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e-Science Update SRS-129

Virginia's Timber Industry—Timber Product Output and Use, 2015

Introduction

This science update contains the findings of a 2015 canvass of all primary wood-using plants in Virginia, and presents changes in product output and residue use since 2013. It complements the Forest Inventory and Analysis (FIA) annual inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain, by county, in 2015 and to determine interstate and cross-regional movement of industrial roundwood. Only primary wood-using mills were canvassed. Primary mills are those that process roundwood in log or bolt form or as chipped roundwood. Examples of industrial roundwood products are saw logs, pulpwood, veneer logs, poles, and logs used for composite board products. Mills producing products from residues generated at primary and secondary processors were not canvassed. Trees chipped in the woods were included in the estimate of timber drain only if they were delivered to a primary domestic manufacturer.

A 100-percent canvass of all wood processors in Virginia was conducted in 2016 to obtain information for 2015. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Virginia timberland was incorporated into Virginia production estimates. Each mill was canvassed by mail or through personal contact at plant locations. Telephone contacts followed mailed questionnaire responses when additional information or clarification of a response was necessary. In the event of a nonresponse, data collected from previous surveys were used to update the current survey. Surveys for all timber products other than pulpwood began in 1965, and are currently conducted every 2 years.

Pulpwood production data were taken from an annual canvass of all southern pulpmills. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

The FIA Research Work Unit of the U.S. Department of Agriculture Forest Service developed the Timber Product Output (TPO) Database Retrieval System to help customers answer questions about timber harvesting and use in the Southern region. This system acts as an interface to a standard set of consistently coded TPO data for each State and county in the region and Nation. The database is well documented and easy to use. The retrieval system allows the user to select the TPO variables of interest and generate a standard set of timber products, removals, and mill residue tables for the specified resource area, State, or region. The Excel® core tables and figures that complement this science update are available on the TPO database. The system is available through the FIA Web site: https://www.fs.usda.gov/srsfia/.

The SRS gratefully acknowledges the tremendous cooperation and assistance provided by the Virginia Department of Forestry in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information.

Table 1—Output of industrial products by product and species group, Virginia, 2013 and 2015

Product and species group	Year 2013	Year 2015	Change	Change
	thousand cubic feet			*percent*
Saw logs				
Softwood	80,176	91,448	11,272	14.1
Hardwood	76,446	74,784	-1,662	-2.2
Total	156,622	166,232	9,610	6.1
Posts, poles & pilings				
Softwood	1,068	2,015	947	88.7
Hardwood	11	89	78	709.1
Total	1,079	2,104	1,025	95.0
Pulpwood				
Softwood	138,974	143,747	4,773	3.4
Hardwood	91,780	91,418	-362	-0.4
Total	230,754	235,165	4,411	1.9
Bioenergy				
Softwood	7,725	17,675	9,950	128.8
Hardwood	13,407	25,518	12,111	90.3
Total	21,132	43,193	22,061	104.4
Other industrial				
Softwood	42,505	56,221	13,716	32.3
Hardwood	3,759	5,200	1,441	38.3
Total	46,264	61,421	15,157	32.8
All industrial				
Softwood	270,448	311,106	40,658	15.0
Hardwood	185,403	197,009	11,606	6.3
Total	455,851	508,115	52,264	11.5

All Products

Industrial timber product output from roundwood increased 52.3 million cubic feet, or 11 percent, to 508.1 million cubic feet.

Output of industrial softwood roundwood products was up 15 percent, to 311.1 million cubic feet, while output of industrial hardwood roundwood products increased 6 percent to 197.0 million cubic feet (fig. 1).

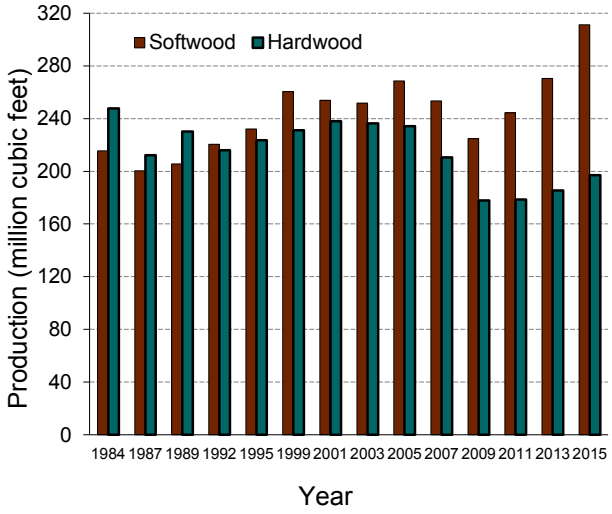


Figure 1—Roundwood production for all products by species group and year, Virginia.

Pulpwood and saw logs were the principal roundwood products in 2015. Combined output of these two products totaled 401.4 million cubic feet and accounted for 79 percent of the State's total industrial roundwood output (fig. 2).

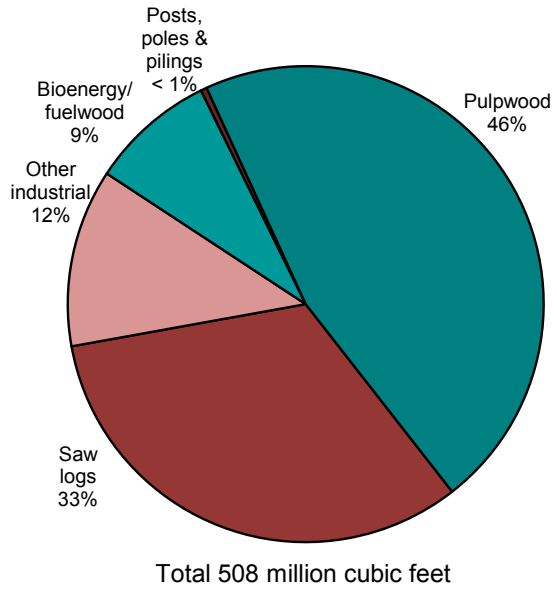


Figure 2—Roundwood production by type of product, Virginia, 2015.

Total receipts at Virginia mills, which included roundwood harvested and retained in the State and roundwood imported from other States, were up 12 percent from 440.0 million cubic feet to 492.7 million cubic feet.

At the same time, the number of primary roundwood-using plants in Virginia decreased from 130 in 2013 to 123 in 2015 (fig. 3, see next page).

Across all products, 86 percent of roundwood harvested was retained for processing at Virginia mills. Exports of roundwood to other States amounted to 70.3 million cubic feet, while imports of roundwood amounted to 54.9 million cubic feet making the State a net exporter of roundwood.

Pulpwood

Total pulpwood production increased 2 percent to 235.2 million cubic feet but accounted for 46 percent of the State's total roundwood TPO compared to 51 percent of total TPO in 2013. Softwood output was up to 143.7 million cubic feet, while hardwood output increased to 91.4 million cubic feet (fig. 4). Softwood output increased by 3 percent over 2013, while hardwood output decreased by < 1 percent compared to 2013.

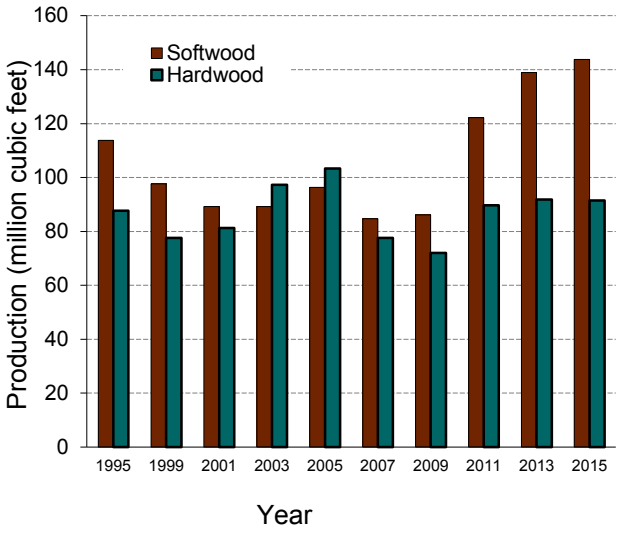


Figure 4—Roundwood pulpwood production by species group and year, Virginia.

Seven pulpmill facilities were operating and receiving roundwood in Virginia in 2015. Total pulpwood receipts for these mills increased to 227.3 million cubic feet, accounting for 46 percent of total receipts for all mills.

Eighty-one percent of roundwood cut for pulpwood was retained for processing at Virginia pulpmills. Roundwood pulpwood accounted for 62 percent of total known exports and 65 percent of total imports.

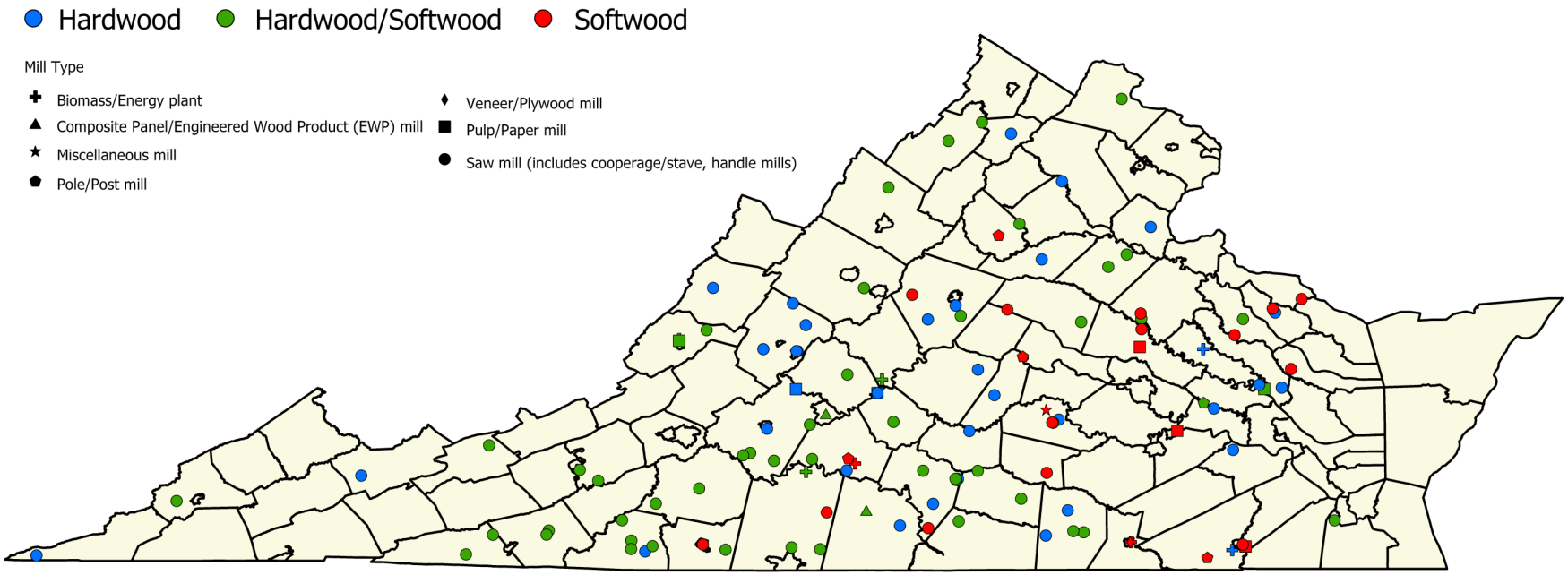


Figure 3– Primary wood-using mills, Virginia, 2015.

Saw Logs

Saw logs accounted for 33 percent of the State's total roundwood products. Output of softwood saw logs increased 14 percent to 91.4 million cubic feet, while that of hardwood saw logs decreased 2 percent to 74.8 million cubic feet (fig. 5).

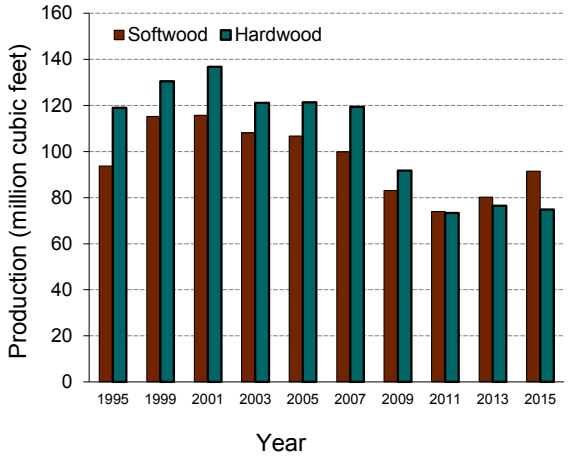


Figure 5—Roundwood saw-log production by species group and year, Virginia.

In 2015, Virginia had 95 sawmills, 12 fewer mills than in 2013. Total saw-log receipts were up 14.6 million cubic feet to 162.5 million cubic feet. Softwood saw-log receipts increased 20 percent to 85.5 million cubic feet, while those of hardwoods increased < 1 percent to 77.0 million cubic feet.

Virginia retained 91 percent of its saw-log production for within State manufacture, with saw-log exports exceeding imports by 3.7 million cubic feet in 2015.

Bioenergy

Bioenergy logs accounted for 9 percent of the State's total roundwood products. Output of softwood bioenergy logs increased 129 percent to 17.7 million cubic feet, while those of hardwood increased 90 percent to 25.5 million cubic feet (fig. 6).

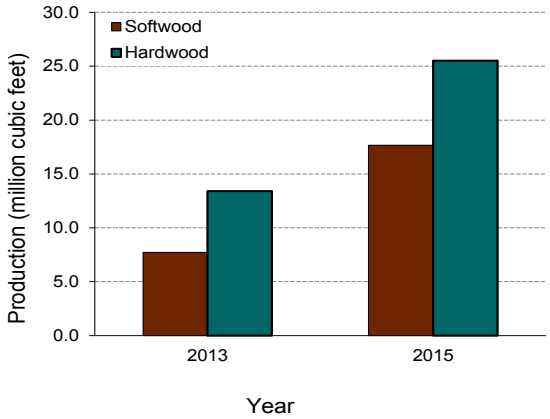


Figure 6—Roundwood bioenergy log production by species group and year, Virginia.

In 2015, Virginia had 11 bioenergy mills, 4 more than in 2013. Total bioenergy receipts increased 21.0 million cubic feet to 44.7 million cubic feet. Softwood bioenergy receipts increased 137 percent to 18.3 million cubic feet, while those of hardwoods increased 66 percent to 26.4 million cubic feet.

Virginia retained 96 percent of its bioenergy log production for within State use, with bioenergy imports exceeding exports by 1.5 million cubic feet in 2015.

Bioenergy includes products such as industrial and residential pellets and boiler/hog fuel used in creating heat, steam or for generating electricity.

Posts, poles and pilings

Post, pole and piling logs accounted for < 1 percent of the State's total roundwood products. Output of softwood post, pole and piling logs increased 89 percent to 2.0 million cubic feet, while those of hardwood increased 709 percent to 89 thousand cubic feet (fig. 7).

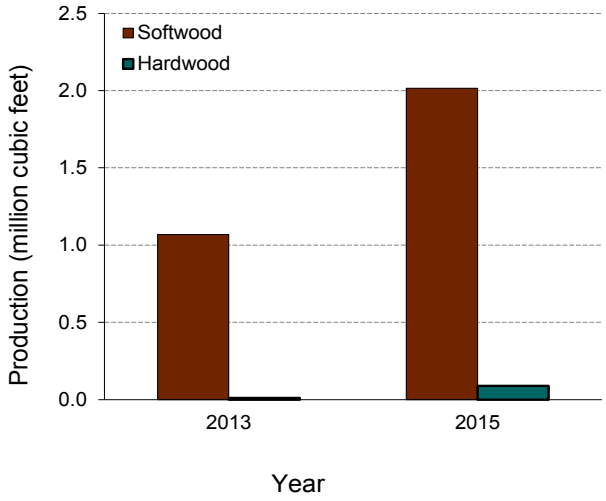


Figure 7—Roundwood post, pole and piling production by species and year, Virginia.

In 2015, Virginia had 6 post, pole and piling mills, one more than in 2013. Total post, pole and piling receipts increased 1.0 million cubic feet to 2.7 million cubic feet. Softwood post, pole and piling receipts increased 59 percent to 2.6 million cubic feet, while those of hardwoods increased 709 percent to 89 thousand cubic feet.

Other Industrial Products

Roundwood harvested for other industrial uses such as composite panel, veneer logs, mulch, residential firewood, logs for log homes, and all other industrial products totaled 61.4 million cubic feet. Softwood made up 92 percent of the other industrial products volume.

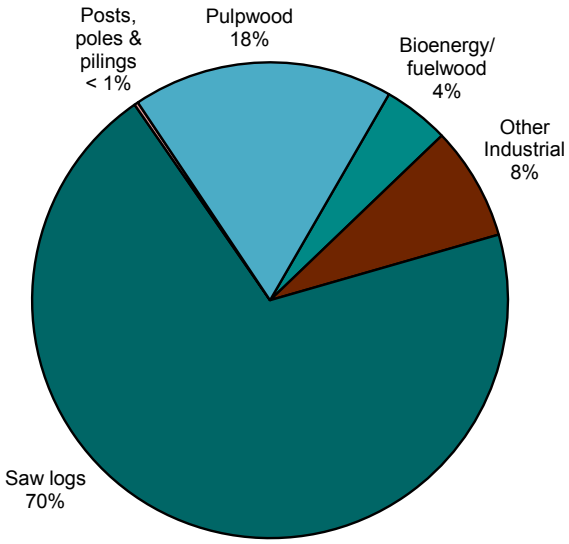
The number of plants producing other industrial products totaled 4 in 2015. Combined receipts of other industrial products from softwood and hardwood were 55.6 million cubic feet for 2015.

Plant Byproducts

In 2015, processing of primary products in Virginia mills generated 145.8 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 54.4 million cubic feet, while bark volume totaled 52.0 million cubic feet. Collectively, sawdust and shavings made up 27 percent of total residues, or 39.4 million cubic feet (fig. 8).

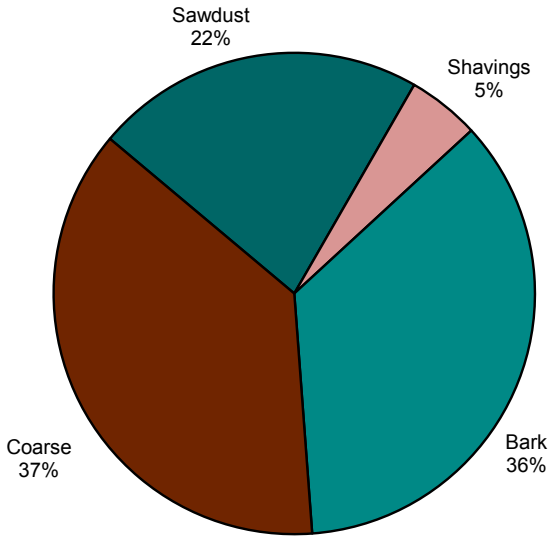
The processing of saw logs generated 101.8 million cubic feet of mill residues, accounting for 70 percent of the total residues produced (fig. 9).

Nearly 100 percent, or 145.5 million cubic feet, of the wood and bark residues were used for a product. While < 1 percent of the residues were not used for a product, 49 percent of the residues were used for industrial fuel and 27 percent were used for fiber products (fig. 10). Seventy-two percent of the residue used for industrial fuel was used onsite, and 28 percent was used at other plants. Sixty-nine percent, or 37.5 million cubic feet, of the coarse residues were used for fiber products. Seventy-five percent of the bark was used for industrial fuel, while 58 percent of the sawdust and shavings were used for industrial fuel.



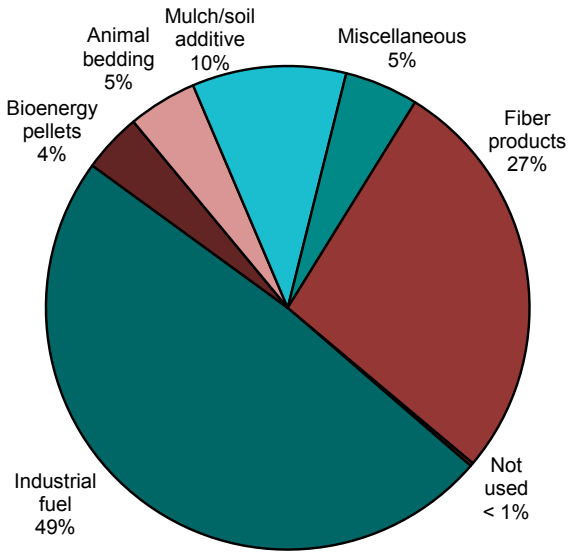
Total 146 million cubic feet

Figure 9—Primary mill residue produced by roundwood type, Virginia, 2015.



Total 146 million cubic feet

Figure 8—Primary mill residue by residue type, Virginia, 2015.



Total 146 million cubic feet

Figure 10—Disposal of residue by product, Virginia, 2015.

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