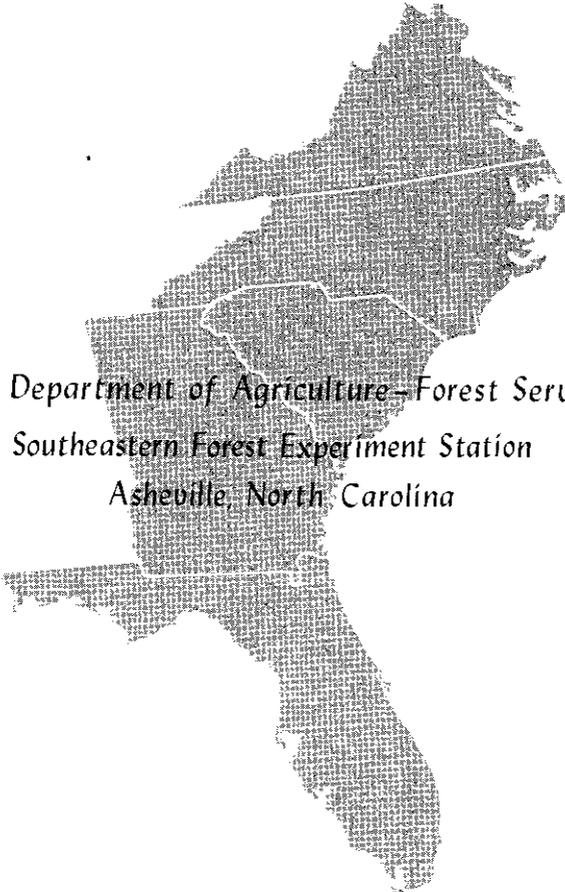
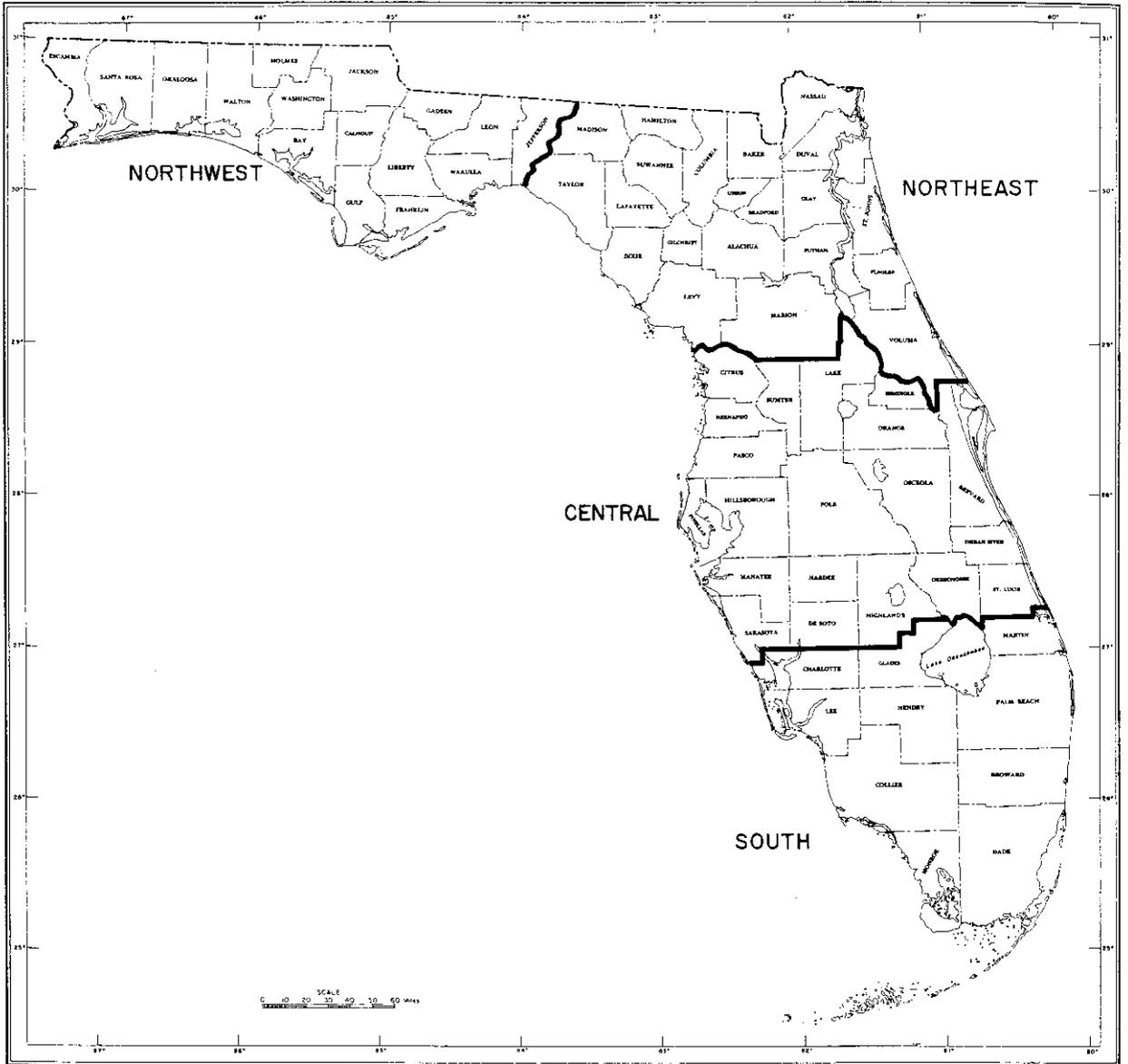


Changes in Output of Industrial Timber Products in Florida, 1969-1975

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Forest Survey Regions in Florida.

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Abstract. --The total output of industrial timber products in Florida amounted to over 300 million cubic feet in 1975, 8 percent less than in 1969 and 16 percent less than in 1973. The largest decline was in the production of roundwood products. Production of plant by-products in 1975 was 6 percent below that in 1973 but was well above the 1969 total. The general statewide changes were also seen in each of the four Forest Survey regions. Volume of unused plant residues dropped by 82 percent between 1969 and 1975 and was less than 2 million cubic feet in 1975.

Keywords: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts.

Between detailed timber surveys, which are made at 10-year intervals in Southeastern States, the easiest way to keep track of timber harvesting in a State is to ask forest industries how much wood they are using and where it is coming from. Such industry canvasses were made in Florida in 1969, 1971, 1973, and 1975. This Bulletin reports the principal changes and trends in the use of Florida wood by forest industries between 1969 and 1975.

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

In some parts of Florida, utilization of forests for timber products was much heavier than in others. Output of industrial timber products is therefore reported for regions within the State as well as for Florida as a whole. The Northeast and Northwest Regions have almost 80 percent of the commercial forest land and produce over 90 percent of the timber products in Florida.

Although central and south Florida produce less than 10 percent of the timber products output, they do make a significant contribution to the production of pulpwood and cypress products.

STATEWIDE TRENDS

The total output of industrial timber products in Florida amounted to over 300 million cubic feet in 1975, 8 percent less than in 1969 and 16 percent less than in 1973. The decline between 1973 and 1975 is viewed as part of the nationwide economic slump rather than a local phenomenon. The number of primary wood-using plants did drop from 139 in 1969 to 125 in 1975 (fig. 1). However, the 1975 figure exceeded that of 1973 by two plants and the number of sawmills increased from 85 to 92 during the 2-year period. The total roundwood receipts dropped by less than 3 percent between 1969 and 1975 and less than 5 percent between 1973 and 1975. Thus, despite the decline in products output, there has been little change in Florida's industrial capacity or demand.

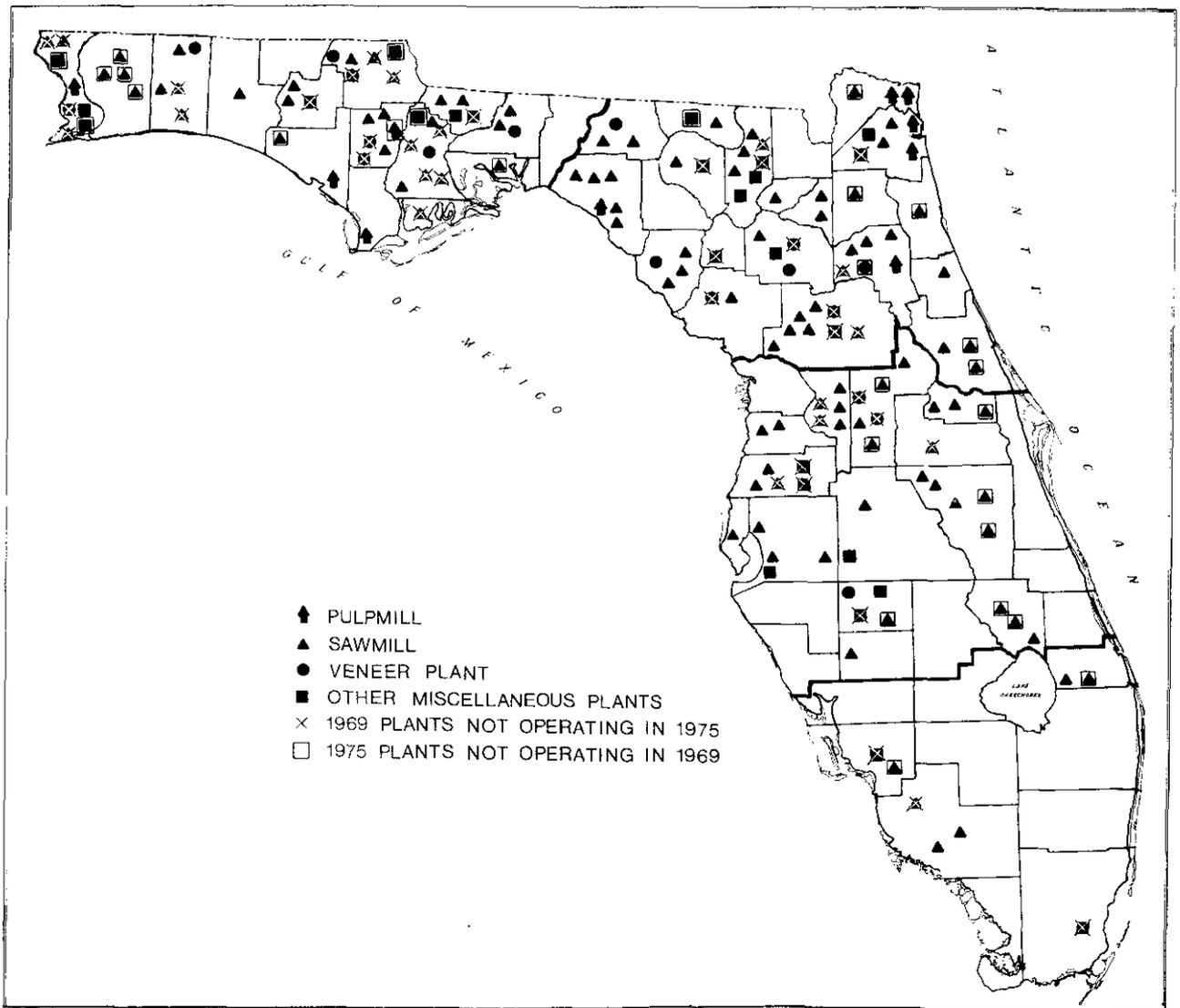


Figure 1. --Location of primary wood-using plants in Florida, 1975.

feet more than the roundwood harvested in Florida that year. This difference between roundwood receipts and output was almost double the average of previous years. With the bulk of Florida's plants being located in the northern part of the State, they can draw wood from Alabama and Georgia almost as easily as from Florida, and the amount of wood shipped into the State can vary considerably from year to year depending on availability and price. There is no indication that the large increase in roundwood imports in 1975 resulted from a general timber shortage in Florida. The 1970 timber survey showed that the net annual growth in the State was exceeding the total timber removals by 184 million cubic feet in 1969. If nothing has happened to drastically reduce the net annual growth, Florida's timber supply should be more than adequate to meet the demands of the State's forest industry.

Plant byproducts were increasingly used as a roundwood substitute between 1969 and 1975. Such byproducts comprised 14 percent of the total output of timber products in 1975, 5 percent more than in 1969. The increased production of plant byproducts cannot be attributed solely to improved utilization of plant residues. A growing number of plants that sell a large quantity of their byproducts, mainly as pulpwood, are purchasing roundwood that is not suited for their principal product for sole purpose of converting it into plant byproducts. Almost 11 million cubic feet of this type of material was included in the 44 million cubic feet of initial plant residues in 1975.

Softwood species have provided the bulk of Florida's industrial timber products in past years and continued to do so in 1975. Softwood production increased substantially between 1969 and 1973, then dropped off sharply between 1973 and 1975. The production of hardwood products declined throughout the 7-year period. Softwood products made up 86 percent of the total output in 1969 and 88 percent in 1975. The decline in the output of hardwood products was limited to those from roundwood. Output of hardwood products from plant byproducts increased. Output of round cypress products also increased, by 67 percent between 1969 and 1975.

The proportions of Florida's harvest used for various products have changed considerably. Pulpwood, the leading product, has been on a downward trend since 1969 when it made up 74 percent of the total output. By 1975 it accounted for only 71 percent. During the same period saw-log production has been increasing, from 18 to 25 percent of the total production. The harvest of veneer logs has varied more than any other product, reaching a high of 25 million cubic feet in 1971 and a low of 6 million cubic feet in 1975. The production of other miscellaneous products such as poles, piling, and fencing collectively followed the same trend as the total products output, increasing through 1973 and then dropping off through 1975.

REGIONAL CHANGES

The detailed timber survey of 1970 showed that the net growth of Florida's forests was exceeding the total removals in all four Survey Regions. However, the difference between net growth and total removals was much smaller in some regions than in others. Therefore, it is necessary to examine the changes in industrial timber products output by region.

Harvesting in the Northeast Region accounted for 55 percent of the State's industrial timber products output from roundwood in 1969 and 58 percent in 1975. This region had not only the largest timber products output but also the largest number of mills and the greatest volume of receipts. The 1970 forest survey showed that this region had the largest timber inventory and the largest net annual growth. It may well be described as the hub of Florida's forest industries.

This region was the only one to have an upward trend in its timber products output between 1969 and 1973, and the 1975 output was only 3 percent below the 1969 level. The greatest gains in the region were in the western part along the Gulf Coast, and several counties in that area maintained their gains through 1975 (fig. 2). During the early seventies the number of primary wood-using plants in the region decreased from 56 to 51; however, one new plant opened since 1973. The trend toward fewer but larger plants is common in the Southeast.

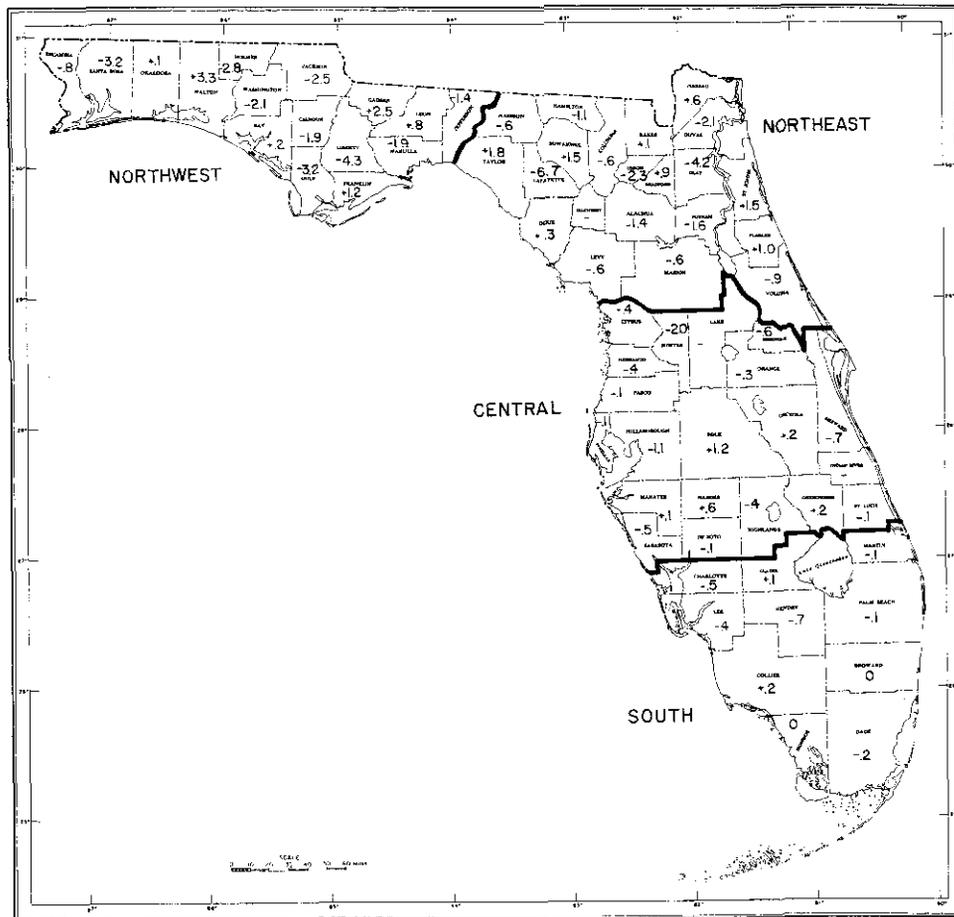


Figure 2. --Changes in output of roundwood products in each county in Florida, 1969-1975, in million cubic feet.

Almost 85 percent of the timber products harvested in 1975 were delivered to mills in the region, and over three times as much roundwood was shipped into the region as was shipped out. Demand for roundwood products was high. Each of the 21 counties in the region was providing roundwood products for 10 or more mills (fig. 3). Most of the roundwood shipped into the region was pulpwood from Georgia.

largest percent of its receipts from outside. This region also had the largest decline in number of plants, losing six sawmills and four veneer mills during the 7-year period. One pulpmill and one miscellaneous mill were added, so there was a net loss of eight mills since 1969.

Central Region

The output of industrial timber products in the Central Region declined 21 percent between 1969 and 1975. The decline was steady throughout the period and was in both species groups and for both roundwood and plant byproducts. Output of miscellaneous products increased slightly and the harvesting of cypress products increased by about one-third.

The mill receipts amounted to only half the products output in 1975, and one-third of the region's output was retained. The total number of mills in the region dropped by one during the period. This net change was the result of the loss of three miscellaneous plants and two veneer mills and the addition of four sawmills. Although the leading product was pulpwood, the region had no pulpmills. This accounts for the large volume of wood being shipped out of the region.

South Region

The South Region produced only 1.8 million cubic feet of industrial timber products in 1975, about half as much as in 1969. The situation in this region closely parallels that of the Central Region in many respects. The decline in products output continued throughout the period, affecting products from both roundwood and plant byproducts. Output of miscellaneous products increased slightly since 1969, but production of saw logs and pulpwood declined. There were no veneer logs produced in the region. Almost 72 percent of the total output was pulpwood, and it was all shipped out of the region because, like the Central Region, the South Region had no pulpmills. The total number of mills in the region stood at six in 1969, reached a high of eight in 1971, then dropped to five by 1975. The five remaining mills were all sawmills.

PLANT RESIDUES

Of the 329.2 million cubic feet of roundwood receipts in the State in 1975, 280.7 million cubic feet were used for principal products. The remaining 48.5 million cubic feet consisted of 37.5 million cubic feet of initial plant residues and 11 million cubic feet of chipped roundwood described earlier. Subsequently, 32.7 million cubic feet of initial plant residues were used as roundwood substitutes and processed as small saw logs, pulpwood, and other miscellaneous products, and 2.9 million cubic feet were used for fuel. Only 1.9 million cubic feet or about 0.5 percent of the roundwood receipts were not used. The unused volume in 1969 was 10.8 million cubic feet or 3 percent of receipts.

hardwood residues were not used. Almost 100 percent of the planer shavings produced at primary wood-using plants were utilized, over 96 percent of the coarse residues were used, and 90 percent of the sawdust and other fine residues were converted to some product.

The most outstanding improvement in utilization of plant residues occurred in bark utilization. In 1969, only 28 percent of the bark residues were being used, but by 1975 bark utilization had risen to 89 percent. Almost 79 percent of the bark residues were used as fuel.

HOW THE STUDY WAS MADE

Two methods were used to obtain data on Florida's output of industrial timber products. All pulpmills that drew wood from Florida were canvassed by mail and all other primary wood-using industries were canvassed by personal interviews. The pulpmills were canvassed by the Southeastern Forest Experiment Station in cooperation with the American Pulpwood Association. Interviews at other plants were conducted by the Florida Division of Forestry, and the data were processed by the Southeastern Station.

Detailed data from the surveys appear in Appendix tables 1-12. Some small mills may have been missed, and some reporting errors exist. Although these omissions and errors have little or no effect on the State or regional figures presented, they could greatly affect some of the county figures. County figures, therefore, should be used only in compiling information on groups of counties.

Definitions of Terms

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

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

Growing-stock trees. --Live trees of commercial species that either contain or are capable of producing at least one 12-foot saw log.

Growing-stock volume. --Net volume in cubic feet of growing-stock trees 5.0 inches d.b.h. and over, 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. (Net volume in primary forks is included.)

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

Industrial wood. --All roundwood products except fuelwood.

Net annual growth. --The increase in volume for a specific year.

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 scale-like 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 improvement; or by land clearing or changes in land use.

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

Conversion Factors

Cubic feet of wood per standard unit

Product	Standard unit	Softwood	Hardwood
Saw logs	Thousand board feet ¹	173.022	157.290
Veneer logs	Thousand board feet ¹	186.947	173.881
Pulpwood	Standard cords	72.900	67.900
Other products	Thousand cubic feet	.001	.001
Plant residues	Green tons	30.851	28.845

¹International $\frac{1}{4}$ -inch rule.

- Bellamy, Thomas R.
1972. Southern pulpwood production, 1971. USDA For. Serv. Resour. Bull. SE-23, 20 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Bellamy, Thomas R.
1974. Southern pulpwood production, 1973. USDA For. Serv. Resour. Bull. SE-29, 22 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Bellamy, Thomas R.
1976. Southern pulpwood production, 1975. USDA For. Serv. Resour. Bull. SE-37, 21 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Bellamy, Thomas R., and Herbert A. Knight
1970. Forest statistics for south Florida, 1970. USDA For. Serv. Resour. Bull. SE-16, 35 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Friensehner, H. S.
1970. Florida's forest products directory, 1970. Fla. Div. For., Tallahassee, Fla., 21 p.
- Friensehner, H. S.
1972. Primary wood-using industries in Florida: A directory and utilization summary. Fla. Div. For., Tallahassee, Fla., 49 p.
- Friensehner, H. S.
1974. Florida's wood-using industry: A directory. Fla. Div. For., Tallahassee, Fla., 151 p.
- Friensehner, H. S.
1975. Commodity drain report of Florida's primary forest industries. Fla. Div. For., Tallahassee, Fla., 12 p.
- Friensehner, H. S.
1976. Commodity drain report of Florida's primary forest industries. Fla. Div. For., Tallahassee, Fla., 12 p.
- Knight, Herbert A.
1969. Forest statistics for northwest Florida, 1969. USDA For. Serv. Resour. Bull. SE-14, 35 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Knight, Herbert A., and Joe P. McClure
1971. Florida's timber 1970. USDA For. Serv. Resour. Bull. SE-20, 48 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Lawrence, J. Dewel, and Frank O. Lege
1973. Potentially available timber volumes on farm and miscellaneous private timberlands in Florida. Bus. and Econ. Dimens. 9(3):12-21.
- McClure, Joe P.
1970. Forest statistics for northeast Florida, 1970. USDA For. Serv. Resour. Bull. SE-15, 35 p. Southeast. For. Exp. Stn., Asheville, N. C.
- Smith, Walton R.
1974. Timber for Florida - today and tomorrow: A summary report. Fla. Div. For., Tallahassee, Fla., 33 p.
- Snyder, Nolan L., and Herbert A. Knight
1970. Forest statistics for central Florida, 1970. USDA For. Serv. Resour. Bull. SE-17, 35 p. Southeast. For. Exp. Stn., Asheville, N. C.

1970. Southern pulpwood production, 1969. USDA For. Serv. Resour. Bull. SE-16, 28 p. Southeast. For. Exp. Stn., Asheville, N. C.

Welch, Richard L.

1971. Veneer log production and receipts in the Southeast, 1969. USDA For. Serv. Res. Note SE-158, 2 p. Southeast. For. Exp. Stn., Asheville, N. C.

Welch, Richard L., and Thomas R. Bellamy

1976. Changes in output of industrial timber products in Georgia, 1971-1974. USDA For. Serv. Resour. Bull. SE-36, 28 p. Southeast. For. Exp. Stn., Asheville, N. C.

Welch, Richard L., and Thomas R. Bellamy

1976. Wood utilization within the primary wood-using industry. For. Prod. J. 26(6):13-16.

1. Output of industrial timber products, by source of material, year, product, and species group, Florida
2. Output of industrial timber products, by source of material, year, product, and species group, Northeast Region
3. Output of industrial timber products, by source of material, year, product, and species group, Northwest Region
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12. Roundwood products output, by species group, year, and county, in Florida

Table 1.--Output of industrial timber products, by source of material, year, product, and species group, Florida

Product and species group	Total output			Roundwood output			Byproduct output		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- <u>Thousand cubic feet</u> -----									
Saw logs:									
Softwood	43,791	58,650	57,754	43,791	57,724	56,956	--	926	798
Hardwood	9,363	8,938	6,713	9,363	8,938	6,713	--	--	--
Total	53,154	67,588	64,467	53,154	66,662	63,669	--	926	798
Veneer logs and bolts:									
Softwood	4,815	10,696	1,849	4,815	10,696	1,849	--	--	--
Hardwood	10,842	10,964	4,362	10,842	10,964	4,362	--	--	--
Total	15,657	21,660	6,211	15,657	21,660	6,211	--	--	--
Pulpwood: ^{1/}									
Softwood	224,594	227,530	193,749	200,528	198,463	169,131	24,066	29,067	24,618
Hardwood	24,682	21,165	22,611	18,227	15,315	14,531	6,455	5,850	8,080
Total	249,276	248,695	216,360	218,755	213,778	183,662	30,521	34,917	32,698
Miscellaneous:									
Softwood	5,829	16,449	12,590	5,785	6,814	3,341	44	9,635	9,249
Hardwood	1,012	1,241	914	829	180	--	183	1,061	914
Total	6,841	17,690	13,504	6,614	6,994	3,341	227	10,696	10,163
All industrial:									
Softwood	279,029	313,325	265,942	254,919	273,697	231,277	24,110	39,628	34,665
Hardwood	45,899	42,308	34,600	39,261	35,397	25,606	6,638	6,911	8,994
Total	324,928	355,633	300,542	294,180	309,094	256,883	30,748	46,539	43,659

^{1/} Roundwood chipped at other primary wood-using plants is included in byproduct output figures.

Table 2.--Output of industrial timber products, by source of material, year, product, and species group, Northeast Region

Product and species group	Total output			Roundwood output			Byproduct output		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- Thousand cubic feet -----									
Saw logs:									
Softwood	22,005	35,758	30,979	22,005	34,832	30,979	--	926	--
Hardwood	2,981	4,678	3,500	2,981	4,678	3,500	--	--	1975
Total	24,986	40,436	34,479	24,986	39,510	34,479	--	926	--
Veneer logs and bolts:									
Softwood	1,610	7,190	1,185	1,610	7,190	1,185	--	--	--
Hardwood	2,627	4,834	1,257	2,627	4,834	1,257	--	--	--
Total	4,237	12,024	2,442	4,237	12,024	2,442	--	--	--
Pulpwood: ^{1/}									
Softwood	131,351	139,017	111,371	119,659	120,877	98,062	11,692	18,140	13,309
Hardwood	11,505	12,365	14,752	2,713	9,836	11,092	1,792	2,529	3,660
Total	142,856	151,382	126,123	129,372	130,713	109,154	13,484	20,669	16,969
Miscellaneous:									
Softwood	3,936	11,220	7,464	3,921	3,029	2,027	15	8,191	5,437
Hardwood	822	1,146	711	673	180	--	149	966	711
Total	4,758	12,366	8,175	4,594	3,209	2,027	164	9,157	6,148
All industrial:									
Softwood	158,902	193,185	150,999	147,195	165,928	132,253	11,707	27,257	18,746
Hardwood	17,935	23,023	20,220	15,994	19,258	15,849	1,941	3,495	4,371
Total	176,837	216,208	171,219	163,189	185,186	148,102	13,648	30,752	23,117

^{1/} Roundwood chipped at other primary wood-using plants is included in byproduct output figures.

Table 3.--Output of industrial timber products, by source of material, year, product, and species group, Northwest Region

Product and species group	Total output			Roundwood output			Byproduct output		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- Thousand cubic feet -----									
Saw logs:									
Softwood	14,980	14,909	20,769	14,980	14,909	20,769	--	--	--
Hardwood	5,261	3,846	2,598	5,261	3,846	2,598	--	--	--
Total	20,241	18,755	23,367	20,241	18,755	23,367	--	--	--
Veneer logs and bolts:									
Softwood	3,138	3,042	664	3,138	3,042	664	--	--	--
Hardwood	6,123	4,224	2,507	6,123	4,224	2,507	--	--	--
Total	9,261	7,266	3,171	9,261	7,266	3,171	--	--	--
Pulpwood: ^{1/}									
Softwood	77,821	76,583	72,394	68,850	66,336	61,617	8,971	10,247	10,777
Hardwood	11,805	7,973	6,065	8,168	5,240	3,055	3,637	2,733	3,010
Total	89,626	84,556	78,459	77,018	71,576	64,672	12,608	12,980	13,787
Miscellaneous:									
Softwood	1,705	3,750	3,691	1,677	3,418	1,236	28	332	2,455
Hardwood	190	91	191	156	--	--	34	91	191
Total	1,895	3,841	3,882	1,833	3,418	1,236	62	423	2,646
All industrial:									
Softwood	97,644	98,284	97,518	88,645	87,705	84,286	8,999	10,579	13,232
Hardwood	23,379	16,134	11,361	19,708	13,310	8,160	3,671	2,824	3,201
Total	121,023	114,418	108,879	108,353	101,015	92,446	12,670	13,403	16,433

^{1/} Roundwood chipped at other primary wood-using plants is included in byproduct output figures.

Table 4.--Output of industrial timber products, by source of material, year, product, and species group, Central Region

Product and species group	Total output			Roundwood output			Byproduct output		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- Thousand cubic feet -----									
Saw logs:									
Softwood	6,347	7,637	5,644	6,347	7,637	4,846	--	--	798
Hardwood	1,121	411	615	1,121	411	615	--	--	--
Total	7,468	8,048	6,259	7,468	8,048	5,461	--	--	798
Veneer logs and bolts:									
Softwood	67	464	--	67	464	--	--	--	--
Hardwood	2,092	1,906	598	2,092	1,906	598	--	--	--
Total	2,159	2,370	598	2,159	2,370	598	--	--	--
Pulpwood: ^{1/}									
Softwood	12,423	9,706	8,690	9,247	9,026	8,158	3,176	680	532
Hardwood	1,372	827	1,793	346	239	383	1,026	588	1,410
Total	13,795	10,533	10,483	9,593	9,265	8,541	4,202	1,268	1,942
Miscellaneous:									
Softwood	147	1,256	1,281	146	180	64	1	1,076	1,217
Hardwood	--	4	12	--	--	--	--	4	12
Total	147	1,260	1,293	146	180	64	1	1,080	1,229
All industrial:									
Softwood	18,984	19,063	15,615	15,807	17,307	13,068	3,177	1,756	2,547
Hardwood	4,585	3,148	3,018	3,559	2,556	1,596	1,026	592	1,422
Total	23,569	22,211	18,633	19,366	19,863	14,664	4,203	2,348	3,969

^{1/} Roundwood chipped at other primary wood-using plants is included in byproduct output figures.

Table 5.--Output of industrial timber products, by source of material, year, product, and species group, South Region

Product and species group	Total output			Roundwood output			Byproduct output		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1975	1975
----- <u>Thousand cubic feet</u> -----									
Saw logs:									
Softwood	459	346	362	459	346	362	--	--	--
Hardwood	--	3	--	--	3	--	--	--	--
Total	459	349	362	459	349	362	--	--	--
Veneer logs and bolts:									
Softwood	--	--	--	--	--	--	--	--	--
Hardwood	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--
Pulpwood:									
Softwood	2,999	2,224	1,294	2,772	2,224	1,294	227	--	--
Hardwood	--	--	1	--	--	1	--	--	--
Total	2,999	2,224	1,295	2,772	2,224	1,295	227	--	--
Miscellaneous:									
Softwood	41	223	154	41	187	14	--	36	140
Hardwood	--	--	--	--	--	--	--	--	--
Total	41	223	154	41	187	14	--	36	140
All industrial:									
Softwood	3,499	2,793	1,810	3,272	2,757	1,670	227	36	140
Hardwood	--	3	1	--	3	1	--	--	--
Total	3,499	2,796	1,811	3,272	2,760	1,671	227	36	140

Table 6.--Number of primary wood-using plants, by Forest Survey Region, year, and industry

Industry	Forest Survey Region																			
	Total				Northeast				Northwest				Central				South			
	1969	1971	1973	1975	1969	1971	1973	1975	1969	1971	1973	1975	1969	1971	1973	1975	1969	1971	1973	1975
	----- <u>Number of plants</u> -----																			
Sawmills	91	88	85	92	35	34	36	37	27	26	21	21	25	24	22	29	4	4	6	5
Veneer mills	17	14	14	9	6	5	5	4	8	7	7	4	3	2	2	1	--	--	--	--
Pulpmills	9	9	10	10	6	6	6	6	3	3	4	4	--	--	--	--	--	--	--	--
Other miscellaneous ^{1/}	22	21	14	14	9	8	4	5	5	6	5	6	6	3	4	3	2	4	1	--
All plants	139	132	123	125	56	53	51	52	43	42	37	35	34	29	28	33	6	8	7	5

^{1/} Includes treating plants, cooperage, specialty plants, etc.

Species group	1969	1971	1973	1975
- - - - Thousand cubic feet - - - -				
Softwood:				
Output	254,919	265,980	280,873	231,277
Retained	210,114	217,921	235,583	197,121
Shipped out	44,805	48,059	45,290	34,156
Shipped in	91,395	93,606	79,273	97,408
Receipts	301,509	311,527	314,856	294,529
Hardwood:				
Output	39,261	38,811	31,624	25,606
Retained	30,917	30,819	24,832	19,440
Shipped out	8,344	7,992	6,792	6,166
Shipped in	5,878	13,217	6,001	15,253
Receipts	36,795	44,036	30,833	34,693
All species:				
Output	294,180	304,791	312,497	256,883
Retained	241,031	248,740	260,415	216,561
Shipped out	53,149	56,051	52,082	40,322
Shipped in	97,273	106,823	85,274	112,661
Receipts	338,304	355,563	345,689	329,222

Table 8.--Industrial roundwood movement, by Forest Survey Region, and species group, 1975

Species group	Forest Survey Region			
	Northeast	Northwest	Central	South
- - - - Thousand cubic feet - - - -				
Softwood:				
Output	132,253	84,286	13,068	1,670
Retained	114,020	58,905	4,064	308
Shipped out	18,233	25,381	9,004	1,362
Shipped in	69,608	44,944	2,668	12
Receipts	183,628	103,849	6,732	320
Hardwood:				
Output	15,849	8,160	1,596	1
Retained	10,693	6,425	1,118	--
Shipped out	5,156	1,735	478	1
Shipped in	7,042	9,097	318	--
Receipts	17,735	15,522	1,436	--
All species:				
Output	148,102	92,446	14,664	1,671
Retained	124,713	65,330	5,182	308
Shipped out	23,389	27,116	9,482	1,363
Shipped in	76,650	54,041	2,986	12
Receipts	201,363	119,371	8,168	320

wood-using industries, by industry, species group, and type of residue, 1975

Species group and type of residue	All industries	Lumber	Veneer and plywood	Other
- - - - Thousand cubic feet - - - -				
Softwood:				
Coarse	804	652	--	152
Shavings	2	2	--	--
Other fine	713	675	--	38
Total	1,519	1,329	--	190
Hardwood:				
Coarse	32	32	--	--
Shavings	--	--	--	--
Other fine	411	255	156	--
Total	443	287	156	--
All species:				
Coarse	836	684	--	152
Shavings	2	2	--	--
Other fine	1,124	930	156	38
Total	1,962	1,616	156	190

Table 10.--Volume of unused plant residues, by Forest Survey Region, species group, and industry, 1975

Species group and industry	Total	Forest Survey Region			
		Northeast	Northwest	Central	South
- - - - - Thousand cubic feet - - - - -					
Softwood:					
Lumber	1,329	507	217	592	13
Veneer and plywood	--	--	--	--	--
Other	190	138	42	10	--
Total	1,519	645	259	602	13
Hardwood:					
Lumber	287	94	9	184	--
Veneer and plywood	156	--	156	--	--
Other	--	--	--	--	--
Total	443	94	165	184	--
All species:					
Lumber	1,616	601	226	776	13
Veneer and plywood	156	--	156	--	--
Other	190	138	42	10	--
Total	1,962	739	424	786	13

Table 11.--Disposal of bark at primary wood-using industries, by species group, year, and disposition^{1/}

Disposition	All species			Softwood			Hardwood			
	1971	1973	1975	1971	1973	1975	1971	1973	1975	
				----- Thousand green tons -----						
Fiber products	1.1	4.8	1.9	1.1	3.0	1.0	--	1.8	0.9	
Charcoal	12.5	42.5	25.9	11.2	35.3	19.4	1.3	7.2	6.5	
Industrial fuel	684.8	1,066.2	890.9	611.0	941.8	780.2	73.8	124.4	110.7	
Domestic fuel	0.1	0.3	0.4	0.1	0.3	0.4	--	--	--	
Miscellaneous	29.0	65.5	87.5	27.7	52.4	83.2	1.3	13.1	4.3	
Not used	456.5	242.7	122.4	372.4	217.4	110.6	84.1	25.3	11.8	
Total	1,184.0	1,422.0	1,129.0	1,023.5	1,250.2	994.8	160.5	171.8	134.2	

^{1/} Information on the disposition of bark was not available for 1969.

Table 12.--Roundwood product output,^{1/} by species group, year, and county, in Florida

Survey unit and county	All species			Softwood			Hardwood		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- Thousand cubic feet -----									
Northeast:									
Alachua	7,505	9,406	6,079	5,592	8,440	5,221	1,913	966	858
Baker	8,373	10,987	8,445	8,372	10,928	8,400	1	59	45
Bragford	5,912	7,060	6,850	5,796	6,749	6,567	116	311	283
Clay	7,226	6,005	3,029	7,009	5,151	2,869	217	854	160
Columbia	10,942	10,650	10,303	10,483	10,354	9,789	459	296	514
Dixie	10,982	16,568	11,258	7,557	13,015	10,018	3,425	3,553	1,240
Duval	5,589	5,603	3,536	5,455	5,417	3,325	134	186	211
Flagler	3,591	6,028	4,549	3,285	5,412	4,152	306	616	397
Gilchrist	2,633	3,194	2,679	1,993	2,580	2,424	640	611	255
Hamilton	7,845	4,460	6,753	7,820	4,451	6,498	25	9	255
Lafayette	9,324	7,288	2,620	8,942	7,119	2,501	382	169	119
Levy	7,448	13,162	6,876	5,350	10,048	1,347	2,098	3,114	2,529
Madison	8,834	9,397	8,225	8,380	8,019	6,835	454	1,378	1,390
Marion	12,173	12,723	11,546	10,436	10,603	9,183	1,737	2,120	2,363
Nassau	10,814	12,457	11,376	10,413	12,201	9,951	401	256	1,425
Putnam	5,880	7,757	3,466	4,051	6,393	2,854	1,029	1,364	612
St. Johns	5,880	6,807	7,332	5,355	5,659	6,767	525	1,148	565
Suwannee	3,287	4,821	4,832	2,608	4,385	4,250	679	436	582
Taylor	19,266	22,839	21,027	18,190	21,422	19,448	1,076	1,417	1,579
Union	4,497	4,324	2,214	4,469	3,899	2,105	28	425	109
Volusia	5,988	3,921	5,107	5,639	3,683	4,749	349	238	358
Total	163,189	185,457	148,102	147,195	165,928	132,253	15,994	19,529	15,849
Northwest:									
Bay	5,628	4,903	5,804	5,598	4,876	5,719	30	27	85
Calhoun	7,824	8,575	5,899	6,692	7,869	5,491	1,132	706	408
Escambia	7,020	9,451	6,218	6,485	8,930	5,964	535	521	254
Franklin	4,269	5,727	5,473	3,979	5,340	4,443	290	387	1,030
Gadsden	5,312	5,468	7,820	4,006	3,693	6,548	1,306	1,775	1,272
Gulf	4,464	2,805	1,235	2,010	1,620	987	2,454	1,185	248
Holmes	8,352	6,454	5,895	6,709	5,636	5,156	1,643	818	429
Jackson	10,471	9,843	7,963	7,164	7,832	6,795	3,307	2,011	1,168
Jefferson	6,129	4,118	4,761	5,681	3,372	4,287	445	746	474
Leon	4,267	3,911	5,000	3,586	3,623	4,650	581	288	350
Liberty	8,962	6,828	4,680	6,162	5,045	3,718	2,800	1,783	962
Ocala	4,431	4,738	4,537	3,943	3,712	4,440	488	1,026	97
Santa Rosa	9,745	8,562	6,538	9,233	8,249	6,488	512	313	50
Wakulla	5,232	4,741	3,347	4,501	4,609	2,922	731	132	425
Walton	8,453	9,284	11,776	6,796	8,179	11,135	1,657	1,105	641
Washington	7,894	5,608	5,810	6,097	5,120	5,543	1,797	488	267
Total	108,353	101,016	92,446	88,645	87,705	84,286	19,708	13,311	8,160

Table 12.--Roundwood product output,^{1/} by species group, year, and county, in Florida (continued)

Survey unit and county	All species			Softwood			Hardwood		
	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975	1969	Average 1971-1973	1975
----- Thousand cubic feet -----									
Central:									
Brevard	769	86	70	754	78	70	15	8	--
Citrus	824	1,149	384	824	1,130	383	--	19	1
De Soto	145	98	16	145	98	16	--	--	--
Hardee	754	1,881	1,347	743	1,881	1,302	11	--	45
Hernando	2,434	1,355	1,996	1,278	1,063	1,478	1,156	292	518
Highlands	499	502	57	499	502	57	--	--	--
Hillsborough	1,360	980	237	1,360	979	193	--	1	44
Indian River	13	165	--	13	165	--	--	--	--
Lake	1,310	1,334	1,285	991	1,269	1,272	319	65	13
Manatee	222	33	304	206	33	303	16	--	1
Okeechobee	140	307	319	140	304	301	--	3	18
Orange	882	503	574	212	432	573	670	71	1
Osceola	1,439	4,448	1,651	1,011	3,466	1,651	428	982	--
Pasco	930	2,040	824	621	1,152	504	309	888	320
Pinellas	144	101	26	144	100	25	--	1	1
Polk	2,737	2,918	3,965	2,737	2,888	3,797	--	30	168
St. Lucie	81	39	9	81	39	9	--	--	--
Sarasota	632	244	138	632	244	138	--	--	--
Seminole	1,414	660	778	1,125	561	355	289	99	423
Sumter	2,637	1,022	684	2,291	924	641	346	98	43
Total	19,366	19,865	24,661	15,807	17,308	13,068	3,559	2,557	1,596
South:									
Broward	--	--	--	--	--	--	--	--	--
Charlotte	520	100	57	520	100	57	--	--	--
Collier	660	400	839	660	400	838	--	--	1
Dade	170	128	--	170	128	--	--	--	--
Glades	235	364	360	235	364	360	--	--	--
Hendry	1,141	1,377	405	1,141	1,377	405	--	--	--
Lee	382	273	--	382	273	--	--	--	--
Martin	73	94	10	73	91	10	--	3	--
Monroe	--	--	--	--	--	--	--	--	--
Palm Beach	91	24	--	91	24	--	--	--	--
Total	3,272	2,760	1,671	3,272	2,757	1,670	--	3	1
All counties	294,180	309,098	256,883	254,919	273,698	231,277	39,261	35,400	25,606

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1977. Changes in output of industrial timber products in Florida, 1969-1975. USDA For. Serv. Resour. Bull. SE-40, 23 p. Southeast. For. Exp. Stn., Asheville, N. C.

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Keywords: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts.

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