



# North Carolina'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 North Carolina, 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 North Carolina 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 North Carolina timberland was incorporated into North Carolina 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 in previous surveys were used to update the current survey. Surveys for all timber products other than pulpwood began in 1961, 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 Forest Service, U.S. Department of Agriculture 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 North Carolina Forest Service 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, North Carolina, 2013 and 2015**

Product and species group	Year		Change	Change
	2013	2015		
	<i>---- thousand cubic feet ----</i>		<i>----- percent -----</i>	
<b>Saw logs</b>				
Softwood	202,829	227,894	25,065	12.4
Hardwood	85,670	86,242	572	0.7
Total	288,499	314,136	25,637	8.9
<b>Veneer logs</b>				
Softwood	25,450	23,105	-2,345	-9.2
Hardwood	9,436	8,489	-947	-10.0
Total	34,886	31,594	-3,292	-9.4
<b>Pulpwood</b>				
Softwood	197,400	200,682	3,282	1.7
Hardwood	52,105	68,335	16,230	31.1
Total	249,505	269,017	19,512	7.8
<b>Bioenergy</b>				
Softwood	16,652	3,775	-12,877	-77.3
Hardwood	20,207	21,891	1,684	8.3
Total	36,859	25,666	-11,193	-30.4
<b>Other industrial</b>				
Softwood	42,998	29,165	-13,833	-32.2
Hardwood	4,751	4,002	-749	-15.8
Total	47,749	33,167	-14,582	-30.5
<b>All industrial</b>				
Softwood	485,329	484,621	-708	-0.1
Hardwood	172,169	188,959	16,790	9.8
Total	657,498	673,580	16,082	2.4

## All Products

Industrial timber product output from roundwood increased 16.1 million cubic feet, or 2 percent, to 673.6 million cubic feet.

Output of industrial softwood roundwood products was down < 1 percent, to 484.6 million cubic feet, while output of industrial hardwood roundwood products increased 10 percent to 189 million cubic feet (fig. 1).

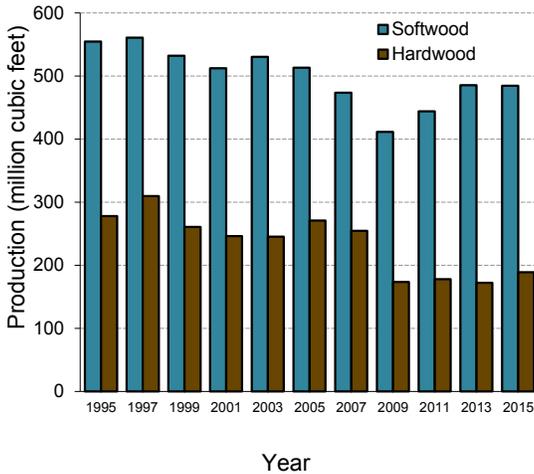


Figure 1—Roundwood production for all products by species group and year, North Carolina.

Pulpwood and saw logs were the principal roundwood products in 2015. Combined output of these two products totaled 583.2 million cubic feet and accounted for 87 percent of the State’s total industrial roundwood output (fig. 2).

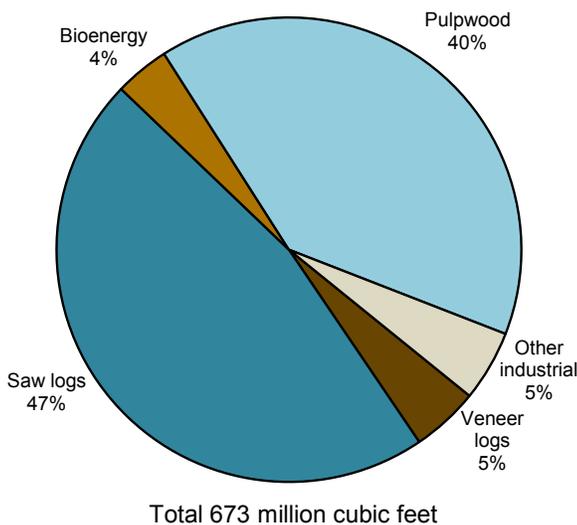


Figure 2—Roundwood production by type of product, North Carolina, 2015.

Total receipts at North Carolina mills, which included roundwood harvested and retained in the State and roundwood imported from other States, were up 5 percent from 654.7 million cubic feet to 686.7 million cubic feet.

At the same time, the number of primary roundwood-using plants in North Carolina increased from 139 in 2013 to 141 in 2015 (fig. 3, see next page). The number of bioenergy mills increased by 3, post, pole and pilings mills decreased by one, while sawmills, pulpmills, veneer, composite panel and other miscellaneous mills remained stable.

Across all products, 86 percent of roundwood harvested was retained for processing at North Carolina mills. Exports of roundwood to other States amounted to 95.3 million cubic feet, while imports of roundwood amounted to 108.3 million cubic feet making the State a net importer of roundwood.

## Pulpwood

Total pulpwood production increased 8 percent to 269 million cubic feet but accounted for 40 percent of the State’s total roundwood TPO compared to 38 percent of total TPO in 2013. Softwood output was up 2 percent over 2013 to 200.7 million cubic feet; hardwood output increased 31 percent from 2013 to 68.3 million cubic feet (fig. 4).

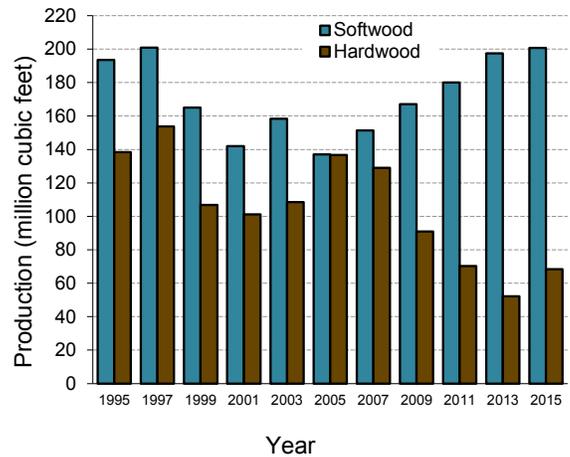


Figure 4—Roundwood pulpwood production by species group and year, North Carolina.

Six pulpmill facilities were operating and receiving roundwood in North Carolina in 2015, the same since 2003. Total pulpwood receipts for these mills increased to 258.8 million cubic feet, accounting for 38 percent of total receipts for all mills.

Seventy-five percent of roundwood cut for pulpwood was retained for processing at North Carolina pulpmills, with exports exceeding imports by 10.2 million cubic feet in 2015. Roundwood pulpwood accounted for 71 percent of total known exports and 53 percent of total imports.

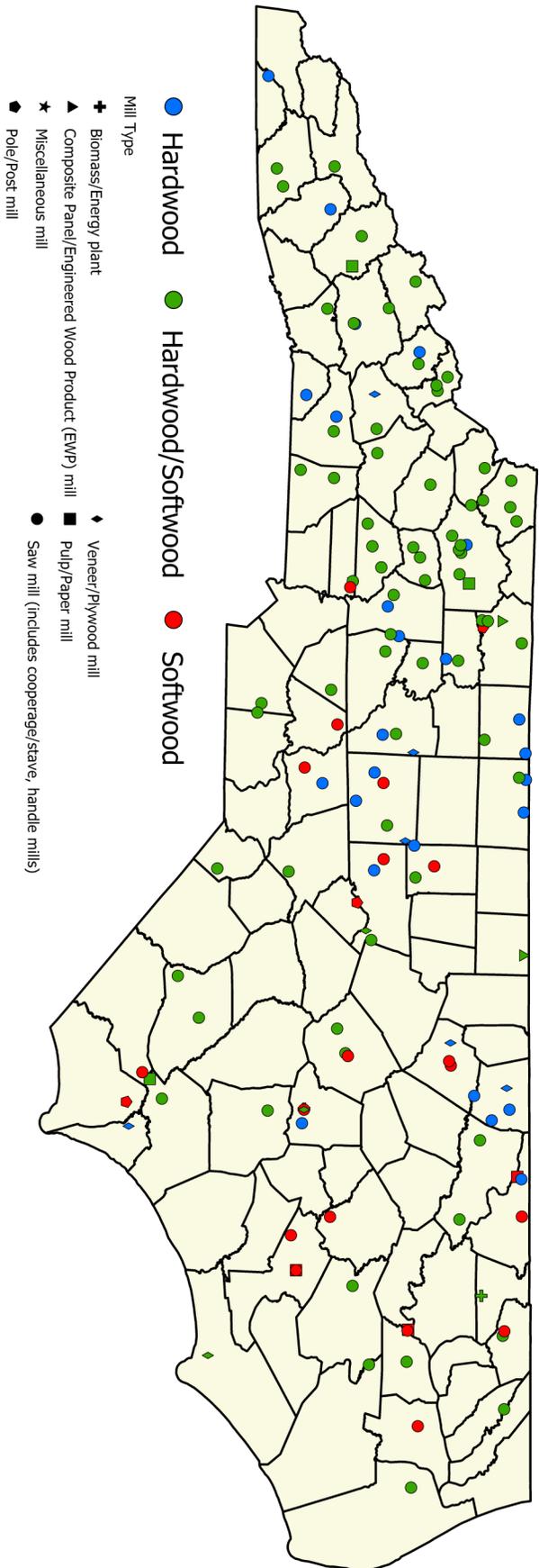


Figure 3—Primary wood-using mills, North Carolina, 2015.

## Saw Logs

Saw logs accounted for 47 percent of the State’s total roundwood products. Output of softwood saw logs increased 12 percent to 227.9 million cubic feet, while that of hardwood saw logs was up < 1 percent to 86.2 million cubic feet (fig. 5).

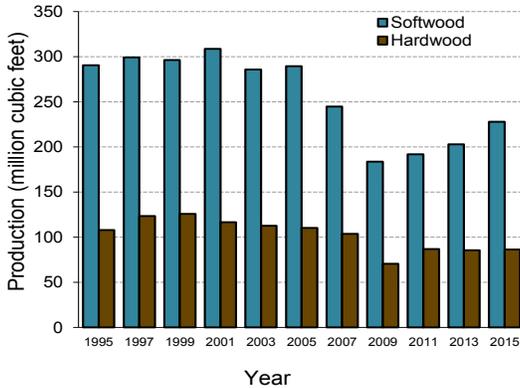


Figure 5—Roundwood saw-log production by species group and year, North Carolina.

In 2015, North Carolina had 112 sawmills, the same as in 2013. Total saw-log receipts were up 28.5 million cubic feet to 331.2 million cubic feet, accounting for 48 percent of total receipts for all mills. Softwood saw-log receipts increased 14 percent to 238.9 million cubic feet, while those of hardwoods were up < 1 percent to 92.4 million cubic feet.

North Carolina retained 94 percent of its saw-log production for within State manufacture, with saw-log imports exceeding exports by 17.1 million cubic feet in 2015.

## Bioenergy

Output of roundwood harvested for bioenergy in 2015 totaled 25.7 million cubic feet, a 30 percent decrease since 2013, and accounted for 4 percent of the State’s total roundwood TPO volume (fig. 6).

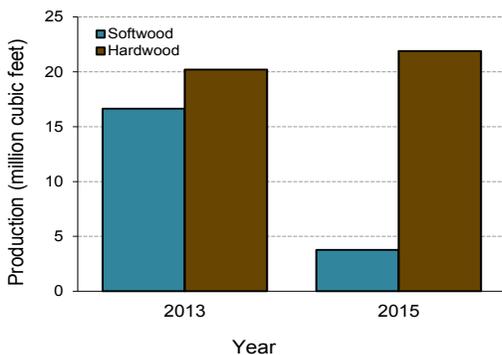


Figure 6—Roundwood bioenergy production by species group and year, North Carolina.

The number of bioenergy mills operating in North Carolina was 8 for 2015, an increase of 3 since 2013. Receipts of roundwood used for bioenergy decreased 24 percent to 22.9 million cubic feet in 2015.

North Carolina retained 83 percent of its bioenergy production for in State use, with bioenergy exports exceeding imports by 2.8 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.

## Veneer Logs

Output of veneer logs in 2015 totaled 31.6 million cubic feet, a 9 percent decline since 2013, and accounted for 5 percent of the State’s total roundwood TPO volume (fig. 7).

The number of veneer mills operating in North Carolina was 9 for 2015, the same number since 2011. Receipts of veneer logs increased 8 percent to 33.9 million cubic feet.

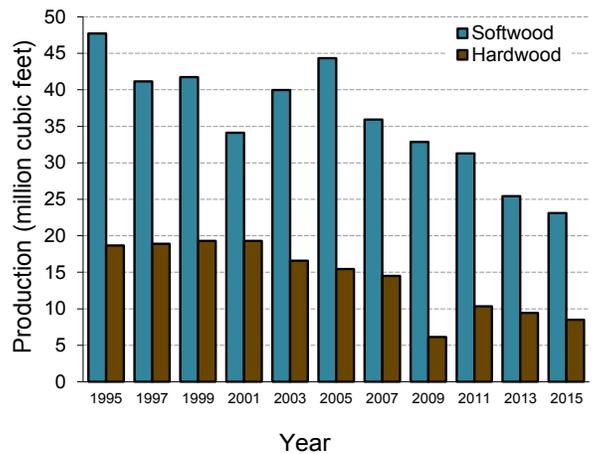


Figure 7—Roundwood veneer log production by species group and year, North Carolina.

## Other Industrial Products

Roundwood harvested for other industrial uses such as poles, posts, mulch, residential firewood, industrial fuel, logs for log homes, composite panels and all other industrial products totaled 33.2 million cubic feet. Softwood made up 88 percent of the other industrial products volume.

The number of plants producing other industrial products totaled 6 in 2015. Combined receipts of other industrial products from softwood and hardwood totaled 39.9 million cubic feet.

## Plant Byproducts

In 2015, processing of primary products in North Carolina mills generated 270.8 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 108.7 million cubic feet, while bark volume totaled 60.5 million cubic feet. Collectively, sawdust and shavings made up 38 percent of total residues, or 101.6 million cubic feet (fig. 8).

The processing of saw logs generated 208.1 million cubic feet of mill residues, accounting for 77 percent of the total residues produced (fig. 9).

Nearly 100 percent, or 270.6 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, 41 percent of the residues were used for industrial fuel and 39 percent were used for fiber products (fig. 10). Ninety-one percent, or 99.3 million cubic feet, of the coarse residues were used for fiber products. Sixty-five percent of the bark, sawdust and shavings were used for industrial fuel. Seventy-three percent of the residue used for industrial fuel was used on site, while 27 percent was used at other plants.

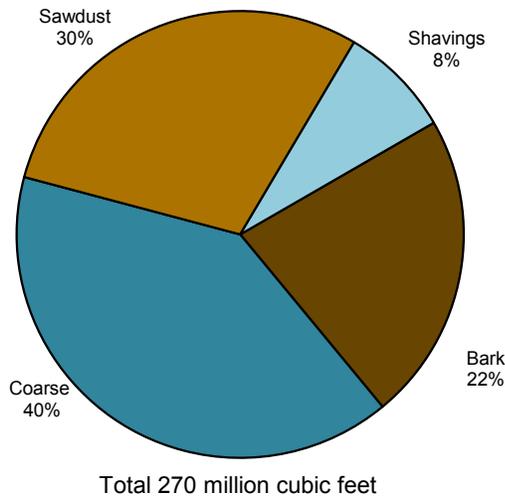


Figure 8—Primary mill residue by residue type, North Carolina, 2015.

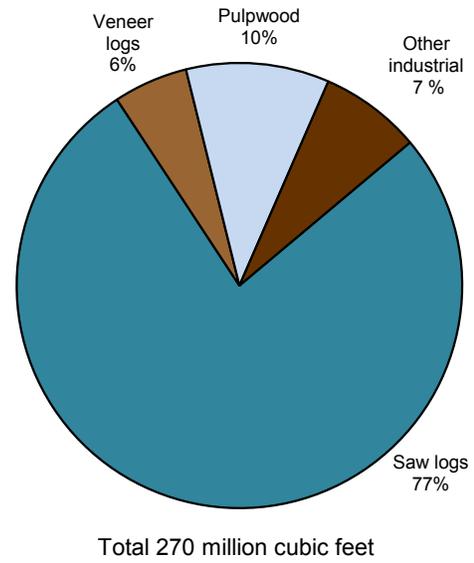


Figure 9—Primary mill residue produced by roundwood type, North Carolina, 2015.

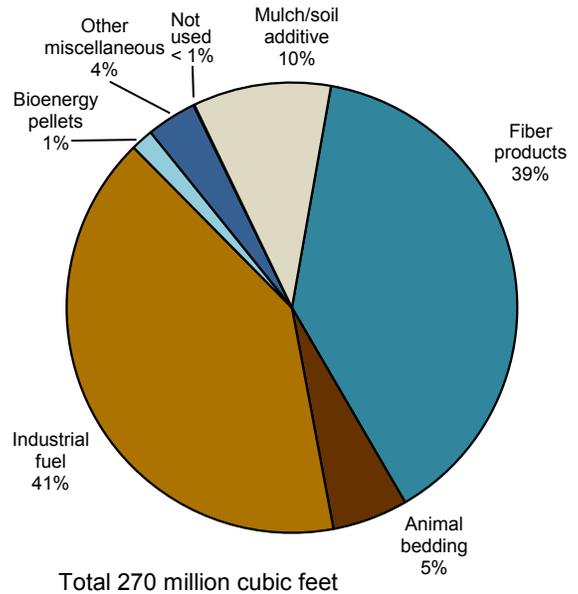


Figure 10—Disposal of residue by product, North Carolina, 2015.

### How to Cite This Publication

Gray, James A.; Bentley, James W.; Cooper, Jason A.; Wall, David J. 2017. North Carolina's timber industry—timber product output and use, 2015. e-Science Update SRS—126. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 5 p.

### Contact Information

James A. Gray, Forester  
 Forest Inventory and Analysis  
 Southern Research Station, USDA Forest Service  
 4700 Old Kingston Pike  
 Knoxville, Tennessee 37919  
 Phone: 865-862-2008/ Fax: 865-862-0248  
 Email: jagray@fs.fed.us  
 Southern FIA: <https://www.fs.usda.gov/srsfia/>  
 National FIA: <https://fia.fs.fed.us>

Clayton B. Altizer, Utilization Forester  
 North Carolina Forest Service  
 NC Department of Agriculture & Consumer Services  
 1616 Mail Service Center  
 Raleigh, NC 27699  
 Phone: 919-857-4840 / Fax: 919-857-4805  
[clay.altizer@ncagr.gov](mailto:clay.altizer@ncagr.gov)

USDA is an equal opportunity provider and employer

The published report is available online at <https://treearch.fs.fed.us>