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Oklahoma Forest Industries, 1984

Dennis M. May

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INTRODUCTION

This publication reports the findings of a 1984 canvass of Oklahoma's primary forest industries. The canvass was conducted by personnel of the Forestry Division of Oklahoma's Department of Agriculture. Results were tabulated and analyzed by the Forest Inventory and Analysis (FIA) Unit of the Southern Forest Experiment Station. When necessary, reported units were converted into standard units or cubic feet by the FIA Unit. The volume of byproducts used for fiber and roundwood used for pulpwood reported in this canvass were derived from the "Southern Pulpwood Production" report for 1984. The tabulated columns of tables 1–15 may not add due to rounding. Previous production figures used for comparison purposes in this report can be found in "Oklahoma Forest Industries, 1972" (USDA For. Serv. Resour. Bull. SO-45), "Oklahoma Forest Industries, 1975" (USDA For. Serv. Resour. Bull. SO-64), and "Oklahoma Forest Industries, 1978" (USDA For. Serv. Resour. Bull. SO-78), all of which are available from the Southern Forest Experiment Station.

ROUNDWOOD

In 1984, Oklahoma supplied 55.3 million cubic feet of roundwood to the wood products industry, a decline of 24 percent from 1978's production of 72.8 million cubic feet. This drop can be attributed to a decline in Oklahoma's pulpwood production in 1984. Softwoods made up approximately three-quarters of the roundwood volume. Most of the softwood production in Oklahoma came from the southeastern counties of the state, while the hardwood production was distributed among the eastern counties of the state (figs. 3 & 4). Five southeastern counties (Choctaw, Latimer, Le Flore, McCurtain and Pushmataha) accounted for 99.3 percent of the softwood production, but only accounted for 81.2 percent of the hardwood production. Collectively, these five counties accounted for 52.4 million cubic feet or 94.6 percent of the total roundwood production (table 12). More than half of the roundwood production (57.1 percent) was in the form of saw logs, making saw logs the main roundwood product produced in Oklahoma. Other roundwood products produced in Oklahoma included pulpwood, poles and posts, veneer logs and miscellaneous products which respectively account for 18.3, 15.2, 8.3 and 1.1 percent of the total roundwood production (table 1). Oklahoma's production of roundwood supplied a total of 122 wood-using mills. Ninety-seven of these mills were operating in Oklahoma in 1984. This number is up from 1978's 81 mills, but still below the 101 and 118 mills operating in 1975 and 1972 respectively. Most of the mills operating in 1984 were located in the eastern half of the state (fig. 1).

SAW LOGS

Oklahoma's saw-log production has remained relatively stable over the last three canvasses (fig. 2). The 1984 production of 186.3 million board feet amounted to a minor decline of 1.2 percent from 1978's production of 188.6 million board feet. Softwoods made up 70.6 percent of the saw-log volume; of which 86.2 percent was shortleaf pine. Red and white oaks accounted for 61.4 percent of the hardwood saw-log volume (table 2). Most of the softwood saw-log production, 98.1 percent, came from the three southeastern counties of Le Flore, McCurtain, and Pushmataha. These same three counties only accounted for 68.4 percent of the hardwood saw-log production (table 6).

In 1984, Oklahoma's sawmills received 177.8 million board feet of saw logs (table 7). Large sawmills (those with an output of at least 3 million board feet) processed 96.9 percent of the softwood and 58.9 percent of the hardwood receipts for a total of 84.9 percent of all saw-log receipts. Over the years, the percentage of saw logs being received by large sawmills had been increasing. In 1972, large sawmills received 83 percent of the saw-log volume. In 1975 and 1978, this percentage increased to 87 and 90 percent of the saw-log receipts. Approximately one-half of the saw logs logged and remaining in Oklahoma crossed county lines before being processed. This is another indication of the dominance of large sawmills. Large sawmills tend to reach out into surrounding counties to maintain saw-log inventories; while small sawmills generally draw from their own counties. Soft-

Dennis M. May is Forester, Southern Forest Experiment Station Forest Service—USDA, Starkville, MS, in cooperation with the Oklahoma Division of Forestry.

wood saw logs accounted for 78 percent of all large sawmill receipts, while hardwood saw logs accounted for 86 percent of small sawmill receipts.

The number of sawmills operating in Oklahoma has fluctuated over the past 12 years. In 1972, 103 sawmills were operating. This number fell to 83 in 1975 and fell again in 1978 to 66 mills. In 1984, a total of 84 sawmills were in operation. Since the number of large sawmills is relatively small and has increased from 7 to 10 in the last 12 years, most of the fluctuation in the number of sawmills can be attributed to the opening and closing of small sawmills in response to local and short-term market conditions.

VENEER

Continuing a downward trend in veneer-log production over the past 12 years, Oklahoma produced 29.3 million board feet of veneer logs in 1984, a decrease of 20.6 percent from 1978's production of 36.9 million board feet (fig. 2). Softwoods made up 98.2 percent of the total production, of which 85.0 percent was in shortleaf pine. Walnut and pecan veneer logs accounted for 98.8 percent of the hardwood production (table 2). The same three counties that produced the majority of saw-log volume also produced the majority of veneer-log volume. Le Flore, McCurtain, and Pushmataha counties collectively accounted for 98.2 percent of all veneer-log production (table 11).

PULPWOOD

Oklahoma's production of roundwood to supply the pulp and paper industry has fallen sharply since 1978 (fig. 2). In 1978, Oklahoma imported 297,066 cords of pulpwood and produced 348,752 cords of pulpwood of which only 63,177 cords were exported. In contrast, Oklahoma produced 125,388 cords of pulpwood in 1984, all of which was exported out of state (table 5). Most of this decline in roundwood pulpwood production and receipts can be attributed to the increased use of wood residues by the State's pulpmills. However, some of the decline is also due to roundwood chips from merchandising operations being reported as byproducts by the receiving mills. Of the roundwood supplied, 58.7 percent was softwood and 41.3 percent was hardwood (table 2). All of the pulpwood came from southeastern counties (table 8).

POLES AND POSTS

A general upward trend in Oklahoma's pole and post production can be seen in figure 2. However, 1984's production of 9.1 million pieces is 5.9 percent lower than 1978's production of 9.7 million pieces (table 1). This discrepancy can be attributed to the relative proportions of poles to posts between the two canvasses. More poles were produced in 1984 than in 1978, thus increasing the cubic foot volume produced. The entire pole and post production was in softwoods, with shortleaf accounting for 90.5 percent of the production (table 2). The three southeastern counties of Choctaw, McCurtain and Pushmataha accounted for 96.3 percent of the production (table 9).

MISCELLANEOUS

There has been a slight upturn in the volume of roundwood supplied for miscellaneous products, which had been declining since 1972 (fig. 2). The 1984 production of 622 thousand cubic feet of roundwood used for furniture and handle stock, excelsior bolts, charcoal, or firewood was 2.5 times the production in 1978, but still only 28.2 percent of the 1972 production. Hardwoods accounted for 86.5 percent of the total production, of which 82.7 percent was in ash and oak. Shortleaf and redcedar made up the softwood volume (table 2). Approximately 60 percent of the total volume produced came from the counties of Le Flore and Pushmataha (table 10).

BYPRODUCTS

In the conversion of roundwood into primary products, Oklahoma's forest industries generated a total of 46.7 million cubic feet of wood residues. Coarse residues made up 81.4 percent of the volume and fine residues made up the remainder. The milling of saw and veneer logs generated 98.0 percent of the coarse residues and 91.8 percent of the fine residues. The production of poles, posts, and miscellaneous products generated the remainder (table 3). Oklahoma's forest industries converted 99.1 percent of their coarse residues and 86.2 percent of their fine residues into byproducts (fig. 7). Most of the coarse byproducts, 96.9 percent, were used as a source of fiber by the pulp and paper industry. Charcoal, fuel, and miscellaneous uses made up the remaining coarse byproducts volume. The majority of fine byproducts, 60.9 percent, was burned as fuel. However, a large portion of the fine byproducts, 32.7 percent, was also used as a source of pulping fiber. The remainder was used for miscellaneous products, mostly animal bedding. A total of 1.55 million cubic feet of residues went unused or were burned as waste. Seventy-seven percent of the unused volume was in fine residues (table 4). The production of primary wood products also generated 283,899 green tons of bark, of which 76.8 percent was softwood and 23.2 percent was hardwood (table 15).

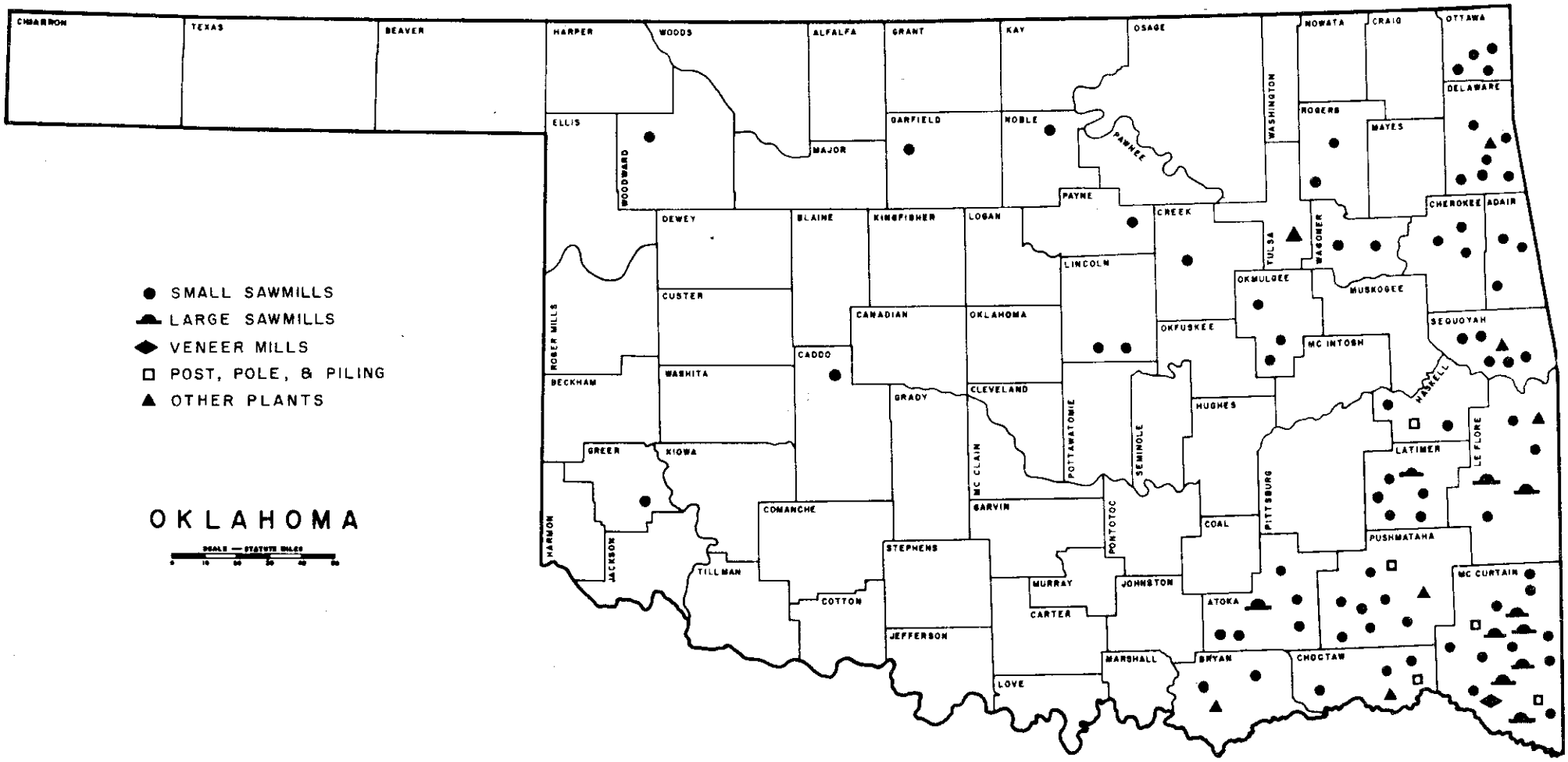

Figure 1.—*Primary wood using mills in Oklahoma, 1984.*

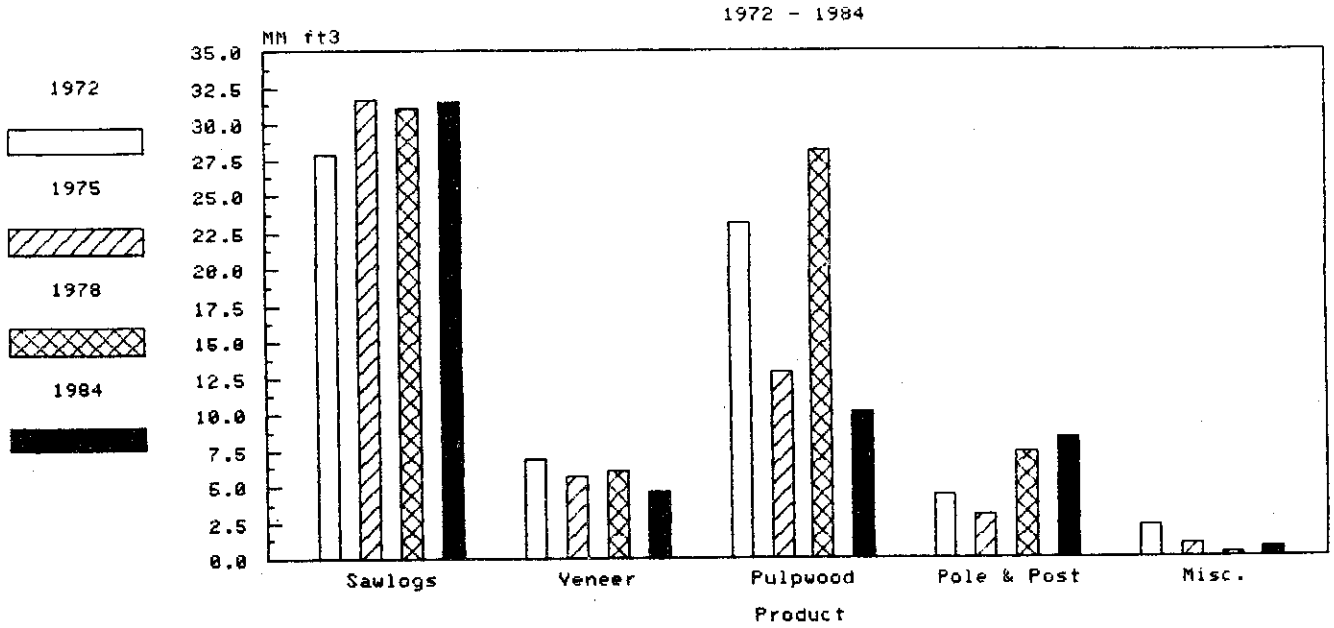

Figure 2.—*Output of industrial roundwood.*

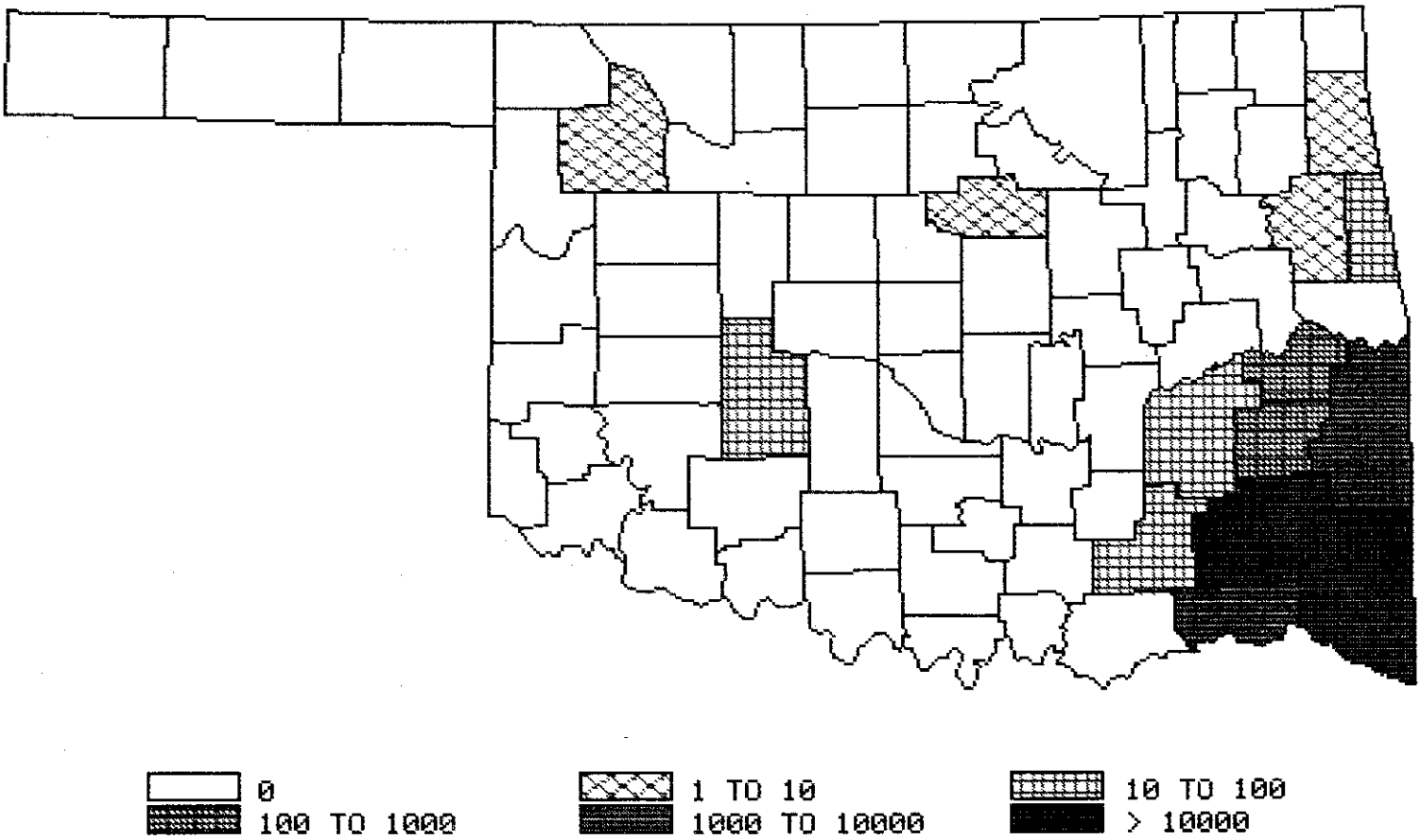

Figure 3.—*Softwood production by county (thousand cubic feet).*

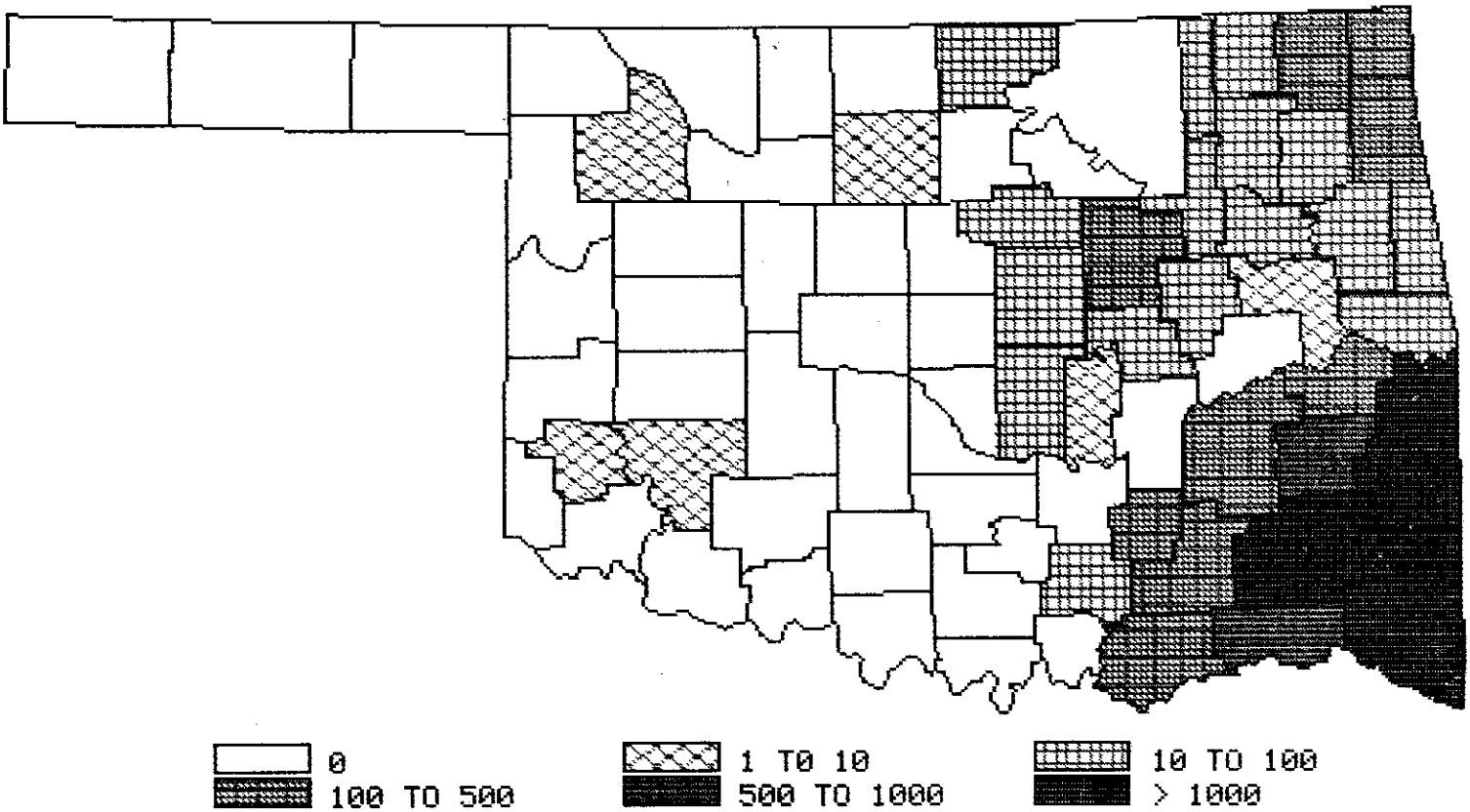

Figure 4.—*Hardwood production by county (thousand cubic feet).*

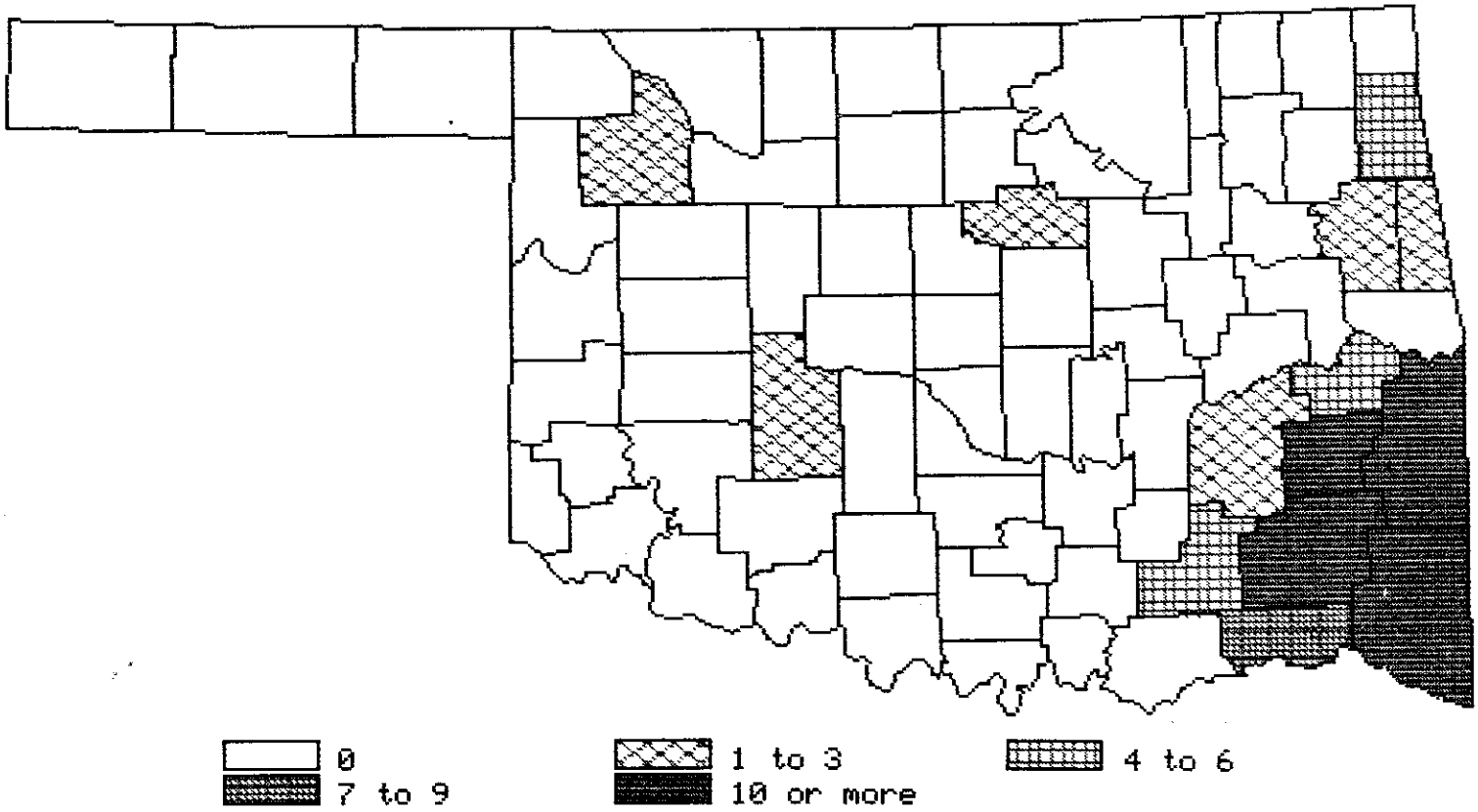

Figure 5.—*Competition for wood resources (number of mills drawing softwood by county).*

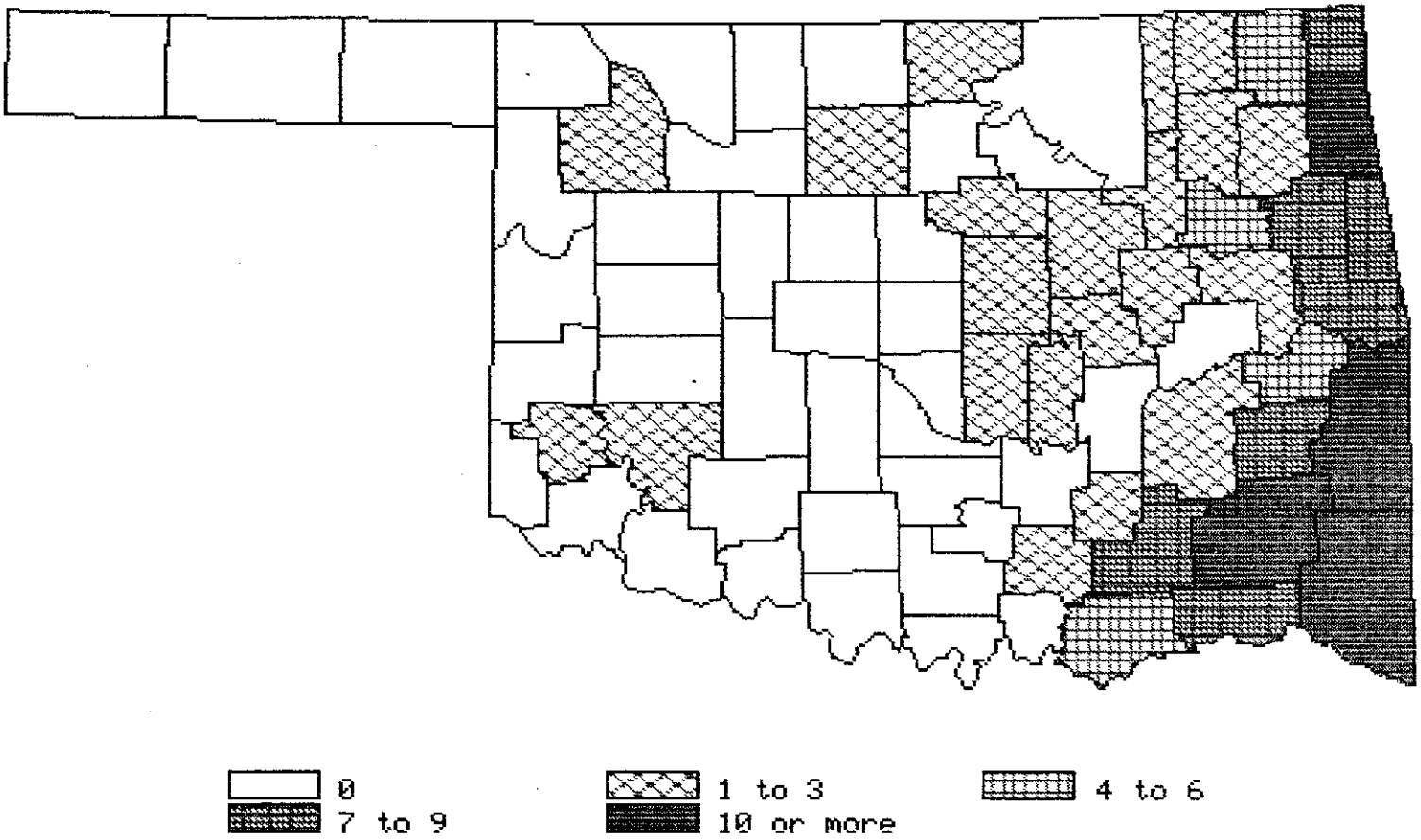

Figure 6.—*Competition for wood resources (number of mills drawing hardwood by county).*

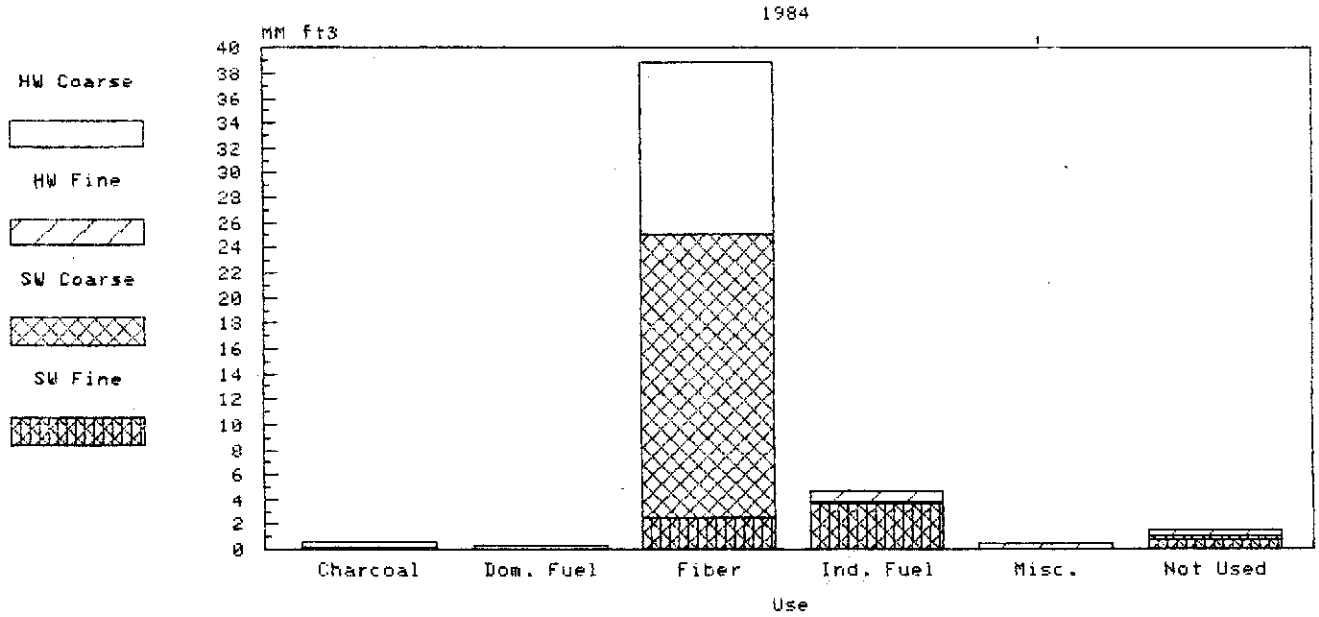

Figure 7.—*Use of wood residues.*

Table 1.—*Volume of industrial roundwood by product*

Product	All species	Softwood	Hardwood	All species	Softwood	Hardwood
	Standard units			*M ft³*		
Veneer[1]	29305	28785	520	4589	4502	87
Saw logs[1]	186330	131602	54728	31607	22254	9353
Pulpwood[2]	125380	73567	51813	10104	5959	4145
Poles & posts[3]	9113	9113	0	8405	8405	0
Miscellaneous[4]	622	84	538	622	84	538
Total				55327	41205	14123

[1]M fbm International 1/4-inch rule.
[2]Cords.
[3]M pieces.
[4]M ft³.

Table 2.—*Volume of industrial roundwood by species*

Species group	Species	Saw logs[1]	Veneer[1] logs	Pulpwood[2]	Poles and[3] posts	Misc.[4] products
		Standard units				
Hardwoods	Ash	1487	0	0	0	154
	Birch	1	0	0	0	0
	Blackgum	2080	0	0	0	0
	Cottonwood	1453	0	0	0	10
	Elm	5452	0	0	0	18
	HW Pulp	0	0	51813	0	0
	Hackberry	413	0	0	0	0
	Hickory	3620	0	0	0	24
	Maple	235	0	0	0	0
	Other	3	0	0	0	0
	Pecan	450	204	0	0	12
	Red Oaks	21630	0	0	0	162
	Sweetgum	4244	0	0	0	0
	Sycamore	471	0	0	0	28
	Walnut	1236	310	0	0	0
	White Oaks	11951	5	0	0	129
	Total	54728	520	51813	0	538
Softwoods	Loblolly	18036	4318	0	869	0
	Red Cedar	172	0	0	0	32
	SW Pulp	0	0	73567	0	0
	Shortleaf	113394	24467	0	8245	52
	Total	131602	28785	73567	9113	84
	All species	186330	29305	125380	9113	622

[1]M fbm International 1/4-inch rule.
[2]Cords.
[3]M pieces.
[4]M ft³.

Table 3.—*Volume of plant residues produced from roundwood products*

Product	All species		Softwood		Hardwood	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
	M ft³					
Saw logs & veneer	7957	37250	6242	22632	1715	14618
Poles & posts	657	430	657	430	0	0
Miscellaneous	53	329	0	0	53	329
All products	8667	38009	6899	23062	1768	14947

Table 4.—*Volume of byproducts produced from plant residues*

Use	All species		Softwood		Hardwood	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
	M ft³					
Charcoal	0	632	0	121	0	511
Domestic fuel	0	368	0	20	0	348
Fiber products	2446	36486	2446	22486	0	14000
Industrial fuel	4552	138	3654	138	898	0
Miscellaneous	472	28	23	1	449	27
Total used	7470	37652	6123	22766	1347	14886
Not used	1196	357	776	295	420	62
Total residues	8667	38009	6899	23062	1768	14947

Table 5.—*Movement of industrial roundwood by product*

Product	Out-of-state receipts	Logged and remained in state	Logged and shipped out of state	Total receipts	Total production
	Standard units				
Saw logs & veneer[1]	4555	202059	13576	206614	215635
Pulpwood[2]	0	0	125380	0	125380
Poles & posts[3]	0	6772	2342	6772	9113
Miscellaneous[4]	2	590	32	592	622

[1]M fbm International 1/4-inch rule.
[2]Cords.
[3]M pieces.
[4]M ft³.

Table 6. —*Saw-log production by county*

County	All species	Softwoods	Hardwoods
	M fbm[1]		
Adair	338	12	325
Atoka	1699	383	1316
Bryan	617	0	617
Caddo	138	138	0
Cherokee	255	11	244
Choctaw	2316	379	1937
Coal	1206	0	1206
Craig	687	0	687
Creek	929	0	929
Delaware	1683	45	1638
Garfield	7	0	7
Greer	8	0	8
Haskell	2357	502	1855
Johnston	30	0	30
Kay	162	0	162
Kiowa	2	0	2
Latimer	1815	862	954
Le Flore	21970	17595	4374
Lincoln	130	0	130
Mayes	565	0	565
McCurtain	83486	56821	26665
Muskogee	4	0	4
Okfuskee	105	0	105
Okmulgee	568	0	568
Ottawa	1096	0	1096
Payne	109	23	86
Pittsburg	1314	125	1189
Pottawatomie	102	0	102
Pushmataha	61111	54703	6408
Rogers	577	0	577
Seminole	33	0	33
Sequoyah	244	0	244
Tulsa	277	0	277
Wagoner	176	0	176
Washington	208	0	208
Woodward	4	2	3
All counties	186330	131602	54728

[1]International 1/4-inch rule.

Table 7.—*Saw-log movement*

County	Logged and remained in county	Outgoing shipments	Incoming shipments	Total log receipts
	M fbm[1]			
Adair	126	212	40	166
Atoka	1652	47	4028	5680
Bryan	487	130	859	1346
Cherokee	49	206	0	49
Choctaw	807	1510	418	1225
Delaware	914	769	2322	3236
Haskell	33	2324	89	122
Latimer	794	1021	2919	3713
Le Flore	4770	17200	1334	6104
McCurtain	77480	6006	69110	146591
Okmulgee	568	0	1108	1675
Ottawa	804	292	2526	3330
Pushmataha	1670	59441	1061	2731
Sequoyah	93	151	1	94
All others[2]	1017	5758	751	1768
All counties	91263	95067	86566	177829

[1]International 1/4-inch rule.
[2]Counties with less than 3 mills.

Table 8. —*Pulpwood production by county*

County	All species	Softwoods	Hardwoods
	Cords		
Choctaw	8500	3060	5440
Haskell	933	933	0
Latimer	10947	5636	5311
Le Flore	25205	14834	10371
McCurtain	39374	28599	10775
Pushmataha	40421	20505	19916
All counties	125380	73567	51813

Table 9.—*Pole and post production by county*[1]

County	Softwoods
	M pieces
Atoka	2
Choctaw	3361
Latimer	1
Le Flore	335
McCurtain	3195
Pushmataha	2220
All counties	9113

[1]Counties with negligible output are omitted.

Table 10.—*Production of miscellaneous products*[1] *by county*

County	All species	Softwoods	Hardwoods
	M ft^3		
Adair	22	14	7
Atoka	22	0	22
Bryan	17	0	17
Choctaw	58	0	58
Coal	7	0	7
Delaware	14	0	14
Johnston	7	0	7
Latimer	45	3	43
Le Flore	244	32	212
Mayes	2	0	2
McCurtain	22	0	22
Pushmataha	124	36	88
Sequoyah	22	0	22
Wagoner	18	0	18
All counties	622	84	538

[1]Includes furniture and handle stock, excelsior bolts, charcoal wood, and firewood.

Table 11.—*Veneer production by county*

County	All species
	M fbm[1]
Craig	77
Haskell	3
Kay	102
Le Flore	2447
McCurtain	11658
Nowata	89
Ottawa	38
Payne	109
Pushmataha	14680
Washington	102
All counties	29305

[1]International 1/4-inch rule.

Table 12.—*Industrial roundwood production by county*[1]

County	All species	Softwoods	Hardwoods
	M ft^3		
Adair	79	16	63
Atoka	317	71	247
Bryan	122	0	122
Caddo	23	23	0
Cherokee	43	2	42
Choctaw	3232	2408	824
Coal	213	0	213
Craig	131	0	131
Creek	159	0	159
Delaware	302	8	294
Garfield	1	0	1
Greer	1	0	1
Haskell	479	161	317
Johnston	12	0	12
Kay	45	0	45
Latimer	1238	608	630
Le Flore	6690	4900	1789
Lincoln	22	0	22
Mayes	98	0	98
McCurtain	21857	16416	5441
Muskogee	1	0	1
Nowata	15	0	15
Okfuskee	18	0	18
Okmulgee	97	0	97
Ottawa	194	0	194
Payne	37	4	33
Pittsburg	224	21	203
Pottawatomie	18	0	18
Pushmataha	19342	16565	2777
Rogers	99	0	99
Seminole	6	0	6
Sequoyah	64	0	64
Tulsa	47	0	47
Wagoner	48	0	48
Washington	53	0	53
Woodward	1	0	0
All counties	55327	41205	14123

[1]Counties with negligible output are omitted.

Table 13.—*Volume of plant byproducts by county*

County	All species		Softwood		Hardwood	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
	M ft³					
Adair	2	5	0	0	2	5
Atoka	867	2041	865	84	2	1957
Bryan	37	50	3	4	34	46
Cherokee	2	2	0	0	2	2
Choctaw	58	366	0	11	58	355
Delaware	69	105	1	1	69	104
Latimer	1	137	1	38	0	99
Le Flore	190	1271	96	139	94	1132
McCurtain	4478	32882	3559	22175	919	10707
Okmulgee	55	69	0	0	55	69
Ottawa	64	135	4	11	59	123
Pushmataha	7	484	0	256	7	228
Sequoyah	3	4	0	0	3	4
All other[1]	1637	102	1594	47	43	55
All counties	7470	37652	6123	22766	1347	14886

[1]Counties with less than 3 mills or less than 1 M ft³.

Table 14.—*Volume of unused plant residues by county*

County	All species		Softwood		Hardwood	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
	M ft³					
Adair	3	2	0	0	3	2
Atoka	12	11	4	4	8	7
Bryan	18	13	0	0	18	13
Choctaw	453	216	438	210	15	5
Delaware	39	30	1	1	39	30
Haskell	5	6	4	6	0	0
Latimer	122	0	25	0	97	0
Le Flore	7	8	7	8	1	0
McCurtain	294	55	126	55	168	0
Ottawa	46	4	4	0	42	4
Pushmataha	190	11	162	11	28	0
All Other[1]	7	0	5	0	2	0
All counties	1196	357	776	295	420	62

[1]Counties with less than 3 mills or less than 1 M ft³.

Table 15. —*Bark production by county*

County	All species	Softwood	Hardwood
	Tons		
Adair	191	0	191
Atoka	6254	490	5764
Bryan	1752	57	1694
Cherokee	56	0	56
Choctaw	74841	72765	2076
Delaware	3747	28	3720
Haskell	328	316	12
Latimer	3913	631	3282
Le Flore	5637	2438	3198
McCurtain	159938	122456	37482
Okmulgee	1926	0	1926
Ottawa	3726	183	3542
Pushmataha	19621	18421	1200
Sequoyah	108	0	108
All other[1]	1859	303	1556
All counties	283899	218089	65810

[1]Counties with less than 3 mills.

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This publication reports the findings of a 100 percent canvass of Oklahoma's forest industries in 1984. The production and receipts of industrial roundwood are reported by product, species group, and county. The production and disposition of mill residues generated by Oklahoma's forest industries are also reported. Roundwood and residue production changes between canvasses are followed and discussed.

Additional keywords: Forest industry, roundwood, products, residues, byproducts.