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Alabama's Timber Resources Updated, 1975

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Southern Forest Experiment Station
Forest Service
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Preface

Because Southern forests are changing constantly and rapidly, the forest manager must have current information about the resource. The Southern Forest Experiment Station inventories each Midsouth State every 10 years. To provide current information between surveys, the Station updates the field data collected during on-the-ground surveys. Updating begins with the survey inventory, net growth is added, and current removals are subtracted to obtain the new inventory. Net growth is a percent of the inventory as determined during the most recent survey. Current removals are estimated from products output indicators such as severance tax and yearly pulpwood production reports. The technique is described in Resource Bulletin SO-31 (Beltz and Bertelson 1971).

Alabama counties

ALABAMA'S TIMBER RESOURCES UPDATED, 1975

Roy C. Beltz

Alabama has a larger inventory of both softwood and hardwood and a greater output of timber products than any other State in the Midsouth. Forest-related activities comprise a major portion of the State's economy, and forest resources have been assessed intermittently since 1935. The most recent survey was made in 1972 (Murphy 1973).

For more than two decades, both softwood and hardwood growing stock have been increasing steadily. Softwood removals generally increased, and hardwoods remained fairly stable (fig. 1). The traditional excess of growth over cut is continuing into 1975.

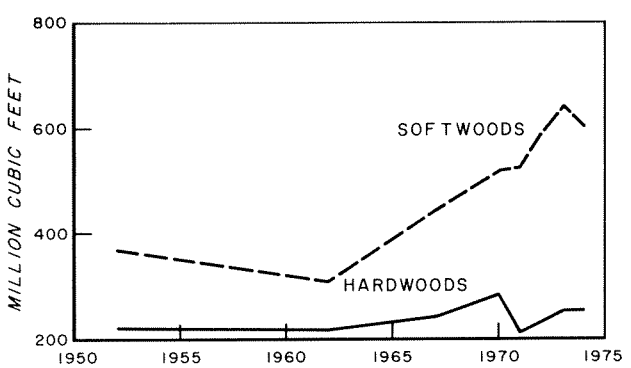

Figure 1.—*Alabama removal trends.*

TIMBER PRODUCTS OUTPUT

Alabama's total output of timber products was an estimated 856 million cubic feet in 1974. Softwoods comprised more than 70 percent of the total. Chief products were saw logs and pulpwood. These estimates are based on data from a 1971 industry canvass (Bertelson 1972), Alabama severance tax,[1] and pulpwood production reports published annually by the Forest Service.

Saw and veneer logs totaled 367 million cubic feet in 1974, an increase of about 20 percent since the 1972 survey. Since the two products are not taxed separately, individual production trends are obscured. However, it appears that softwood veneer log production is increasing at a faster rate than softwood saw logs. In 1971, softwood veneer was about 15 percent of the combined softwood saw and veneer log output; by 1972, veneer output had risen to about 18 percent (Bertelson 1972). The proportion was probably even higher in 1974.

Pulpwood, the dominant product in Alabama's timber harvest, accounted for 459 million cubic feet of the total 1974 output. Seventy percent of the pulpwood was produced from softwoods. For a detailed analysis of pulpwood production see Bertelson (1975).

Products such as poles, piling, posts, and cooperage comprised only 3 percent of the 1974 timber harvest, just as they did in 1971. Alabama, however, is a leader in pole and piling production, and by 1974 production had increased substantially. No information is available for the other miscellaneous products, and production is assumed to be about the same as in 1971.

TIMBER VOLUME

As of January 1, 1975, Alabama forests contained an estimated 21.4 billion cubic feet of growing stock. This volume represents an average increase of 2 percent per year since the 1972 survey.

About 56 percent of the growing stock is softwood. Softwood inventory has been steadily increasing. Between the 1963 and 1972 surveys, average annual change was about +290 million cubic feet. The gain, however, slowed to 210 million cubic feet per year between 1972 and 1975.

The hardwood volume increased 15 percent, or about 130 million cubic feet, per year between the 1963 and 1972 surveys. Since 1972, the annual change has averaged almost +175 million cubic feet per year. Thus, the hardwood inventory continues to expand, but the softwood inventory appears headed toward equilibrium.

[1] Alabama Forestry Commission. 1972-1974. **Production of forest products by counties as determined from forest products severance tax receipts.** Unpublished reports.

COUNTY RESOURCES

Updating was done at the county level primarily to allow inspection of trends within the State. Tabulating individual county information allows flexibility in combining counties into local timbersheds and procurement areas.

The growing stock inventory is concentrated in the southwest portion of Alabama (fig. 2).[2] The distributions of softwood and hardwood growing stock differ somewhat (figs. 3 and 4). The southern and western parts of the State support the bulk of both species groups, but softwood is rather limited in the north.

The interplay of growth and drain is of immediate concern. Softwood deficits prevail in the extreme north, where inventory is limited, and in several southeastern counties, where industrial drain is heavy (fig. 5). For hardwoods, a surplus of growth over cut prevails throughout the State except for a limited area in the southeast (fig. 6).

The growth/cut deficits are small. For all counties showing a decline in softwood inventory, the overall loss since 1974 was only 6 percent. In addition, these counties comprise a relatively minor part of the State's softwood resource. By 1975, for instance, 20 percent of the softwood growing stock was in these counties. Based on the 1972 survey data, these counties comprised about one-fourth of the commercial forest acreage in the State. Actions should be taken, however, to assure that the resource is not depleted to a critical level.

Hardwood losses were less than softwood. Counties showing declines in growing stock inventory comprised less than 10 percent of the 1972 commercial forest area and less than 10 percent of the 1975 hardwood inventory.

RELIABILITY OF DATA

Users of the updated statistics should be aware of some inherent limitations. Data compiled during State surveys are subject to sampling error. At the State level, sampling error for growing stock volume was 1.2 percent for Alabama (Hedlund and Earles 1973); as the State estimate is broken into smaller units for counties, the error increases. Updating basic survey data introduces an additional source of error; therefore, individual county estimates should be used with care. For best results, counties should be grouped into local timbersheds or procurement areas for analysis. Trend data, showing net growth, removals, and inventory by county for each year since the 1972 survey are available at cost from the Southern Station.

[2] Figures 2-6 were generated using SYMAP, a program developed at the Laboratory for Computer Graphics, Graduate School of Design, Harvard University.

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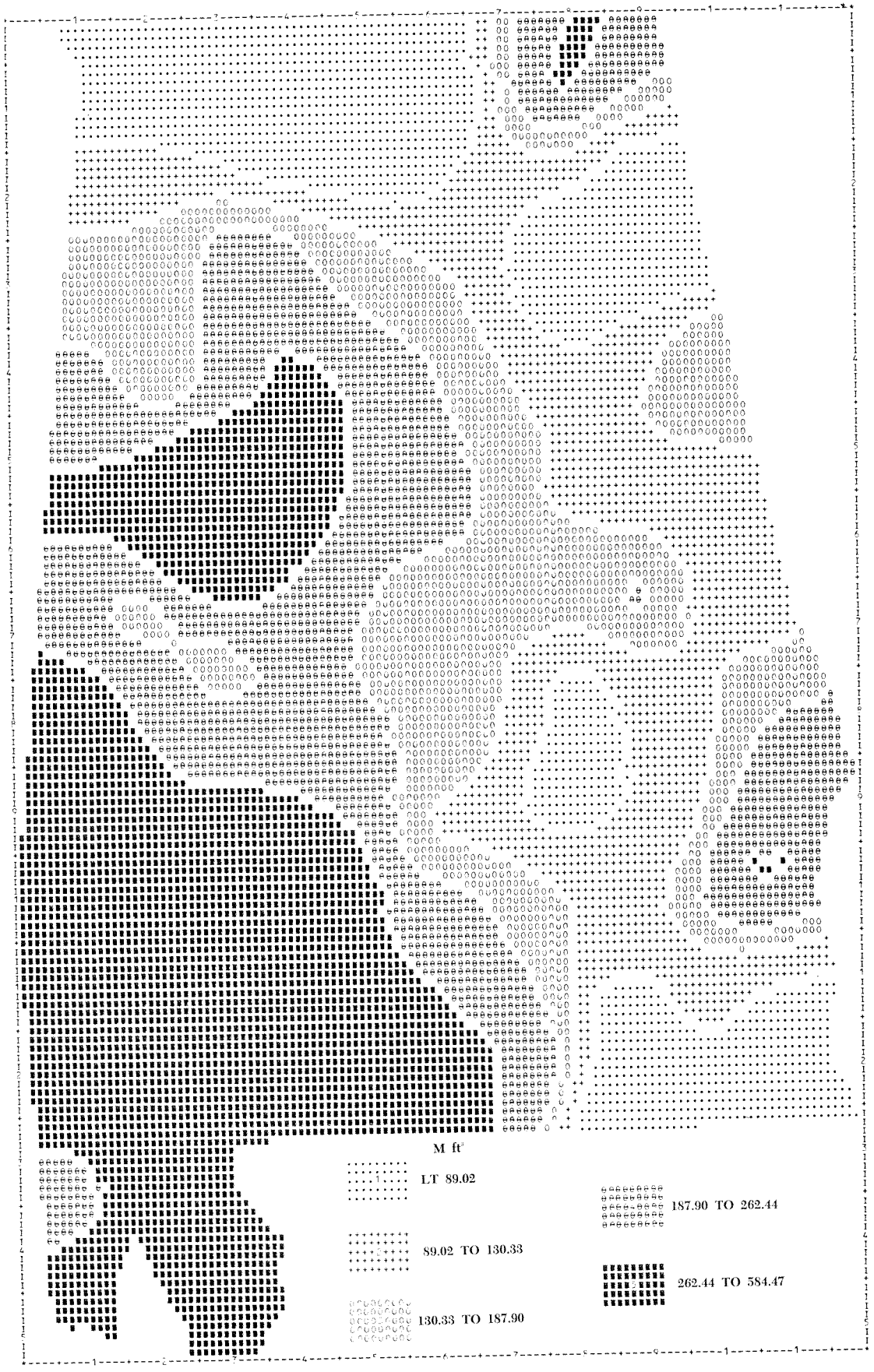

Figure 2.—*Distribution of growing stock inventory, 1975.*

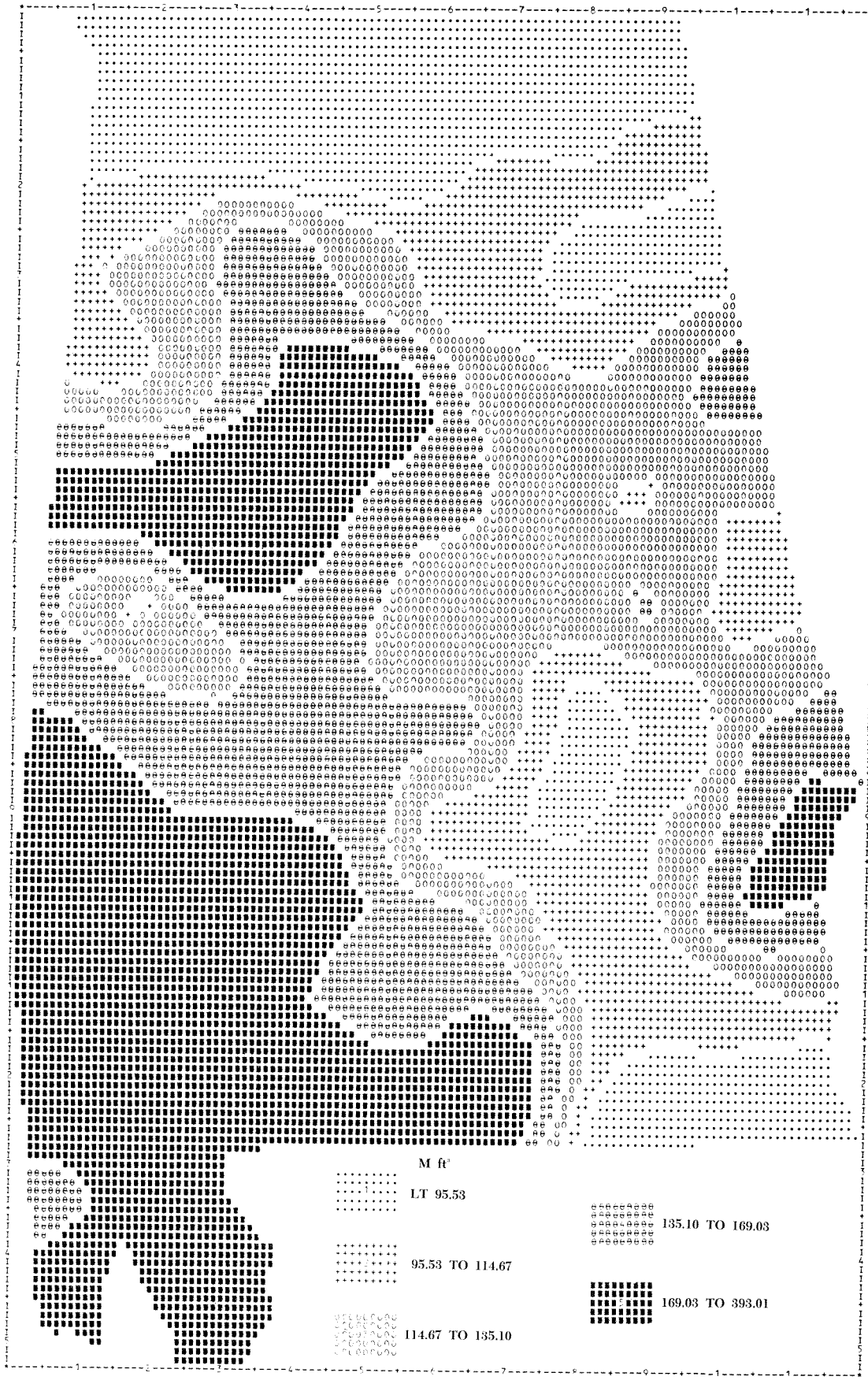

Figure 3.—*Distribution of softwood growing stock inventory, 1975.*

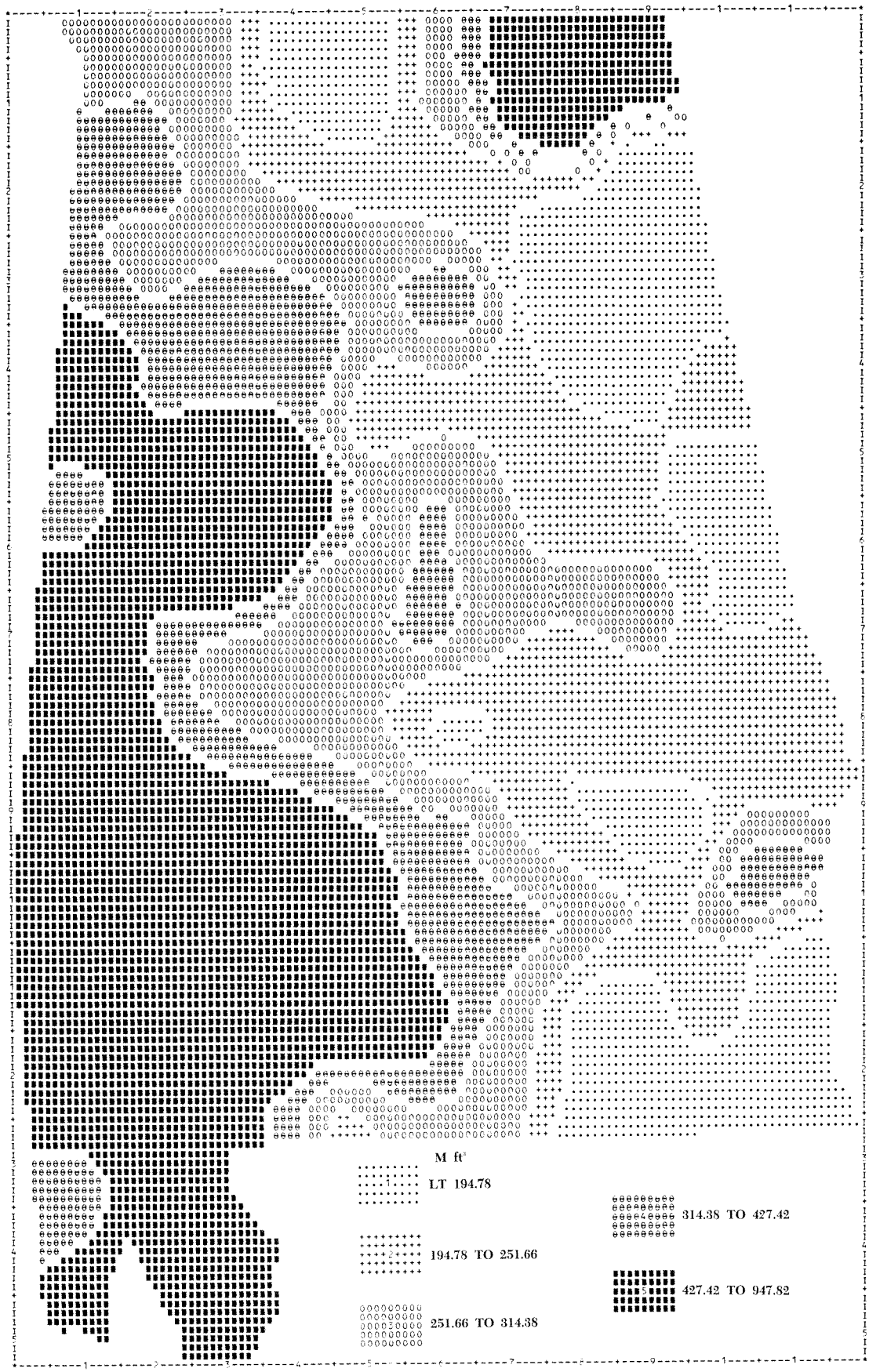

Figure 4.—*Distribution of hardwood growing stock inventory, 1975.*

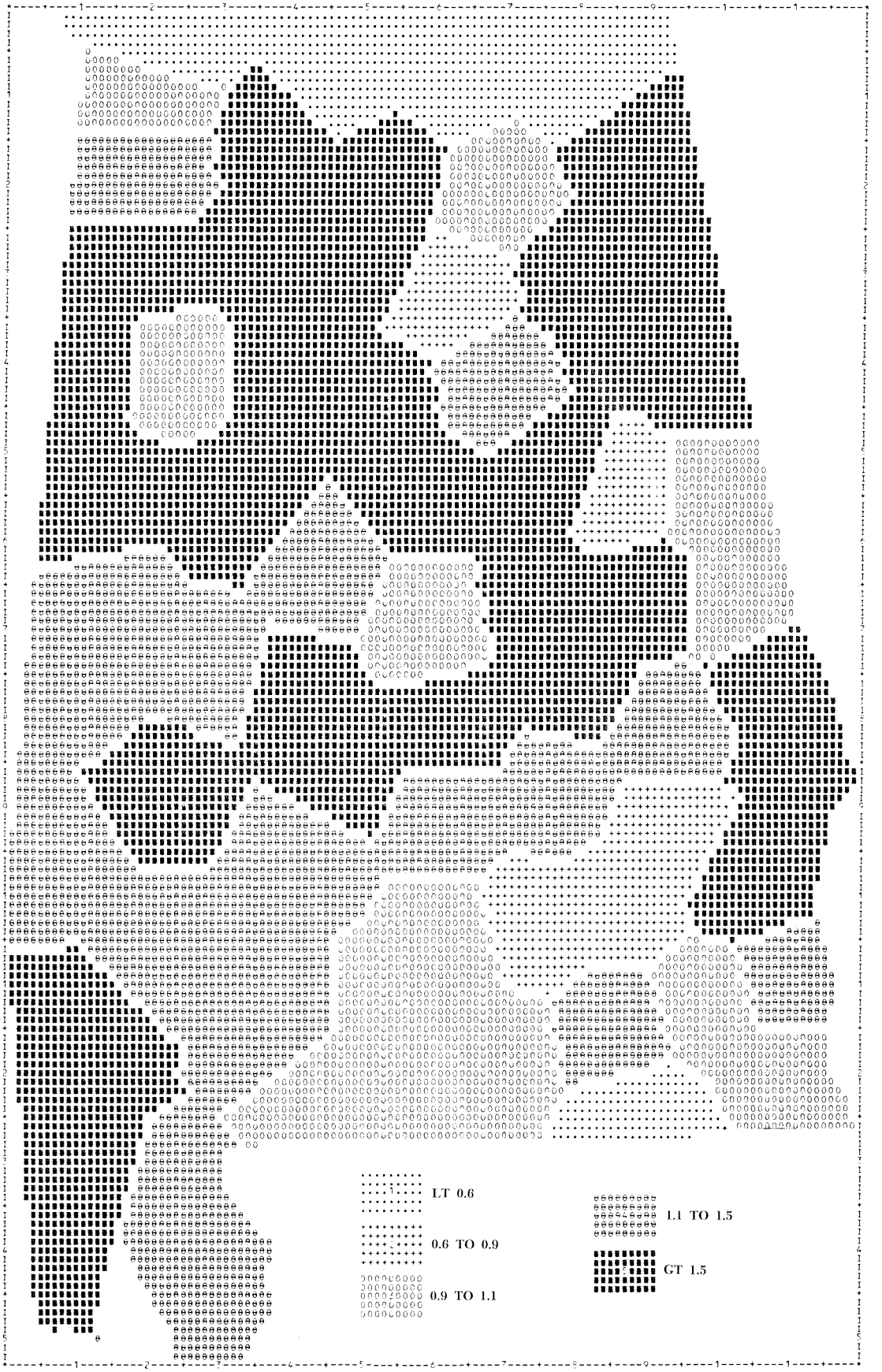

Figure 5.—*Softwood growth/cut relationships, 1974.*

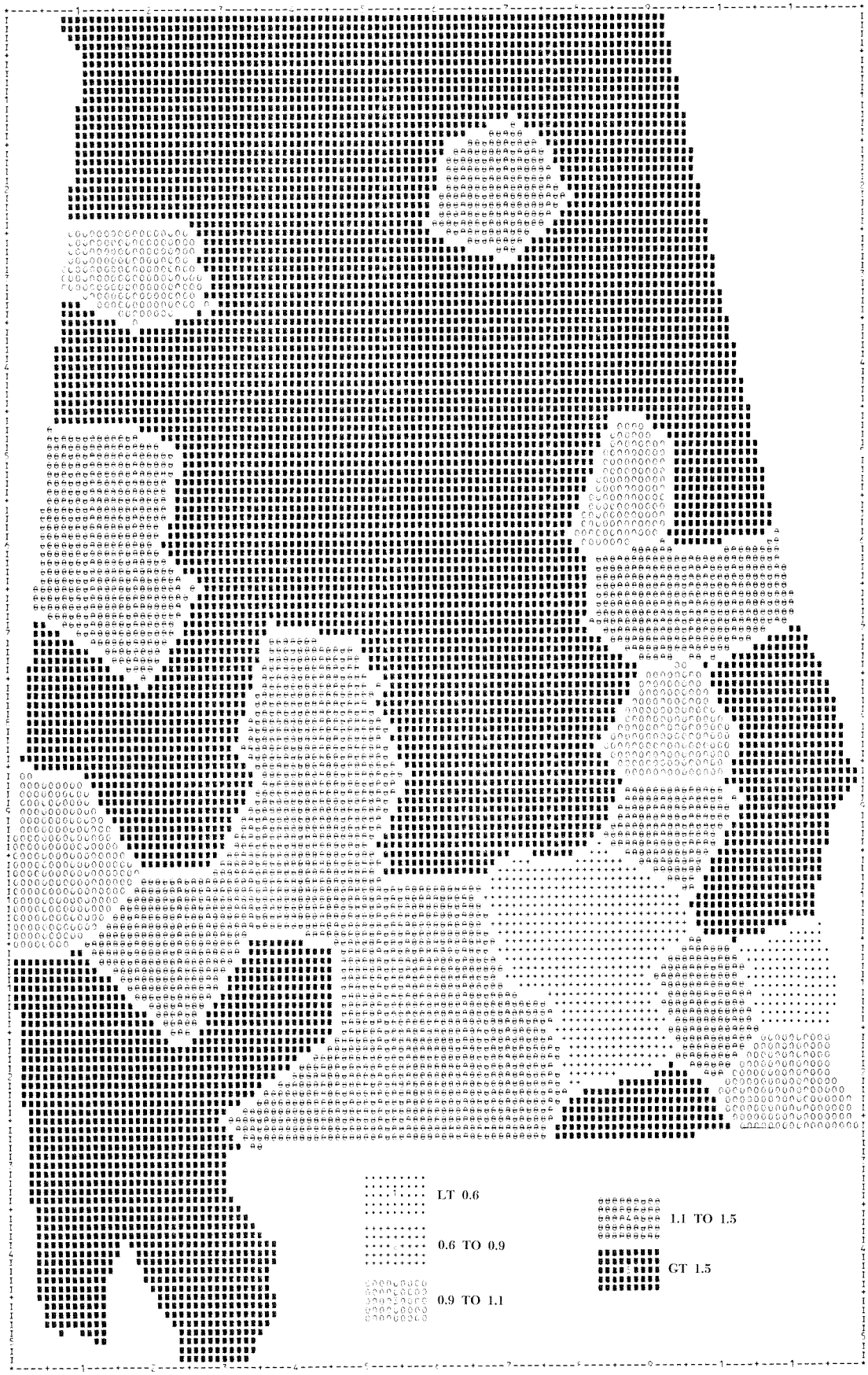

Figure 6.—*Hardwood growth/cut relationships, 1974.*

Table 1. *Growing stock and sawtimber volume on commercial forest land, 1975*

County	Growing stock			Sawtimber		
	Total	Softwood	Hardwood	Total	Softwood	Hardwood
	Million cubic feet			*Million board feet*		
Autauga	291.0	200.0	91.0	1,013.8	786.6	227.2
Baldwin	771.3	474.3	297.0	3,013.0	2,145.6	867.4
Barbour	426.9	279.8	147.1	1,336.5	1,030.8	305.7
Bibb	367.0	243.8	123.2	1,176.8	921.8	255.0
Blount	257.6	111.1	146.5	738.1	332.0	406.1
Bullock	212.2	136.9	75.3	674.9	508.0	166.9
Butler	379.3	237.8	141.5	1,464.5	1,061.3	403.2
Calhoun	207.1	129.6	77.5	547.1	374.1	173.0
Chambers	203.3	113.1	90.2	581.2	393.5	187.7
Cherokee	136.7	78.4	58.3	370.6	234.8	135.8
Chilton	277.8	137.4	140.4	759.0	529.2	229.8
Choctaw	575.1	390.1	185.0	2,140.3	1,728.5	411.8
Clarke	947.8	584.5	363.3	3,702.5	2,750.9	951.6
Clay	230.4	128.7	101.7	588.6	424.2	164.4
Cleburne	307.3	204.8	102.5	793.5	624.3	169.2
Coffee	162.6	97.1	65.5	442.1	289.2	152.9
Colbert	162.4	26.0	136.4	328.9	47.8	281.1
Conecuh	472.7	233.6	239.1	1,719.7	1,078.4	641.3
Coosa	279.6	163.3	116.3	741.2	501.1	240.1
Covington	426.6	301.8	124.8	1,466.0	1,259.6	206.4
Crenshaw	268.9	131.9	137.0	944.1	603.9	340.2
Cullman	278.3	151.6	126.7	652.9	402.0	250.9
Dale	213.6	99.6	114.0	657.4	399.2	258.2
Dallas	362.5	224.9	137.6	1,169.6	942.0	227.6
De Kalb	196.1	103.3	92.8	452.1	244.7	207.4
Elmore	183.0	80.4	102.6	471.9	248.3	223.6
Escambia	485.6	366.0	119.6	1,876.9	1,564.0	312.9
Etowah	128.1	75.8	52.3	305.5	174.4	131.1
Fayette	288.8	139.1	149.7	691.2	408.4	282.8
Franklin	228.7	90.0	138.7	389.0	139.9	249.1
Geneva	108.3	35.5	72.8	254.2	121.0	133.2
Greene	304.1	129.6	174.5	1,104.1	558.0	546.1
Hale	307.9	181.8	126.1	1,119.2	825.2	294.0
Henry	198.6	134.7	63.9	540.7	431.6	109.1
Houston	89.2	49.1	40.1	253.2	139.5	113.7
Jackson	423.5	30.5	393.0	1,183.4	94.4	1,089.0
Jefferson	417.6	316.1	101.5	1,371.5	1,145.6	225.9
Lamar	318.0	118.7	199.3	682.4	264.0	418.4
Lauderdale	132.0	12.5	119.5	295.2	25.4	269.8
Lawrence	162.0	53.7	108.3	413.3	179.6	233.7
Lee	278.0	172.9	105.1	818.2	550.2	268.0
Limestone	81.3	10.9	70.4	260.6	55.8	204.8
Lowndes	243.2	106.7	136.5	859.9	472.4	387.5
Macon	211.0	98.0	113.0	640.9	395.4	245.5
Madison	159.3	30.2	129.1	352.6	89.3	263.3
Marengo	439.2	258.6	180.6	1,549.4	998.1	551.3
Marion	269.8	138.8	131.0	539.7	306.9	232.8
Marshall	210.2	111.4	98.8	663.8	431.1	232.7
Mobile	411.5	261.6	149.9	1,325.3	995.1	330.2
Monroe	553.1	269.5	283.6	1,886.1	1,068.3	817.8
Montgomery	171.6	75.8	95.8	472.1	267.9	204.2
Morgan	160.1	59.7	100.4	411.7	166.3	245.4
Perry	320.1	200.6	119.5	1,119.9	849.3	270.6
Pickens	449.9	281.5	168.4	1,327.4	924.7	402.7
Pike	233.4	117.0	116.4	760.9	448.8	312.1
Randolph	216.5	132.0	84.5	607.5	408.8	198.7
Russell	351.5	252.3	99.2	1,151.0	962.5	188.5
St. Clair	258.8	151.4	107.4	672.2	418.6	253.6
Shelby	346.4	211.3	135.1	887.0	609.2	277.8
Sumter	470.6	245.4	225.2	1,904.9	1,248.8	656.1
Talladega	249.1	141.8	107.3	694.5	476.4	218.1
Tallapoosa	317.1	190.5	126.6	858.9	606.3	252.6
Tuscaloosa	794.1	423.6	370.5	2,295.3	1,397.3	898.0
Walker	432.2	271.3	160.9	1,270.5	954.2	316.3
Washington	634.9	384.8	250.1	2,161.9	1,523.3	638.6
Wilcox	544.1	290.4	253.7	1,834.5	1,101.9	732.6
Winston	364.1	229.0	135.1	1,068.5	731.1	337.4
Area total	21,360.6	11,913.9	9,446.7	66,821.3	44,390.8	22,430.5

Table 2. *Net growth of growing stock and sawtimber on commercial forest land, 1974*

County	Growing stock			Sawtimber		
	Total	Softwood	Hardwood	Total	Softwood	Hardwood
	- - - Million cubic feet - - -			*- - - Million board feet - - -*		
Autauga	18.3	14.5	3.8	66.6	57.1	9.5
Baldwin	33.5	23.7	9.8	135.9	107.3	28.6
Barbour	27.3	20.1	7.2	88.8	73.9	14.9
Bibb	21.2	15.8	5.4	70.9	59.7	11.2
Blount	17.3	9.5	7.8	50.1	28.5	21.6
Bullock	15.2	10.9	4.3	49.8	40.3	9.5
Butler	20.6	14.8	5.8	82.5	65.9	16.6
Calhoun	16.5	12.2	4.3	44.9	35.2	9.7
Chambers	13.2	9.3	3.9	40.3	32.2	8.1
Cherokee	9.5	6.5	3.0	26.5	19.6	6.9
Chilton	18.8	11.8	7.0	57.0	45.5	11.5
Choctaw	36.7	25.3	11.4	137.4	112.0	25.4
Clarke	51.0	32.8	18.2	202.0	154.3	47.7
Clay	14.9	9.4	5.5	39.9	30.9	9.0
Cleburne	16.8	11.7	5.1	44.3	35.8	8.5
Coffee	11.3	8.2	3.1	31.8	24.5	7.3
Colbert	5.5	1.2	4.3	11.1	2.1	9.0
Conecuh	28.1	16.4	11.7	107.1	75.6	31.5
Coosa	20.7	14.0	6.7	56.9	43.0	13.9
Covington	22.7	17.3	5.4	81.2	72.2	9.0
Crenshaw	13.2	8.1	5.1	50.1	37.3	12.8
Cullman	18.8	11.9	6.9	45.3	31.6	13.7
Dale	13.4	8.0	5.4	44.1	31.9	12.2
Dallas	21.4	15.2	6.2	74.2	63.9	10.3
De Kalb	9.1	6.0	3.1	21.2	14.2	7.0
Elmore	12.7	7.3	5.4	34.5	22.7	11.8
Escambia	24.4	19.2	5.2	95.6	82.0	13.6
Etowah	10.0	7.5	2.5	23.6	17.4	6.2
Fayette	19.9	12.3	7.6	50.5	36.2	14.3
Franklin	9.5	4.6	4.9	15.8	7.1	8.7
Geneva	5.9	2.5	3.4	14.8	8.6	6.2
Greene	15.3	7.8	7.5	57.1	33.5	23.6
Hale	15.7	10.3	5.4	59.5	46.8	12.7
Henry	14.9	11.6	3.3	42.8	37.1	5.7
Houston	6.6	4.5	2.1	18.9	12.9	6.0
Jackson	10.5	1.5	9.0	29.6	4.7	24.9
Jefferson	31.2	24.5	6.7	103.9	89.0	14.9
Lamar	21.5	11.6	9.9	46.5	25.8	20.7
Lauderdale	7.2	1.2	6.0	16.0	2.4	13.6
Lawrence	6.0	1.9	4.1	15.2	6.4	8.8
Lee	18.4	13.3	5.1	55.2	42.2	13.0
Limestone	2.7	.4	2.3	8.7	1.9	6.8
Lowndes	13.3	7.3	6.0	49.5	32.5	17.0
Macon	12.6	7.7	4.9	41.6	30.9	10.7
Madison	5.6	1.7	3.9	13.0	5.1	7.9
Marengo	25.8	17.2	8.6	92.8	66.5	26.3
Marion	21.7	13.7	8.0	44.5	30.4	14.1
Marshall	7.8	4.1	3.7	24.7	16.0	8.7
Mobile	25.0	19.2	5.8	85.9	73.1	12.8
Monroe	31.6	19.1	12.5	111.5	75.5	36.0
Montgomery	10.8	5.3	5.5	30.5	18.7	11.8
Morgan	7.0	3.3	3.7	18.1	9.1	9.0
Perry	18.9	12.3	6.6	67.1	52.1	15.0
Pickens	29.6	22.0	7.6	90.5	72.2	18.3
Pike	14.6	8.4	6.2	48.8	32.1	16.7
Randolph	16.9	12.6	4.3	49.0	38.9	10.1
Russell	21.8	16.6	5.2	73.5	63.5	10.0
St. Clair	22.2	16.5	5.7	58.9	45.5	13.4
Shelby	24.7	17.3	7.4	65.1	49.8	15.3
Sumter	25.2	13.7	11.5	103.1	69.7	33.4
Talladega	16.8	11.7	5.1	49.8	39.4	10.4
Tallapoosa	23.2	16.6	6.6	66.0	52.8	13.2
Tuscaloosa	48.9	34.1	14.8	148.4	112.5	35.9
Walker	29.7	20.2	9.5	89.8	71.0	18.8
Washington	34.2	23.7	10.5	120.5	93.6	26.9
Wilcox	30.1	19.1	11.0	104.0	72.3	31.7
Winston	25.1	18.0	7.1	75.1	57.3	17.8
Area total	1,270.5	838.0	432.5	4,069.8	3,051.7	1,018.1

Table 3. *Removals of growing stock and sawtimber on commercial forest land, 1974.*

County	Growing stock			Sawtimber		
	Total	Softwood	Hardwood	Total	Softwood	Hardwood
	- - - Million cubic feet - - -			*- - - Million board feet - - -*		
Autauga	4.4	2.3	2.1	14.4	9.1	5.3
Baldwin	24.1	18.7	5.4	100.1	84.4	15.7
Barbour	13.4	10.1	3.3	43.8	37.0	6.8
Bibb	16.3	13.0	3.3	56.1	49.2	6.9
Blount	16.2	15.6	.6	48.2	46.5	1.7
Bullock	15.7	12.5	3.2	53.2	46.2	7.0
Butler	19.0	14.4	4.6	77.4	64.3	13.1
Calhoun	4.6	3.9	.7	12.8	11.3	1.5
Chambers	12.9	9.8	3.1	40.6	34.1	6.5
Cherokee	3.8	2.7	1.1	10.6	8.1	2.5
Chilton	16.8	12.8	4.0	56.0	49.4	6.6
Choctaw	32.9	20.9	12.0	119.2	92.5	26.7
Clarke	42.4	29.5	12.9	172.8	138.9	33.9
Clay	17.7	12.5	5.2	49.5	41.1	8.4
Cleburne	8.9	5.7	3.2	22.6	17.4	5.2
Coffee	9.7	6.1	3.6	26.5	18.2	8.3
Colbert	2.3	1.2	1.1	4.4	2.1	2.3
Conecuh	24.5	16.7	7.8	98.0	77.0	21.0
Coosa	12.3	7.9	4.4	33.4	24.2	9.2
Covington	23.3	18.4	4.9	85.0	76.9	8.1
Crenshaw	16.8	10.6	6.2	63.8	48.5	15.3
Cullman	9.5	7.3	2.2	23.5	19.2	4.3
Dale	13.2	8.4	4.8	44.7	33.8	10.9
Dallas	11.9	7.0	4.9	37.5	29.4	8.1
De Kalb	2.1	1.3	.8	4.8	3.1	1.7
Elmore	6.6	4.1	2.5	18.3	12.8	5.5
Escambia	25.9	21.2	4.7	103.0	90.8	12.2
Etowah	4.5	4.1	.4	10.6	9.5	1.1
Fayette	15.5	12.6	2.9	42.4	36.9	5.5
Franklin	6.5	3.4	3.1	10.8	5.3	5.5
Geneva	7.3	5.8	1.5	22.6	19.8	2.8
Greene	12.0	6.9	5.1	45.5	29.6	15.9
Hale	10.3	7.2	3.1	40.0	32.8	7.2
Henry	16.5	9.3	7.2	42.1	29.9	12.2
Houston	6.6	4.6	2.0	18.7	13.1	5.6
Jackson	10.3	6.4	3.9	30.7	19.9	10.8
Jefferson	9.2	7.5	1.7	31.0	27.3	3.7
Lamar	8.1	6.0	2.1	17.6	13.2	4.4
Lauderdale	4.5	2.9	1.6	9.5	5.9	3.6
Lawrence	2.3	1.1	1.2	6.1	3.5	2.6
Lee	5.6	4.2	1.4	16.8	13.3	3.5
Limestone	4.7	3.5	1.2	21.4	18.0	3.4
Lowndes	8.5	6.5	2.0	34.3	28.8	5.5
Macon	10.8	5.8	5.0	34.4	23.5	10.9
Madison	6.6	4.7	1.9	17.8	13.8	4.0
Marengo	8.4	6.0	2.4	30.4	23.0	7.4
Marion	17.0	8.4	8.6	34.0	18.7	15.3
Marshall	7.1	4.2	2.9	23.3	16.4	6.9
Mobile	9.4	9.2	.2	35.4	34.9	.5
Monroe	22.9	16.6	6.3	83.9	65.6	18.3
Montgomery	7.6	4.4	3.2	22.4	15.5	6.9
Morgan	3.0	1.9	1.1	8.0	5.3	2.7
Perry	12.7	7.2	5.5	42.9	30.5	12.4
Pickens	16.1	9.6	6.5	47.0	31.4	15.6
Pike	19.3	9.8	9.5	63.2	37.7	25.5
Randolph	14.0	12.5	1.5	42.0	38.6	3.4
Russell	10.8	8.0	2.8	35.9	30.5	5.4
St. Clair	17.1	14.7	2.4	46.2	40.6	5.6
Shelby	4.2	3.1	1.1	11.2	8.9	2.3
Sumter	15.9	10.0	5.9	68.1	50.8	17.3
Talladega	7.0	5.4	1.6	21.5	18.3	3.2
Tallapoosa	15.1	10.6	4.5	42.6	33.7	8.9
Tuscaloosa	18.2	11.6	6.6	54.4	38.3	16.1
Walker	12.9	9.8	3.1	40.7	34.6	6.1
Washington	21.9	14.9	7.0	76.9	59.1	17.8
Wilcox	23.5	14.9	8.6	81.4	56.5	24.9
Winston	13.6	9.9	3.7	40.7	31.6	9.1
Area total	854.7	599.8	254.9	2,824.6	2,230.1	594.5

Beltz, Roy C.

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