Natural			
----- <i>Thousand acres</i> -----							
Colbert	209.2	...	10.7	26.8	21.5	144.9	5.4
De Kalb	221.2	...	12.0	41.9	29.9	137.5	...
Franklin	262.1	...	39.4	15.9	39.4	162.5	4.9
Jackson	430.4	...	5.5	33.1	44.1	336.6	11.0
Lauderdale	164.9	...	19.8	...	13.2	131.9	...
Lawrence	194.8	5.2	5.3	42.0	10.5	110.6	21.2
Limestone	90.0	...	...	...	5.0	65.0	20.0
Madison	187.3	...	...	34.0	...	127.7	25.5
Marshall	173.8	...	11.2	39.2	28.0	95.3	...
Morgan	171.4	...	5.0	25.2	20.2	100.8	20.2
All counties	2105.1	5.2	108.9	258.2	211.8	1412.7	108.2

Table 4—Area of timberland by county and stand-size class, North Alabama Counties, 1990

County	All classes	Stand-size class		
		Sawtimber	Poletimber	Sapling- seedling
----- <i>Thousand acres</i> -----				
Colbert	209.2	69.7	91.2	48.3
De Kalb	221.2	65.8	77.7	77.7
Franklin	262.1	65.1	78.8	118.2
Jackson	430.4	182.1	160.0	88.3
Lauderdale	164.9	59.3	59.3	46.2
Lawrence	194.8	89.3	63.2	42.2
Limestone	90.0	60.0	10.0	20.0
Madison	187.3	110.7	68.1	8.5
Marshall	173.8	72.9	61.7	39.2
Morgan	171.4	80.7	70.6	20.2
All counties	2105.1	855.6	740.7	508.8

Table 5—Area of timberland by county and site class, North Alabama Counties, 1990

County	All classes	Site class (cubic feet/acre/year)				
		> 165	120-165	85-120	50-85	< 50
----- <i>Thousand acres</i> -----						
Colbert	209.2	26.8	10.7	85.8	85.8	...
De Kalb	221.2	17.9	12.0	47.8	95.7	47.8
Franklin	262.1	14.8	6.1	49.2	172.3	19.7
Jackson	430.4	27.6	77.3	99.3	138.0	88.3
Lauderdale	164.9	...	26.4	46.2	72.5	19.8
Lawrence	194.8	...	21.1	42.2	105.3	26.2
Limestone	90.0	10.0	25.0	20.0	35.0	...
Madison	187.3	25.5	25.5	34.0	59.6	42.6
Marshall	173.8	16.8	50.4	56.1	28.0	22.4
Morgan	171.4	40.3	15.1	60.5	45.4	10.1
All counties	2105.1	179.8	269.6	541.2	837.6	276.9

Table 6—Area of timberland by county and stocking classes of growing-stock trees,
North Alabama Counties, 1990

County	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
----- <i>Thousand acres</i> -----						
Colbert	209.2	...	32.2	166.3	10.7	...
De Kalb	221.2	...	59.8	131.5	29.9	...
Franklin	262.1	14.8	73.9	148.8	19.7	4.9
Jackson	430.4	...	38.6	320.1	66.2	5.5
Lauderdale	164.9	...	39.6	92.3	33.0	...
Lawrence	194.8	10.5	115.6	58.1	5.3	5.3
Limestone	90.0	...	15.0	50.0	20.0	5.0
Madison	187.3	...	51.1	102.1	34.0	...
Marshall	173.8	5.6	22.4	128.9	16.8	...
Morgan	171.4	10.1	45.4	95.8	20.2	...
All counties	2105.1	41.0	493.5	1294.0	255.8	20.7

Table 7—Area of timberland by forest type and ownership class, North Alabama Counties, 1990

Forest type ¹	All ownerships	National forest	Other public	Forest industry	Forest industry- leased	Other private
----- Thousand acres -----						
White-red-jack pine	5.2	5.2	...	...	...	...
Loblolly-shortleaf pine	367.1	21.9	5.5	63.9	...	275.8
Softwood total	372.3	27.1	5.5	63.9	...	275.8
Oak-pine	211.8	5.2	16.7	...	...	189.8
Oak-hickory	1412.7	41.6	71.8	51.5	9.8	1238.0
Oak-gum-cypress	108.2	...	30.6	...	...	77.6
Hardwood total	1732.7	46.8	119.2	51.5	9.8	1505.4
All types	2105.1	74.0	124.7	115.4	9.8	1781.1

¹Forest 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 class and stocking classes of growing-stock trees,
North Alabama Counties, 1990

Ownership class	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
----- <i>Thousand acres</i> -----						
National forest	74.0	5.2	57.3	11.5	...	...
Other public	124.7	5.3	5.5	102.4	11.5	...
Forest industry	115.4	9.8	37.8	57.3	10.4	...
Forest industry-leased	9.8	...	...	9.8	...	...
Other private	1781.1	20.6	392.9	1113.0	233.9	20.7
All ownerships	2105.1	41.0	493.5	1294.0	255.8	20.7

Table 9—Area of timberland by forest type and stand-size class, North Alabama Counties, 1990

Forest type ¹	All classes	Stand-size class		
		Sawtimber	Poletimber	Sapling- seedling
----- <i>Thousand acres</i> -----				
White-red-jack pine	5.2	5.2	...	...
Loblolly-shortleaf pine	367.1	105.6	197.4	64.1
Softwood total	372.3	110.8	197.4	64.1
Oak-pine	211.8	75.1	75.9	60.8
Oak-hickory	1412.7	595.8	433.1	383.8
Oak-gum-cypress	108.2	73.9	34.3	...
Hardwood total	1732.7	744.8	543.2	444.6
All types	2105.1	855.6	740.7	508.8

¹Forest 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, North Alabama Counties, 1990

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	99375	28416	24719	16570	14654	7497	4096	1748	869	435	158	205	9
Other yellow pines	66874	32692	12465	8899	6918	3326	1804	570	143	56	2	...	...
Eastern white-red pine	321	...	...	77	...	84	70	36	41	12	...	...	...
Eastern hemlock	1391	903	451	...	...	...	27	...	...	10	...	...	...
Cypress	515	...	...	163	77	...	88	188	...	...	...	...	...
Other softwoods	53258	30230	11792	5915	3291	1359	455	130	58	11	...	16	...
Total softwoods	221734	92241	49427	31624	24939	12266	6540	2671	1111	525	160	221	9
Select white oaks	85501	40326	19359	7512	5624	4409	3137	2004	1599	611	506	365	48
Select red oaks	13731	3251	3571	1551	1775	922	976	698	277	260	267	161	22
Other white oaks	71999	32151	18329	6115	5985	3515	2557	1261	969	446	279	340	52
Other red oaks	70198	34094	8165	8623	5573	5011	3167	2477	1316	837	364	460	112
Hickory	140097	84529	22276	12757	7757	5467	3717	1635	1007	571	209	166	7
Hard maple	44521	34444	5740	1885	1189	626	357	133	81	67	...	...	...
Soft maple	92600	74266	10813	3124	1866	1071	447	305	294	192	100	119	4
Beech	7649	5058	1938	265	51	31	...	39	53	34	40	114	27
Sweetgum	65660	32336	14219	6882	5477	3274	1822	839	394	232	111	74	...
Tupelo-blackgum	74973	59490	8065	3578	1163	1398	606	300	230	24	80	40	...
Ash	52884	34351	9342	4581	1668	1476	595	343	192	94	137	106	...
Basswood	2577	1996	...	112	104	136	66	115	...	31	9	6	...
Yellow-poplar	27959	16724	5037	1146	1053	1232	884	683	475	314	183	206	22
Black walnut	2803	514	1286	411	216	231	53	25	46	11	8	...	...
Other hardwoods	274273	191903	60827	11765	4644	2321	1275	668	415	215	157	78	4
Total hardwoods	1027422	645433	188966	70307	44144	31118	19657	11526	7348	3940	2450	2236	297
Noncommercial	129623	89643	31445	6526	1382	493	85	33	16	...	...	...	...
All species	1378778	827316	269839	108456	70464	43878	26282	14230	8475	4464	2610	2457	306

Table 11— Number of growing-stock trees on timberland by species and diameter class, North Alabama Counties, 1990

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	91095	25245	20957	15985	14230	7275	4039	1748	827	422	158	199	9
Other yellow pines	57324	26777	10877	7692	6803	2853	1669	502	107	43	2	...	...
Eastern white-red pine	281	...	...	77	...	44	70	36	41	12	...	...	...
Eastern hemlock	913	451	451	...	...	...	...	...	...	10	...	...	...
Cypress	515	...	...	163	77	...	88	188	...	...	...	...	...
Other softwoods	40381	21981	8663	5399	2898	907	337	109	58	11	...	16	...
Total softwoods	190509	74455	40948	29316	24009	11079	6204	2582	1033	499	160	215	9
Select white oaks	57621	18440	16209	6690	4905	4226	2692	1819	1402	536	406	255	40
Select red oaks	10695	2471	2328	1207	1727	803	784	589	231	183	229	131	11
Other white oaks	54752	23011	13029	5104	5538	3307	2111	1006	805	358	242	225	17
Other red oaks	52663	21342	6210	6962	5445	4899	2850	2322	1168	761	267	378	59
Hickory	88314	42429	16832	10278	7237	5064	3216	1494	934	510	179	138	3
Hard maple	26589	17494	5234	1885	1003	544	205	116	81	28	...	...	...
Soft maple	50737	37320	8802	2045	1150	710	226	214	127	24	70	51	...
Beech	5383	3082	1938	147	51	...	...	22	53	22	21	35	13
Sweetgum	45943	18117	10771	5287	5364	3126	1686	821	364	222	111	74	...
Tupelo-blackgum	34105	23393	5060	2197	1053	1280	606	204	200	24	66	21	...
Ash	28256	14434	6367	3519	1529	1258	480	285	162	94	60	68	...
Basswood	1515	998	...	112	104	73	66	115	...	31	9	6	...
Yellow-poplar	21700	12627	3155	1146	985	1159	834	662	453	290	163	206	19
Black walnut	1181	...	506	305	114	152	27	25	31	11	8	...	...
Other hardwoods	126095	78565	32795	7373	3560	1734	878	554	324	182	83	44	4
Total hardwoods	605551	313723	129236	54256	39765	28336	16663	10249	6334	3275	1915	1632	166
All species	796060	388178	170184	83572	63774	39415	22867	12832	7367	3774	2076	1847	175

Table 12— Volume of growing stock on timberland by species and diameter class, North Alabama Counties, 1990

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
----- Million cubic feet -----											
Shortleaf-loblolly pine	412.8	38.6	88.9	84.6	74.3	45.4	29.1	21.6	10.5	18.9	0.9
Other yellow pines	141.2	21.2	42.0	32.6	27.4	12.4	4.0	1.5	0.1	...	...
Eastern white-red pine	3.8	0.3	...	0.3	1.0	0.7	1.1	0.4	...	...	...
Eastern hemlock	0.4	...	...	...	...	...	...	0.4	...	...	...
Cypress	7.7	0.5	0.7	...	1.6	5.0	...	...	...	...	...
Other softwoods	43.4	11.8	14.1	8.4	4.2	2.0	1.7	0.5	...	0.6	...
Total softwoods	609.3	72.4	145.7	125.9	108.5	65.5	35.9	24.4	10.6	19.5	0.9
Select white oaks	278.8	14.8	27.5	42.7	43.7	41.8	45.3	20.7	19.7	17.7	4.9
Select red oaks	85.7	2.7	9.8	8.4	13.0	12.7	7.6	8.1	12.6	9.6	1.2
Other white oaks	191.3	12.0	31.7	31.3	32.7	21.1	23.4	12.2	11.8	13.7	1.6
Other red oaks	301.6	17.0	29.5	49.7	45.4	51.6	34.1	29.3	13.4	24.6	6.9
Hickory	278.4	22.5	36.7	50.3	54.8	36.9	32.0	22.6	11.1	10.9	0.6
Hard maple	25.2	4.4	5.5	5.6	3.4	2.5	2.1	1.7	...	...	...
Soft maple	33.8	4.5	5.8	6.0	3.5	4.0	3.2	0.8	3.2	2.9	...
Beech	7.6	0.5	0.3	...	...	0.4	1.5	0.9	1.0	2.4	0.6
Sweetgum	157.4	9.3	29.9	31.8	28.9	20.4	13.2	10.8	7.2	6.0	...
Tupelo-blackgum	45.1	4.6	4.7	12.1	8.7	3.9	6.1	0.9	3.2	0.9	...
Ash	56.8	8.2	8.0	13.0	6.5	6.3	4.4	3.2	2.7	4.5	...
Basswood	7.9	0.2	0.6	0.8	1.1	2.9	...	1.2	0.7	0.6	...
Yellow-poplar	113.9	3.1	4.7	13.1	15.8	18.2	15.4	14.1	9.1	17.0	3.5
Black walnut	4.6	0.4	0.4	1.0	0.2	0.5	0.7	0.6	0.8	...	...
Other hardwoods	98.7	16.5	17.8	15.1	13.2	12.0	9.1	7.6	4.0	2.9	0.6
Total hardwoods	1686.8	120.6	212.9	280.9	270.8	235.2	197.9	134.5	100.4	113.6	19.9
All species	2296.1	193.0	358.6	406.8	379.3	300.7	233.8	158.9	111.0	133.0	20.9

Table 13 — *Volume of growing stock in the saw-log portion of sawtimber¹ by trees on timberland by species and diameter class, North Alabama Counties, 1990*

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 cubic feet -----</i>									
Shortleaf-loblolly pine	243.4	66.6	65.2	39.7	26.3	19.3	9.0	16.5	0.8
Other yellow pines	61.7	24.8	22.4	10.0	3.3	1.1	0.1	...	...
Eastern white-red pine	3.2	0.3	0.8	0.7	1.0	0.4	...	...	...
Eastern hemlock	0.3	...	...	...	...	0.3	...	...	...
Cypress	6.0	...	1.4	4.6	...	...	...	...	...
Other softwoods	14.6	6.7	3.7	1.7	1.6	0.4	...	0.5	...
Total softwoods	329.2	98.3	93.5	56.6	32.2	21.6	9.1	17.0	0.8
Select white oaks	155.0	...	31.8	33.7	36.4	17.4	16.5	15.0	4.0
Select red oaks	52.8	...	9.3	10.2	6.3	7.2	10.5	8.2	1.2
Other white oaks	91.4	...	23.7	16.5	19.1	10.1	9.7	11.1	1.2
Other red oaks	163.3	...	31.8	41.6	28.3	24.6	10.8	19.8	6.5
Hickory	132.4	...	40.0	29.0	26.3	18.1	9.4	9.3	0.4
Hard maple	7.6	...	2.6	2.1	1.7	1.3	...	...	...
Soft maple	13.4	...	2.4	3.1	2.5	0.6	2.6	2.3	...
Beech	5.2	...	...	0.2	1.2	0.8	0.7	1.8	0.4
Sweetgum	67.3	...	19.5	15.7	11.3	9.4	6.3	5.2	...
Tupelo-blackgum	18.7	...	6.2	3.1	5.2	0.8	2.7	0.8	...
Ash	21.9	...	4.6	5.2	3.5	2.7	2.2	3.8	...
Basswood	4.8	...	0.7	2.3	...	0.7	0.6	0.5	...
Yellow-poplar	77.0	...	10.6	15.0	13.4	12.3	7.6	15.1	3.0
Black walnut	2.3	...	0.2	0.3	0.6	0.5	0.7	...	...
Other hardwoods	39.1	...	9.4	9.8	7.6	6.4	3.0	2.3	0.6
Total hardwoods	852.3	...	192.6	187.8	163.4	112.9	83.2	95.1	17.3
All species	1181.5	98.3	286.2	244.4	195.6	134.4	92.4	112.1	18.1

¹That 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, North Alabama Counties, 1990*

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-loblolly pine	1416.6	355.8	370.4	232.5	160.3	121.3	60.1	111.9	4.3
Other yellow pines	341.4	130.5	124.5	57.8	20.9	7.2	0.6	...	...
Eastern white-red pine	16.0	1.3	4.1	3.3	5.1	2.1	...	...	...
Eastern hemlock	2.0	...	...	...	...	2.0	...	...	...
Cypress	31.1	...	7.6	23.6	...	...	...	...	...
Other softwoods	75.1	34.0	18.9	8.3	8.4	2.8	...	2.7	...
Total softwoods	1882.3	521.5	525.4	325.5	194.6	135.5	60.8	114.7	4.3
Select white oaks	910.1	...	171.6	190.2	220.0	105.9	101.5	95.3	25.5
Select red oaks	310.8	...	50.3	56.0	36.2	43.3	67.9	50.2	6.9
Other white oaks	534.9	...	128.7	91.9	113.8	60.3	62.0	70.5	7.6
Other red oaks	933.6	...	166.7	230.6	167.8	146.7	65.5	122.2	34.2
Hickory	798.0	...	223.6	170.7	161.6	116.6	62.4	60.3	2.8
Hard maple	45.6	...	14.1	12.1	10.4	9.0	...	...	...
Soft maple	75.8	...	12.8	16.9	13.5	2.6	15.4	14.5	...
Beech	31.9	...	...	1.3	7.3	4.5	4.8	12.0	2.1
Sweetgum	388.6	...	104.5	87.2	66.2	58.8	39.6	32.4	...
Tupelo-blackgum	104.7	...	33.0	16.9	29.6	4.8	16.7	3.7	...
Ash	130.2	...	24.6	29.4	20.3	15.9	13.8	26.3	...
Basswood	29.1	...	3.5	13.8	...	4.4	3.9	3.5	...
Yellow-poplar	458.2	...	59.5	89.4	75.9	74.3	47.2	95.4	16.5
Black walnut	15.1	...	0.7	1.6	3.8	3.0	6.0	...	...
Other hardwoods	226.0	...	50.8	54.6	44.6	38.9	19.2	15.3	2.7
Total hardwoods	4992.7	...	1044.5	1062.5	971.0	689.0	525.8	601.6	98.3
All species	6875.0	521.5	1569.9	1388.0	1165.6	824.4	586.6	716.2	102.6

Table 15 – Volume of growing stock and sawtimber on timberland by county and species group, North Alabama Counties, 1990

County	Growing stock						Sawtimber							
	All species	Softwood			Hardwood		All species	Softwood			Hardwood			
		Pine	Planted	Natural	Other	Soft ¹		Hard ²	Pine	Planted	Natural	Other	Soft ¹	Hard ²
----- Million cubic feet -----														
Colbert	159.2	7.5	43.0	0.9	22.9	84.9	362.9	3.9	101.8	2.9	46.9	207.4		
De Kalb	210.1	14.3	77.8	...	33.2	84.8	563.3	47.0	223.3	...	78.5	214.5		
Franklin	249.9	30.9	34.2	1.9	48.4	134.4	662.3	41.5	102.1	4.5	136.8	377.6		
Jackson	438.3	1.6	36.9	19.8	72.6	307.5	1351.7	...	122.5	31.6	216.7	980.9		
Lauderdale	164.8	24.4	7.7	...	26.3	106.4	502.5	63.4	20.6	...	70.8	347.6		
Lawrence	228.6	11.6	46.8	9.5	41.1	119.5	656.7	27.9	164.8	21.0	107.1	335.9		
Limestone	123.9	...	10.7	...	39.4	73.8	456.5	...	57.9	...	138.3	260.3		
Madison	257.1	...	71.9	13.9	66.4	104.9	831.3	...	296.5	41.4	194.9	298.5		
Marshall	201.3	9.1	61.2	4.4	32.7	94.0	644.1	8.8	246.8	1.4	99.6	287.4		
Morgan	262.8	16.5	51.6	1.2	56.2	137.4	843.8	67.7	177.4	5.5	173.2	420.0		
All counties	2296.1	115.9	441.9	51.5	439.1	1247.7	6875.0	260.1	1513.9	108.3	1262.8	3729.9		

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.²Hardwood 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, North Alabama Counties, 1990

Class of timber	All species	Softwood			Hardwood	
		Pine		Other	Soft ¹	Hard ²
		Planted	Natural			
----- Million cubic feet -----						
Sawtimber trees:						
Saw-log portion	1181.5	47.5	260.7	20.9	217.0	635.3
Upper-stem portion	282.0	9.7	48.8	3.4	55.3	164.8
Total	1463.6	57.2	309.5	24.4	272.3	800.1
Poletimber trees	832.5	58.7	132.4	27.1	166.8	447.5
All growing-stock trees	2296.1	115.9	441.9	51.5	439.1	1247.7
Rough trees:						
Sawtimber size	88.8	0.7	10.1	2.5	22.9	52.6
Poletimber size	79.4	0.8	3.5	2.2	20.3	52.7
Total	168.2	1.5	13.6	4.6	43.2	105.3
Rotten trees:						
Sawtimber size	47.3	...	0.2	0.7	8.7	37.8
Poletimber size	3.4	...	...	0.2	1.1	2.0
Total	50.7	...	0.2	0.9	9.8	39.8
Salvable dead trees:						
Sawtimber size	3.2	...	0.9	0.8	0.4	1.1
Poletimber size	3.7	...	1.3	...	...	2.4
Total	6.9	...	2.2	0.8	0.4	3.5
All classes	2521.9	117.4	457.9	57.9	492.5	1396.2

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.²Hardwood 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, North Alabama Counties, 1990*

Croatia, 1996												
Ownership class	Live trees						Growing stock					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine			Soft ¹	Hard ²		Pine			Soft ¹	Hard ²
		Planted	Natural	Other				Planted	Natural	Other		
----- Million cubic feet -----												
National forest	110.5	5.0	32.7	3.4	7.3	62.1	106.3	4.7	31.6	3.4	7.0	59.7
Other public	196.6	1.6	22.4	3.9	52.7	116.0	176.6	1.6	21.9	3.1	47.0	102.9
Forest industry	105.1	40.7	9.7	1.5	14.7	38.5	97.0	40.7	8.5	1.5	13.6	32.7
Forest industry-leased	10.1	...	...	0.5	3.6	6.0	8.7	...	...	0.5	3.3	4.9
Other private	2092.7	70.2	391.0	47.8	413.7	1170.2	1907.5	69.0	379.9	43.0	368.2	1047.5
All ownerships	2515.0	117.4	455.7	57.0	492.1	1392.7	2296.1	115.9	441.9	51.5	439.1	1247.7

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

²Hardwood 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, North Alabama Counties, 1990*

County	All species	Growing stock					All species	Sawtimber																	
		Softwood			Hardwood			Softwood			Hardwood														
		Pine			Soft ¹	Hard ²		Pine			Soft ¹	Hard ²													
		Planted	Natural	Other				Planted	Natural	Other															
----- Million cubic feet -----													----- Million board feet -----												
Colbert	8.1	1.4	2.2	0.1	0.9	3.4	24.4	0.2	9.0	0.4	4.7	10.0													
De Kalb	10.4	0.4	1.6	...	2.3	6.1	29.0	2.6	8.9	...	6.3	11.2													
Franklin	13.5	3.4	0.7	0.2	3.1	6.0	36.8	2.8	11.0	0.4	7.3	15.2													
Jackson	12.7	0.2	1.4	0.4	3.2	7.5	33.3	...	5.8	0.4	6.7	20.4													
Lauderdale	9.0	1.2	1.6	...	0.9	5.2	29.4	2.8	6.5	...	3.0	17.2													
Lawrence	9.1	1.4	1.0	0.4	2.1	4.3	25.6	4.0	5.6	0.9	2.9	12.1													
Limestone	3.0	...	0.2	...	1.4	1.4	14.3	...	0.5	...	8.6	5.1													
Madison	10.4	1.3	3.7	0.3	2.0	3.1	34.3	2.6	18.8	0.4	7.2	5.3													
Marshall	7.9	0.6	2.3	0.3	1.1	3.5	29.3	1.6	11.4	0.9	6.8	8.7													
Morgan	10.9	1.0	3.3	...	1.4	5.1	41.9	6.8	13.0	0.2	4.5	17.4													
All counties	94.9	11.0	18.1	1.7	18.5	45.7	298.3	23.4	90.4	3.6	58.1	122.7													

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

²Hardwood 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, North Alabama Counties, 1990*

County	Growing stock						Sawtimber					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Planted	Natural	Other	Soft ¹	Hard ²		Planted	Natural	Other	Soft ¹	Hard ²

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

²Hardwood 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, North Alabama Counties, 1990*

Species	Growth	Removals
	----- Million cubic feet -----	
Yellow pines	28.6	27.0
Eastern white-red pines	0.4	...
Other softwoods	1.7	0.2
Total softwoods	30.7	27.3
Select white-red oaks	15.5	7.3
Other white-red oaks	16.8	11.3
Hickory	8.2	5.0
Hard maple	1.0	0.1
Sweetgum	5.7	1.7
Ash-walnut-black cherry	4.3	0.1
Yellow-poplar	4.7	1.8
Other hardwoods	7.9	3.2
Total hardwoods	64.2	30.4
All species	94.9	57.7

Table 21—Average net annual growth and average annual removals of sawtimber on timberland by species, North Alabama Counties, 1990

Species	Growth	Removals
----- Million board feet -----		
Yellow pines	112.0	111.5
Eastern white-red pines	1.9	...
Other softwoods	3.6	0.6
Total softwoods	117.5	112.1
Select white-red oaks	54.8	25.6
Other white-red oaks	42.3	36.8
Hickory	17.5	14.9
Hard maple	0.4	...
Sweetgum	22.3	5.5
Ash-walnut-black cherry	8.5	...
Yellow-poplar	21.9	6.6
Other hardwoods	13.2	12.3
Total hardwoods	180.8	101.8
All species	298.3	213.9

Table 22—Average annual mortality of growing stock and sawtimber on timberland by species, North Alabama Counties, 1990

Species	Growing stock	Sawtimber
----- Million cubic feet ----- Million board feet -----		
Yellow pines	8.3	15.3
Other softwoods	0.5	1.8
Total softwoods	8.8	17.0
Select white-red oaks	1.4	3.7
Other white-red oaks	5.4	15.9
Hickory	2.9	7.1
Sweetgum	1.3	2.2
Ash-walnut-black cherry	0.3	1.4
Yellow-poplar	1.3	3.5
Other hardwoods	2.4	5.9
Total hardwoods	15.0	39.6
All species	23.9	56.7

Table 23—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, North Alabama Counties, 1990

Ownership class	Growth						Removals					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Planted	Pine		Soft ¹	Hard ²		Planted	Pine		Soft ¹	Hard ²
			Natural	Other					Natural	Other		
----- Million cubic feet -----												
National forest	3.9	0.8	0.2	0.1	0.6	2.3	1.9	...	0.7	...	0.4	0.8
Other public	5.0	0.1	1.0	0.3	1.2	2.6	0.3	...	0.2	...	0.2	...
Forest industry	8.0	4.2	1.3	...	0.9	1.6	5.9	2.2	1.9	...	0.1	1.7
Forest industry-leased	0.7	...	...	...	0.3	0.5	...	...	...	...	...	...
Other private	77.1	5.9	15.6	1.3	15.5	38.8	49.6	1.5	20.6	0.2	5.8	21.4
All ownerships	94.9	11.0	18.1	1.7	18.5	45.7	57.7	3.7	23.3	0.2	6.5	24.0

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

²Hardwood 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, North Alabama Counties, 1990*

Ownership class	All species	Growth					All species	Removals				
		Softwood			Hardwood			Softwood			Hardwood	
		Pine			Soft ¹	Hard ²		Pine			Soft ¹	Hard ²
		Planted	Natural	Other				Planted	Natural	Other		
----- <i>Million board feet</i> -----												
National forest	12.3	2.1	1.4	...	1.1	7.6	4.7	...	3.3	...	0.9	0.5
Other public	17.9	...	9.1	...	2.1	6.7	0.8	...	0.8	...	...	...
Forest industry	12.5	6.7	4.9	0.1	-0.1	0.9	20.3	9.1	5.9	...	0.6	4.8
Forest industry-leased	1.6	...	...	0.4	1.1	0.1	...	...	...	...	...	...
Other private	254.1	14.6	75.1	3.1	53.9	107.4	188.1	3.5	89.0	0.6	22.4	72.5
All ownerships	298.3	23.4	90.4	3.6	58.1	122.7	213.9	12.6	98.9	0.6	24.0	77.8

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

²Hardwood 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, North Alabama Counties, 1990*

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
<i>----- Million board feet -----</i>						
Yellow pines	1758.0	468.9	230.9	1028.3	...	29.9
Cypress	31.1	31.1	...	...	...	...
Redcedar	75.1	74.5	...	...	...	0.7
Other softwoods	18.0	2.0	...	16.0	...	...
Total softwoods	1882.3	576.5	230.9	1044.3	...	30.6
Select white-red oaks	1220.9	96.2	320.6	556.8	181.5	65.8
Other white-red oaks	1468.5	75.5	276.9	731.2	315.6	69.3
Hickory	798.0	28.6	155.8	461.6	121.7	30.2
Hard maple	45.6	...	5.6	23.9	13.6	2.5
Sweetgum	388.6	8.9	65.7	269.1	31.9	13.1
Tupelo and blackgum	104.7	12.0	12.4	66.7	7.5	6.2
Ash-walnut-black cherry	173.7	20.2	47.3	68.1	23.2	14.8
Yellow-poplar	458.2	52.2	83.8	168.6	119.9	33.7
Other hardwoods	334.4	12.3	48.3	154.7	83.8	35.2
Total hardwoods	4992.7	305.9	1016.4	2500.6	898.8	271.0
All species	6875.0	882.4	1247.2	3544.9	898.8	301.6

Supplemental Tables 26-43

Table 26—Area of timberland by stand age, forest type group and type of regeneration, North Alabama Counties, 1990

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
----- Thousand acres -----						
1-10	10.9	5.6	...	...	10.0	32.8
11-20	34.6	11.5	...	...	...	17.3
21-30	30.1	24.6	...	...	...	13.9
31-40	5.6	10.4	...	...	...	10.7
41-50	4.9	...	...	...	...	...
> 50	...	...	...	...	...	5.3
Mixed	28.0	206.0	6.6	205.2	12.0	1419.0
Total	114.1	258.2	6.6	205.2	21.9	1499.0

Table 27—Volume of softwood growing stock on timberland by forest type, North Alabama Counties, 1990

County	Total	Forest type group					
		White-red-jack pine	Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
			Planted	Natural			
----- Million cubic feet -----							
Colbert	51.3	...	7.5	24.4	8.6	10.3	0.5
De Kalb	92.2	...	12.2	43.8	16.7	19.4	...
Franklin	67.0	...	30.9	9.7	12.3	13.9	0.3
Jackson	58.3	...	1.6	20.9	20.3	15.6	...
Lauderdale	32.1	...	18.5	...	6.3	7.4	...
Lawrence	67.9	4.7	7.0	32.2	8.4	14.6	1.1
Limestone	10.7	...	...	...	7.5	3.2	...
Madison	85.9	...	...	58.5	...	16.2	11.2
Marshall	74.7	...	9.1	30.8	28.6	6.2	...
Morgan	69.3	...	16.4	29.7	13.1	9.7	0.4
All counties	609.3	4.7	103.1	249.9	121.8	116.4	13.5

Table 28 — *Volume of hardwood growing stock on timberland by forest type, North Alabama Counties, 1990*

County	Total	Forest type group					
		White-red-jack pine	Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
			Planted	Natural			
----- Million cubic feet -----							
Colbert	107.9	...	0.2	2.8	7.3	89.1	8.5
De Kalb	118.0	...	0.2	6.1	13.7	97.9	...
Franklin	182.9	...	9.5	4.0	17.6	146.8	5.0
Jackson	380.1	...	...	8.9	15.1	346.5	9.5
Lauderdale	132.7	...	3.3	...	4.3	125.1	...
Lawrence	160.6	1.2	0.1	10.8	5.4	111.9	31.2
Limestone	113.2	...	...	...	6.1	68.4	38.7
Madison	171.2	...	...	6.7	...	129.7	34.9
Marshall	126.7	...	...	8.9	27.6	90.1	...
Morgan	193.5	...	0.6	13.9	14.6	128.0	36.5
All counties	1686.8	1.2	13.8	62.2	111.7	1333.6	164.4

Table 29 — *Volume of softwood growing stock in the saw-log portion of sawtimber trees on timberland by forest type, North Alabama Counties, 1990*

County	Total	Forest type group					
		White-red-jack pine	Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress
			Planted	Natural			
----- Million cubic feet -----							
Colbert	21.0	...	0.9	8.4	4.0	7.2	0.5
De Kalb	47.0	...	6.9	17.7	8.9	13.5	...
Franklin	25.9	...	7.6	4.8	5.4	8.1	...
Jackson	27.1	...	...	6.5	11.4	9.2	...
Lauderdale	15.9	...	7.1	...	4.8	4.0	...
Lawrence	39.7	3.2	2.5	18.2	4.8	10.1	1.0
Limestone	9.3	...	...	...	6.6	2.8	...
Madison	58.1	...	...	37.5	...	12.4	8.2
Marshall	41.7	...	1.8	17.0	21.0	2.0	...
Morgan	43.5	...	11.8	16.4	9.3	5.6	0.3
All counties	329.2	3.2	38.5	126.5	76.1	74.9	10.0

Table 30 — *Volume of hardwood growing stock in the saw-log portion of sawtimber trees on timberland by forest type, North Alabama Counties, 1990*

County	Total	Forest type group				
		Planted	Loblolly-shortleaf pine		Oak-pine	Oak-gum-cypress
			Natural			
Colbert	45.3	...	1.2	3.0	36.1	4.9
De Kalb	50.9	...	2.0	2.8	46.1	...
Franklin	86.3	4.0	2.4	10.5	67.7	1.8
Jackson	201.3	...	2.0	2.9	192.1	4.2
Lauderdale	72.3	1.6	...	0.4	70.3	...
Lawrence	77.6	...	3.9	1.5	58.1	14.1
Limestone	68.4	...	...	3.1	39.6	25.7
Madison	83.6	...	1.7	...	66.0	15.9
Marshall	67.1	...	4.8	14.5	47.8	...
Morgan	99.5	...	4.8	6.9	64.5	23.3
All counties	852.3	5.5	22.8	45.7	688.3	89.9

Table 31—Volume of timber on timberland by county, class of timber and species group, North Alabama Counties, 1990

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
-----Million cubic feet-----							
Colbert	185.8	51.3	107.9	2.5	19.2	...	5.0
De Kalb	232.0	92.2	118.0	6.0	12.9	0.2	2.7
Franklin	269.5	67.0	182.9	1.4	14.5	...	3.7
Jackson	486.8	58.3	380.1	2.3	33.6	0.1	12.4
Lauderdale	184.2	32.1	132.7	0.7	14.9	...	3.8
Lawrence	243.6	67.9	160.6	2.5	11.2	...	1.4
Limestone	138.2	10.7	113.2	0.3	10.9	...	3.1
Madison	279.5	85.9	171.2	1.5	11.3	...	9.6
Marshall	220.4	74.7	126.7	1.0	11.2	0.8	6.1
Morgan	275.0	69.3	193.5	1.7	8.7	0.1	1.8
All counties	2515.0	609.3	1686.8	19.8	148.5	1.1	49.6

Table 32—Number of live trees on timberland by detailed species and diameter class, North Alabama Counties, 1990

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 pine	19518	7415	3917	2037	2768	1731	1036	482	84	27	20	...	...
Loblolly pine	79857	21001	20802	14533	11885	5766	3059	1266	785	408	138	205	9
Virginia pine	66874	32692	12465	8899	6918	3326	1804	570	143	56	2	...	...
E. white pine	321	...	...	77	...	84	70	36	41	12	...	...	...
Redcedar	53258	30230	11792	5915	3291	1359	455	130	58	11	...	16	...
Hemlock-spruce	1391	903	451	...	...	...	27	...	...	10	...	...	...
Cypress	515	...	...	163	77	...	88	188	...	...	...	...	...
Total softwoods	221734	92241	49427	31624	24939	12266	6540	2671	1111	525	160	221	9
Select white oaks	85501	40326	19359	7512	5624	4409	3137	2004	1599	611	506	365	48
Select red oaks	13731	3251	3571	1551	1775	922	976	698	277	260	267	161	22
Other white oaks	71999	32151	18329	6115	5985	3515	2557	1261	969	446	279	340	52
Other red oaks	70198	34094	8165	8623	5573	5011	3167	2477	1316	837	364	460	112
Other hickories	140097	84529	22276	12757	7757	5467	3717	1635	1007	571	209	166	7
Persimmon	14293	9405	2602	1474	529	203	53	17	...	10	...	...	...
Hard maple	44521	34444	5740	1885	1189	626	357	133	81	67	...	...	...
Soft maple	91550	73760	10322	3124	1866	1031	447	305	282	192	100	119	4
Boxelder	1049	506	492	...	...	40	...	...	12	...	...	...	...
Beech	7649	5058	1938	265	51	31	...	39	53	34	40	114	27
Sweetgum	65660	32336	14219	6882	5477	3274	1822	839	394	232	111	74	...
Blackgum	74848	59490	8065	3578	1110	1398	583	279	217	24	80	25	...
Other gums/tupelos	125	...	...	...	53	...	23	21	13	...	...	15	...
White ash	42666	30064	6306	3244	1015	973	353	252	177	71	127	84	...
Other ashes	10218	4287	3036	1337	652	503	242	91	15	23	10	22	...
Sycamore	3429	1354	1476	202	122	105	102	...	15	20	20	13	...
Basswood	2577	1996	...	112	104	136	66	115	...	31	9	6	...
Yellow-poplar	27959	16724	5037	1146	1053	1232	884	683	475	314	183	206	22
Magnolia	2556	998	1012	232	178	...	28	62	29	...	9	8	...
Willow	1389	984	...	220	...	75	79	...	32	...	...	...	...
Black walnut	2803	514	1286	411	216	231	53	25	46	11	8	...	...
Black cherry	23745	15009	5708	2035	346	260	230	65	35	19	20	15	4
American elm	18437	14829	2023	916	253	168	124	39	30	32	18	5	...
Other elms	52442	39596	10287	814	1120	243	192	102	30	12	28	18	...
River birch	306	...	...	...	65	...	43	62	68	19	43	8	...
Other birches	594	506	...	...	53	36	...	...	...	...	...	...	...
Hackberry	17373	10319	4424	887	529	466	300	234	116	76	9	12	...
Black locust	7863	4120	2066	693	517	303	82	36	46	...	...	...	...
Other locusts	1095	...	780	263	51	...	...	...	...	...	...	...	...
Sassafras	29445	20721	7363	661	468	204	...	...	...	28	...	...	...
Dogwood	92443	67334	22594	2387	129	...	...	...	...	...	...	...	...
Holly	564	451	...	113	...	...	...	...	...	...	...	...	...
Other commercial	8296	6279	492	868	284	259	41	50	14	...	9	...	...
Total hardwoods	1027422	645433	188966	70307	44144	31118	19657	11526	7348	3940	2450	2236	297
Noncommercial	129623	89643	31445	6526	1382	493	85	33	16	...	...	...	...
All species	1378778	827316	269839	108456	70464	43878	26282	14230	8475	4464	2610	2457	306

Table 33—*Number of growing-stock trees on timberland by detailed species and diameter class, North Alabama Counties, 1990*

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
----- Thousand trees -----											
Shortleaf pine	8046	1952	2713	1731	1036	482	84	27	20	...	...
Loblolly pine	36847	14033	11517	5544	3003	1266	743	395	138	199	9
Virginia pine	19670	7692	6803	2853	1669	502	107	43	2	...	...
E. white pine	281	77	...	44	70	36	41	12	...	...	...
Redcedar	9737	5399	2898	907	337	109	58	11	...	16	...
Hemlock-spruce	10	...	...	...	...	...	...	10	...	...	...
Cypress	515	163	77	...	88	188	...	...	...	...	...
Total softwoods	75106	29316	24009	11079	6204	2582	1033	499	160	215	9
Select white oaks	22972	6690	4905	4226	2692	1819	1402	536	406	255	40
Select red oaks	5896	1207	1727	803	784	589	231	183	229	131	11
Other white oaks	18711	5104	5538	3307	2111	1006	805	358	242	225	17
Other red oaks	25112	6962	5445	4899	2850	2322	1168	761	267	378	59
Other hickories	29052	10278	7237	5064	3216	1494	934	510	179	138	3
Persimmon	1685	1096	390	162	26	...	...	10	...	...	...
Hard maple	3861	1885	1003	544	205	116	81	28	...	...	...
Soft maple	4576	2045	1150	671	226	214	127	24	70	51	...
Boxelder	40	...	...	40	...	...	...	...	...	...	...
Beech	363	147	51	...	...	22	53	22	21	35	13
Sweetgum	17055	5287	5364	3126	1686	821	364	222	111	74	...
Blackgum	5556	2197	1000	1280	583	204	187	24	66	14	...
Other gums/tupelos	95	...	53	...	23	...	13	...	...	7	...
White ash	4737	2284	877	790	268	194	147	71	60	46	...
Other ashes	2718	1235	652	468	212	91	15	23	...	22	...
Sycamore	534	202	122	105	48	...	15	20	10	13	...
Basswood	517	112	104	73	66	115	...	31	9	6	...
Yellow-poplar	5918	1146	985	1159	834	662	453	290	163	206	19
Magnolia	428	232	104	...	28	41	16	...	...	8	...
Willow	47	...	...	...	30	...	16	...	...	...	...
Black walnut	675	305	114	152	27	25	31	11	8	...	...
Black cherry	1776	1044	293	152	175	65	17	19	8	...	4
American elm	1315	748	253	128	97	39	15	19	10	5	...
Other elms	2018	632	910	210	106	102	15	12	18	12	...
River birch	283	...	65	...	43	62	68	19	28	...	...
Hackberry	2387	887	529	394	230	174	102	55	9	6	...
Black locust	1296	693	274	194	53	36	46	...	...	...	...
Other locusts	238	187	51	...	...	...	...	...	...	...	...
Sassafras	907	263	411	204	...	...	...	28	...	...	...
Dogwood	631	631	...	...	...	...	...	...	...	...	...
Other commercial	1191	758	157	186	41	35	14	...	...	...	...
Total hardwoods	162592	54256	39765	28336	16663	10249	6334	3275	1915	1632	166
All species	237698	83572	63774	39415	22867	12832	7367	3774	2076	1847	175

Table 34—*Volume of growing stock on timberland by detailed species and diameter class, North Alabama Counties, 1990*

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
-----Million cubic feet-----											
Shortleaf pine	86.6	4.6	20.6	22.4	20.5	12.3	3.5	1.5	1.3	...	...
Loblolly pine	326.2	34.0	68.3	62.2	53.8	33.2	25.6	20.1	9.2	18.9	0.9
Virginia pine	141.2	21.2	42.0	32.6	27.4	12.4	4.0	1.5	0.1	...	...
E. white pine	3.8	0.3	...	0.3	1.0	0.7	1.1	0.4	...	...	...
Redcedar	43.4	11.8	14.1	8.4	4.2	2.0	1.7	0.5	...	0.6	...
Hemlock-spruce	0.4	...	...	...	...	...	...	0.4	...	...	...
Cypress	7.7	0.5	0.7	...	1.6	5.0	...	...	...	...	...
Total softwoods	609.3	72.4	145.7	125.9	108.5	65.5	35.9	24.4	10.6	19.5	0.9
Select white oaks	278.8	14.8	27.5	42.7	43.7	41.8	45.3	20.7	19.7	17.7	4.9
Select red oaks	85.7	2.7	9.8	8.4	13.0	12.7	7.6	8.1	12.6	9.6	1.2
Other white oaks	191.3	12.0	31.7	31.3	32.7	21.1	23.4	12.2	11.8	13.7	1.6
Other red oaks	301.6	17.0	29.5	49.7	45.4	51.6	34.1	29.3	13.4	24.6	6.9
Other hickories	278.4	22.5	36.7	50.3	54.8	36.9	32.0	22.6	11.1	10.9	0.6
Persimmon	7.5	2.8	1.7	1.8	0.6	...	...	0.6	...	...	...
Hard maple	25.2	4.4	5.5	5.6	3.4	2.5	2.1	1.7	...	...	...
Soft maple	33.5	4.5	5.8	5.7	3.5	4.0	3.2	0.8	3.2	2.9	...
Boxelder	0.3	...	...	0.3	...	...	...	...	...	...	...
Beech	7.6	0.5	0.3	...	...	0.4	1.5	0.9	1.0	2.4	0.6
Sweetgum	157.4	9.3	29.9	31.8	28.9	20.4	13.2	10.8	7.2	6.0	...
Blackgum	43.5	4.6	4.3	12.1	8.1	3.9	5.6	0.9	3.2	0.7	...
Other gums/tupelos	1.6	...	0.3	...	0.6	...	0.5	...	...	0.2	...
White ash	35.9	4.3	4.6	7.3	3.5	4.1	3.9	2.5	2.7	3.1	...
Other ashes	20.8	3.9	3.5	5.7	3.0	2.2	0.4	0.7	...	1.4	...
Sycamore	5.3	0.5	0.7	1.0	0.7	...	0.2	0.9	0.6	0.7	...
Basswood	7.9	0.2	0.6	0.8	1.1	2.9	...	1.2	0.7	0.6	...
Yellow-poplar	113.9	3.1	4.7	13.1	15.8	18.2	15.4	14.1	9.1	17.0	3.5
Magnolia	3.2	0.4	0.7	...	0.4	0.9	0.5	...	...	0.2	...
Willow	0.6	...	...	...	0.3	...	0.3	...	...	...	...
Black walnut	4.6	0.4	0.4	1.0	0.2	0.5	0.7	0.6	0.8	...	...
Black cherry	10.3	1.7	1.0	1.3	2.5	1.6	0.6	0.5	0.4	...	0.6
American elm	9.3	1.5	1.6	1.6	1.5	0.9	0.5	0.9	0.3	0.3	...
Other elms	15.6	1.4	4.7	2.1	2.0	2.3	0.3	0.5	1.0	1.3	...
River birch	7.4	...	0.4	...	0.9	1.6	2.2	1.0	1.4	...	...
Hackberry	19.9	2.6	3.0	2.9	2.9	3.5	2.5	2.0	0.2	0.4	...
Black locust	7.4	1.5	1.2	1.7	0.8	0.6	1.5	...	...	...	...
Other locusts	1.0	0.6	0.4	...	...	...	...	...	...	...	...
Sassafras	4.9	0.6	1.5	1.7	...	...	...	1.2	...	...	...
Dogwood	1.1	1.1	...	...	...	...	...	...	...	...	...
Other commercial	5.2	1.7	0.8	1.0	0.6	0.7	0.5	...	...	...	...
Total hardwoods	1686.8	120.6	212.9	280.9	270.8	235.2	197.9	134.5	100.4	113.6	19.9
All species	2296.1	193.0	358.6	406.8	379.3	300.7	233.8	158.9	111.0	133.0	20.9

Table 35—*Volume of growing stock in the saw-log portion of sawtimber trees on timberland by detailed species and diameter class, North Alabama Counties, 1990*

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 cubic feet -----</i>									
Shortleaf pine	51.5	17.9	17.7	10.1	3.1	1.4	1.3	...	...
Loblolly pine	191.9	48.7	47.5	29.7	23.2	17.9	7.8	16.5	0.8
Virginia pine	61.7	24.8	22.4	10.0	3.3	1.1	0.1	...	...
E. white pine	3.2	0.3	0.8	0.7	1.0	0.4	...	...	...
Redcedar	14.6	6.7	3.7	1.7	1.6	0.4	...	0.5	...
Hemlock-spruce	0.3	...	...	...	...	0.3	...	...	...
Cypress	6.0	...	1.4	4.6	...	...	...	...	...
Total softwoods	329.2	98.3	93.5	56.6	32.2	21.6	9.1	17.0	0.8
Select white oaks	155.0	...	31.8	33.7	36.4	17.4	16.5	15.0	4.0
Select red oaks	52.8	...	9.3	10.2	6.3	7.2	10.5	8.2	1.2
Other white oaks	91.4	...	23.7	16.5	19.1	10.1	9.7	11.1	1.2
Other red oaks	163.3	...	31.8	41.6	28.3	24.6	10.8	19.8	6.5
Other hickories	132.4	...	40.0	29.0	26.3	18.1	9.4	9.3	0.4
Persimmon	1.0	...	0.5	...	...	0.6	...	...	...
Hard maple	7.6	...	2.6	2.1	1.7	1.3	...	...	...
Soft maple	13.4	...	2.4	3.1	2.5	0.6	2.6	2.3	...
Beech	5.2	...	...	0.2	1.2	0.8	0.7	1.8	0.4
Sweetgum	67.3	...	19.5	15.7	11.3	9.4	6.3	5.2	...
Blackgum	17.7	...	5.7	3.1	4.8	0.8	2.7	0.6	...
Other gums/tupelos	1.0	...	0.5	...	0.3	...	...	0.2	...
White ash	15.7	...	2.4	3.4	3.1	2.0	2.2	2.5	...
Other ashes	6.3	...	2.2	1.7	0.4	0.6	...	1.3	...
Sycamore	2.6	...	0.5	...	0.2	0.8	0.5	0.6	...
Basswood	4.8	...	0.7	2.3	...	0.7	0.6	0.5	...
Yellow-poplar	77.0	...	10.6	15.0	13.4	12.3	7.6	15.1	3.0
Magnolia	1.7	...	0.3	0.8	0.4	...	...	0.2	...
Willow	0.4	...	0.2	...	0.2	...	...	...	...
Black walnut	2.3	...	0.2	0.3	0.6	0.5	0.7	...	...
Black cherry	4.9	...	1.8	1.3	0.5	0.4	0.3	...	0.6
American elm	3.4	...	1.0	0.7	0.5	0.7	0.2	0.2	...
Other elms	5.9	...	1.5	2.0	0.2	0.4	0.9	1.0	...
River birch	5.8	...	0.6	1.2	2.0	0.9	1.0	...	...
Hackberry	8.7	...	1.9	2.7	1.9	1.8	0.1	0.3	...
Black locust	2.3	...	0.6	0.5	1.2	...	...	...	...
Sassafras	0.8	...	...	...	...	0.8	...	...	...
Other commercial	1.5	...	0.4	0.6	0.4	...	...	...	...
Total hardwoods	852.3	...	192.6	187.8	163.4	112.9	83.2	95.1	17.3
All species	1181.5	98.3	286.2	244.4	195.6	134.4	92.4	112.1	18.1

Table 36—*Volume of timber on timberland by species and class of timber, North Alabama Counties, 1990*

Species	Live tree	Growing stock	Rough	Rotten
----- Million cubic feet -----				
Shortleaf pine	87.0	86.6	0.5	...
Loblolly pine	331.0	326.2	4.8	...
Virginia pine	151.0	141.2	9.6	0.2
E. white pine	4.2	3.8	0.3	...
Redcedar	48.7	43.4	4.4	0.9
Hemlock-spruce	0.6	0.4	0.2	...
Cypress	7.7	7.7	...	...
Total softwoods	630.2	609.3	19.8	1.1
Select white oaks	300.2	278.8	14.5	6.9
Select red oaks	95.5	85.7	6.5	3.3
Other white oaks	213.2	191.3	15.0	6.8
Other red oaks	324.9	301.6	14.6	8.8
Other hickories	298.1	278.4	15.4	4.2
Persimmon	9.4	7.5	1.9	...
Hard maple	28.5	25.2	2.4	1.0
Soft maple	53.4	33.5	14.8	5.1
Boxelder	0.5	0.3	0.2	...
Beech	13.9	7.6	1.0	5.3
Sweetgum	164.4	157.4	6.9	0.1
Blackgum	49.0	43.5	4.3	1.3
Other gums/tupelos	2.2	1.6	0.5	...
White ash	43.6	35.9	6.0	1.7
Other ashes	21.7	20.8	0.5	0.4
Sycamore	6.1	5.3	0.6	0.2
Basswood	8.3	7.9	0.4	...
Yellow-poplar	117.0	113.9	1.9	1.2
Magnolia	3.8	3.2	0.2	0.4
Willow	1.7	0.6	1.1	...
Black walnut	6.0	4.6	1.1	0.2
Black cherry	14.3	10.3	4.0	...
American elm	11.1	9.3	1.8	...
Other elms	18.9	15.6	2.5	0.8
River birch	8.0	7.4	...	0.6
Other birches	0.4	...	0.4	...
Hackberry	23.3	19.9	3.4	...
Black locust	8.7	7.4	0.5	0.8
Other locusts	1.3	1.0	0.2	...
Sassafras	5.6	4.9	0.7	...
Dogwood	4.0	1.1	2.7	0.1
Holly	0.2	...	0.2	...
Other commercial	6.4	5.2	0.9	0.3
Total hardwoods	1863.3	1686.8	127.0	49.6
Noncommercial	21.5	...	21.5	...
All species	2515.0	2296.1	168.2	50.7

Table 37—Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, North Alabama Counties, 1990

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 pine	107.0	34.5	29.4	18.1	11.9	5.6	7.3	...	...
Loblolly pine	349.2	48.6	61.2	66.7	47.7	59.1	17.1	48.7	...
Virginia pine	12.8	2.7	1.8	2.9	3.0	2.5	...	...	...
Redcedar	74.5	34.0	18.9	7.6	8.4	2.8	...	2.7	...
Hemlock-spruce	2.0	...	...	...	...	2.0	...	...	...
Cypress	31.1	...	7.6	23.6	...	...	...	...	...
Total softwoods	576.5	119.8	118.8	118.9	71.1	72.1	24.4	51.4	...
Select white oaks	64.2	...	...	...	13.4	7.6	16.0	24.8	2.3
Select red oaks	32.0	...	...	...	6.9	6.0	10.8	8.4	...
Other white oaks	34.7	...	...	...	2.1	4.5	9.8	18.3	...
Other red oaks	40.9	...	...	...	2.0	11.9	2.9	12.4	11.7
Other hickories	28.6	...	...	...	5.8	10.0	5.0	7.8	...
Soft maple	5.6	...	...	...	...	...	3.2	2.4	...
Sweetgum	8.9	...	...	...	...	3.6	...	5.3	...
Blackgum	12.0	...	...	...	2.6	...	9.4	...	...
White ash	16.6	...	...	...	1.7	6.0	...	8.9	...
Other ashes	3.6	...	...	...	...	...	...	3.6	...
Sycamore	4.4	...	...	...	...	4.4	...	...	...
Basswood	2.3	...	...	...	...	2.3	...	...	...
Yellow-poplar	52.2	...	...	...	...	4.7	2.4	45.0	...
Total hardwoods	305.9	...	...	...	34.5	61.1	59.3	136.9	14.0
All species	882.4	119.8	118.8	118.9	105.6	133.2	83.7	188.3	14.0

Table 38—Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class, North Alabama Counties, 1990

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 pine	53.9	12.6	14.9	20.5	5.9	...	...	...	...
Loblolly pine	168.8	37.4	24.9	18.9	22.2	30.3	5.7	29.3	...
Virginia pine	8.2	...	5.6	1.9	...	...	0.6	...	...
Total softwoods	230.9	50.1	45.4	41.4	28.1	30.3	6.3	29.3	...
Select white oaks	239.8	...	...	42.6	89.8	41.1	28.8	30.2	7.3
Select red oaks	80.8	...	...	12.3	11.7	17.4	26.2	13.2	...
Other white oaks	104.1	...	...	18.7	36.3	19.4	14.5	12.6	2.5
Other red oaks	172.8	...	...	20.7	35.7	59.5	13.5	37.0	6.3
Other hickories	155.8	...	...	41.9	39.3	34.5	21.8	18.3	...
Hard maple	5.6	...	...	...	...	5.6	...	...	...
Soft maple	3.2	...	...	1.8	1.4	...	...	...	...
Beech	2.1	...	...	...	...	...	...	2.1	...
Sweetgum	65.7	...	...	15.9	13.8	18.3	13.6	4.2	...
Blackgum	12.4	...	...	4.4	5.6	0.7	1.6	...	...
White ash	38.1	...	...	5.4	14.6	3.9	4.6	9.7	...
Other ashes	4.0	...	...	2.7	...	1.3	...	...	...
Sycamore	2.9	...	...	...	...	...	2.9	...	...
Basswood	12.0	...	...	4.6	...	...	3.9	3.5	...
Yellow-poplar	83.8	...	...	15.2	22.2	27.3	8.3	9.8	1.1
Black cherry	5.2	...	...	3.0	...	...	2.2	...	...
American elm	3.0	...	...	...	3.0	...	...	...	...
Other elms	8.8	...	...	2.1	...	2.6	...	4.0	...
River birch	10.0	...	...	...	3.9	6.0	...	...	...
Hackberry	3.8	...	...	...	1.3	2.5	...	...	...
Other commercial	2.7	...	...	...	2.7	...	...	...	...
Total hardwoods	1016.4	...	...	191.4	281.2	240.2	141.8	144.6	17.2
All species	1247.2	50.1	45.4	232.8	309.2	270.5	148.1	173.9	17.2

Table 39—*Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, North Alabama Counties, 1990*

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	129.7	50.8	57.7	17.7	...	3.5	...	...	...
Loblolly pine	588.6	170.4	180.7	85.9	64.9	22.7	30.1	34.0	...
Virginia pine	309.9	126.6	112.7	48.0	17.9	4.7	...	...	...
E. white pine	16.0	1.3	4.1	3.3	5.1	2.1	...	...	...
Total softwoods	1044.3	349.1	355.3	154.9	87.9	33.1	30.1	34.0	...
Select white oaks	406.0	...	132.5	99.5	78.8	35.8	22.7	27.8	8.9
Select red oaks	150.8	...	39.2	27.1	16.5	16.4	23.3	22.5	5.8
Other white oaks	276.7	...	96.2	58.5	48.4	26.0	26.2	18.7	2.7
Other red oaks	454.5	...	105.1	139.1	90.9	53.5	25.5	37.3	3.2
Other hickories	461.6	...	180.8	98.8	89.2	47.5	19.7	25.7	...
Persimmon	2.9	...	2.9	...	...	...	...	...	...
Hard maple	23.9	...	11.6	7.2	1.6	3.5	...	...	...
Soft maple	20.8	...	3.0	5.1	3.5	2.2	7.1	...	...
Beech	6.2	...	...	...	...	...	2.0	4.2	...
Sweetgum	269.1	...	94.7	60.5	40.4	30.3	20.4	22.9	...
Blackgum	61.3	...	24.7	8.0	17.3	4.1	5.8	1.5	...
Other gums/tupelos	5.4	...	2.4	...	2.3	...	...	0.7	...
White ash	32.4	...	11.0	11.7	...	2.6	7.1	...	...
Other ashes	14.5	...	7.7	2.7	...	...	...	4.1	...
Sycamore	4.5	...	1.5	...	...	...	...	3.0	...
Basswood	11.2	...	2.0	9.2	...	...	...	...	...
Yellow-poplar	168.6	...	41.1	34.1	27.8	22.0	17.5	24.4	1.5
Magnolia	7.3	...	...	4.9	2.5	...	...	...	...
Willow	2.0	...	0.7	...	1.2	...	...	...	...
Black walnut	14.1	...	0.7	1.6	2.7	3.0	6.0	...	...
Black cherry	7.1	...	4.0	...	3.1	...	...	...	...
American elm	8.6	...	5.7	...	...	3.0	...	...	...
Other elms	19.1	...	5.9	6.8	...	...	3.3	3.1	...
River birch	25.8	...	3.4	7.0	8.5	...	6.9	...	...
Hackberry	28.8	...	7.5	12.1	7.3	1.9	...	...	...
Black locust	8.9	...	2.4	1.4	5.1	...	...	...	...
Sassafras	3.1	...	...	...	...	3.1	...	...	...
Other commercial	5.4	...	2.0	3.5	...	...	...	...	...
Total hardwoods	2500.6	...	788.7	598.7	447.1	254.8	193.3	195.9	22.1
All species	3544.9	349.1	1143.9	753.6	535.0	287.8	223.4	229.9	22.1

Table 40—*Volume of sawtimber for tree grade 4 on timberland by detailed species and diameter class, North Alabama Counties, 1990*

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>									
Select white oaks	145.6	...	37.4	43.7	24.7	9.0	25.9	3.7	1.2
Select red oaks	35.9	...	8.5	12.6	1.1	3.5	7.7	1.4	1.2
Other white oaks	83.5	...	28.6	11.8	21.9	7.6	6.1	7.3	...
Other red oaks	232.1	...	60.8	68.8	35.8	18.7	22.9	23.5	1.6
Other hickories	121.7	...	41.3	23.3	21.6	19.1	8.5	5.1	2.8
Persimmon	3.5	...	...	...	...	3.5	...	...	...
Hard maple	13.6	...	...	4.8	8.8	...	...	...	...
Soft maple	34.8	...	8.9	7.7	8.7	...	1.5	8.0	...
Beech	17.1	...	...	1.3	7.3	...	2.9	5.7	...
Sweetgum	31.9	...	9.0	8.2	10.6	2.2	1.9	...	...
Blackgum	7.5	...	4.1	1.5	1.8	...	...	...	...
White ash	1.3	...	...	...	1.3	...	...	...	...
Other ashes	10.2	...	4.2	4.0	2.0	...	...	...	...
Basswood	1.5	...	1.5	...	...	...	...	...	...
Yellow-poplar	119.9	...	18.4	38.6	20.1	17.8	17.2	7.7	...
Magnolia	1.8	...	1.8	...	...	...	...	...	...
Black walnut	1.0	...	...	...	1.0	...	...	...	...
Black cherry	10.7	...	6.1	4.5	...	...	...	...	...
American elm	8.4	...	...	4.1	...	1.7	1.2	1.3	...
Other elms	7.0	...	2.4	2.4	...	...	2.3	...	...
Hackberry	7.7	...	2.3	...	1.2	2.3	...	2.0	...
Black locust	2.0	...	...	...	2.0	...	...	...	...
Total hardwoods	898.8	...	235.3	237.4	170.0	85.4	98.1	65.8	6.8
All species	898.8	...	235.3	237.4	170.0	85.4	98.1	65.8	6.8

Table 41—*Volume of sawtimber on timberland by species and ownership class, North Alabama Counties, 1990*

Species	All ownerships	National forest	Other public	Forest industry	Forest industry-leased	Other private
<i>----- Million board feet -----</i>						
Yellow pines	1758.0	111.2	107.8	81.1	...	1457.9
Cypress	31.1	...	...	...	...	31.1
Redcedar	75.1	13.7	...	6.1	1.2	54.2
Other softwoods	18.0	16.0	...	...	...	2.0
Total softwoods	1882.3	140.9	107.8	87.2	1.2	1545.3
Select white-red oaks	1220.9	81.0	124.9	26.9	...	988.1
Other white-red oaks	1468.5	58.6	155.5	35.1	1.6	1217.6
Hickory	798.0	32.5	55.6	10.9	3.6	695.4
Hard maple	45.6	1.0	2.7	...	...	41.8
Sweetgum	388.6	1.4	92.1	1.4	8.6	285.1
Tupelo and blackgum	104.7	0.7	7.5	1.1	...	95.5
Ash-walnut-black cherry	173.7	10.0	2.2	5.1	1.6	154.8
Yellow-poplar	458.2	16.8	19.1	16.1	...	406.2
Other hardwoods	334.4	2.1	40.6	4.3	1.5	286.0
Total hardwoods	4992.7	204.2	500.3	100.9	16.9	4170.4
All species	6875.0	345.0	608.1	188.1	18.1	5715.7

Table 42—Average net annual growth, average annual removals, and average annual mortality of live trees¹ by county and species group, North Alabama Counties, 1990

County	Growth			Removals			Mortality		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood	All species	Softwood	Hardwood
----- Million cubic feet -----									
Colbert	10.0	4.1	6.0	3.8	0.7	3.1	1.8	1.0	0.8
De Kalb	9.5	2.6	6.9	13.1	6.0	7.1	4.5	1.4	3.1
Franklin	13.9	4.3	9.6	8.6	5.1	3.5	3.7	2.3	1.4
Jackson	14.6	2.0	12.6	5.6	1.0	4.6	5.6	1.4	4.3
Lauderdale	8.8	2.6	6.2	6.9	3.5	3.4	1.8	0.5	1.3
Lawrence	8.7	2.9	5.8	6.2	3.8	2.4	2.8	1.4	1.4
Limestone	3.0	0.2	2.8	4.8	1.6	3.2	1.7	...	1.7
Madison	8.4	4.9	3.5	0.4	0.1	0.3	5.1	0.5	4.6
Marshall	8.2	3.1	5.1	6.2	3.6	2.6	2.1	0.9	1.2
Morgan	9.2	4.6	4.6	5.1	2.8	2.3	2.7	0.7	2.0
All counties	94.3	31.2	63.1	60.7	28.3	32.4	31.8	10.1	21.7

¹Excludes trees less than 5.0 inches in diameter at breast height.

Table 43—Average net annual growth, average annual removals, and average annual mortality of live trees¹ by ownership class and species group, North Alabama Counties, 1990

Ownership class	Growth			Removals			Mortality		
	All classes	Softwood	Hardwood	All species	Softwood	Hardwood	All Species	Softwood	Hardwood
----- Million cubic feet -----									
National forest	3.7	1.3	2.3	1.9	0.7	1.3	1.0	0.7	0.3
Other public	5.3	1.4	3.9	0.3	0.2	0.2	2.3	0.1	2.2
Forest industry	8.4	5.6	2.8	5.9	4.1	1.8	1.7	0.9	0.7
Forest industry-leased	0.8	...	0.8	...	...	...	...	...	...
Other private	76.1	22.9	53.2	52.5	23.4	29.1	26.8	8.3	18.5
All ownerships	94.3	31.2	63.1	60.7	28.3	32.4	31.8	10.1	21.7

¹Excludes trees less than 5.0 inches in diameter at breast height.

FIGURES

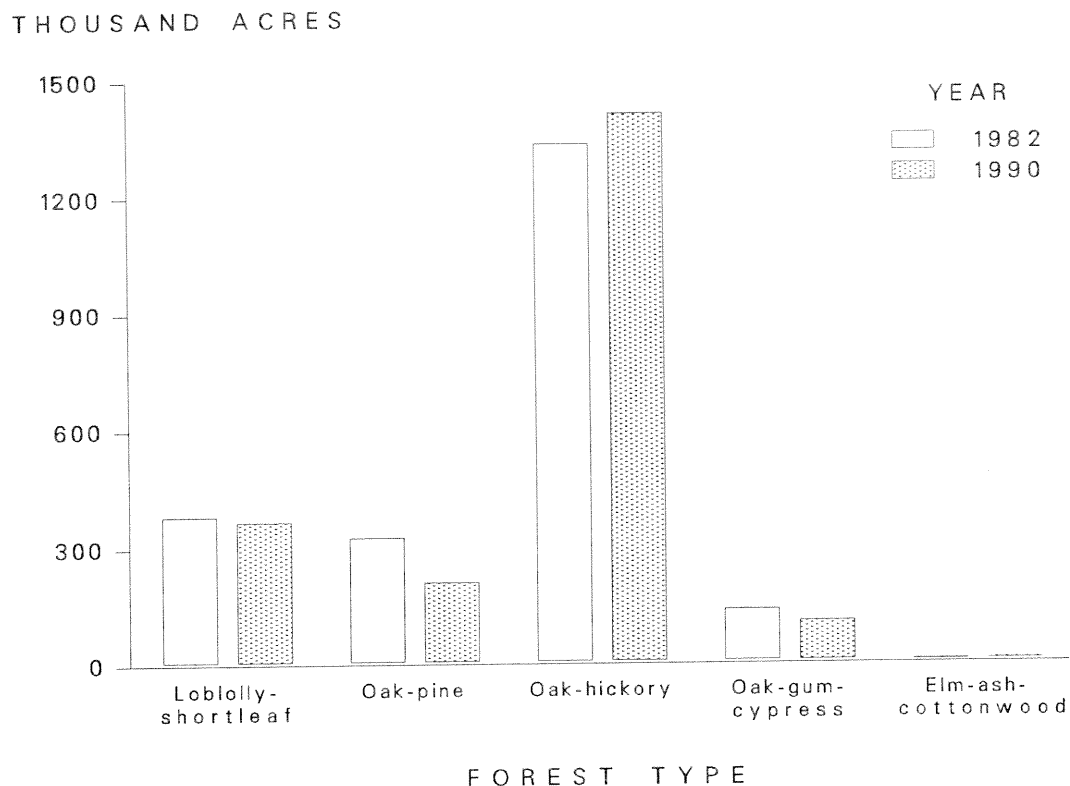


Figure 1.—Area of timberland by forest type, North Alabama, 1982 and 1990.

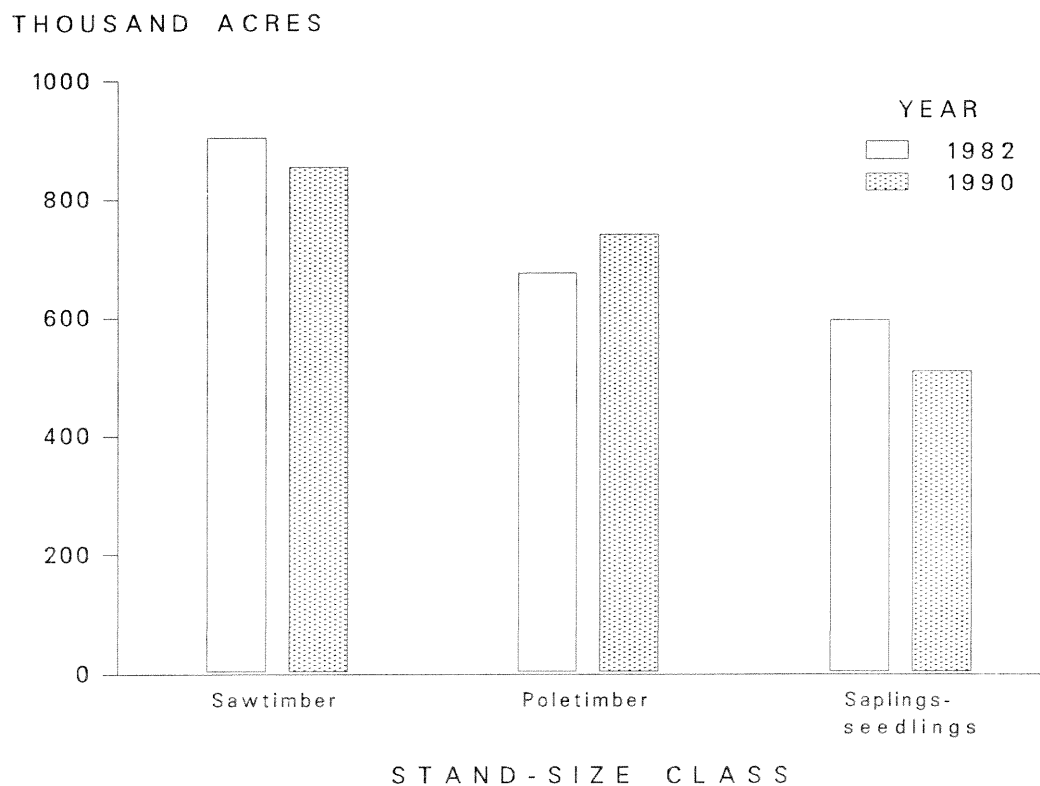


Figure 2.—Area of timberland by stand-size class, North Alabama, 1982 and 1990.

MILLION CUBIC FEET

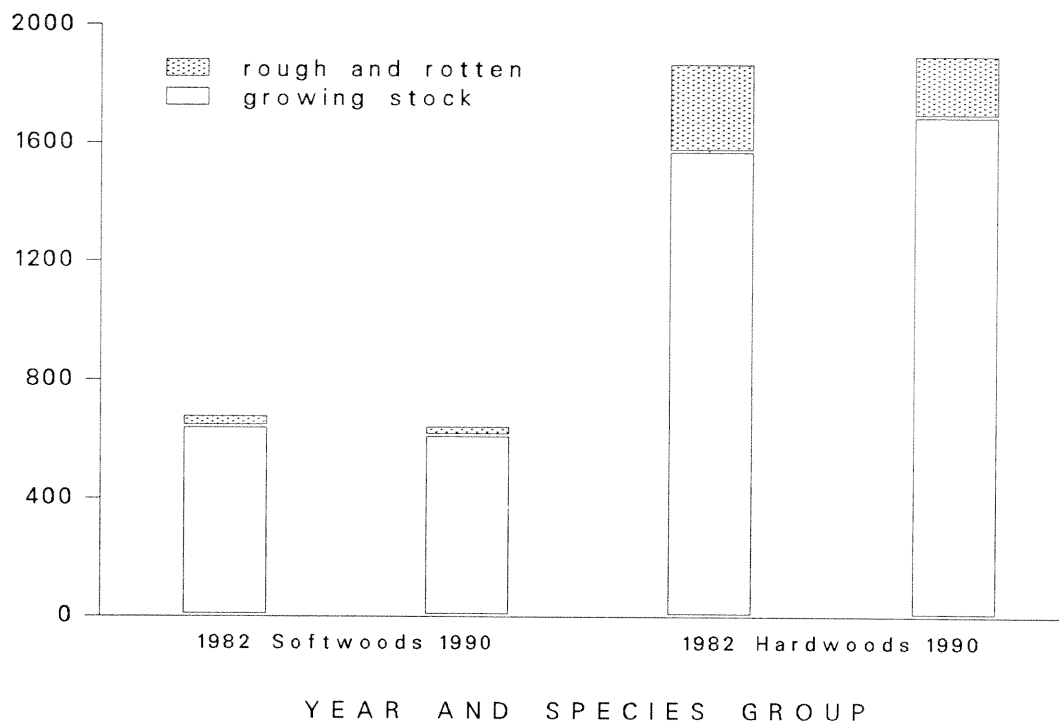


Figure 3.—Volume of live trees on timberland by species group and class of timber, North Alabama, 1982 and 1990.

MILLION CUBIC FEET

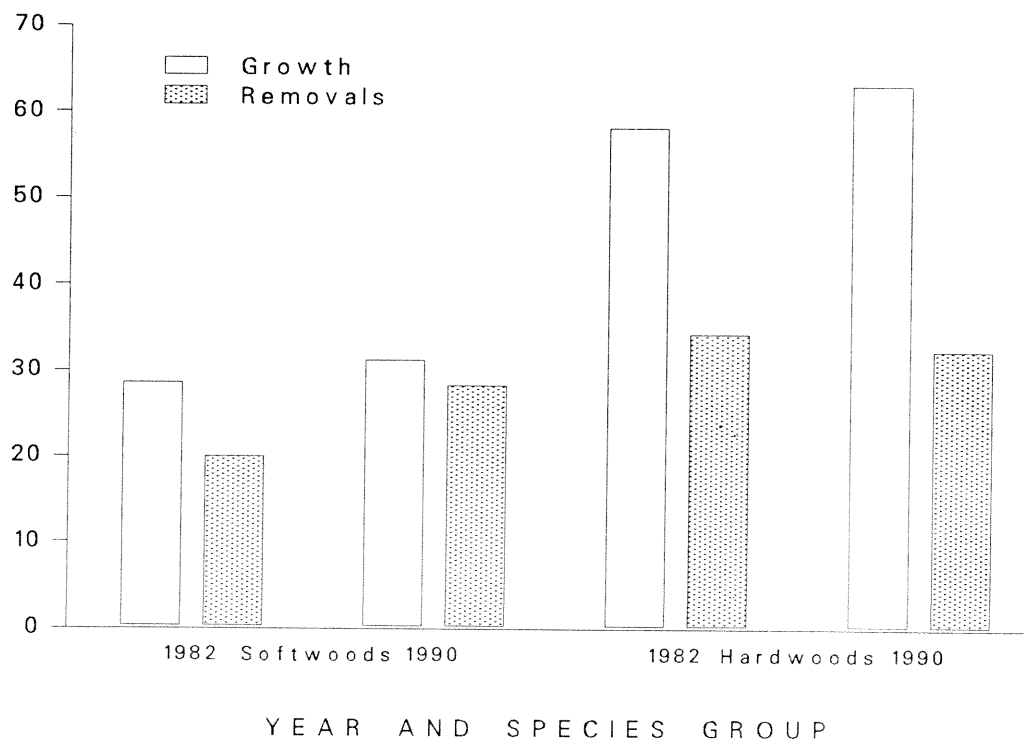


Figure 4.—Average net annual growth and average annual removals of live trees on timberland by species group, North Alabama, 1982 and 1990.

MILLION CUBIC FEET

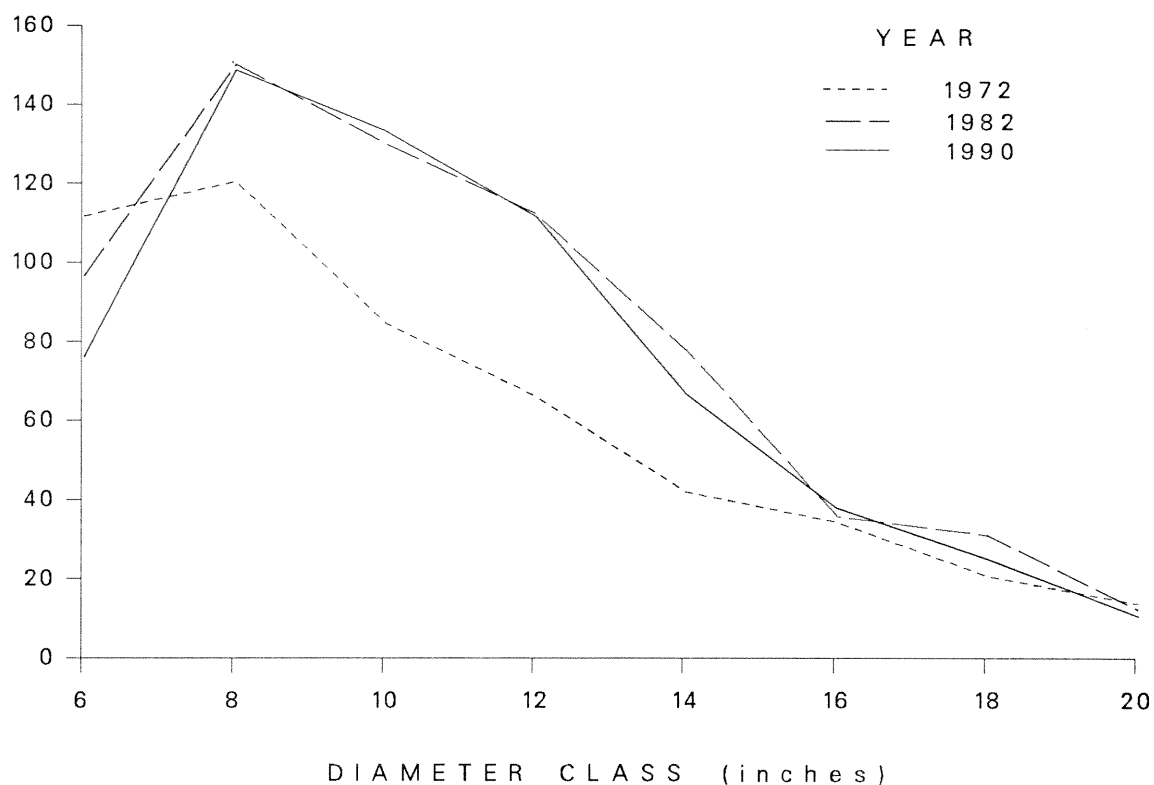


Figure 5.—Volume of live softwood trees on timberland by diameter class, North Alabama, 1972, 1982 and 1990.

MILLION CUBIC FEET

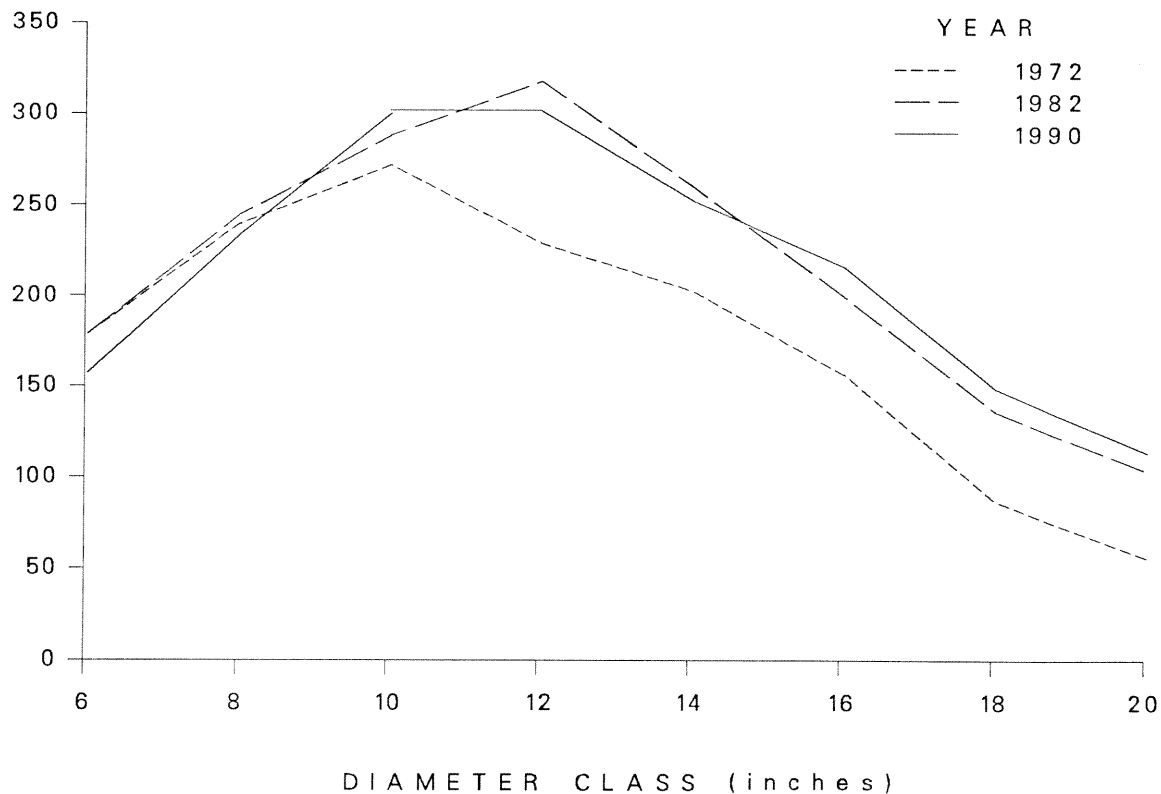


Figure 6.—Volume of live hardwood trees on timberland by diameter class, North Alabama, 1972, 1982, and 1990.

MILLION TREES

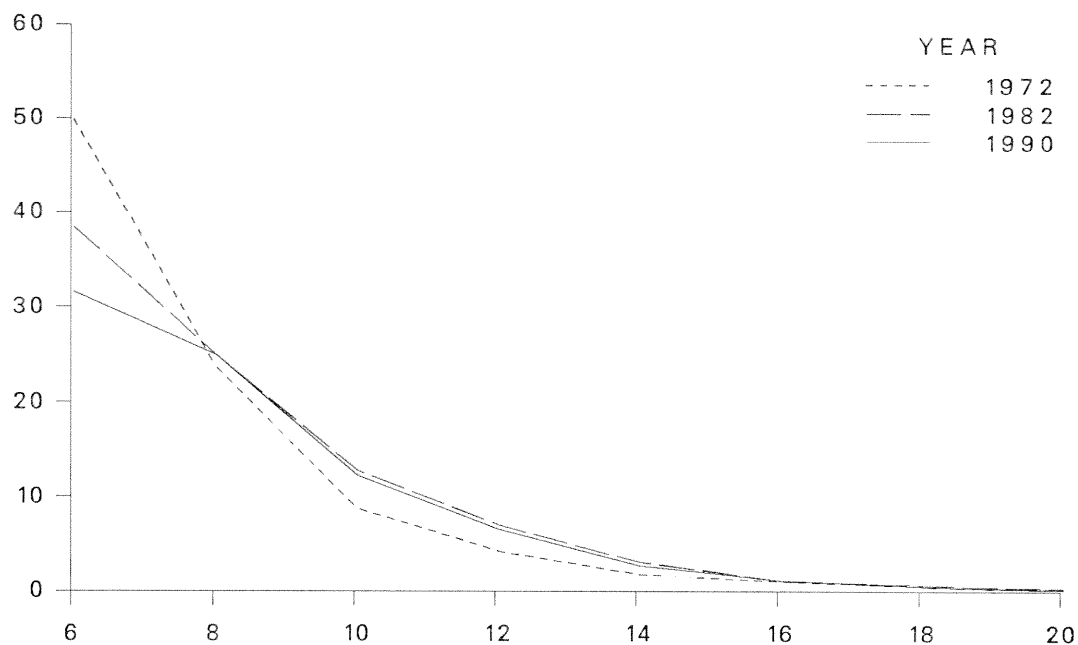


Figure 7.—Number of live softwood trees on timberland by diameter class, North Alabama, 1972, 1982 and 1990.

MILLION TREES

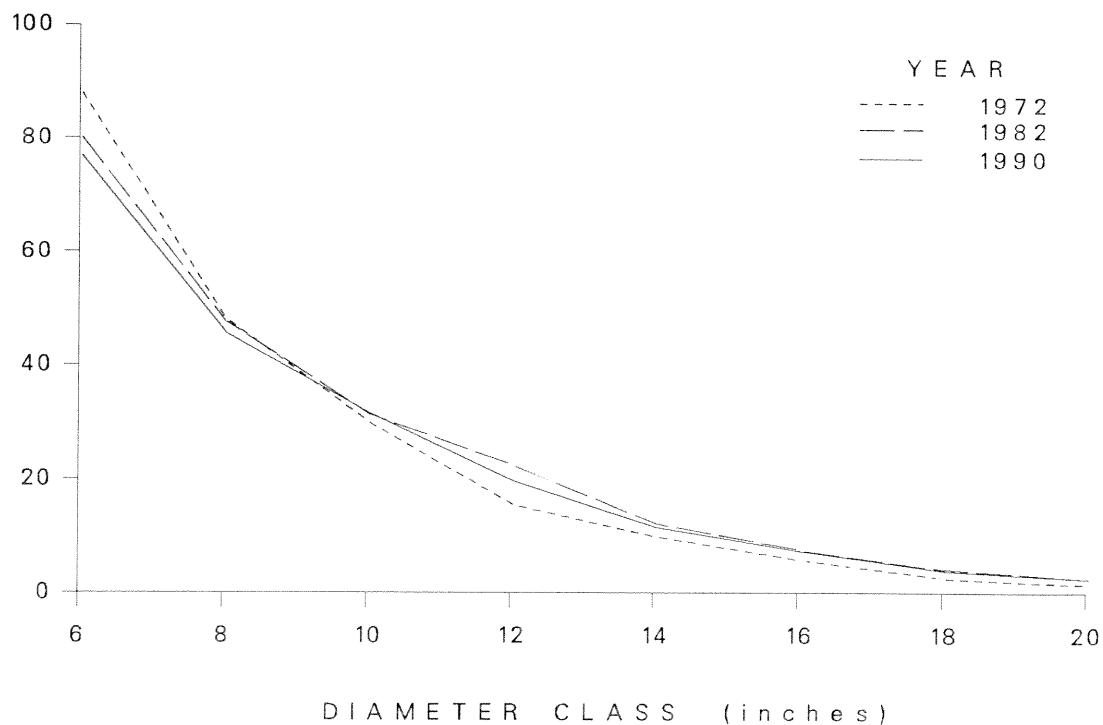


Figure 8.—Number of live hardwood trees on timberland by diameter class, North Alabama, 1972, 1982, and 1990.

McWilliams, William H.; Duncan, K. L.; Vissage, John S. 1990. Forest Statistics for North Alabama Counties – 1990. Resour. Bull. SO-149. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 30 p.

Tabulates forest resource information from a new inventory of the North Counties of Alabama.

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

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