United States
Department of
Agriculture

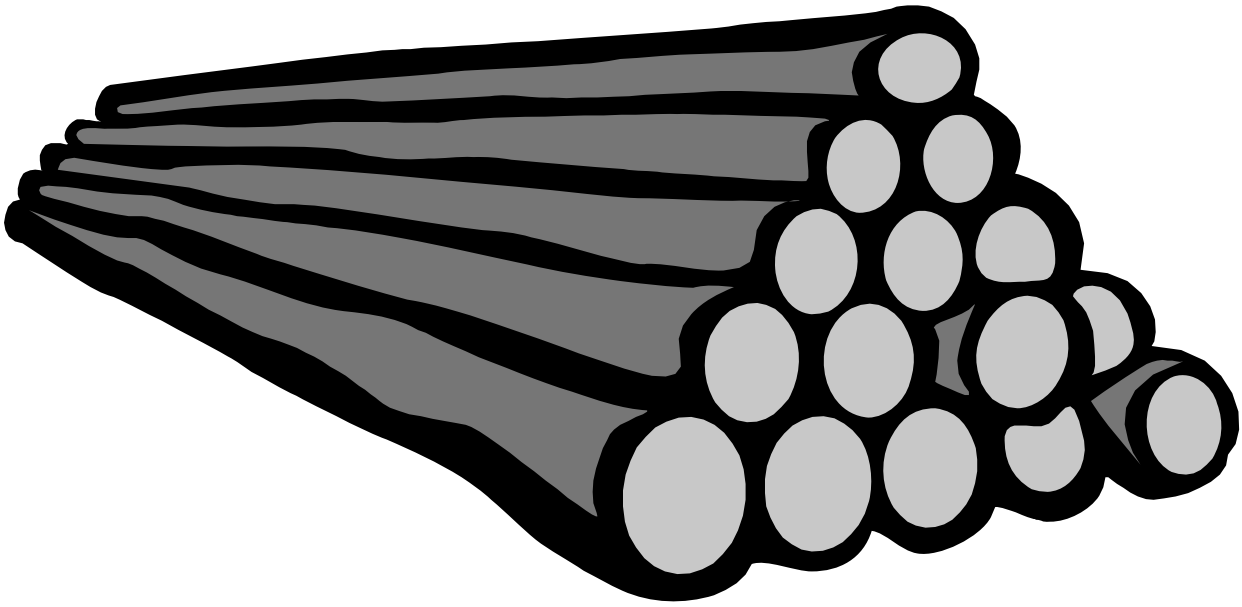
Forest Service

**Northeastern
Research Station**

Resource Bulletin NE-165

West Virginia Timber Product Output, 2000

**Bruce Hansen
Ed Murriner
Iris Baker
Melody Akers**



Abstract

Assesses primary wood-processing in West Virginia for 2000. In 2000, West Virginia's total wood harvest for industrial uses was 202 million cubic feet, up nearly 22 percent from 1994. Sawlog production totaled 803.5 million board feet, a decrease of 8.1 million board feet from 1994. There were 172 sawmills operating in the State in 2000, with only 10 percent accounting for more than half of West Virginia's lumber production. Fifty-seven mills accounted for 90 percent of the lumber produced. Oak accounted for 43 percent of the State's production followed by yellow-poplar at 23 percent. Pulpwood production totaled 732,000 cords, an increase of 110 percent from 1994.

The Authors

BRUCE HANSEN is an economist and Project Leader with the Northeastern Research Station, Princeton, West Virginia. He joined the USDA Forest Service in 1968.

ED MURRINER is an assistant state forester for resource inventory and sawmill assistance with the West Virginia Bureau of Commerce's Division of Forestry at Charleston.

IRIS BAKER is a research forester with the Northeastern Research Station at Princeton, West Virginia. She joined the USDA Forest Service in 1995

MELODY AKERS is a computer specialist with the Northeastern Research Station at Princeton, West Virginia. She joined the USDA Forest Service in 2001.

Manuscript received for publication 6 September 2005

Published by:
USDA FOREST SERVICE
11 CAMPUS BLVD SUITE 200
NEWTOWN SQUARE PA 19073-3294

January 2006

For additional copies:
USDA Forest Service
Publications Distribution
359 Main Road
Delaware, OH 43015-8640
Fax: (740)368-0152

Visit our homepage at: **http://www.fs.fed.us/ne**

Highlights

- In 2000, the wood harvest for industrial uses in West Virginia totaled 202 million cubic feet, an increase of nearly 22 percent from 1994. However, this increase failed to match the 38-percent increase recorded from 1987 to1994.

- Sawlog production totaled 803.5 million board feet (MMbf), down slightly from the 811.6 MMbf recorded in 1994.

- In 2000, 172 sawmills produced lumber in West Virginia. Only 10 percent of these mills accounted for more than half of the State's production. One-third of the mills accounted for 90 percent and one-half accounted for 97 percent.

- Oak accounted for 43 percent of the sawlog harvest of the known species, down from 52 percent in 1994. Yellow-poplar accounted for 23 percent, up 2 percent from 1994.

- When production of sawlogs and veneer logs are combined, yellow-poplar accounted for nearly 33 percent of the total known species.

- Pulpwood roundwood production in 2001 totaled 732,000 cords, an increase of 110 percent from 1994.[1] However, pulpwood production from residue chips was down 54 percent from 1994. As a result, overall pulpwood production increased by nearly 30 percent in 2001 from 1994. The shift from residue chips to roundwood likely reflects expanded markets for mill residues. Also, there were more engineered wood product mills in operation in 2001 than in 1994. These mills tend to use roundwood exclusively.

[1]In this report, pulpwood production figures are for 2001.

Introduction

This is the most recent report summarizing roundwood production in West Virginia as part of the Timber Product Output (TPO) assessment carried out by the USDA Forest Service. The intent of TPO is to provide information to complement data collected by the Forest Service's Forest Inventory and Analysis (FIA) unit. While FIA concentrates on providing information on growing stock and sawtimber inventories and removals, TPO determines which provide insights into what roundwood markets are accountable for removals by surveying primary forest industry about its roundwood receipts. The success of TPO in providing accurate, complete, and timely information on resource use depends on the cooperation of the industry. The survey for this report represents a complete canvass of the primary industry, though data on the overall number and size of the firms surveyed, species distribution, and residue amounts and their disposal are estimates due to the number of firms that did not return a completed questionnaire.

The industries surveyed include sawmills (these typically produce grade lumber but also can produce pallet material, rail ties, and mine material), pulp and paper mills (includes receipts by engineered wood or composite mills, e.g., OSB,) veneer mills, and miscellaneous wood-product manufacturers. The latter typically include manufacturers of wood fences, posts, and poles.

Product Breakdown

Sawlogs accounted for nearly 61 percent of the wood receipts in West Virginia in 2000. Pulpwood received by in-state and out-of-state pulp and engineered wood product mills accounted for nearly 31 percent. Veneer logs accounted for about 2 percent and miscellaneous products about 7 percent (Fig. 1, Table 1). The product breakdown is based on cubic feet. (Figures 1 through 9 and Tables 2 through 12 are in the Appendix.)

Overall product output in 2000 was up more than 50 percent from the level reported in 1965 (Fig. 2, Table 2), and more than double the low for the period recorded in 1979. The major factor leading to the overall increase was the amount of pulpwood produced relative to other product categories. In 2000, pulpwood accounted for 31 percent of the State total. The largest share recorded for pulpwood prior to this was 20.5 percent in 1965 (Table 2).

Regional Production

West Virginia has historically been divided into three regions: northeastern, southern, and northwestern (Tables 3-4). Since 1994, there seems to have been a relative shift in sawlog production shares from the northwestern to the northeastern region, while the southern region has remained nearly unchanged:

Year	Sawlog production (%)		
	Northwestern	Southern	Northeastern
1994	24	37	39
2000	18	33	49

It is important to note that the origin of more than 60 percent of the 2000 volume total is unknown. This could well affect the current distribution.

Sawlog Production

Of the 172 sawmills operating in West Virginia in 2000 (Table 5), 90 reported production of 1 MMbf or more while 82 reported production of less than 1 MMbf (Fig. 3, Table 5). Twenty percent of the mills accounted for more than 70 percent of the production, 40 percent accounted for more than 90 percent, and half accounted for 97 percent (Fig. 4).

West Virginia was a net exporter of sawlogs in 2000. Exports totaled 37 MMbf (Table 6) while imports were roughly 25.5 MMbf (Table 5). Exports accounted for about 4.6 percent of the State's total production.

By export destination, Virginia led all other states in 2000, accounting for 37 percent of the total. This was far different than in 1994 when Ohio led all other states, accounting for nearly 60 percent of the export total. Rounding out the top five in 2000 were Maryland, Pennsylvania, Ohio, and Kentucky.

It is difficult to gain a true measure of exports since they are imputed from data on mill receipts. An accurate accounting requires the cooperation of out-of-state mills. Differences between 1994 and 2000 may be due at least

partially to differences in the responses of out-of-state mills. Because Ohio has traditionally been the major importer of roundwood from West Virginia, all mills in Ohio are mailed questionnaires as part of the West Virginia survey. By contrast, surveys are mailed only to mills in Pennsylvania and Maryland that are within 50 miles of the West Virginia border. No attempt is made to contact nonrespondents in any of the importing states.

Data on West Virginia exports to mills outside of the 13-state Northeast region (Virginia, Tennessee, etc.) are obtained from TPO assessments conducted in those states and provided to us.

Of total sawlog production in West Virginia in 2000 (803,519 Mbf), unknown species accounted for 294,508 Mbf or 37 percent. Of the remaining 509,011 Mbf, red oak accounted for 31 percent followed by yellow-poplar (23), white oak (17), hard maple (7), soft maple (5), and basswood (4) (Fig.5, Table 7). The distribution of species by region is shown in Table 8.

Pulpwood Production

The combined use of pulpwood roundwood and manufacturing residue was a record 878,000 cords in 2000. However, while roundwood use nearly doubled, manufacturing residue use was down by nearly 63 percent from 1995.

Since 1995, there seems to be a dramatic shift from the use of manufacturing residues toward roundwood on the part of pulp mills, but this could be due to several factors acting alone or in concert. First, it is generally agreed that new markets for mill residues may be affecting the supply of such residues to pulp mills (Fig. 6, Table 9). Also, several roundwood-only engineered wood product mills came on line during the latter part of the last decade. Wood use by these mills generally is of pulpwood type and is included with the pulpwood estimates. Thus, they likely have affected both the roundwood-to-residue ratio and species mix.

It also may be that in previous reporting, chips from whole-tree chip operations and remote chip mills might have been recorded as manufacturing residue rather than as "roundwood." However, we took a narrower view of what constitutes manufacturing residue, confining it to sawdust and residue chips only.

In its annual pulpwood statistical summary, the Forest Resource Association (FRA) identifies seven sources of material going to pulp mills that may provide insight into the apparent discrepancy (Jarvis 2002). These sources are: short-wood, long-wood, whole-tree chips debarked, whole-tree chips with bark, chips from remote chip mills, sawdust, and residue chips.

According to FRA nationwide data for 2001, roundwood accounts for 49 percent of industry receipts, chips from roundwood and from chip mills, 24 percent, and mill waste (sawdust and residue chips), 27 percent. Thus, on the basis of roundwood versus all other, the ratio of roundwood to chips is 49:51. This division is similar to the ratio of 51:49 roundwood to mill residues reported for 1995 by Widmann et al. (1998). But if we include chips from roundwood and remote chip mills with roundwood, leaving only sawdust and residue chips to represent manufacturing residues, the ratio between "roundwood" in all its forms and residues as reported by FRA is 73:27. This is similar to the 83-percent roundwood, 17-percent manufacturing residue split realized in our study (Fig. 6). Unfortunately, Widmann et al. did not break down their data into similar subcomponents to facilitate further analysis.

Regionally, FRA reported the use of sawdust and residue chips as generally ranging from 14 to 22 percent. There was one exception, the West, where residue chips and sawdust accounted for more than 71 percent of the material inputs. Within the Northeast region, defined by FRA as Maine, New York, New Hampshire, and Pennsylvania, the overall ratio of roundwood to residues was 78:22. Roundwood (and chips from roundwood) and chips from remote mills contributed 58 and 20 percent, respectively. The rest (22 percent) was mill residues.

In defense of a possible 50/50 mix between roundwood and manufacturing residue use, it must be pointed out that West Virginia's mountainous terrain limits whole-tree chip operations. In a separate inquiry aimed at this issue, one company drawing material from the State

Table 1.—Volume of industrial roundwood production, by product, 2000

Product	Standard unit	Species			Total
		Softwood	Hardwood	Unknown	
Sawlogs	Mbf	5,145	503,865	294,508	803,518
Pulpwood[a]	Cords	91,482	640,625	--	732,107
Veneer	Mbf	--	24,411	--	24,411
Miscellaneous	Mft3	1,072	7,077	5,537	13,686
Sawlogs	Mft3	767	77,091	44,471	122,329
Pulpwood[a]	Mft3	7,776	54,453	--	62,229
Veneer	Mft3	--	3,735	--	3,735
Miscellaneous	Mft3	1,072	7,077	5,537	13,686
Sawlogs	Mm3	28	2,182	1,259	3,469
Pulpwood[a]	Mm3	220	1,542	--	1,762
Veneer	Mm3	--	132	--	132
Miscellaneous	Mm3	38	201	196	435

[a] Pulpwood production figures are for 2001.

reported that it procures 50-percent roundwood, 10-percent whole-tree chips from roundwood, and 40-percent manufacturing residue. However, if the mix in West Virginia is about 50/50 or even 60:40, then the State would seem to lie outside the regional norm with respect to residue use in the pulping process.

In 1994, West Virginia softwoods made up about 20 percent of the pulpwood material versus 80 percent for hardwoods (Widmann et al. 1998). However, in 2001, softwood use fell to about 12.5 percent of the total while hardwood use rose to 87.5 percent. This may be partially a result of a preference for yellow-poplar by engineered product mills and the relative abundance of this species in the forest inventory (Table 1).

Veneer Log Production and Exports

Veneer log production in 2000 was down from 1994, totaling nearly 43 MMbf. Thirteen percent of this production went to markets outside West Virginia. In 1994, most of the exported material went to Kentucky and North Carolina. White and red oak made up nearly 83 percent of all exports; cherry accounted for more than 7 percent (Tables 10-11).

In 2000, veneer log production totaled nearly 21 MMbf. All but 4 percent remained in the State. Pennsylvania and New York were the primary recipients, accounting for nearly 90 percent of all veneer log exports. Black cherry (72.9 percent) and hard maple (9.3 percent) accounted for more than 82 percent of the exported volume.

Mill Residue

Of the 172 firms surveyed, 64 supplied information about their production and disposition of one or more types of residue. The other 108 mills did not respond to the residue inquiry or did not provide production data. There were six residue types, including hardwood and softwood bark, coarse, and fine residues.

However, when looking at a specific residue by type, response varies. For instance, 23 of the 64 respondents reported softwood production but only 7 of these mills provided information on how they dispose of softwood coarse residues. Does this mean that the remaining 16 mills have no coarse residues to dispose of? Not likely.

Likewise, 14 and 15 firms provided information on the disposition of softwood bark and fine residues,

respectively. Again, the number of respondents should have equaled the number of firms (23) reporting the receipt of softwood logs.

All but one of the respondents reported the receipt of hardwood logs. Of the 64 firms, 51 reported on their disposal of hardwood bark and fine residues; 46 reported on their disposal of hardwood coarse residue.

Percentages were computed for each of eight disposal options based on the usable response for each of the six types of residue. Volumes were estimated for each mill and then summed to provide a weighted average for each residue and disposal method. Estimates of total tons were derived for each residue on an industry basis using conversion factors developed some time ago for the State of Virginia (Appendix).

On the basis of total production for West Virginia, the estimated amounts of softwood bark, coarse, and fine residues were 36, 72.5, and 32.3 million tons, respectively. The estimated amounts of hardwood bark, coarse, and fine residues were 723, 1,908, and 1,060 million tons, respectively (Table 12).

Figures 8-10 break down residue by species and type going to each disposal method as reported by respondents. It is important to note that the disposition of residues by mills that did not disclose their disposal method may be distinctly different from that of respondents. Also the residue volumes in Table 12 are estimated amounts generated rather than amounts used.

Literature Cited

Jarvis, Steve. 2002. **Annual pulpwood statistics summary report 1997-2001.** Rockville, MD: Forest Resources Association.

Widmann, Richard; Wharton, Eric H.; Murriner, Edward C. 1998. **West Virginia timber products output—1994.** Resour. Bull. NE-143. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.

Appendix

Residue Conversion Factors

Species	Residue		
	Bark	Coarse	Fine
	Tons/Mbf		
Hardwood	0.5535	1.7455	1.0747
Softwood	0.4005	1.6241	1.0581

Note: Tons/cord = 2.5; ft3/cord = 85.0.

Table 2.—Trends in timber products output, selected years, 1965 to 2000a

Species	Product	1965	1974	1979	1987	1994	2000
Softwoods	Sawlogs	3.6	2.9	3.0	1.0	2.6	0.8
	Pulpwood	8.7	4.3	2.5	5.9	5.6	7.8
	Veneer	--	--	--	--	--	--
	All other	0.9	4.4	1.9	3.0	0.2	1.1
	Total	13.2	11.6	7.4	9.9	8.4	9.7
Hardwoods	Sawlogs	80.9	69.3	62.1	85.1	121.5	77.1
	Pulpwood	18.4	13.9	8.2	17.2	24.0	54.5
	Veneer	0.8	0.5	1.3	1.2	6.5	3.7
	All other	18.7	11.3	10.2	6.2	4.9	7.1
	Total	118.8	95.0	81.8	109.7	156.9	142.4
Total	Sawlogs	84.5	72.2	65.1	86.1	124.1	122.3
	Pulpwood	27.1	18.2	10.7	23.1	29.6	62.3
	Veneer	0.8	0.5	1.3	1.2	6.5	3.7
	All other	19.6	15.7	12.1	9.2	5.1	13.7
	Total	132.0	106.6	89.2	119.6	165.3	202.0

[a] Includes 49.9 MMbf for which species is unknown. As a result, the sum of individual softwood and hardwood product totals for 2000 does not equal the overall total.

Table 3.—Industrial timber harvest, by geographic unit, species group and products, 2000

Geographic unit	Species group	Sawlogs and veneer logs	Pulpwood	Other	Total
		Thousand cubic feet			
Northeastern	Softwood	218	2,724	308	3,250
	Hardwood	22,313	22,592	796	45,701
	Unknown	--	--	--	--
	Total	22,531	25,316	1,104	48,951
Southern	Softwood	110	233	553	896
	Hardwood	22,612	3,340	5,311	31,263
	Unknown	--	--	--	--
	Total	22,722	3,573	5,864	32,159
Northwestern	Softwood	44	3,470	35	3,549
	Hardwood	7,113	7,004	149	14,266
	Unknown	--	--	--	--
	Total	7,157	10,474	184	17,815
Unknown	Softwood	395	1,349	175	1,643
	Hardwood	28,804	21,517	822	48,246
	Unknown	44,471	--	5,537	53,181
	Total	73,670	22,866	6,534	103,070
Total	Softwood	767	7,776	1,071	9,614
	Hardwood	80,842	54,453	7,078	142,373
	Unknown	44,471	--	5,537	50,008
	Total	126,080	62,229	13,686	201,995

Table 4.—Sawlog production and consumption by geographic unit, selected years, 1965 to 2000

Geographic unit	1965	1974	1979	1987	1994	2000
	Thousand board feet					
			Production			
Northeastern	201.3	186.1	187.6	239.2	323.3	118.5
Southern	227.4	199.4	168.7	228.9	294.9	148.2
Northwestern	62.0	78.2	61.0	94.7	193.4	38.8
Unknown	--	--	--	--	--	497.9
Total	490.7	463.7	417.3	562.8	811.6	803.4
			Consumption			
Northeastern	203.0	194.8	172.4	236.3	357.6	353.1
Southern	227.4	187.9	154.7	210.0	256.5	305.4
Northwestern	55.0	64.6	41.9	88.7	111.6	134.1
Unknown	--	--	--	--	--	--
Total	485.4	447.3	369.0	535.0	725.7	792.6

Table 5.—Number of operating sawmills, selected years, 1965 to 2000

Year	Mills with:		Total number of mills
	1 MMbf or more production	Less than 1 MMbf production	
1965	94	172	266
1974	90	137	227
1979	77	124	201
1987	111	53	164
1994	113	64	177
2000	90	82	172

Table 6.—Production of sawlogs by species and destination of shipments, 2000

Species	Retained in state	Exported to:					Total exports	Total production
		KY	MD	OH	PA	VA		
	Thousand board feet							
Ash	11,607	7	247	73	21	386	734	12,341
Basswood	18,170	--	178	5	244	--	427	18,597
Beech	4,441	--	25	13	52	--	90	4,531
Birch	1,478	--	16	--	10	--	26	1,504
Cherry	16,513	--	1,245	217	836	--	2,298	18,811
Elm	574	--	15	--		--	15	589
Gum	821	8	2	--	10	--	20	841
Hickory	12,852	57	27	26	67	528	705	13,557
Soft maple	23,464	36	560	67	655	245	1,563	25,027
Hard maple	31,711	4	499	201	613	545	1,862	33,573
White oak								
Select	31,572	--	36	263	653	--	952	32,524
Other	50,700	302	1,218	229	94	2,799	4,642	55,342
Red oak								
Select	68,311	--	120	422	2,634	--	3,176	71,487
Other	78,926	455	2,672	305	114	4,378	7,924	86,850
Walnut	1,540	--	3	8	34	--	45	1,585
Yellow-poplar	109,790	522	2,229	328	1,342	3,798	8,219	118,009
Other								
Hardwoods	6,328	112	--	2,141	--	117	2,370	8,698
Softwoods	3,241	--	6	46	--	1,851	1,903	5,144
Unknown	294,508	--	--	--	--	--	--	294,508
Total	766,547	1,503	9,098	4,344	7,379	14,647	36,971	803,518

Table 7.—Consumption of sawlogs and source of shipments, 2000

Species	Retained in state	Source state:			Total imports	Total consumption
		MD	PA	VA		
	Thousand board feet					
Ash	11,607	73	168	200	441	12,048
Basswood	18,170	3	266	169	438	18,608
Beech	4,441	--	--	6	6	4,447
Birch	1,478	--	530	--	530	2,008
Cherry	16,513	1,140	--	274	1,414	17,927
Elm	574	7	21	7	35	609
Gum	821	--	--	--	--	821
Hickory	12,852	274	137	247	658	13,510
Soft maple	23,491	291	365	259	915	24,406
Hard maple	31,711	220	353	551	1,124	32,835
White oak						
Select	31,572	2,760	2,155	2,527	7,442	39,014
Other	50,700	20	40	907	967	51,667
Red oak						
Select	68,311	2,288	2,720	1,759	6,767	75,078
Other	78,926	--	--	1,072	1,072	79,998
Walnut	1,540	--	--	55	55	1,595
Yellow-poplar	109,790	429	1,377	989	2,795	112,585
Other						
Hardwoods	6,301	208	244	206	658	6,959
Softwoods	3,241	55	27	139	221	3,462
Unknown	294,508	--	--	--	--	294,508
Total	766,547	7,768	8,403	9,367	25,538	792,085

Table 8.—Production of sawlogs by species and geographic unit, 2000

Species	Northeastern	Southern	Northwestern	Unknown	Total
	Thousand board feet				
Ash	3,004	4,333	1,072	3,932	12,341
Basswood	4,866	8,560	532	4,639	18,597
Beech	2,751	426	198	1,156	4,531
Birch	856	115	10	523	1,504
Cherry	7,287	4,550	1,280	5,695	18,812
Elm	304	7	5	274	590
Gum	373	72	16	383	844
Hickory	2,377	2,497	589	8,093	13,556
Soft maple	10,709	7,921	1,433	4,990	25,053
Hard maple	9,362	13,908	2,156	8,148	33,574
White oak					
Select	6,236	9,066	4,560	12,663	32,525
Other	5,628	11,441	3,961	34,312	55,342
Red oak					
Select	20,612	29,022	7,584	14,269	71,487
Other	10,387	19,600	4,451	52,412	86,850
Walnut	698	362	259	266	1,585
Yellow-poplar	29,423	34,559	9,594	44,433	118,009
Other					
Hardwoods	2,205	985	892	4,588	8,670
Softwoods	1,469	733	246	2,697	5,145
Unknown	--	--	--	294,508	294,508
Total	118,547	148,157	38,838	497,981	803,523

Table 9.—Production of pulpwood from roundwood and manufacturing residue, 1965 to 2001

Year	Pulpwood source		Total
	Roundwood	Manufacturing residue	
	Thousand cords		
1965	319.3	92.4	411.7
1966	289.9	76.4	366.3
1967	333.3	117.4	450.7
1968	288.1	119.4	407.5
1969	279.7	149.4	429.1
1970	225.8	129.3	355.1
1971	228.2	112.2	340.4
1972	190.3	145.0	335.3
1973	258.2	158.9	417.1
1974	213.6	198.5	412.1
1975	272.0	135.7	407.7
1976	213.2	149.1	362.3
1978	185.9	158.1	344.0
1979	158.5	119.3	277.8
1980	126.2	164.3	290.5
1981	235.2	186.3	447.3
1982	271.5	156.3	391.5
1983	246.6	186.1	457.6
1984	244.5	142.8	389.4
1985	218.1	174.5	392.6
1986	231.0	216.4	447.4
1987	272.0	286.4	558.4
1988	279.8	434.9	714.7
1989	313.2	296.7	609.9
1990	339.4	237.1	576.5
1991	313.0	267.2	580.2
1992	340.4	355.6	696.0
1993	385.2	310 .3	695.5
1994	348 .3	334.1	682.4
1995	372.3	393.0	757.7
2001	732.1	145.9	878.0

Table 10.—Veneer log production and exports, by species, 2000

Species	Harvested and used in state	Exported to:			Total exported	Total production
		KY	NC	VA		
	Thousand board feet					
Ash	61	106	122	37	265	326
Cherry	1,220	--	--	--	--	1,220
Walnut	61	--	--	--	--	61
Hickory	--	--	122	18	140	140
Hard maple	61	--	183	247	430	491
Red oak	122	750	403	59	1,212	1,334
White oak	--	--	244	414	658	658
Yellow-poplar	19,247	--	--	1	1	19,248
Other						
Hardwoods	--	25	378	530	933	933
Softwoods	--	--	--	--	--	--
Total	20,772	881	1,452	1,306	3,639	24,411

Table 11.—Veneer log production and receipts, selected years, 1963-2000

Year	Production	Receipts
	MMbf International	
1963	7.0	6.3
1965	4.6	6.4
1968	7.9	8.7
1972	4.3	6.1
1974	3.2	4.3
1976	3.6	3.9
1979	8.5	23.0
1980	7.5	23.4
1984	3.9	a
1987	7.6	a
1994	42.7	44.7
2000	24.4	3.8

a Withheld to avoid individual disclosure.

Table 12.—Estimates of hardwood and softwood bark, coarse, and fine residues generated (not necessarily used or sold) by West Virginia primary processors, 2000

Product type	Species	Residue		
		Bark	Coarse	Fine
		Thousand tons		
Sawlogs	Hardwood	440.3	1,388.4	854.8
	Softwood	3.3	13.1	8.6
	Total	443.6	1,401.5	863.4
Veneer logs	Hardwood	13.5	21.8	11.2
	Softwood	--	--	--
	Total	13.5	21.8	11.2
Pulpwood	Hardwood	221.2	--	--
	Softwood	26.6	--	--
	Total	247.8	--	--
Miscellaneous	Hardwood	48.4	497.5	194.5
	Softwood	6.2	59.3	23.8
	Total	54.6	556.8	218.3
All types	Hardwood	723.3	1,907.7	1,060.5
	Softwood	36.0	72.5	32.3
	Total	759.3	1,980.2	1,092.8

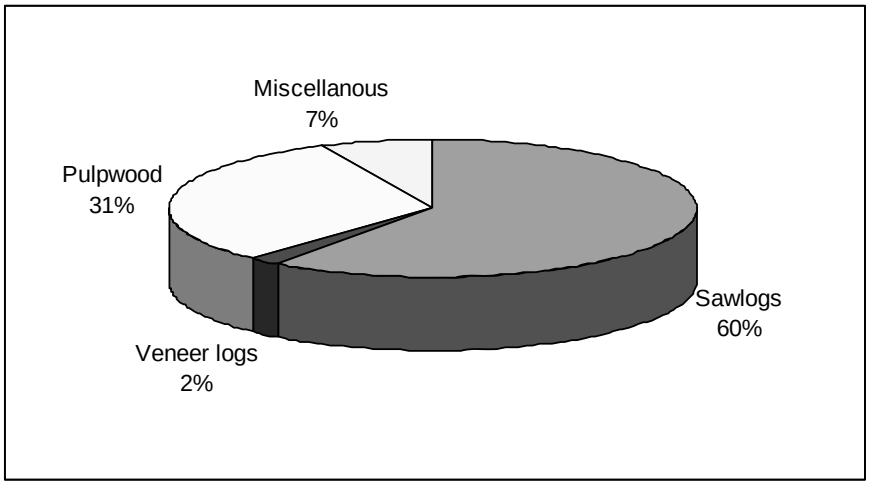


Figure 1.—Product composition of roundwood harvest based on cubic feet, 2000.

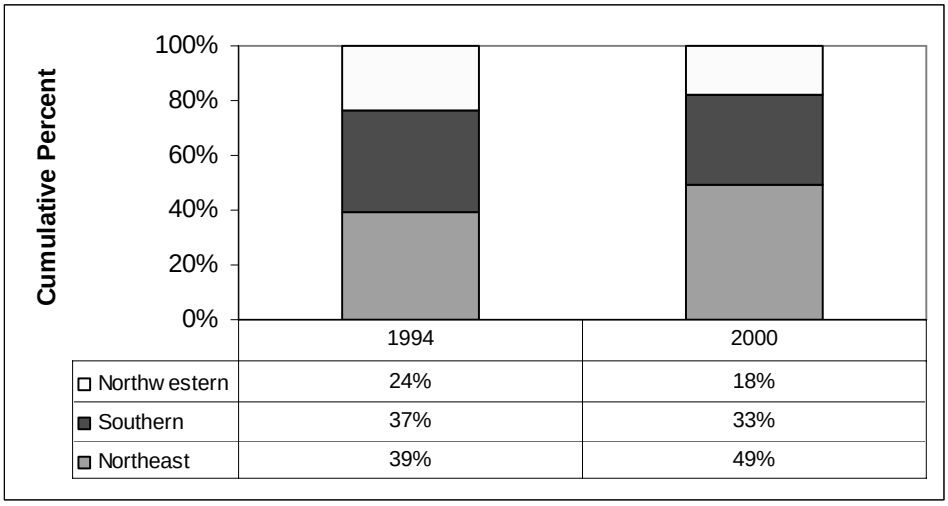


Figure 2.—Product production trends in West Virginia, selected years, 1965-2000.

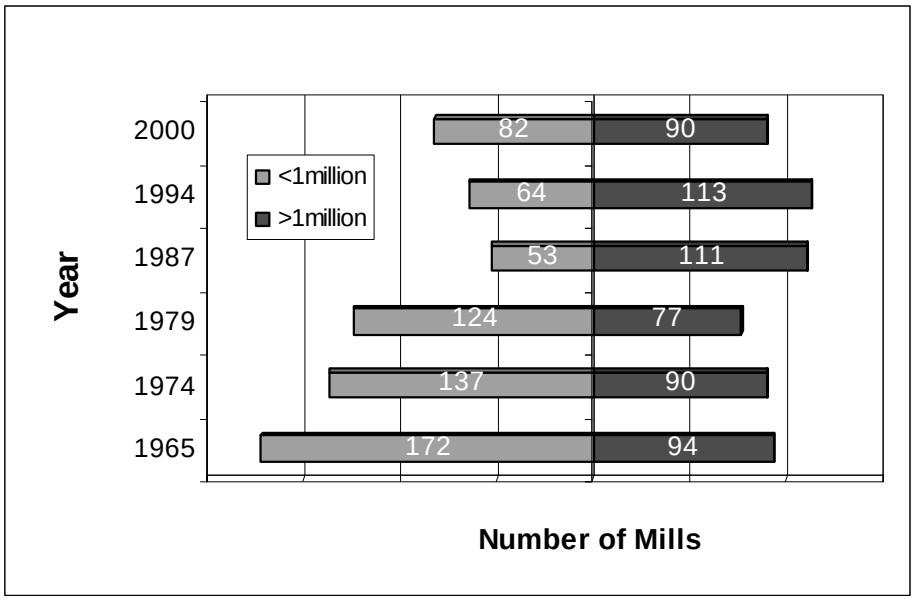


Figure 3.—Sawmills in West Virginia with production above and below 1 million board feet.

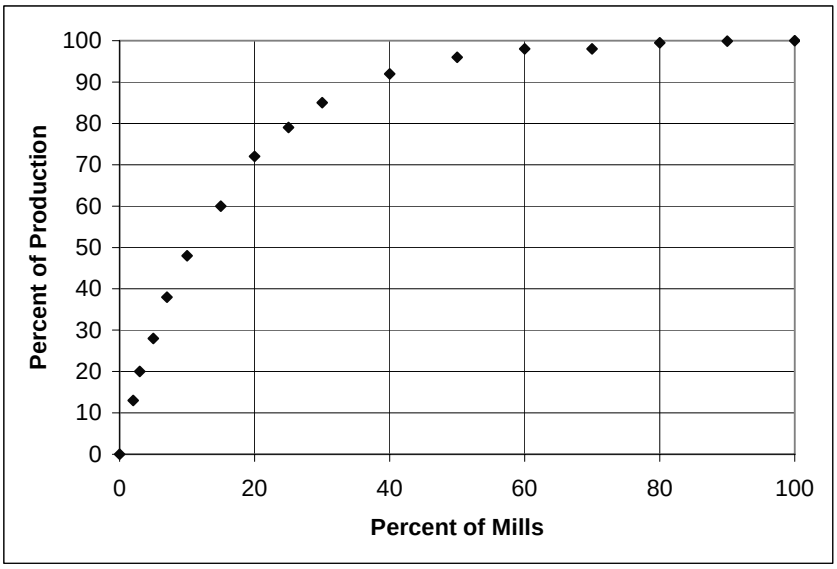


Figure 4.—Cumulative production curve for West Virginia sawmills, 2000.

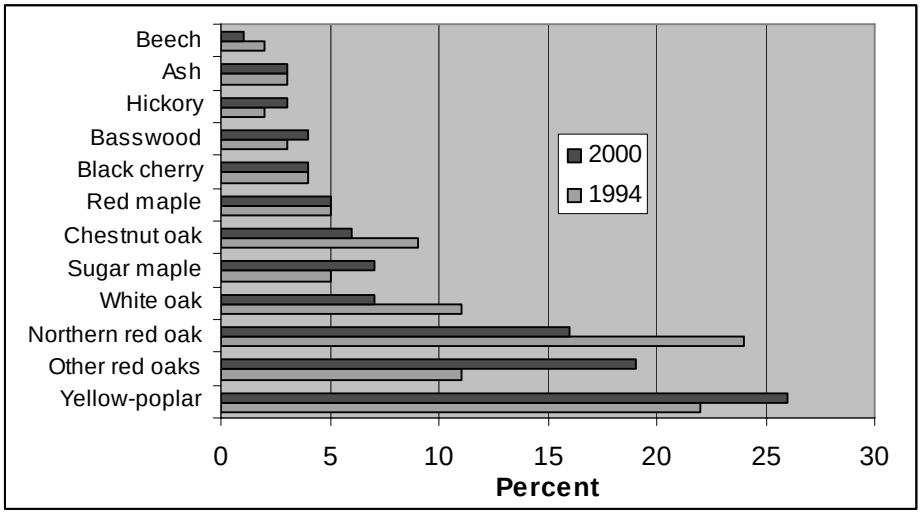


Figure 5.—Sawlog production in West Virginia, percent of total, 1994 and 2000.

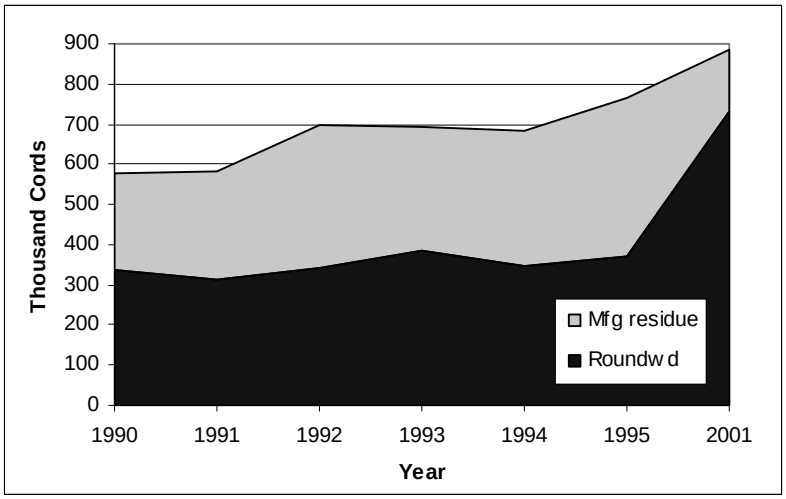


Figure 6.—Roundwood (includes roundwood, chips from roundwood, and chips from chip mills) and manufacturing residue (includes residue chips and sawdust) used in pulp production, 1990-1995 and 2001.

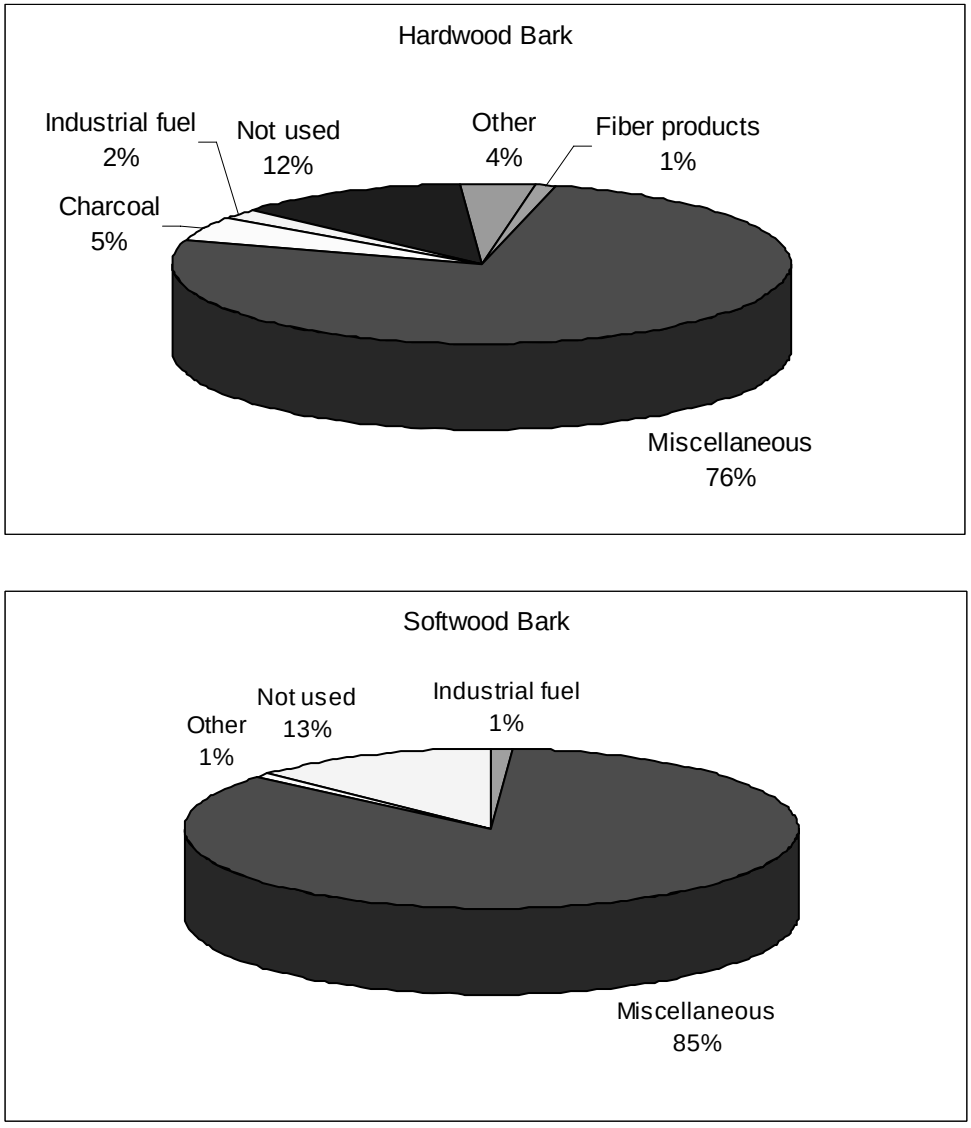
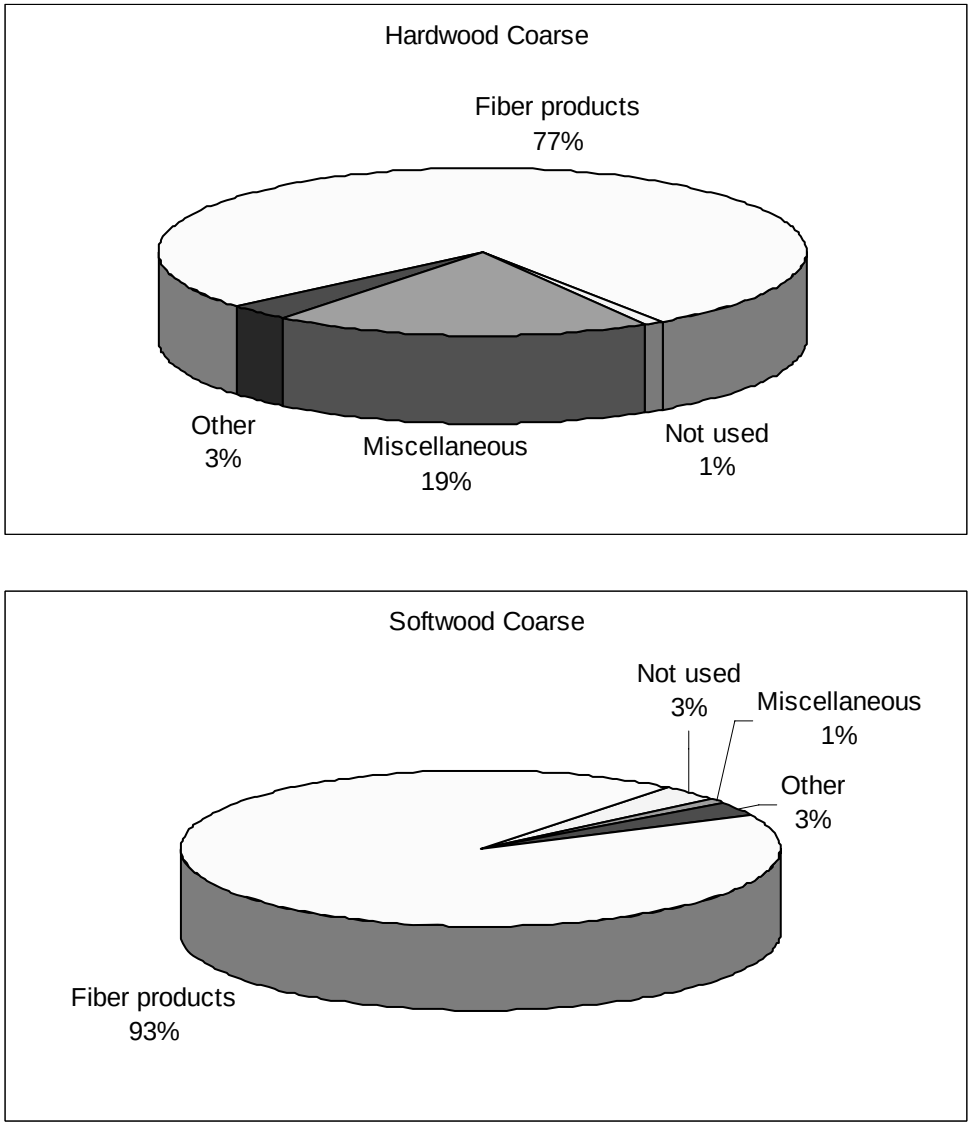
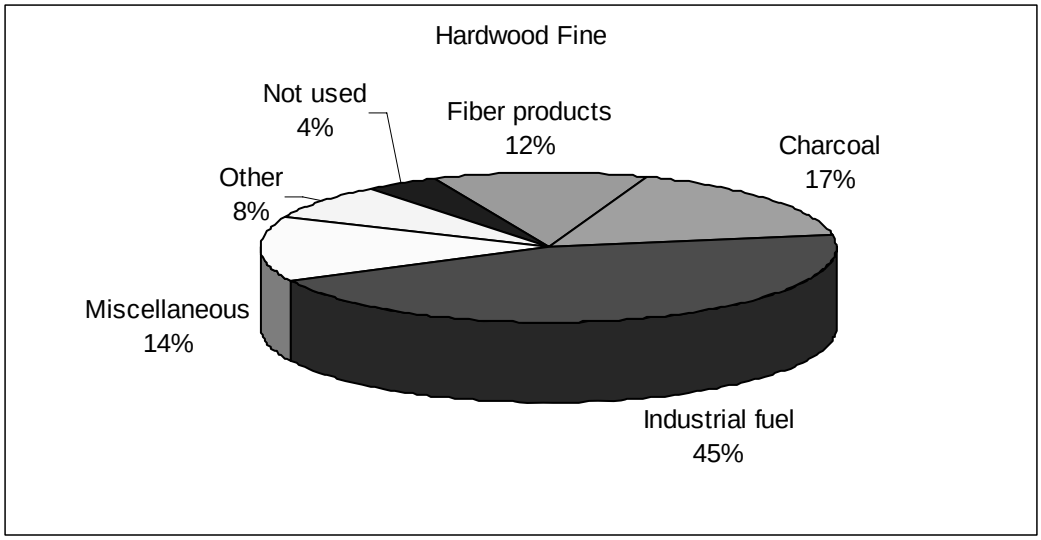


Figure 7.—Disposition of hardwood (n=51) and softwood (n=14) bark residue, by use, 2000.



Fibure 8.—Disposition of hardwood (n=46) and softwood (n=7) coarse residue, by use, 2000.



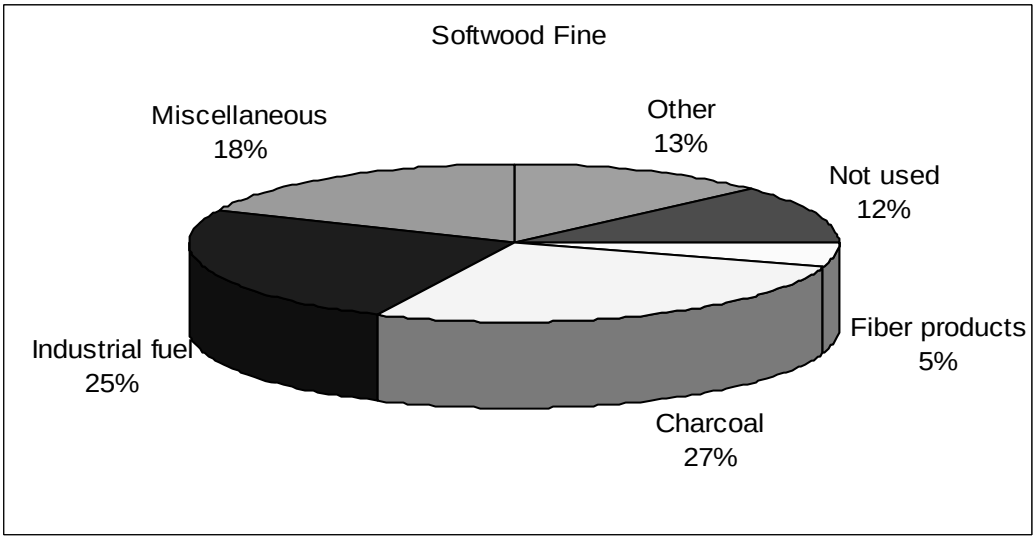
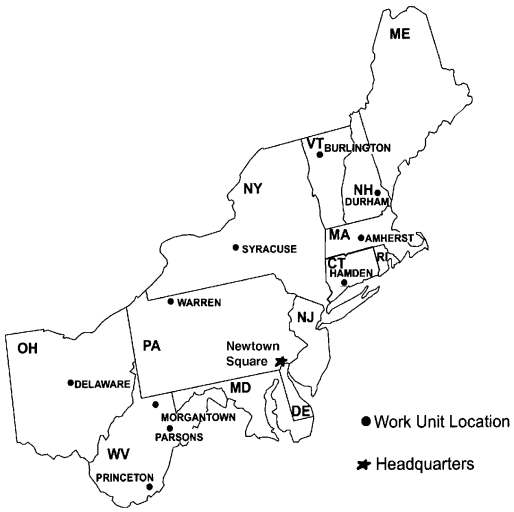


Figure 9.—Disposition of hardwood (n=51) and softwood (n=15) fine residue, by use, 2000.

Hansen, Bruce; Murriner, Ed; Baker, Iris; Akers, Melody. 2006. **West Virginia timber product output, 2000.** Resour. Bull. NE-165. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station 18 p.

Assesses primary wood-processing activities in West Virginia for 2000. West Virginia's total wood harvest for industrial uses was 202 million cubic feet, up nearly 22 percent from 1994. Sawlog production totaled 803.5 million board feet, a decrease of 8.1 million board feet from 1994. There were 172 sawmills operating in the State in 2000, with only 10 percent accounting for more than half of West Virginia's lumber production. Fifty-seven mills accounted for 90 percent of the lumber produced. Oak accounted for 43 percent of the State's production, followed by yellow-poplar at 23 percent. Pulpwood production totaled 732,000 cords, an increase of 110 percent from 1994.

Keywords: Roundwood production, roundwood consumption, mill receipts, primary processing, sawlogs, veneer logs, pulpwood, engineered wood products



Headquarters of the Northeastern Research Station is in Newtown Square, Pennsylvania. Field laboratories are maintained at:

Amherst, Massachusetts, in cooperation with the University of Massachusetts

Burlington, Vermont, in cooperation with the University of Vermont

Delaware, Ohio

Durham, New Hampshire, in cooperation with the University of New Hampshire

Hamden, Connecticut, in cooperation with Yale University

Morgantown, West Virginia, in cooperation with West Virginia University

Parsons, West Virginia

Princeton, West Virginia

Syracuse, New York, in cooperation with the State University of New York, College of Environmental Sciences and Forestry at Syracuse University

Warren, Pennsylvania

"Caring for the Land and Serving People Through Research"