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ROCKY MOUNTAIN FOREST AND RANGE EXPERIMENT STATION

Lumber Production in Arizona and New Mexico, 1960

by

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SUMMARY

Arizona sawmills turned out 329,859,000 board feet of lumber in 1960. New Mexico's lumber production in the same year was 227,773,000 board feet. Output in both States was generally in line with the upward trend in production in recent years.

In Arizona, almost nine-tenths of the production was ponderosa pine. Apache, Coconino and Navajo Counties produced 93 percent of Arizona's total output; more than half of the active sawmills were in these three counties. Twelve of the 38 active Arizona mills sawed more than 5 million board feet each, and turned out 286 million board feet, or 87 percent of the State's total.

In New Mexico, ponderosa pine, Douglas-fir, and Engelmann spruce made up 89 percent of the State's total production. Production was concentrated in north-central New Mexico; Colfax, Rio Arriba, Sandoval, Taos, and Catron were the leading counties. Of the 117 active New Mexico mills, 37 sawed more than 1 million board feet each, and turned out 85 percent of the State's production. Small mills are numerous in New Mexico, but their total output is minor.

[1] *Research Forester, located at Flagstaff, in cooperation with Arizona State College; central headquarters are maintained at Fort Collins, in cooperation with Colorado State University.*

TREND

Lumber production in Arizona and New Mexico has generally increased in recent years (fig. 1). Production in 1960 was 9 percent greater in Arizona but slightly less in New Mexico than respective estimates of the 1958 Census of Manufactures.[2]

Comparison of production in 1952 and 1960 shows considerable difference in proportion by species (table 1). A shift to more production of Douglas-fir and other softwoods and less ponderosa pine is apparently due to more access roads into Douglas-fir and fir-spruce timber.

ARIZONA PRODUCTION

Species.--Almost nine-tenths of the 1960 lumber output was ponderosa pine (table 2). Douglas-fir, the true firs, and Engelmann spruce followed in production, in that order. Ponderosa pine was the principal species produced in all but Graham County where Douglas-fir led.

Counties.--Although lumber was produced in 10 of the 14 counties in Arizona (fig. 2), output was concentrated in Apache, Coconino, and Navajo Counties (table 2). Together they contained more than one-half of the active

[2] *U. S. Bureau of the Census. Lumber production and mill stocks, 1959 and 1958. Series M24T(59)-1. June 19, 1961.*

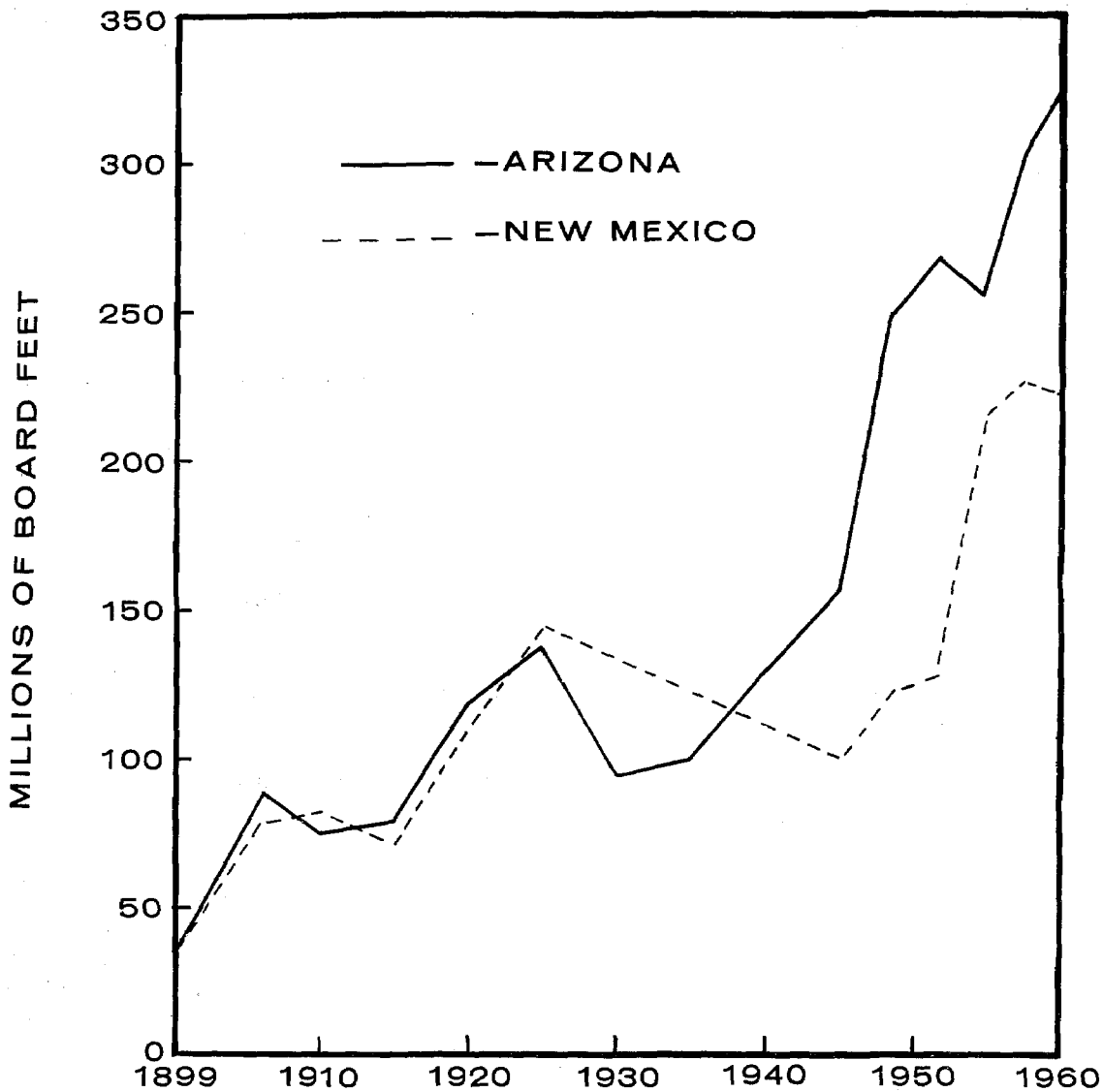

Figure 1.--Lumber production in Arizona and New Mexico, 1899-1960. The annual production figures for years previous to 1960 were obtained from the following sources:

1899-1945 -- Steer, Henry B. Lumber Production in the United States, 1799-1946. U. S. Dept. Agr. Misc. Pub. 669, 233 pp., 1948.

1948 -- U. S. Forest Service. Lumber production in the Western States and Alaska, 1948. 3 pp., 1950. Washington, D. C.

1952 -- U. S. Forest Service. Timber Resource Review. (Unpublished data not presented in terms of lumber production in the published report of the TRR.)

1954 -- U. S. Bureau of the Census. Census of Manufacturers. Lumber and timber basic products. Bul. MC24-A. 1957.

1958 -- U. S. Bureau of the Census. Census of Manufacturers. Lumber production and mill stocks, 1959 and 1958. Series M24T(59)-1. June 19, 1961.

Table 1.--Arizona and New Mexico lumber production by species, 1952 and 1960

Year[1]	Ponderosa pine		Douglas-fir		Other softwoods		Hardwoods		Total	
	M b.m.	Pct.	M b.m.	Pct.	M b.m.	Pct.	M b.m.	Pct.	M b.m.	Pct.
1952	324,364	81.5	33,070	8.3	40,516	10.2	1	([2])	397,951	100.0
1960	390,658	70.1	80,947	14.5	85,250	15.3	777	0.1	557,632	100.0

[1] 1952 figures from unpublished data obtained as part of the Timber Resource Review.
[2] Less than 0.1 percent.

Table 2.--Arizona lumber production by counties and species, in thousands of board feet, lumber tally, 1960

County	Active sawmills	Douglas-fir	Ponderosa pine	True firs and others[1]	Engelmann spruce	Total	Proportion
	Number	M board feet					Percent
Apache	10	14,949	108,882	3,042	2,200	129,073	39.1
Coconino	5	2,768	105,899	3,675	1,250	113,592	34.4
Gila, Graham, Greenlee, Pima, and Pinal	6	593	8,528	271	200	9,592	2.9
Mojave, Yavapai	6	--	12,075	--	--	12,075	3.7
Navajo	11	4,822	56,968	3,680	57	65,527	19.9
Total	38	23,132	292,352	10,668	3,707	329,859	100.0
		Percent					
Proportion		7.0	88.7	3.2	1.1	100.0	

[1] All true firs, except for 71 M b.m. white bark and limber pines from Graham County.

sawmills, and produced more than nine-tenths of the State's total output. Production per mill was particularly high in Coconino County, where average mill output was 22.7 million board feet.

Mill classes.--Twelve of the 38 active mills produced more than 5 million board feet, and turned out 87 percent of the State's total (table 3). Small mills (those producing less than 1 million board feet) were few and sawed less than 1 percent of the State's output.

Trend.--Number of existing mills and distribution by production class did not change significantly between 1958 and 1960. Four mills were idle in 1960, as compared with only one in 1958. Ownership turnover was frequent. Eighteen percent of the mills active in 1960 had come under new ownership since 1958, with changes occurring in most production classes. Three mills went out of existence in the same period, including one that burned in 1960.

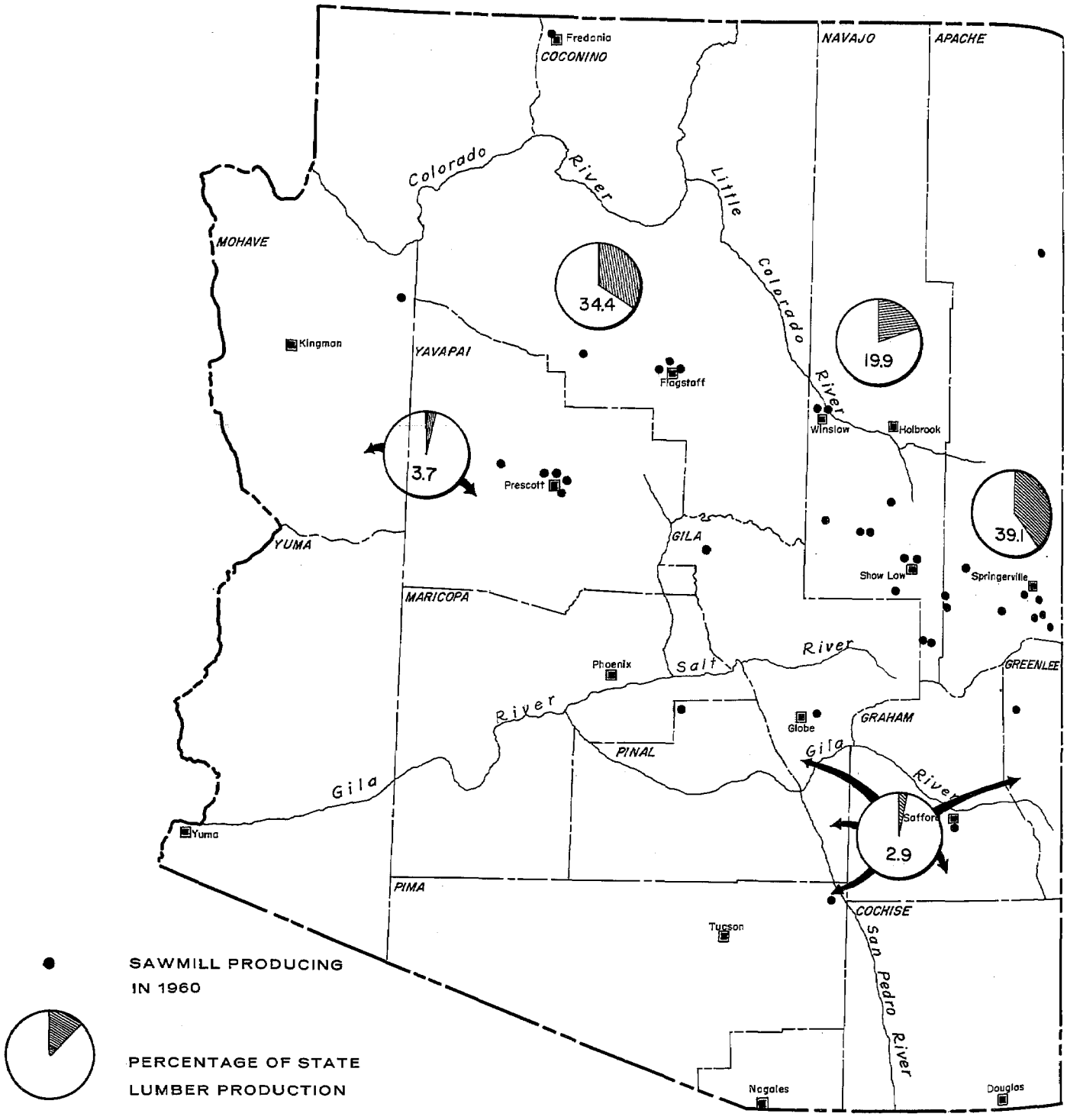

Figure 2.--Sawmills active in Arizona in 1960, with percentage of lumber production by county.

Table 3. --Arizona lumber production by mill production classes, 1960

Production class (M b.m. per yr.)	Active mills	M b.m.	Percent
	Number		
1 - 49	1	35	([1])
50 - 199	7	880	0.3
200 - 499	1	489	.1
500 - 999	2	1,221	.4
1,000 - 4,999	15	41,474	12.6
5,000 and more	12	285,760	86.6
Total	38	329,859	100.0

[1] Less than 0.1 percent.

NEW MEXICO PRODUCTION

Species.--Ponderosa pine, Douglas-fir, and Engelmann spruce, the principal species produced (table 4), accounted for 89 percent of the State's production. Ponderosa pine was the leading species in 14 counties and made up 43 percent of New Mexico's total output.

Counties.--Sawmills operated in 19 of the 32 counties in 1960. Production and number of mills were concentrated in the north-central part of the State (fig. 3). Colfax, Sandoval, Rio Arriba, and Taos Counties in northern New Mexico and Catron County on the western border contained about one-half of the sawmills and produced almost three-fourths of the State's total output (table 4). Sandoval County ranked highest in production per mill, with an average mill output of more than 4 million board feet.

Mill classes.--More than four-fifths of the State's total output was produced by mills that sawed at least 1 million board feet each (table 5). Thirteen of the 37 mills in this group produced at least 5 million board feet.

New Mexico has a large number of small mills, but they contribute relatively little to total output. About two-thirds of the active mills sawed less than 1 million board feet, and turned out only 15 percent of the State's production.

Thirty mills were inactive in 1960.

Trend.--No appreciable changes in number of mills or distribution by production class occurred between 1958 and 1960. However, 20 percent of existing mills were inactive in 1960, as compared to only 11 percent in 1958.

Turnover in ownership was fairly frequent. Fifteen percent of the mills active in 1960 had come under new ownership since 1958, with changes taking place in all except the largest production class. At least six mills went out of business completely in the same period, and five others burned in 1960.

SURVEY METHOD

The surveys in both States were done cooperatively by the U. S. Forest Service and the U. S. Bureau of the Census. Production data were obtained principally by mailing inquiries to all known sawmill operators. A complete list of mills was prepared with the help of the National Forests, and the Bureau of Land Management and the Bureau of Indian Affairs, U. S. Department of the Interior.

Reports were obtained from all mills that produced 5 million board feet or more. Production for mills that did not reply was estimated by sampling within each State.

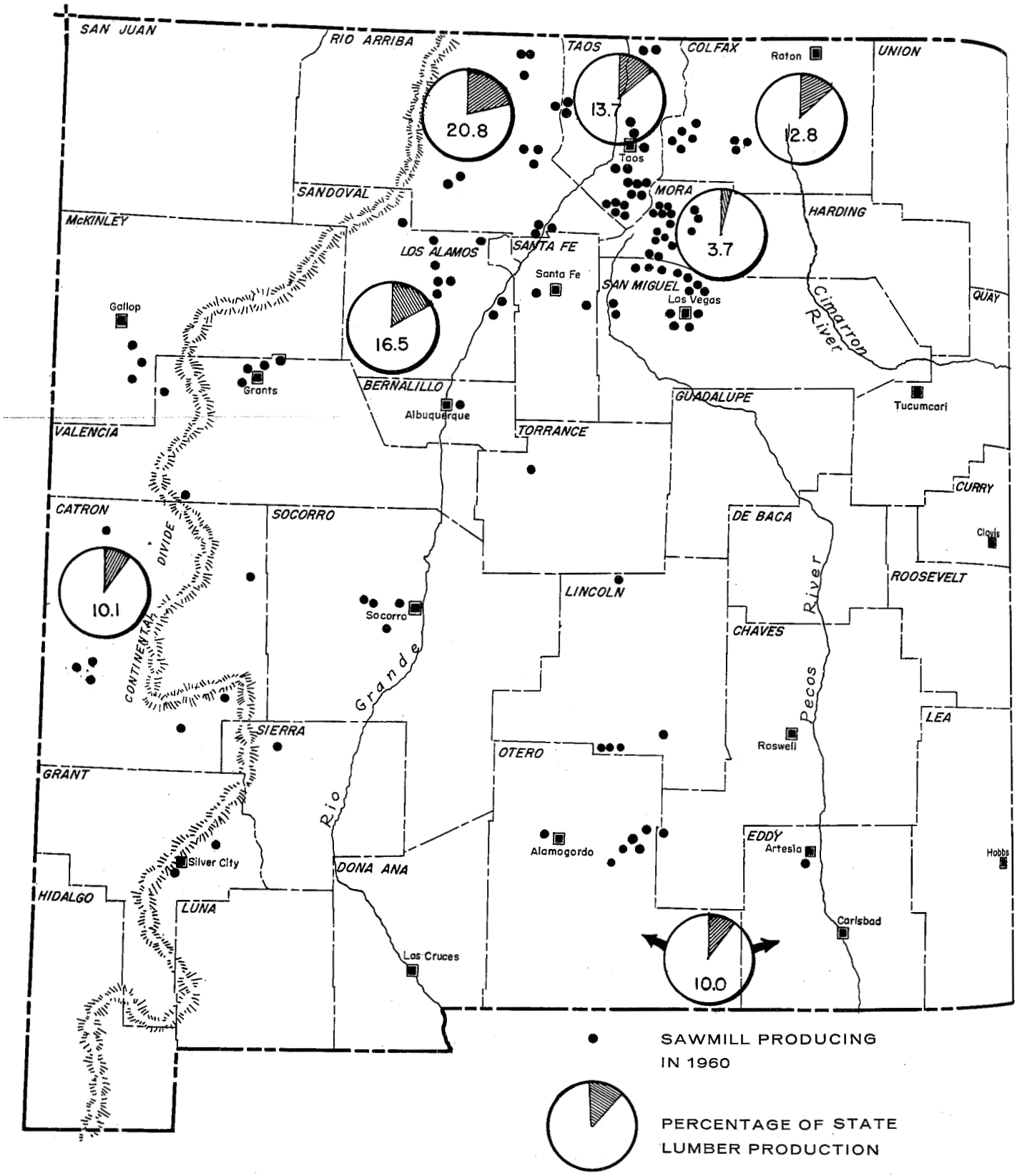

Figure 3.--Sawmills active in New Mexico in 1960, with percentage of lumber production by county (not shown for counties or groups of counties with less than 3.0 percent).

Table 4.--New Mexico lumber production by counties and species, in thousands of board feet, lumber tally, 1960

County	Active sawmills	Douglas-fir	Ponderosa pine	True firs	Engelmann spruce	Other[1]	Total	Proportion
	Number	M board feet						Percent
Catron	7	5,046	17,229	439	72	250	23,036	10.1
Colfax	8	12,025	4,992	0	11,592	577	29,186	12.8
Lincoln, Chavez	6	820	4,030	2,218	235	13	7,316	3.2
Mora	15	5,348	2,127	513	419	84	8,491	3.7
Otero, Eddy	7	6,441	5,145	8,590	951	1,525	22,652	10.0
Rio Arriba	12	5,007	18,849	1,403	22,018	0	47,277	20.8
Sandoval	9	8,938	21,174	2,888	4,521	0	37,521	16.5
San Miguel	14	1,639	1,707	327	141	0	3,814	1.7
Santa Fe, Bernalillo, Torrance	4	2,117	3,357	533	2	0	6,009	2.6
Socorro, Grant, Sierra	7	1,891	4,153	0	0	50	6,094	2.7
Taos	19	8,343	12,487	3,366	6,895	180	31,271	13.7
Valencia, McKinley	9	200	3,056	200	350	1,300	5,106	2.2
Total	117	57,815	98,306	20,477	47,196	3,979	227,773	100.0
		Percent						
Proportion		25.4	43.2	9.0	20.7	1.7	100.0	

[1] Four-fifths of this volume was made up of white bark, limber, and pinyon pines, and one was aspen and cottonwood.

Table 5.--New Mexico lumber production by mill production classes, 1960

Production class (M b.m. per yr.)	Active mills	M b.m.	Percent
	Number		
1 - 49	27	1,466	0.6
50 - 199	21	9,390	4.1
200 - 499	17	4,704	2.1
500 - 999	15	18,684	8.2
1,000 - 4,999	24	62,162	27.3
5,000 and more	13	131,367	57.7
Total	117	227,773	100.0

Personal contacts on a random sample basis were made with selected nonresponding mills as follows:

Production class (Mb.m./yr.)	Mills sampled[3] (Percent)
1,000 - 4,999	25
500 - 999	10
200 - 499	5
50 - 199	5
1 - 99	5

The estimated production of the nonrespondents was added to the total production of respondents to obtain the total estimated production for each State.

[3] *At least two mills were selected in each class, and as a result these sampling rates were actually exceeded in most cases.*

ACCURACY OF THE SURVEYS

Production reports were received from 26 active respondent mills in Arizona. These mills turned out 309,844,000 board feet, or 94 percent of State's total output. For the 12 nonrespondent mills, an additional 20,015,000 board feet was estimated by sampling. Sampling error was 36.9 percent of the estimated part of Arizona's production, and 2.2 percent of the State's total output.

In New Mexico, the production of 178,649,000 board feet reported by 74 active respondent mills constituted 78.4 percent of the State's production. For the nonrespondent mills, an additional 49,124,000 board feet was estimated by sampling. Sampling error was 37.5 percent of the estimated part of New Mexico's production, and 8.2 percent of the State's total output.