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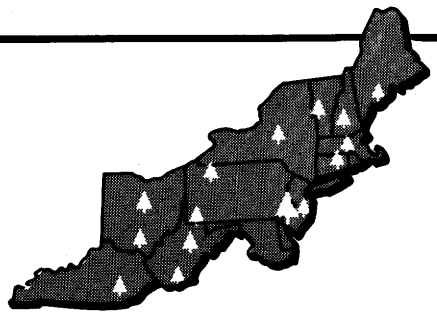

FOREST SERVICE, U.S. DEPT. OF AGRICULTURE, 6816 MARKET STREET, UPPER DARBY, PA. 19082

A PREVIEW OF WEST VIRGINIA'S FOREST RESOURCE

by JOSEPH E. BARNARD
Research Forester
and TERESA M. BOWERS
Statistical Assistant

USDA Forest Service
Northeastern Forest Experiment Station
Resources Evaluation

Abstract.—Forest land occupies 75 percent of the total land area of West Virginia. Sixty percent of the forest land is classified in the oak-hickory forest type and only 6 percent in all the softwood forest types. Since 1961, growing-stock volume increased 24 percent. Yellow-poplar increased 39 percent in volume and is now the prevalent species in the State.

Keywords: Forest surveys (West Virginia), forest area, resources (timber), statistics (forestry).

Forest is the dominant land use of the rugged West Virginia landscape. Inventories of this resource have been made by the Forest Service three times in the past quarter century. Each survey was designed to provide a reliable estimate of the extent and condition of the forest resource and to indicate what changes were occurring. A detailed statistical and analytical report of the most recent inventory is being prepared for publication. It will give a comprehensive analysis of the current situation and trends in the forest resource. This is a preview of that report.

Forest Land Area Continues to Increase

In 1949 forest occupied 64 percent of the total land area of West Virginia. The second inventory in 1961 showed a dramatic increase of forest area to 74 percent of the land area. The most recent inventory shows that this trend has continued although the rate has declined. In 1975 the forest area was 11.6 million acres—75 percent of the total land area. Considering the area of land affected since 1961 by the construction of major segments of the Interstate

Highway System, new pipeline and powerline rights-of-way, mining activity, and the growth of urban areas, the continued increase in total forest area is more significant than indicated by the percentage increase.

Ninety-nine percent of the 11.6 million acres of forest is classified as commercial forest land; the remainder is classified as either unproductive forest or productive-reserved. Land area in the productive-reserved category increased as a result of administrative reclassification of public forest lands. Since 1961, the area in productive-reserved status has increased from 46,000 to 115,000 acres.

Forests are distributed quite uniformly across the entire state. All counties except Brooke and Jefferson are 50 percent or more forested. Six counties are over 85 percent forested. Webster County has the distinction of being the most heavily forested with 92 percent of its land area in forest.

Hardwood types predominate in West Virginia. Sixty percent of the forest land is classified in the oak-hickory forest type and only 6 percent in all the softwood forest types. The distribution of the hardwood forest types shows some significant shifts since 1961. The area in the oak-hickory type declined but an important local type in this group—yellow-poplar—showed a significant increase. The area in the oak-pine, the elm-ash-red maple, and the maple-beech-birch types increased.

A study of forest-land owners was conducted in conjunction with this inventory. Two objectives of this study were to define the pattern of forest-land ownership more clearly and to seek an understanding of the motives and intentions of forest-land owners. Over 1 million acres of commercial forest land is publically owned. All of the Monongahela plus parts of the George Washington and Jefferson National Forests account for 873 thousand acres. Most of the remaining public lands are State-owned. An estimated 207,500 individuals, groups, or corporations each own 1 acre or more of the 10,342,900 acres of private commercial forest land. In the past, 31 percent of these owners have harvested timber from their lands. The forest land owned by those who have harvested timber makes up 61 percent of the total private commercial forest area.

Volume Change

Data from a second remeasurement of field plots established in 1949 provided a history of growth, mortality, and removals in the forest during the past quarter century. Average annual net growth of all growing stock was 35 cubic feet per acre during the past 14 years and 32.5 cubic feet per acre during the preceeding 12 years. In 1974 the annual growth of growing stock was 41 cubic feet per acre and the ratio of growth to removals was nearly 3 to 1.

Part of the analysis of the current volume and growth includes a procedure to determine whether past volume and growth estimates are directly comparable with the present estimate. This procedure helps to locate inconsistencies in the data and to evaluate differences that may have occurred because of procedural or definitional differences between inventory occasions. This analysis of the West Virginia inventory resulted in an adjustment of the 1961 inventory to reflect the standards, procedures, and definitions used in 1975.

Here are the figures, adjusted as described above, showing the trends:

	1961	1975	Change
Growing stock volume: (million cubic feet)			
Softwoods	557	995	+438
Hardwoods	10,320	12,520	+2,200
Total	10,877	13,515	2,638
Sawtimber volume: (million board feet)			
Softwoods	1,378	2,600	+1,222
Hardwoods	20,560	25,031	+4,471
Total	21,938	27,631	5,693

Growing Stock and Sawtimber Volume Continue to Increase

Timber volume increased rapidly in West Virginia between 1949 and 1961. Much of this increase resulted from ingrowth, i.e., trees previously too small to be measured for volume had reached the minimum size required to be classified as growing stock. This surge of ingrowth into the minimum recognized diameter class has slowed. Three-fifths of the gross growth between 1961 and 1975 was accretion, i.e., volume added to trees that were already of growing-stock size. The average growing-stock volume per acre in West Virginia was 1,177

cubic feet in 1975; a 23 percent increase since 1961. The sawtimber portion of growing stock averaged 2,406 board feet per acre in 1975; a 25 percent increase since 1961.

The growing-stock volume increase among the major species has not been uniform. The relative positions of the 10 species with the largest cubic-foot volume in 1961 and 1975 reflect these uneven changes:

Species	Rankings 1961	1975
Red oak	1	3
Chestnut oak	2	2
Yellow-poplar	3	1
Hickory	4	5
White oak	5	4
Black oak	6	6
Beech	7	9
Sugar maple	8	8
Red maple	9	7
Basswood	10	—
Black cherry	—	10

Yellow-poplar increased 39 percent in volume and is now the most prevalent species in the State. The oaks as a group exceed yellow-poplar in volume, but red oak dropped from first to third position. All oaks showed increases in volume and white oak replaced hickory as the fourth most abundant species. The volume of black cherry increased 67 percent and it became the tenth most abundant species. The volume of red maple increased 49 percent and the species moved from ninth to seventh position. The volume of both beech and basswood declined. Beech dropped to ninth position and basswood is no longer among the 10 most abundant species. Black oak and sugar maple maintained their same relative positions. Although no softwood is on the list of top ten species, softwoods as a group have increased 79 percent. All softwoods accounted for 5 percent of the total volume in 1961 and 7.4 percent of total volume in 1975.

Sawtimber volume has increased 26 percent since 1961. For hardwoods, much of the increase was in the 12- and 14-inch diameter classes. Logs in trees of this size usually do not meet the minimum size specifications for standard lumber log grades 1 or 2. Most of the hardwood sawtimber increase was in grade 3 standard lumber logs. Forty-six percent of the hardwood sawtimber volume is now grade 3. We found little change in the proportion of hardwood volume in grades 1 and 2 combined. However, more of this higher quality timber is now classed as grade 1 than in 1961. Of the softwoods, only the pines are segregated into quality classes by standard lumber log grades. More than 88 percent of the sawtimber volume of the pines is grade 3 or poorer quality. Here, as in the hardwoods, the high proportion of sawtimber volume in the smaller diameter classes is the reason for the low quality.

The following tables describe the forest resource of West Virginia.

Table 1.—*Land area in West Virginia, by land classes, counties, and geographic units, 1975*

County	Total land area[a]	Nonforest land area	Forest land		
			Non-commercial[b]	Commercial	Sampling error of total[c]
	Thousand acres				*Percent*
Barbour	218.2	81.4	0.9	135.9	10
Berkeley	202.2	83.0	1.2	118.0	12
Braxton	330.9	77.9	1.0	252.0	6
Grant	305.9	67.6	2.1	236.2	6
Hampshire	409.0	87.7	1.7	319.6	5
Hardy	374.4	71.6	5.1	297.7	5
Harrison	267.5	120.2	2.5	144.8	13
Jefferson	134.9	96.3	2.1	36.5	35
Lewis	250.9	82.6	.7	167.6	9
Mineral	211.2	44.6	.7	165.9	6

CONTINUED

Table 1.—Continued

County	Total land area[a]	Nonforest land area	Forest land		Sampling error of total[c]
			Non-commercial[b]	Commercial	
	Thousand acres				*Percent*
Morgan	149.1	32.2	6.6	110.3	7
Pendleton	444.8	109.4	34.2	301.2	6
Pocahontas	603.5	84.9	15.3	503.3	7
Preston	412.8	110.7	1.4	300.7	6
Randolph	663.0	80.6	13.3	569.1	4
Taylor	111.4	45.1	1.4	64.9	15
Tucker	269.5	38.6	20.2	210.7	9
Upshur	225.3	70.5	.8	154.0	8
Webster	352.6	27.7	8.1	316.8	3
Northeastern Unit	5,937.1	1,412.6	119.3	4,405.2	1.4
Boone	320.6	56.6	—	264.0	10
Clay	219.5	29.8	—	189.7	6
Fayette	424.3	84.7	3.9	335.7	5
Greenbrier	656.7	154.8	1.0	500.9	4
Kanawha	580.4	122.3	—	458.1	4
Logan	291.9	56.0	3.3	232.6	10
McDowell	341.1	64.1	—	277.0	11
Mercer	266.8	77.1	.5	189.2	6
Mingo	270.7	47.9	—	222.8	10
Monroe	302.5	116.5	—	186.0	8
Nicholas	416.0	78.4	.3	337.3	6
Raleigh	387.3	88.5	1.4	297.4	5
Summers	223.8	60.4	4.4	159.0	6
Wyoming	322.6	52.3	6.8	263.5	5
Southern Unit	5,024.2	1,089.4	21.6	3,913.2	1.8
Brooke	56.4	29.8	—	26.6	27
Cabell	178.7	47.0	0.3	131.4	8
Calhoun	179.8	41.3	—	138.5	9
Doddridge	204.2	53.9	—	150.3	9
Gilmer	217.0	54.0	2.1	160.9	9
Hancock	53.2	26.4	1.5	25.3	27
Jackson	294.7	103.3	.2	191.2	8
Lincoln	280.3	33.4	—	246.9	4
Marion	199.0	65.6	1.2	132.2	10
Marshall	194.7	78.2	—	116.5	12
Mason	276.8	113.4	.4	163.0	10
Monongalia	233.5	83.8	.2	149.5	11
Ohio	68.0	30.6	—	37.4	21
Pleasants	82.7	14.2	.1	68.4	8
Putnam	222.7	66.4	—	156.3	7
Ritchie	289.3	72.1	1.8	215.4	6
Roane	311.0	99.6	—	211.4	9
Tyler	163.6	44.3	—	119.3	9
Wayne	328.6	63.4	.1	265.1	5
Wetzel	232.1	50.1	.1	181.9	6
Wirt	150.4	27.3	—	123.1	6
Wood	235.8	81.1	—	154.7	9
Northwestern Unit	4,452.5	1,279.2	8.0	3,165.3	1.9
Total for state	15,413.8	3,781.2	148.9	11,483.7	1.0

[a] Source: Area Measurement Report, Bureau of the Census, Areas of West Virginia: 1960 (April 1967).

[b] Includes nonproductive and productive-reserved forest land.

[c] In percent at the 68 percent probability level for commercial forest land.

Table 2.—*Area of commercial forest land in West Virginia, by ownership classes and geographic units, 1975*

[In thousands of acres]

Ownership classes	Northeastern	Southern	Northwestern	Total
National Forest	733.8	138.8	—	872.6
Other Federal	14.0	3.1	22.0	39.1
State	88.1	78.7	62.1	228.9
County and municipal	.2	—	—	.2
Total public	836.1	220.6	84.1	1,140.8
Forest industry	234.5	491.5	153.7	879.7
Farmer-owned	876.0	391.5	660.1	1,927.6
Miscellaneous private:				
Individual	1,634.4	1,289.6	1,863.8	4,787.8
Corporate	402.8	1,254.1	95.4	1,752.3
Other	421.4	265.9	308.2	995.5
Total private	3,569.1	3,692.6	3,081.2	10,342.9
All ownerships	4,405.2	3,913.2	3,165.3	11,483.7

Table 3.—*Form of ownership by number of owners and acres of privately-owned forest land with number of owners who have harvested timber and the acres they own, West, Virginia, 1975*

Form of ownership	All owners		Owners who have harvested timber	
	Number	Thousand acres owned	Number	Thousand acres owned
Individual	182,100	6,517.5	55,900	3,149.6
Partnership	4,300	290.3	800	187.2
Corporation	3,000	2,591.0	500	2,417.8
Other[a]	18,100	944.1	6,400	564.9
Total	207,500	10,342.9	63,600	6,319.5

[a] Includes associations, clubs, and undivided estates.

Table 4.—*Area of commercial forest land, by forest types and stand-size classes, West Virginia, 1975*

[In thousands of acres]

Forest type	All stands	Saw-timber stands	Pole-timber stands	Sapling-seedling stands	Non-stocked areas
White pine	101.2	36.8	54.1	10.3	—
Spruce-fir	59.0	43.6	14.0	1.1	0.3
Virginia and pitch pine	485.2	163.7	173.9	147.6	—
Oak-pine	568.2	221.6	172.7	164.3	9.6
Oak-hickory[a]	6,828.1	2,794.4	2,455.5	1,465.7	112.5
Elm-ash-red maple	814.5	258.4	282.1	274.0	—
Maple-beech-birch	2,618.6	1,557.2	807.3	243.1	11.0
Aspen-birch	8.9	—	—	—	8.9
All types	11,483.7	5,075.7	3,959.6	2,306.1	142.3

[a] Includes the yellow-poplar forest type.

Table 5.—*Area of commercial forest land in West Virginia, by forest type, county, and geographic unit, 1975*

[In thousands of acres]

County	Virginia and pitch pine	Other softwood types	Oak-hickory	Maple-beech-birch	Other hardwood types	All types
Barbour	0.7	1.9	74.5	37.4	21.4	135.9
Berkeley	13.5	1.5	72.9	8.0	22.1	118.0
Braxton	1.2	3.9	136.9	73.2	36.8	252.0
Grant	26.1	2.4	142.3	20.9	44.5	236.2
Hampshire	31.9	3.9	199.3	19.4	65.1	319.6
Hardy	32.4	3.2	183.5	18.8	59.8	297.7
Harrison	.6	2.7	73.6	36.3	31.6	144.8
Jefferson	3.4	.3	23.3	3.0	6.5	36.5
Lewis	1.2	2.7	93.6	44.8	25.3	167.6
Mineral	24.7	1.7	96.2	10.1	33.2	165.9
Morgan	16.4	1.0	62.8	6.5	23.6	110.3
Pendleton	27.5	5.3	178.5	26.4	63.5	301.2
Pocahontas	1.6	33.5	177.8	242.2	48.2	503.3
Preston	1.8	4.2	167.3	84.9	42.5	300.7
Randolph	1.6	9.1	270.6	236.2	51.6	569.1
Taylor	.3	1.1	34.1	16.8	12.6	64.9
Tucker	.5	5.8	102.7	77.4	24.3	210.7
Upshur	.8	2.1	84.5	44.0	22.6	154.0
Webster	1.3	3.5	162.6	119.0	30.4	316.8
Northeastern Unit	187.5	89.8	2,337.0	1,125.3	665.6	4,405.2
Boone	—	2.8	160.4	92.3	8.5	264.0
Clay	2.6	3.2	127.3	43.8	12.8	189.7
Fayette	4.9	4.4	225.2	78.1	23.1	335.7
Greenbrier	5.5	12.4	281.4	166.2	35.4	500.9
Kanawha	7.4	8.5	305.3	105.4	31.5	458.1
Logan	—	3.6	150.4	68.1	10.5	232.6
McDowell	—	4.6	174.0	81.8	16.6	277.0
Mercer	2.2	2.6	126.3	45.6	12.5	189.2
Mingo	—	3.3	139.8	68.7	11.0	222.8
Monroe	7.0	3.9	122.3	37.5	15.3	186.0
Nicholas	6.1	3.9	217.8	85.8	23.7	337.3
Raleigh	4.5	3.1	199.7	69.5	20.6	297.4
Summers	2.3	2.8	104.7	38.3	10.9	159.0
Wyoming	5.7	11.3	171.4	57.7	17.4	263.5
Southern Unit	48.2	70.4	2,506.0	1,038.8	249.8	3,913.2
Brooke	1.2	—	17.7	3.8	3.9	26.6
Cabell	13.1	—	79.7	17.8	20.8	131.4
Calhoun	17.1	—	79.7	18.4	23.3	138.5
Doddridge	4.2	—	103.1	21.7	21.3	150.3
Gilmer	5.1	—	109.7	22.2	23.9	160.9
Hancock	.9	—	16.5	4.3	3.6	25.3
Jackson	19.4	—	116.3	27.1	28.4	191.2
Lincoln	7.8	—	161.0	39.5	38.6	246.9
Marion	4.5	—	91.3	18.2	18.2	132.2
Marshall	4.8	—	75.3	18.6	17.8	116.5
Mason	27.4	—	90.6	20.9	24.1	163.0
Monongalia	4.2	—	102.5	21.6	21.2	149.5
Ohio	1.5	—	24.6	5.9	5.4	37.4
Pleasants	3.3	—	45.7	10.0	9.4	68.4
Putnam	23.3	—	89.2	21.6	22.2	156.3
Ritchie	12.2	—	139.9	31.0	32.3	215.4
Roane	19.4	—	128.8	31.4	31.8	211.4
Tyler	7.4	—	76.6	17.2	18.1	119.3
Wayne	21.1	—	163.1	38.1	42.8	265.1
Wetzel	5.4	—	120.3	27.7	28.5	181.9
Wirt	20.9	—	67.1	16.9	18.2	123.1
Wood	25.3	—	86.4	20.6	22.4	154.7
Northwestern Unit	249.5	—	1,985.1	454.5	476.2	3,165.3
Total for state	485.2	160.2	6,828.1	2,618.6	1,391.6	11,483.7

Table 6.—*Net volume of growing stock on commercial forest land in West Virginia, by forest type, county, and geographic unit, 1975*

[In millions of cubic feet]

County	Virginia and pitch pine	Other softwood types	Oak-hickory	Maple-beech-birch	Other hardwood types	All types
Barbour	0.6	3.2	77.8	46.0	19.3	146.9
Berkeley	7.8	1.2	62.4	9.9	17.7	99.0
Braxton	1.1	8.3	155.4	94.7	36.4	295.9
Grant	18.6	2.1	144.8	30.5	39.0	235.0
Hampshire	19.8	3.0	192.6	26.7	56.6	298.7
Hardy	22.3	2.8	183.5	28.6	53.8	291.0
Harrison	.5	3.4	63.0	34.1	18.9	119.9
Jefferson	2.0	.2	13.5	2.1	4.2	22.0
Lewis	1.0	4.1	93.9	51.5	21.2	171.7
Mineral	15.4	1.2	93.6	15.8	29.2	155.2
Morgan	12.2	.6	58.5	10.7	20.3	102.3
Pendleton	18.5	5.7	177.6	33.7	53.7	289.2
Pocahontas	1.7	88.2	265.3	451.6	51.0	857.8
Preston	1.6	7.7	183.7	107.8	40.8	341.6
Randolph	1.4	26.9	421.3	474.8	65.2	989.6
Taylor	.3	1.4	31.1	16.8	8.2	57.8
Tucker	.4	16.7	164.4	140.5	19.6	341.6
Upshur	.7	4.2	93.5	57.0	22.4	177.8
Webster	1.2	8.3	237.2	230.2	39.1	516.0
Northeastern Unit	127.1	189.2	2,713.1	1,863.0	616.6	5,509.0
Boone	—	7.0	171.7	85.0	6.6	270.3
Clay	1.6	5.7	150.1	53.7	14.0	225.1
Fayette	3.1	6.2	264.3	94.3	25.1	393.0
Greenbrier	3.9	29.2	371.1	277.5	46.7	728.4
Kanawha	4.9	16.1	355.6	127.3	34.6	538.5
Logan	—	8.9	157.3	62.1	8.0	236.3
McDowell	—	11.3	161.6	74.3	12.3	259.5
Mercer	1.4	4.6	153.2	56.2	14.9	230.3
Mingo	—	8.0	141.4	62.3	8.2	219.9
Monroe	5.0	7.2	124.7	41.1	13.7	191.7
Nicholas	3.7	4.7	250.0	134.6	23.4	416.4
Raleigh	2.8	3.7	233.4	83.3	22.9	346.1
Summers	1.5	5.4	125.7	45.7	12.8	191.1
Wyoming	4.0	27.3	191.6	68.7	18.3	309.9
Southern Unit	31.9	145.3	2,851.7	1,266.1	261.5	4,556.5
Brooke	0.8	—	15.7	4.2	3.1	23.8
Cabell	13.5	—	78.6	21.2	18.2	131.5
Calhoun	17.7	—	74.0	21.6	19.5	132.8
Doddridge	2.8	—	123.7	29.5	20.1	176.1
Gilmer	3.2	—	126.5	28.9	22.3	180.9
Hancock	.8	—	15.9	5.5	3.2	25.4
Jackson	22.9	—	118.9	33.0	26.7	201.5
Lincoln	5.8	—	182.1	53.3	35.6	276.8
Marion	2.8	—	104.6	24.3	16.3	148.0
Marshall	3.4	—	70.4	22.1	14.7	110.6
Mason	32.5	—	89.1	24.5	22.7	168.8
Monongalia	3.0	—	120.8	29.1	20.4	173.3
Ohio	1.1	—	24.6	7.3	4.9	37.9
Pleasants	4.5	—	64.1	14.4	11.0	94.0
Putnam	29.6	—	101.1	27.1	23.2	181.0
Ritchie	13.5	—	167.9	41.0	33.0	255.4
Roane	20.2	—	120.2	37.1	27.1	204.6
Tyler	7.2	—	85.2	21.5	16.7	130.6
Wayne	19.8	—	162.8	45.9	37.0	265.5
Wetzel	3.9	—	136.7	36.2	26.9	203.7
Wirt	29.7	—	81.4	22.8	20.4	154.3
Wood	32.5	—	93.0	25.9	22.0	173.4
Northwestern Unit	271.2	—	2,157.3	576.4	445.0	3,449.9
Total for state	430.2	334.5	7,722.1	3,705.5	1,323.1	13,515.4

Table 7.—*Net volume of sawtimber on commercial forest land in West Virginia, by forest type, county, and geographic unit, 1975*

[In millions of board feet]

County	Virginia and pitch pine	Other softwood types	Oak-hickory	Maple-beech-birch	Other hardwood types	All types
Barbour	0.7	8.2	134.5	87.5	34.3	265.2
Berkeley	11.3	2.3	104.4	17.6	31.7	167.3
Braxton	1.4	21.8	284.3	186.9	66.2	560.6
Grant	35.4	3.6	232.7	56.1	73.9	401.7
Hampshire	29.4	5.8	329.0	41.0	102.7	507.9
Hardy	38.0	5.0	306.0	48.1	99.0	496.1
Harrison	.6	9.9	97.4	62.3	31.2	201.4
Jefferson	3.3	.5	21.1	3.8	7.0	35.7
Lewis	1.2	9.7	155.6	96.7	35.8	299.0
Mineral	26.3	2.4	149.7	28.1	53.8	260.3
Morgan	23.1	1.3	86.3	20.4	38.3	169.4
Pendleton	32.2	9.5	290.2	52.1	96.7	480.7
Pocahontas	2.6	256.8	438.0	949.9	109.5	1,756.8
Preston	1.9	18.6	324.3	209.1	72.1	626.0
Randolph	1.6	77.2	859.5	1,035.1	125.2	2,098.6
Taylor	.4	4.0	49.2	31.0	13.5	98.1
Tucker	.5	54.7	343.2	326.6	36.0	761.0
Upshur	.8	10.9	169.0	111.1	40.6	332.4
Webster	1.4	21.4	505.8	569.9	72.9	1,171.4
Northeastern Unit	212.1	523.6	4,880.2	3,933.3	1,140.4	10,689.6
Boone	—	9.2	424.8	206.0	17.8	657.8
Clay	3.4	11.9	311.7	113.6	29.2	469.8
Fayette	6.3	14.2	550.5	199.9	52.0	822.9
Greenbrier	8.1	53.8	792.1	583.7	109.9	1,547.6
Kanawha	10.3	31.6	746.5	271.2	71.6	1,131.2
Logan	—	11.4	390.2	150.8	21.9	574.3
McDowell	—	14.6	378.9	175.5	34.4	603.4
Mercer	2.8	9.4	332.2	122.5	32.8	499.7
Mingo	—	10.1	343.3	150.2	22.9	526.5
Monroe	11.1	13.5	237.7	83.0	21.6	366.9
Nicholas	7.3	11.7	506.4	306.8	43.5	875.7
Raleigh	5.4	9.2	492.3	177.9	47.3	732.1
Summers	3.3	10.4	271.4	98.7	26.9	410.7
Wyoming	9.1	48.4	391.4	143.9	36.7	629.5
Southern Unit	67.1	259.4	6,169.4	2,783.7	568.5	9,848.1
Brooke	1.8	—	30.0	9.4	6.1	47.3
Cabell	25.4	—	150.0	48.8	34.3	258.5
Calhoun	32.3	—	138.8	49.4	36.0	256.5
Doddridge	5.6	—	268.7	75.6	39.0	388.9
Gilmer	6.3	—	266.8	72.2	43.6	388.9
Hancock	1.9	—	30.2	12.2	6.4	50.7
Jackson	45.8	—	230.0	75.5	51.9	403.2
Lincoln	11.4	—	356.0	124.4	71.1	562.9
Marion	5.7	—	228.0	63.2	31.0	327.9
Marshall	7.2	—	129.4	50.0	28.1	214.7
Mason	62.6	—	175.6	55.7	43.6	337.5
Monongalia	6.5	—	260.9	73.0	40.0	380.4
Ohio	2.5	—	47.0	16.7	9.8	76.0
Pleasants	9.0	—	144.5	37.3	22.1	212.9
Putnam	58.0	—	203.4	62.8	46.2	370.4
Ritchie	27.0	—	350.2	98.7	66.1	542.0
Roane	39.7	—	216.8	83.7	52.3	392.5
Tyler	13.7	—	174.1	52.1	32.6	272.5
Wayne	36.1	—	304.8	104.7	70.6	516.2
Wetzel	7.7	—	274.3	85.3	53.2	420.5
Wirt	60.0	—	164.4	52.7	41.4	318.5
Wood	64.4	—	186.0	60.1	43.7	354.2
Northwestern Unit	530.6	—	4,329.9	1,363.5	869.1	7,093.1
Total for state	809.8	783.0	15,379.5	8,080.5	2,578.0	27,630.8

Table 8.—*Net volume of growing-stock trees [a] on commercial forest land, by species and tree size, West Virginia, 1975*

Species	All trees	Poletimber trees	Sawtimber	
	Million cubic feet			*Million board feet* [b]
White pine	125.5	43.7	81.8	328.8
Virginia pine	416.5	154.9	261.6	903.2
Other yellow pines	115.1	29.8	85.3	300.2
Red spruce	153.3	18.1	135.2	565.2
Hemlock [c]	184.6	55.3	129.3	502.3
Total softwoods	995.0	301.8	693.2	2,599.7
Select white oaks	1,293.0	511.9	781.1	2,668.1
Select red oaks	1,294.1	351.0	943.1	3,203.8
Other white oaks	1,384.7	559.9	824.8	2,768.6
Other red oaks	1,427.1	471.7	955.4	3,354.4
Red maple	829.9	486.3	343.6	1,085.9
Sugar maple	758.6	416.8	341.8	1,158.0
Yellow birch	142.5	94.5	48.0	164.8
Sweet birch	250.7	180.8	69.9	228.2
Hickory	1,173.8	658.7	515.1	1,720.6
Beech	612.3	196.3	416.0	1,459.3
Ash	282.2	102.3	179.9	591.0
Black walnut	107.2	46.1	61.1	206.8
Yellow-poplar	1,412.8	463.5	949.3	3,267.7
Cucumbertree	124.7	50.7	74.0	247.3
Blackgum	132.5	48.4	84.1	296.1
Black cherry	453.6	138.6	315.0	1,112.1
Basswood	207.5	77.1	130.4	417.5
Other hardwoods	633.2	309.9	323.3	1,080.9
Total hardwoods	12,520.4	5,164.5	7,355.9	25.031.1
All species	13,515.4	5,466.3	8,049.1	27,630.8

[a] Growing-stock trees are trees that satisfy national specifications for form and allowable cull. Net volumes are given for all such trees 5.0 inches dbh and larger.

[b] International ¼-inch rule.

[c] Includes a small amount of redcedar.

Table 9.—*Net volume of sawtimber on commercial forest land, by species and quality classes, West Virginia, 1975*

[In millions of board feet] [a]

Species	All classes	Standard lumber logs			
		Grade 1	Grade 2	Grade 3	Grade 4 [b]
Softwoods:					
White pine	328.8	22.1	68.7	185.0	53.0
Virginia pine	903.2	16.5	27.1	859.6	—
Other yellow pines	300.2	18.2	21.7	260.3	—
Other softwoods [c]	1,067.5	—	—	—	—
Total softwoods	2,599.7	56.8	117.5	1,304.9	53.0
Hardwoods:					
Select white oak	2,668.1	182.0	431.1	1,370.6	684.4
Select red oak	3,203.8	742.4	706.0	1,341.3	414.1
Other white oaks	2,768.6	297.3	518.6	1,289.8	662.9
Other red oaks	3,354.4	495.4	533.1	1,434.1	891.8
Red maple	1.085.9	123.6	145.7	545.8	270.8
Sugar maple	1,158.0	144.3	187.9	545.2	280.6
Yellow birch	164.8	25.5	28.6	76.5	34.2
Sweet birch	228.2	26.6	44.7	114.5	42.4
Hickory	1,720.6	161.0	237.3	799.2	523.1
Beech	1,459.3	120.7	193.2	691.3	454.1
Ash	591.0	79.2	137.7	261.4	112.7
Black walnut	206.8	5.2	27.5	131.4	42.7
Yellow-poplar	3,267.7	658.8	600.0	1,337.3	671.6
Cucumbertree	247.3	23.2	47.5	125.0	51.6
Blackgum	296.1	54.7	76.7	125.9	38.8
Black cherry	1,112.1	169.7	218.9	483.8	239.7
Basswood	417.5	57.1	95.7	203.3	61.4
Other hardwoods	1,080.9	65.8	149.8	619.6	245.7
Total hardwoods	25,031.1	3,432.5	4,380.0	11,496.0	5,722.6
Percentage of hardwoods	100	14	17	46	23

[a] International ¼-inch rule.
[b] Grade-4 applies only to the pines. For hardwoods the volumes in this column are for construction logs.
[c] Species other than pine are not graded into standard lumber grades.

Table 10.—*Annual net growth and removals of growing stock and sawtimber on commercial forest land, softwoods and hardwoods, West Virginia, 1974*

Species group	Growing stock		Sawtimber	
	Net growth	Removals	Net growth	Removals
	Thousand cubic feet		*Thousand board feet*	
Softwoods	58,600	10,600	172,000	27,800
Hardwoods	414,900	155,500	651,000	405,300
Total	473,500	166,100	823,000	433,100
	Percent			
Sampling error of totals	8	15	11	19

[a] International ¼-inch rule.

METRIC EQUIVALENTS
OF UNITS USED IN THIS REPORT

1 acre = 4,046.86 square meters or 0.405 hectare.
1,000 acres = 405 hectares.
1,000,000 acres = 405,000 hectares.
1,000 board feet (International ¼-inch log rule) = 3.48 cubic meters.
1,000,000 board feet (International ¼-inch log rule) = 3,480 cubic meters.
Breast height = 1.4 meters above ground level.
1 cubic foot = 28,317 cubic centimeters or 0.028317 cubic meter.
1,000 cubic feet = 28.317 cubic meters.
1,000,000 cubic feet = 28,317 cubic meters.
1 cord (wood, bark, and airspace) = 3.6246 cubic meters.
1 cord (solid wood, pulpwood) = 2.4069 cubic meters.
1 cord (solid wood, other than pulpwood) = 2.2654 cubic meters.
1,000 cords (pulpwood) = 2,406.9 cubic meters.
1,000 cords (other products) = 2,265.4 cubic meters.
1 foot = 30.48 centimeters or 0.3048 meter.
1 inch = 25.4 millimeters or 2.54 centimeters or 0.0254 meter.
1 mile = 1.609 kilometers.
1 square foot = 929.03 square centimeters or 0.0929 square meter.

Source: A. Binek. 1973 Forest products in terms of metric units. Published by the author, P.O. Box 7 Westmount, Quebec H3Z2T1 Canada