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Changes in Output of Industrial Timber Products In North Carolina, 1973-1979

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Changes to Table 11, Resource Bulletin SE-70
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Table 11.--Disposal of bark at primary wood-using industries for 3 years, by disposition and species group, North Carolina

Disposition	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand green tons								
Fiber products	25.0	11.5	32.7	4.7	3.1	14.9	20.3	8.4	17.8
Particleboard	0.9	0.4	2.8	0.7	0.1	2.3	0.2	0.3	0.5
Charcoal	--	8.7	35.0	--	8.2	27.8	--	0.5	7.2
Industrial fuel	930.0	834.3	1,059.4	552.8	477.9	630.6	377.2	356.4	428.8
Domestic fuel	27.9	25.0	35.7	13.8	9.7	13.8	14.1	15.3	21.9
Miscellaneous	223.0	249.0	209.8	176.7	205.2	143.1	46.3	43.8	66.7
Not used	392.3	230.6	117.4	183.1	107.8	45.6	209.2	122.8	71.8
Total	1,599.1	1,359.5	1,492.8	931.8	812.0	878.1	667.3	547.5	614.7

Changes in Output of Industrial Timber Products in North Carolina, 1973-1979

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Abstract

More than 534 million cubic feet of industrial roundwood products were harvested from North Carolina forests during 1979, 2 percent more than in 1976 but 7 percent less than in 1973. Saw logs and pulpwood were the leading roundwood products with 91 percent of output. Byproduct output increased from 94 million cubic feet in 1973 to more than 144 million cubic feet in 1979, a 53 percent increase. A total of 530 primary wood-using plants operated in North Carolina during 1979, an increase of more than 100 plants, mostly sawmills, since 1973. North Carolina's output of 534 million cubic feet of industrial roundwood exceeded receipts by 15 million cubic feet in 1979, making the State a net exporter of industrial roundwood. A trend toward complete utilization of residues continued. Use of residues was 87 percent for bark, 98 percent for coarse materials, 89 percent for sawdust, and 97 percent for shavings.

KEYWORDS: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts, wood movement.

Background

In 1974 a detailed forest inventory of North Carolina was made to determine inventory, growth, and removals of the forest resources; these inventories are made at approximately 10-year intervals. To supplement these data, primary wood-using plants are canvassed periodically to determine amounts and sources of their receipts. These industry canvasses have been made approximately every 3 years, beginning in 1964 and continuing through 1979. This Bulletin reports the findings of the 1979 canvass and the changes since 1973.

Since one objective is to determine the volume of wood removed from the State's forests, only primary processing plants are considered. A plant that converts boards from a sawmill into furniture, for example, is classed as a secondary processor and is not considered here. Total use of wood by primary processing plants is here called output of industrial timber products. The output is divided into two components--roundwood products and plant byproducts. The second component consists of those initial residues from primary plants that were used as a roundwood substitute.

This report divides North Carolina into four geographic regions, Southern Coastal Plain, Northern Coastal Plain, Piedmont, and Mountain (fig. 1). Each region has its own characteristics that affect the wood-using industry in different ways. These regions coincide with those for inventory and commodity drain surveys, permitting many comparisons beyond those reported here.

Statewide Trends

North Carolina's total output of industrial timber products for 1979 was almost 679 million cubic feet, an increase of 8 percent since 1976 and 1 percent more than 1973. Statewide outputs are shown in table 1; those for individual regions are in tables 2-5. Softwood roundwood accounted for more than 50 percent of the total output in 1979, approximately 6 percent less than 1973 and 1976. Hardwood roundwood output was 28 percent of total output, about the same as in previous years. The leading products for 1979 were saw logs and pulpwood, which accounted for 49 percent and 42 percent, respectively, of the roundwood produced. Byproduct use has increased by 53 percent since 1973 and

now accounts for approximately 21 percent of total output.

The number of primary wood-using plants increased from 410 in 1973 to 530 in 1979 (fig. 2). Almost all the increase was in sawmills in the Piedmont and Mountain Regions (table 6). Veneer mills decreased by 5 during this 7-year period, and now number 31. One pulpmill closed during this period, leaving eight operating. The Piedmont is the only region without a pulpmill. There were 13 other miscellaneous plants in 1979, approximately the same as in 1973 and 1976.

North Carolina continues to be a net exporter of industrial roundwood; however, export volume has declined from 8 percent of the total output in 1973 to 3 percent in 1979 (table 7). When compared regionally, the Southern Coastal Plain, Northern Coastal Plain, and Piedmont are net exporters, while the Mountain Region imported four times more than it exported during 1979 (table 8). More than 96 percent of out-of-State softwood movement can be attributed to pulpwood, most of which is shipped to South Carolina. Ninety percent of the hardwood exported to other States was pulpwood; most went to Virginia.

The volume of unused plant residues continues to decline as use for fuelwood and other products increases (table 9). Utilization of residues in 1979 was 98 percent for coarse material, 97 percent for shavings, 89 percent for sawdust, and 87 percent for bark. Ninety-seven percent of the unutilized residues came from the manufacture of lumber and consisted of bark and sawdust. More than 84 percent of the unused residues occur in the Piedmont and Mountain Regions of the State, where sawmills are smaller and scattered over a larger area (table 10). Only 8 percent of softwood bark and 22 percent of hardwood bark were not utilized during 1979 (table 11).

North Carolina had 17 counties that produced more than 10 million cubic feet of roundwood during 1979, compared with 16 counties in 1976 and 18 during 1973 (table 12). Most of the counties producing more than 10 million cubic feet in 1979 also produced this amount in 1976 and 1973. Craven County, in the Northern Coastal Plain led all counties with 26.6 million cubic feet and also had the largest increase since 1973 (figs. 3, 4).

Southern Coastal Plain

The Southern Coastal Plain's 21 counties produced almost 30 percent of the total output for North Carolina during 1979. Their output was approximately the same as in 1976 and 1973 (table 2). A small increase was noted in total product output despite a decline in roundwood of 6 percent. Approximately 75 percent of the total output was softwood, with saw logs comprising 36 percent and pulpwood 52 percent of the total. Pulpwood was the leading roundwood product with 46 percent, followed by saw logs with 42 percent. This region produced more than 40 percent of the State's veneer during 1979; almost 93 percent of the region's output was softwood. Byproduct output during 1979 was approximately 52 million cubic feet, 26 percent of the total output and an 89 percent increase over 1976. The region was a net exporter of industrial roundwood as output exceeded receipts by 33 percent. Both softwood and hardwood roundwood exports were four times greater than imports. Pulpwood was the leading export product; most of it was shipped to South Carolina.

There was only one major change in the makeup of wood-using industries in this region since 1973. One pulpmill was completed and began operating between 1973 and 1976. In 1979 the number of wood-using plants totaled 71, about the same number as in 1973.

Northern Coastal Plain

The Northern Coastal Plain, consisting of 23 counties in the northeastern part of the State, produced 35 percent of the industrial output of North Carolina during 1979. Production of roundwood was 8 percent more than in 1976 but 13 percent less than in 1973 (table 3). Byproduct output has increased in each of the survey years, from more than 41 million cubic feet to more than 51 million cubic feet, a 24 percent increase. Total roundwood exports were 126 percent more than imports, with 18 million cubic feet of softwood and 14 million cubic feet of hardwood being exported. The roundwood exports consisted mainly of pulpwood and were exported to Virginia.

There were 64 wood-using plants operating in this region during 1979, 4 less

than in 1976 and 13 fewer than in 1973. The reduction in number of plants resulted from the closing of sawmills, as the number of other types of plants remained about the same. This region contains four of the State's eight pulpmills.

The Northern Coastal Plain had the most roundwood output of any region in the State and the least amount of unused residues. Only 826,000 cubic feet of residues was not used; more than 83 percent of the unused material came from sawn products.

Piedmont

The Piedmont Region was the only one in the State to show an increase in roundwood output during each of the survey years. Although there was only a 6 percent increase from 1973 through 1979, this was in contrast to all other regions in the State which had declines in 1976. The region's 35 counties accounted for 155 million cubic feet or 29 percent of the roundwood output in the State (table 4). About 62 percent of Piedmont output was softwood and 38 percent was hardwood. Saw logs accounted for almost 52 percent and pulpwood 41 percent of the roundwood product output. Byproduct output increased 45 percent between 1973 and 1979 and totals more than 31 million cubic feet.

The Piedmont had the largest volume and greatest percentage of roundwood exports of any region in the State. Almost 74 million cubic feet of roundwood was exported, while less than 3 million cubic feet was imported. Only 59 percent of softwood roundwood and 41 percent of the hardwood produced were retained for use within the region.

Total number of wood-using plants increased from 170 in 1973 to 208 in 1979. All the increase in number of plants can be attributed to sawmills; other types of plants remained constant or decreased in number. Among its 208 mills, the Piedmont Region has only one large veneer mill, six large sawmills, and is the only region without a pulpmill.

Volume of unused plant residues in this region was more than 5 million cubic feet, 45 percent of the State total during 1979. More than 99 percent of the unused residues, which consist primarily of sawdust, come from the manufacture of lumber. Use of residues in this region is limited for several reasons. First, many of the sawmills are portable, small, and scattered over a wide area, making collection expensive. Second, no large industries using wood for fuel are located in this region.

Mountain

The Mountain Region with its 21 counties is the only region in the State where hardwood roundwood output exceeds softwood (table 5). This region produced 9 percent of the roundwood output for the State in 1979, compared with 8 percent in 1976 and 10 percent in 1973. More than 60 percent of the region's roundwood output is hardwood, and saw logs are the leading product. Byproduct output remained about the same for all three survey years, approximately 6 percent of the total industrial output for the region.

Both softwood and hardwood roundwood imports exceeded exports by more than four to one. Output was only 68 percent of the regional use (mill receipts). More than 92 percent of softwood and 73 percent of hardwood roundwood imports were pulpwood.

The Mountain Region had the second largest number of plants operating in the State during 1979. Sawmills accounted for 181 of the 187 plants; 4 veneer and 2 pulpmills were also operating in this region.

The volume of unused plant residues was higher here, in relation to roundwood output, than in any other region of the State. More than 4.5 million cubic feet of residues was not used in the Mountain Region during 1979, more than 38 percent of the State total. More than 95 percent of these unused residues came from lumber manufacture, with sawdust accounting for 60 percent, bark 23 percent, and coarse material 17 percent of this total. There are several reasons for the large volume of unused residues in this region: (1) Most sawmills are small and do not have facilities for utilizing the residues on site, (2) collecting and transporting the small volumes of the residue is difficult and expensive, (3) large facilities that use wood residues are rare, and (4) many portable sawmills operate within this region.

Coarse residues. Wood residues suitable for chipping, such as slab, edgings, and veneer cores.

Fine residues. Wood residues not suitable for chipping, such as sawdust and shavings.

Hardwoods. Dicotyledonous trees, usually broad-leaved and deciduous.

Industrial wood. All roundwood products except fuelwood.

Plant byproducts. Wood products, such as pulp chips, obtained incidentally to production of other manufactured products.

Primary wood-using plants (industries). Those plants or industries that utilized roundwood products in the manufacture of their principal products. (Plants that utilize only plant byproducts as a substitute for roundwood are included.)

Roundwood products. Logs, bolts, or other round sections cut from trees for industrial or consumer uses.

Softwoods. Coniferous trees, usually evergreen, having needles or scalelike leaves.

Timber products. Roundwood products and plant byproducts.

Timber removals. The net volume of growing-stock trees removed from the inventory by harvesting, by cultural operations such as stand improvements, or by land clearing or changes in land use.

Unused plant residues. Wood material from manufacturing plants not utilized for some product.

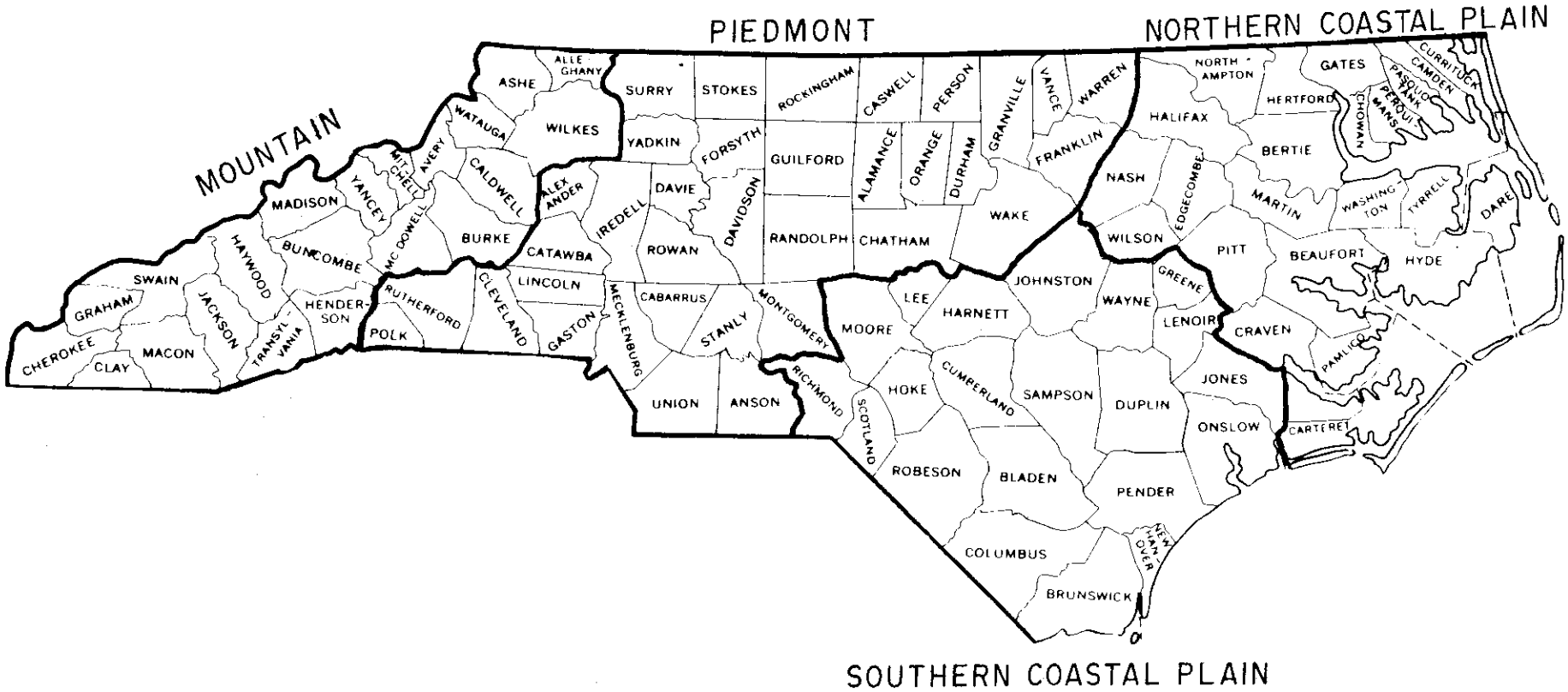

Figure 1.--Forest survey regions in North Carolina.

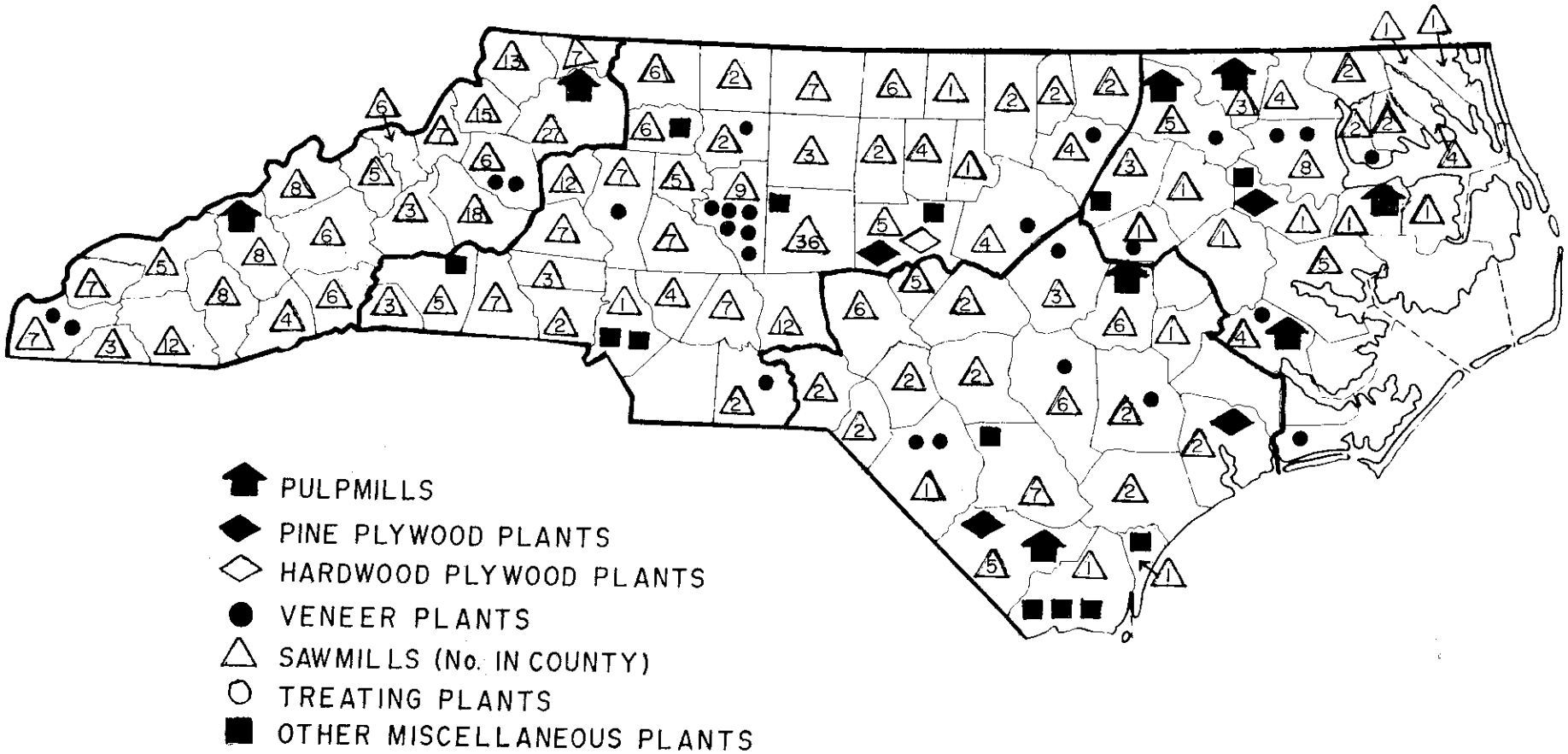

Figure 2.--Location of primary wood-using industries in North Carolina, 1979.

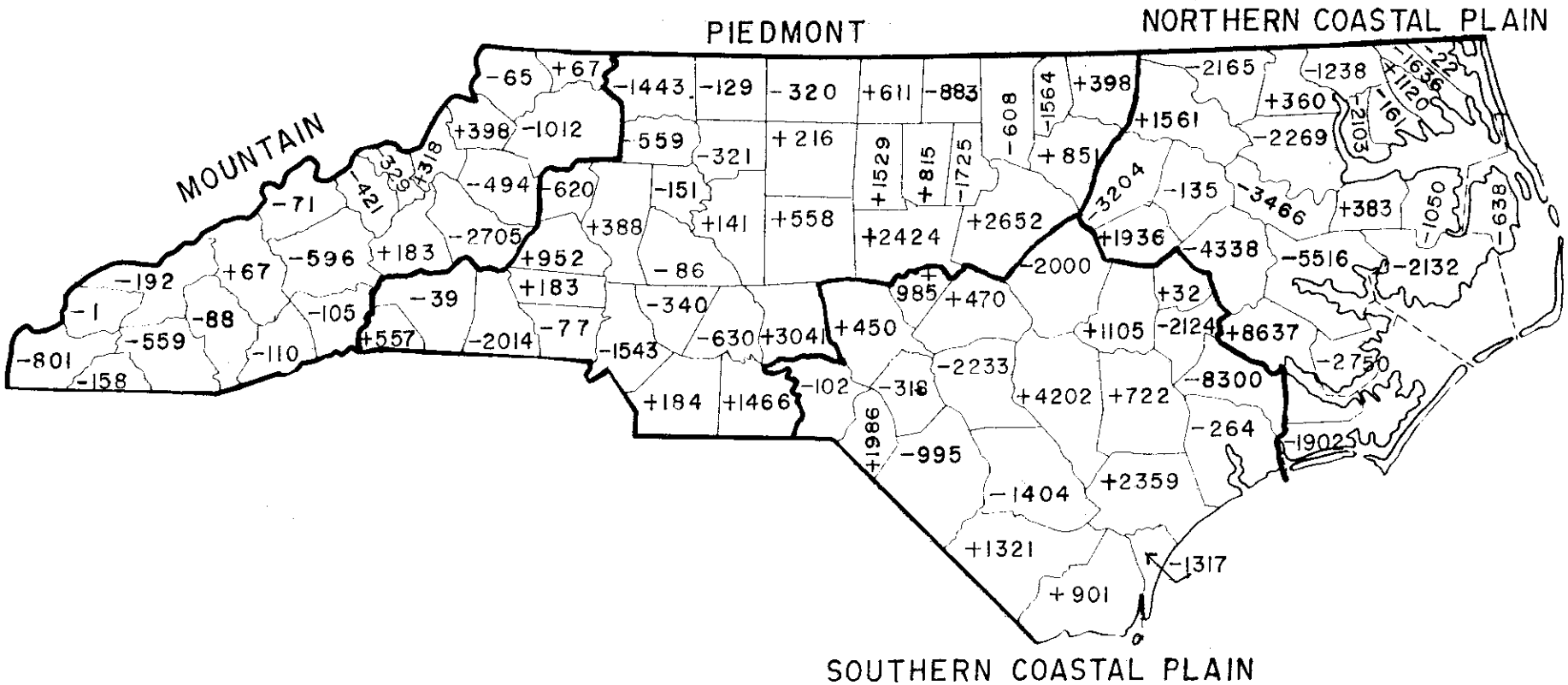

Figure 3.--Change in output of softwood roundwood products (in thousand cubic feet), by county, North Carolina, 1973-1979.

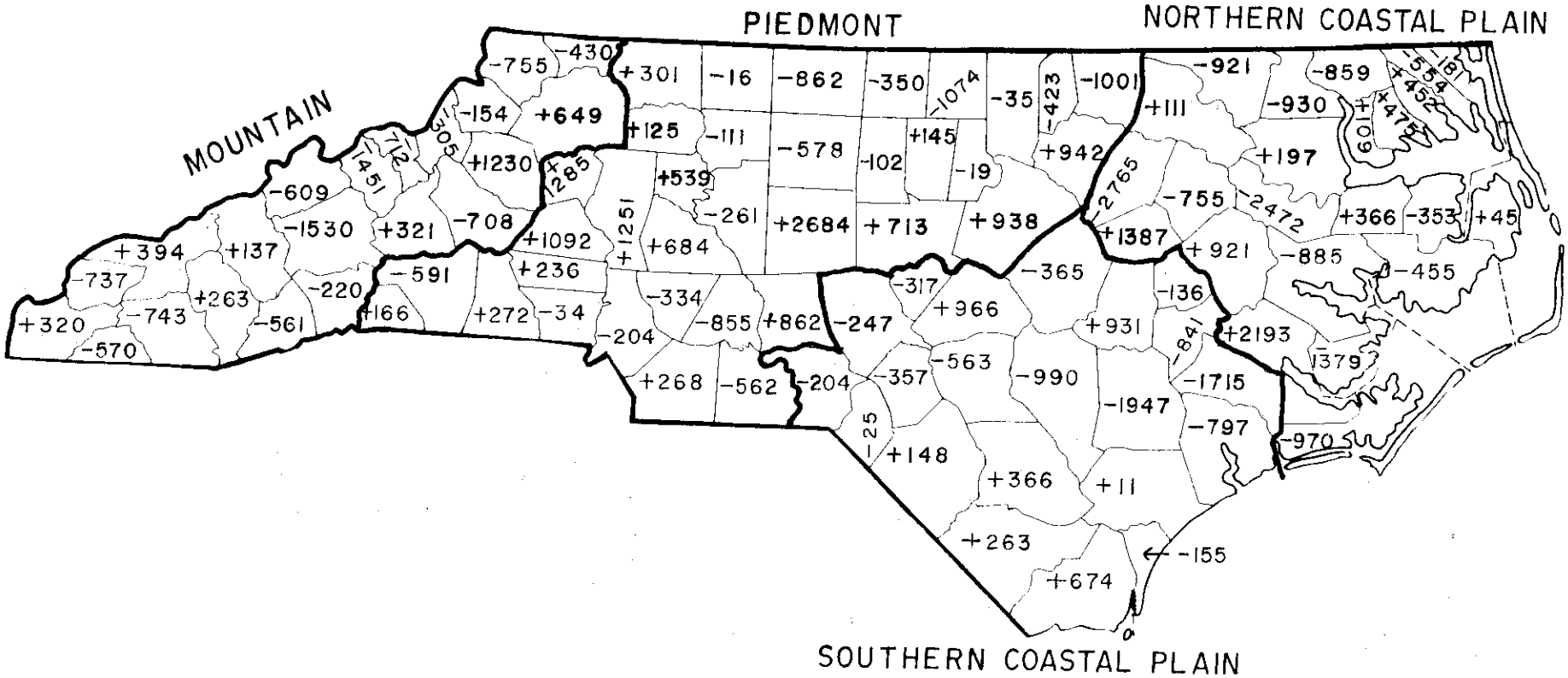

Figure 4.--Change in output of hardwood roundwood products (in thousand cubic feet), by county, North Carolina, 1973-1979.

Table 1.--Output of industrial timber products for 3 years, by product and species group, and by type of material, North Carolina

Product and species group	Total			Roundwood			Byproduct		
	1973[a]	1976[b]	1979[b]	1973[a]	1976[b]	1979[b]	1973	1976	1979
	Thousand cubic feet								
Saw logs:									
Softwood	182,201	182,786	181,604	178,126	178,489	175,692	4,075	4,297	5,912
Hardwood	90,240	72,822	85,788	89,940	72,559	85,717	300	263	71
Total	272,441	255,608	267,392	268,066	251,048	261,409	4,375	4,560	5,983
Veneer logs:									
Softwood	49,799	31,643	34,496	49,799	31,643	34,496	--	--	--
Hardwood	17,629	11,262	9,644	17,629	11,262	9,644	--	--	--
Total	67,428	42,905	44,140	67,428	42,905	44,140	--	--	--
Pulpwood:									
Softwood	202,727	216,236	222,656	143,698	148,968	134,625	59,029	67,268	88,031
Hardwood	106,538	97,275	120,283	92,243	78,195	89,494	14,295	19,080	30,789
Total	309,265	313,511	342,939	235,941	227,163	224,119	73,324	86,348	118,820
Other industrial:									
Softwood	14,903	10,935	13,918	1,899	1,428	777	13,004	9,507	13,141
Hardwood	6,101	4,609	10,301	2,491	333	3,890	3,610	4,276	6,411
Total	21,004	15,544	24,219	4,390	1,761	4,667	16,614	13,783	19,552
All industrial:									
Softwood	449,630	441,600	452,674	373,522	360,528	345,590	76,108	81,072	107,084
Hardwood	220,508	185,968	226,016	202,303	162,349	188,745	18,205	23,619	37,271
Total	670,138	627,568	678,690	575,825	522,877	534,335	94,313	104,691	144,355

[a]Excludes a small amount of roundwood pulpwood chipped.
[b]Includes roundwood chipped at other primary wood-using industries.

Table 2.--Output of industrial timber products for 3 years, by product and species group, and by type of material, Southern Coastal Plain, North Carolina

Product and species group	Total			Roundwood			Byproduct		
	1973[a]	1976[b]	1979[b]	1973[a]	1976[b]	1979[b]	1973	1976	1979
	Thousand cubic feet								
Saw logs:									
Softwood	44,027	48,375	53,499	41,373	45,076	47,613	2,654	3,299	5,886
Hardwood	13,459	10,802	14,673	13,397	10,802	14,673	62	--	--
Total	57,486	59,177	68,172	54,770	55,878	62,286	2,716	3,299	5,886
Veneer logs:									
Softwood	18,117	13,220	16,481	18,117	13,220	16,481	--	--	--
Hardwood	3,134	3,085	1,308	3,134	3,085	1,308	--	--	--
Total	21,251	16,305	17,789	21,251	16,305	17,789	--	--	--
Pulpwood:									
Softwood	69,724	86,488	78,157	53,769	69,053	45,107	15,955	17,435	33,050
Hardwood	30,091	25,403	34,338	27,906	22,167	23,538	2,185	3,236	10,800
Total	99,815	111,891	112,495	81,675	91,220	68,645	18,140	20,671	43,850
Other industrial:									
Softwood	4,948	3,455	2,315	929	619	463	4,019	2,836	1,852
Hardwood	872	589	198	460	--	78	412	589	120
Total	5,820	4,044	2,513	1,389	619	541	4,431	3,425	1,972
All industrial:									
Softwood	136,816	151,538	150,452	114,188	127,968	109,664	22,628	23,570	40,788
Hardwood	47,556	39,879	50,517	44,897	36,054	39,597	2,659	3,825	10,920
Total	184,372	191,417	200,969	159,085	164,022	149,261	25,287	27,395	51,708

[a]Excludes a small amount of roundwood pulpwood chipped.
[b]Includes roundwood chipped at other primary wood-using industries.

Table 3.--Output of industrial timber products for 3 years, by product and species group, and by type of material, Northern Coastal Plain, North Carolina

Product and species group	Total			Roundwood			Byproduct		
	1973[a]	1976[b]	1979[b]	1973[a]	1976[b]	1979[b]	1973	1976	1979
	Thousand cubic feet								
Saw logs:									
Softwood	72,818	69,073	64,380	71,397	68,075	64,380	1,421	998	--
Hardwood	30,147	21,044	18,893	30,128	21,044	18,893	19	--	--
Total	102,965	90,117	83,273	101,525	89,119	83,273	1,440	998	--
Veneer logs:									
Softwood	28,193	12,944	11,377	28,193	12,944	11,377	--	--	--
Hardwood	7,387	5,481	4,978	7,387	5,481	4,978	--	--	--
Total	35,580	18,425	16,355	35,580	18,425	16,355	--	--	--
Pulpwood:									
Softwood	68,665	60,070	81,446	42,000	30,704	45,823	26,665	29,366	35,623
Hardwood	36,625	38,358	43,248	29,241	30,050	35,577	7,384	8,308	7,671
Total	105,290	98,428	124,694	71,241	60,754	81,400	34,049	37,674	43,294
Other industrial:									
Softwood	5,991	4,568	7,481	730	355	12	5,261	4,213	7,469
Hardwood	2,494	788	2,767	1,549	--	1,634	945	788	1,133
Total	8,485	5,356	10,248	2,279	355	1,646	6,206	5,001	8,602
All industrial:									
Softwood	175,667	146,655	164,684	142,320	112,078	121,592	33,347	34,577	43,092
Hardwood	76,653	65,671	69,886	68,305	56,575	61,082	8,348	9,096	8,804
Total	252,320	212,326	234,570	210,625	168,653	182,674	41,695	43,673	51,896

[a]Excludes a small amount of roundwood pulpwood chipped.

[b]Includes roundwood chipped at other primary wood-using industries.

Table 4.--Output of industrial timber products for 3 years, by product and species group, and by type of material, Piedmont, North Carolina

Product and species group	Total			Roundwood			Byproduct		
	1973[a]	1976[b]	1979[b]	1973[a]	1976[b]	1979[b]	1973	1976	1979
	Thousand cubic feet								
Saw logs:									
Softwood	47,410	51,107	49,280	47,410	51,107	49,254	--	--	26
Hardwood	24,454	23,927	31,329	24,312	23,927	31,258	142	--	71
Total	71,864	75,034	80,609	71,722	75,034	80,512	142	--	97
Veneer logs:									
Softwood	3,489	5,479	6,376	3,489	5,479	6,376	--	--	--
Hardwood	4,437	1,756	2,673	4,437	1,756	2,673	--	--	--
Total	7,926	7,235	9,049	7,926	7,235	9,049	--	--	--
Pulpwood:									
Softwood	54,054	63,359	56,195	40,456	44,774	39,673	13,598	18,585	16,522
Hardwood	28,078	25,071	30,401	25,631	20,724	23,720	2,447	4,347	6,681
Total	82,132	88,430	86,596	66,087	65,498	63,393	16,045	22,932	23,203
Other industrial:									
Softwood	3,628	2,791	3,414	234	437	280	3,394	2,354	3,134
Hardwood	2,137	3,082	6,814	358	252	2,178	1,779	2,830	4,636
Total	5,765	5,873	10,228	592	689	2,458	5,173	5,184	7,770
All industrial:									
Softwood	108,581	122,736	115,265	91,589	101,797	95,583	16,992	20,939	19,682
Hardwood	59,106	53,836	71,217	54,738	46,659	59,829	4,368	7,177	11,388
Total	167,687	176,572	186,482	146,327	148,456	155,412	21,360	28,116	31,070

[a]Excludes a small amount of roundwood pulpwood chipped.
[b]Includes roundwood chipped at other primary wood-using industries.

Table 5.--Output of industrial timber products for 3 years, by product and species group, and by type of material, Mountain, North Carolina

Product and species group	Total			Roundwood			Byproduct		
	1973[a]	1976[b]	1979[b]	1973[a]	1976[b]	1979[b]	1973	1976	1979
	Thousand cubic feet								
Saw logs:									
Softwood	17,946	14,231	14,445	17,946	14,231	14,445	--	--	--
Hardwood	22,180	17,049	20,893	22,103	16,786	20,893	77	263	--
Total	40,126	31,280	35,338	40,049	31,017	35,338	77	263	--
Veneer logs:									
Softwood	--	--	262	--	--	262	--	--	--
Hardwood	2,671	940	685	2,671	940	685	--	--	--
Total	2,671	940	947	2,671	940	947	--	--	--
Pulpwood:									
Softwood	10,284	6,319	6,858	7,473	4,437	4,022	2,811	1,882	2,836
Hardwood	11,744	8,443	12,296	9,465	5,254	6,659	2,279	3,189	5,637
Total	22,028	14,762	19,154	16,938	9,691	10,681	5,090	5,071	8,473
Other industrial:									
Softwood	336	121	708	6	17	22	330	104	686
Hardwood	598	150	522	124	81	--	474	69	522
Total	934	271	1,230	130	98	22	804	173	1,208
All industrial:									
Softwood	28,566	20,671	22,273	25,425	18,685	18,751	3,141	1,986	3,522
Hardwood	37,193	26,582	34,396	34,363	23,061	28,237	2,830	3,521	6,159
Total	65,759	47,253	56,669	59,788	41,746	46,988	5,971	5,507	9,681

[a]Excludes a small amount of roundwood pulpwood chipped.
[b]Includes roundwood chipped at other primary wood-using industries.

Table 6.--Number of primary wood using plants for 3 years, by survey region and industry, North Carolina

Region	Total all plants	Industry			
		Sawmills	Veneer mills	Pulpmills	Other misc.
Southern Coastal Plain					
1973	69	58	9	1	1
1976	74	62	8	2	2
1979	71	57	7	2	5
Northern Coastal Plain					
1973	77	59	9	4	5
1976	68	55	8	4	1
1979	64	50	8	4	2
Piedmont					
1973	170	151	14	--	5
1976	207	189	12	--	6
1979	208	190	12	--	6
Mountain					
1973	94	87	4	3	--
1976	103	97	4	2	--
1979	187	181	4	2	--
All regions					
1973	410	355	36	8	11
1976	452	403	32	8	9
1979	530	478	31	8	13

Table 7.--Industrial roundwood movement for 3 years, by species group, North Carolina

Species group	1973[a]	1976	1979
	- - Thousand cubic feet - -		
Softwood:			
Output	373,522	360,528	345,590
Retained	297,387	296,989	300,434
Export	76,135	63,539	45,156
Import	44,060	42,375	37,217
Receipts	341,447	339,364	337,651
Hardwood:			
Output	202,303	162,349	188,745
Retained	163,026	134,488	159,308
Export	39,277	27,861	29,437
Import	23,923	20,690	21,837
Receipts	186,949	155,178	181,145
All species:			
Output	575,825	522,877	534,335
Retained	460,413	431,477	459,742
Export	115,412	91,400	74,593
Import	67,983	63,065	59,054
Receipts	528,396	494,542	518,796

[a]Excludes a small amount of roundwood pulpwood chipped.

Table 8.--Industrial roundwood movement, by species group and survey region North Carolina, 1979

Species group	Southern Coastal Plain	Northern Coastal Plain	Piedmont	Mountain
	Thousand cubic feet			
Softwood:				
Output	109,667	121,590	95,585	18,748
Retained	72,277	103,278	47,914	15,301
Export	37,390	18,312	47,671	3,447
Import	9,929	10,232	1,068	15,989
Receipts	82,206	113,510	48,982	31,290
Hardwood:				
Output	39,652	61,056	59,805	28,232
Retained	27,367	46,754	33,786	24,522
Export	12,285	14,302	26,019	3,710
Import	2,718	4,230	1,699	13,191
Receipts	30,085	50,984	35,485	37,713
All species:				
Output	149,319	182,646	155,390	46,980
Retained	99,644	150,032	81,700	39,823
Export	49,675	32,614	73,690	7,157
Import	12,647	14,462	2,767	29,180
Receipts	112,291	164,494	84,467	69,003

Table 9.--Volume of unused plant residues at primary wood-using industries, by species group and type of residue, and by industry, North Carolina, 1979

Species group and type of residue	All industries	Lumber	Veneer and plywood	Other
	Thousand cubic feet			
Softwood:				
Coarse	1,520	1,520	--	--
Shavings	434	434	--	--
Other fine	4,600	4,585	15	--
Total	6,554	6,539	15	--
Hardwood:				
Coarse	1,264	1,106	158	--
Shavings	30	30	--	--
Other fine	3,977	3,770	207	--
Total	5,271	4,906	365	--
All species:				
Coarse	2,784	2,626	158	--
Shavings	464	464	--	--
Other fine	8,577	8,355	222	--
Total	11,825	11,445	380	--

Table 10.--Volume of unused plant residues, by species group and industry, and by survey region, North Carolina, 1979

Species group and industry	Total	Region			
		Southern Coastal Plain	Northern Coastal Plain	Piedmont	Mountain
	Thousand cubic feet				
Softwood:					
Lumber	6,539	1,002	542	3,034	1,961
Veneer and plywood	15	--	15	--	--
Other	--	--	--	--	--
Total	6,554	1,002	557	3,034	1,961
Hardwood:					
Lumber	4,906	112	144	2,297	2,353
Veneer and plywood	365	--	125	26	214
Other	--	--	--	--	--
Total	5,271	112	269	2,323	2,567
All species:					
Lumber	11,445	1,114	686	5,331	4,314
Veneer and plywood	380	--	140	26	214
Other	--	--	--	--	--
Total	11,825	1,114	826	5,357	4,528

Table 11.--Disposal of bark at primary wood-using industries for 3 years, by disposition and species group, North Carolina

Disposition	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand green tons								
Fiber products	25.0	11.5	9.7	4.7	3.1	4.1	20.3	8.4	5.6
Particleboard	0.9	0.4	2.8	0.7	0.1	2.3	0.2	0.3	0.5
Charcoal	--	8.7	35.0	--	8.2	27.8	--	0.5	7.2
Industrial fuel	930.0	834.3	468.0	552.8	477.9	302.3	377.2	356.4	165.7
Domestic fuel	27.9	25.0	35.7	13.8	9.7	13.8	14.1	15.3	21.9
Miscellaneous	223.0	249.0	202.1	176.7	205.2	141.0	46.3	43.8	61.1
Not used	392.3	230.6	117.4	183.1	107.8	45.6	209.2	122.8	71.8
Total	1,599.1	1,359.5	870.7	931.8	812.0	536.9	667.3	547.5	333.8

Table 12.--Roundwood products output for 3 years, by region and county, and by species group, North Carolina

Region and county	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand cubic feet								
Southern Coastal Plain:									
Bladen	14,871	18,631	13,833	10,848	12,551	9,444	4,023	6,080	4,389
Brunswick	11,190	11,421	12,765	9,250	9,825	10,151	1,940	1,596	2,614
Columbus	12,356	16,263	13,940	9,135	13,759	10,456	3,221	2,504	3,484
Cumberland	6,333	6,341	3,537	4,782	5,274	2,549	1,551	1,067	988
Duplin	11,607	10,784	10,382	7,591	8,803	8,313	4,016	1,981	2,069
Greene	2,551	2,984	2,447	1,827	1,952	1,859	724	1,032	588
Harnett	4,164	3,781	5,600	2,865	2,542	3,335	1,299	1,239	2,265
Hoke	2,340	2,438	1,665	1,743	2,033	1,425	597	405	240
Johnston	12,712	9,090	10,347	8,163	5,344	6,163	4,549	3,746	4,184
Jones	14,153	7,409	4,138	11,613	6,004	3,313	2,540	1,405	825
Lee	3,897	4,218	4,565	2,331	3,417	3,316	1,566	801	1,249
Lenior	7,353	4,093	4,388	5,529	3,296	3,405	1,824	797	983
Moore	5,843	5,591	6,046	3,939	4,296	4,389	1,904	1,295	1,657
New Hanover	2,334	1,767	862	1,994	1,673	677	340	94	185
Onslow	7,285	8,985	6,224	5,638	8,175	5,374	1,647	810	850
Pender	7,027	10,410	9,397	5,043	8,923	7,402	1,984	1,487	1,995
Richmond	4,799	3,496	4,493	3,418	2,442	3,316	1,381	1,054	1,177
Robeson	8,799	12,363	7,952	6,108	9,552	5,113	2,691	2,811	2,839
Sampson	11,712	12,348	14,924	7,505	9,700	11,707	4,207	2,648	3,217
Scotland	2,328	4,969	4,289	1,440	4,456	3,426	888	513	863
Wayne	5,431	6,640	7,467	3,426	3,951	4,531	2,005	2,689	2,936
Total	159,085	164,022	149,261	114,188	127,968	109,664	44,897	36,054	39,597

Continued

Table 12.--Roundwood products output for 3 years, by region and county, and by species group, North Carolina--Continued

Region and county	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand cubic feet								
Northern Coastal Plain:									
Beaufort	21,728	14,146	15,327	16,182	9,242	10,666	5,546	4,904	4,661
Bertie	18,925	15,508	16,853	11,449	8,400	9,180	7,476	7,108	7,673
Camden	3,955	3,967	1,765	2,451	2,167	815	1,504	1,800	950
Carteret	6,445	2,603	3,573	5,041	2,134	3,139	1,404	469	434
Chowan	6,228	3,634	4,234	4,375	1,950	2,272	1,853	1,684	1,962
Craven	15,755	16,657	26,585	11,566	12,218	20,203	4,189	4,439	6,382
Currituck	1,923	1,333	1,720	935	590	913	988	743	807
Dare	2,745	3,595	2,152	2,364	3,508	1,726	381	87	426
Edgecombe	6,251	6,016	5,361	3,970	3,752	3,835	2,281	2,264	1,526
Gates	12,009	11,645	9,912	8,361	8,406	7,123	3,648	3,239	2,789
Halifax	13,160	12,867	14,832	7,648	8,652	9,209	5,512	4,215	5,623
Hertford	11,041	10,279	10,471	6,425	5,693	6,785	4,616	4,586	3,686
Hyde	6,440	4,353	3,853	5,075	3,238	2,943	1,365	1,115	910
Martin	12,732	7,287	6,794	8,196	4,956	4,730	4,536	2,331	2,064
Nash	12,253	9,985	6,284	7,153	7,417	3,949	5,100	2,568	2,335
Northampton	14,873	14,155	11,787	8,729	8,566	6,564	6,144	5,589	5,223
Pamlico	7,118	4,146	2,989	4,937	3,195	2,187	2,181	951	802
Pasquotank	5,168	3,508	6,740	3,825	2,681	4,945	1,343	827	1,795
Perquimans	5,720	3,576	6,034	4,115	2,331	3,954	1,605	1,245	2,080
Pitt	10,187	5,521	6,770	8,445	2,956	4,107	1,742	2,565	2,663
Tyrrell	5,713	3,820	4,310	4,450	3,329	3,400	1,263	491	910
Washington	3,910	4,172	4,659	2,243	2,499	2,626	1,667	1,673	2,033
Wilson	6,346	5,880	9,669	4,385	4,198	6,321	1,961	1,682	3,348
Total	210,625	168,653	182,674	142,320	112,078	121,592	68,305	56,575	61,082

Continued

Table 12.--Roundwood products output for 3 years, by region and county, and by species group, North Carolina--Continued

Region and county	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand cubic feet								
Piedmont:									
Alamance	1,282	656	2,709	468	212	1,997	814	444	712
Alexander	2,537	3,153	3,202	1,987	2,276	1,367	550	877	1,835
Anson	8,840	9,395	9,744	5,954	6,480	7,420	2,886	2,915	2,324
Cabarrus	2,759	2,342	2,085	1,755	1,430	1,415	1,004	912	670
Caswell	2,238	2,216	2,499	672	881	1,283	1,566	1,335	1,216
Catawba	1,855	2,215	3,899	1,563	1,570	2,515	292	645	1,384
Chatham	9,189	12,483	12,326	5,905	9,675	8,329	3,284	2,808	3,997
Cleveland	3,856	2,496	2,194	3,133	1,837	1,199	723	659	995
Davidson	4,385	2,478	4,265	2,043	1,183	2,184	2,342	1,295	2,081
Davie	2,316	2,491	2,704	1,483	1,359	1,332	833	1,132	1,372
Durham	3,957	4,762	2,213	2,963	3,889	1,238	994	873	975
Forsyth	1,652	1,657	1,220	1,048	824	727	604	833	493
Franklin	8,734	9,479	10,527	5,761	7,081	6,612	2,973	2,398	3,915
Gaston	1,990	2,398	1,879	1,539	1,909	1,462	451	489	417
Granville	7,696	8,434	7,053	4,354	6,351	3,746	3,342	2,083	3,307
Guilford	2,339	1,281	1,977	1,018	632	1,234	1,321	649	743
Iredell	4,430	4,938	6,069	3,508	3,182	3,896	922	1,756	2,173
Lincoln	2,626	3,721	3,045	2,137	2,946	2,320	489	775	725
Mecklenburg	3,947	2,460	2,200	3,157	1,605	1,614	790	855	586
Montgomery	7,179	8,807	11,082	5,334	6,732	8,375	1,845	2,075	2,707
Orange	2,959	3,093	3,919	1,644	1,777	2,459	1,315	1,316	1,460
Person	4,121	5,434	2,164	2,024	4,150	1,141	2,097	1,284	1,023
Polk	1,418	1,542	2,141	553	972	1,110	865	570	1,031
Randolph	4,270	5,163	7,512	2,165	2,827	2,723	2,105	2,336	4,789
Rockingham	3,562	1,926	2,380	1,281	757	961	2,281	1,169	1,419
Rowan	3,276	4,532	3,874	2,268	2,618	2,182	1,008	1,914	1,692
Rutherford	6,391	4,637	5,761	3,620	2,820	3,581	2,771	1,817	2,180
Stanly	4,300	3,658	2,815	2,608	2,763	1,978	1,692	895	837
Stokes	2,634	2,340	2,489	819	951	690	1,815	1,389	1,799
Surry	3,864	1,881	2,722	2,123	823	680	1,741	1,058	2,042
Union	3,289	3,714	3,741	2,003	2,308	2,187	1,286	1,406	1,554
Vance	3,354	2,767	1,367	2,315	2,121	751	1,039	646	616
Wake	9,536	11,071	13,126	6,644	8,698	9,296	2,892	2,373	3,830
Warren	7,365	6,876	6,762	4,248	5,111	4,646	3,117	1,765	2,116
Yadkin	2,181	1,960	1,747	1,492	1,047	933	689	913	814
Total	146,327	148,456	155,412	91,589	101,797	95,583	54,738	46,659	59,829

Continued

Table 12.--Roundwood products output for 3 years, by region and county, and by species group, North Carolina--Continued

Region and county	All species			Softwood			Hardwood		
	1973	1976	1979	1973	1976	1979	1973	1976	1979
	Thousand cubic feet								
Mountains:									
Alleghany	1,405	1,072	1,042	798	757	865	607	315	177
Ashe	2,198	383	1,378	743	120	678	1,455	263	700
Avery	762	429	775	67	85	385	695	344	390
Buncombe	4,052	3,550	1,926	1,043	1,474	447	3,009	2,076	1,479
Burke	7,866	5,811	4,453	5,101	3,824	2,396	2,765	1,987	2,057
Caldwell	3,278	1,949	4,059	2,262	1,118	1,768	1,016	831	2,291
Cherokee	3,957	2,756	3,476	2,170	1,590	1,369	1,787	1,166	2,107
Clay	1,512	1,723	784	443	721	285	1,069	1,002	499
Graham	1,541	895	803	198	162	197	1,343	733	606
Haywood	1,747	1,413	1,951	237	315	304	1,510	1,098	1,647
Henderson	2,292	1,649	1,967	621	754	516	1,671	895	1,451
Jackson	1,339	2,929	1,514	393	742	305	946	2,187	1,209
McDowell	1,761	1,333	2,265	871	711	1,054	890	622	1,211
Macon	2,634	2,178	1,332	842	415	283	1,792	1,763	1,049
Madison	2,590	2,048	1,910	567	740	496	2,023	1,308	1,414
Mitchell	2,070	753	1,029	804	330	475	1,266	423	554
Swain	1,381	855	1,583	572	267	380	809	588	1,203
Transylvania	2,585	1,345	1,914	504	544	394	2,081	801	1,520
Watauga	539	183	783	--	40	398	539	143	385
Wilkes	11,287	7,538	10,924	6,455	3,864	5,443	4,832	3,674	5,481
Yancy	2,992	954	1,120	734	112	313	2,258	842	807
Total	59,788	41,746	46,988	25,425	18,685	18,751	34,363	23,061	28,237
All counties	575,825	522,877	534,335	373,522	360,528	345,590	202,303	162,349	188,745

Hutchins, Cecil C., Jr.
Changes in output of industrial timber products in North Carolina, 1973-1979. Resour. Bull. SE-70. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station; 1983. 23 p.

More than 534 million cubic feet of industrial roundwood products were harvested from North Carolina forests during 1979, 2 percent more than in 1976 but 7 percent less than in 1973. Saw logs and pulpwood were the leading roundwood products with 91 percent of output. Byproduct output increased from 94 million cubic feet in 1973 to more than 144 million cubic feet in 1979, a 53 percent increase. A total of 530 primary wood-using plants operated in North Carolina during 1979, an increase of more than 100 plants, mostly sawmills, since 1973. North Carolina's output of 534 million cubic feet of industrial roundwood exceeded receipts by 15 million cubic feet in 1979, making the State a net exporter of industrial roundwood. A trend toward complete utilization of residues continues.

KEYWORDS: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts, wood movement.

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KEYWORDS: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts, wood movement.

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