USDA
United States Department of Agriculture

# North Carolina's Timber Industry—Timber Product Output and Use, 2011

Forest Inventory & Analysis Factsheet

*James W. Bentley, Jason A. Cooper, and Michael Howell*

## Introduction

This science update contains the findings of a 2011 canvass of all primary wood-using plants in North Carolina, and presents changes in product output and residue use since 2009. 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 2011 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 2012 to obtain information for 2011. 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 updated using current data collected for mills of similar size, product type, and location. 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 system is available through the FIA Web site: http://srsfia2.fs.fed.us/. The Excel® core tables and figures that complement this science update are available on the TPO database.

The Southern Research Station gratefully acknowledges the tremendous cooperation and assistance provided by the North Carolina Division of Forest Resources in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information.

Evergreen Packaging, Canton, NC. (photo courtesy of Evergreen Packaging)

## All Products

- Industrial timber product output from roundwood increased 37.4 million cubic feet, or 6 percent, to 622.5 million cubic feet.
- Output of industrial softwood roundwood products was up 8 percent to 443.5 million cubic feet, while output of industrial hardwood roundwood products increased 3 percent to 179.0 million cubic feet (fig. 1).
- Saw logs and pulpwood were the principal roundwood products in 2011. Combined output of these two products totaled 530.2 million cubic feet and accounted for 85 percent of the State's total industrial roundwood output (fig. 2).
- Total receipts at North Carolina mills, which included roundwood harvested and retained in the State and roundwood imported from other States, was up 10 percent from 560.7 million cubic feet to 615.9 million cubic feet.
- At the same time, the number of primary roundwood-using plants in North Carolina declined from 141 in 2009 to 135 in 2011 (fig. 3). The number of sawmills decreased by five, veneer mills dropped by one, while pulpmills, composite panel, and other miscellaneous mills remained stable.

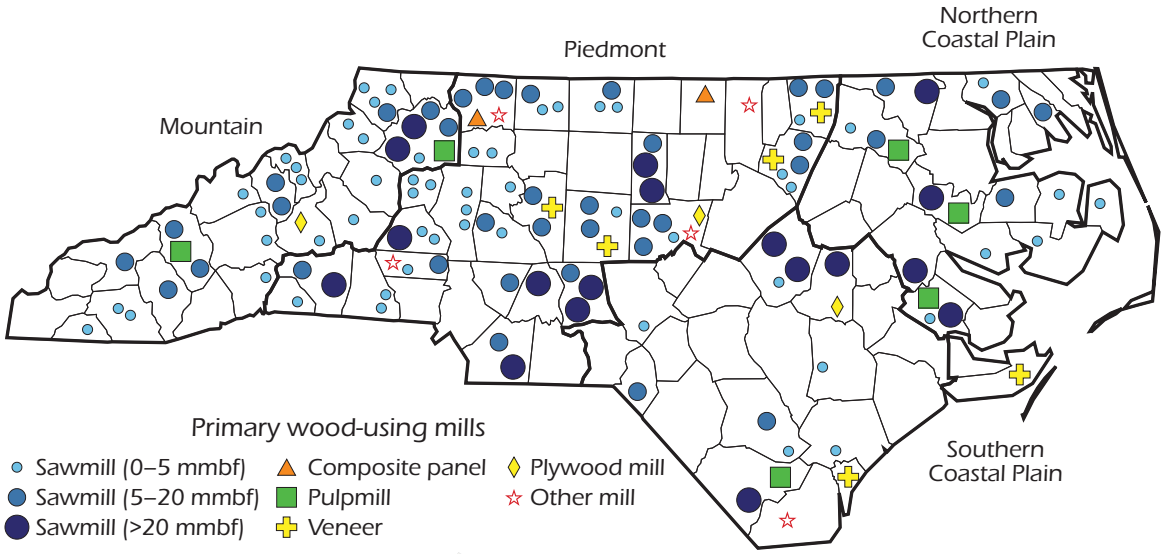


Figure 3—Primary wood-using mills by region, North Carolina, 2011.

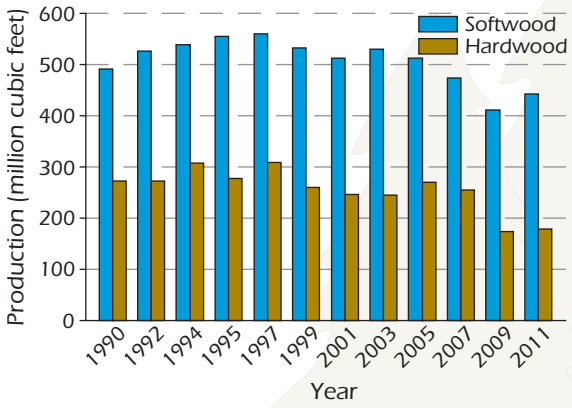


Figure 1—Roundwood production for all products by species group and year, North Carolina.

- Across all products, 85 percent of roundwood harvested was retained for processing at North Carolina mills. Exports of roundwood to other States amounted to 95.4 million cubic feet, while imports of roundwood amounted to 88.9 million cubic feet making the State a net exporter of roundwood.

## Saw Logs

- Saw logs accounted for 45 percent of the State's total roundwood products. Output of softwood saw logs increased 4 percent to 191.7 million cubic feet, while that of hardwood saw logs was up 24 percent to 87.1 million cubic feet (fig. 4).
- In 2011, North Carolina had 113 sawmills, 5 fewer mills than in 2009. Total saw-log receipts were up 18.9 million cubic feet to 285.4 million cubic feet, accounting for 46 percent of total receipts for all mills. Softwood saw-log receipts increased 3 percent to 199.2 million cubic feet, while those of hardwoods were up 19 percent to 86.2 million cubic feet.
- North Carolina retained 95 percent of its saw-log production for within State manufacture, with saw-log imports exceeding exports by 6.7 million cubic feet in 2011.

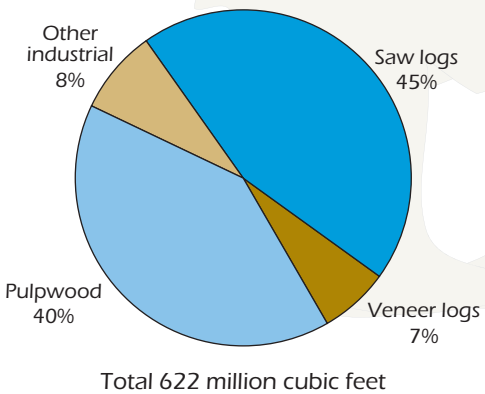


Figure 2—Roundwood production by type of product, North Carolina, 2011.

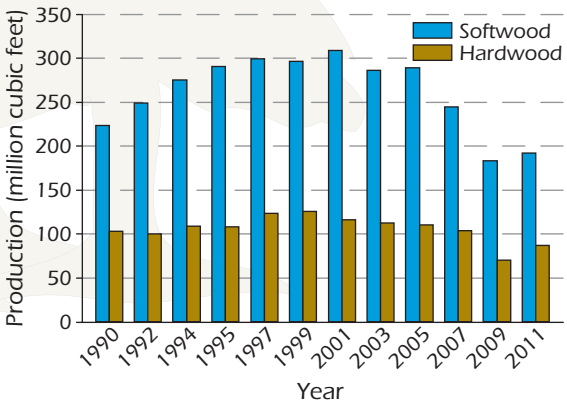


Figure 4—Roundwood saw-log production by species group and year, North Carolina.

## Pulpwood

- Total pulpwood production decreased 3 percent to 251.4 million cubic feet but accounted for 40 percent of the State's total roundwood TPO compared to 44 percent of total TPO in 2009. Softwood output was up 8 percent to 180.6 million cubic feet, while hardwood output decreased 22 percent to 70.7 million cubic feet (fig. 5).

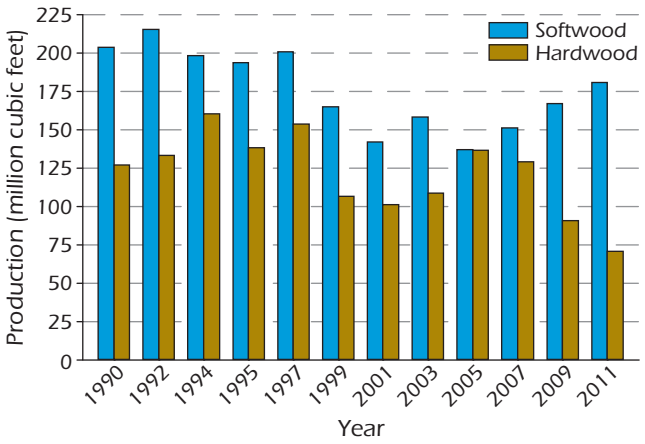


Figure 5—Roundwood pulpwood production by species group and year, North Carolina.

- Six pulpmill facilities were operating and receiving roundwood in North Carolina in 2011, the same since 2003. Total pulpwood receipts for these mills increased to 256.4 million cubic feet, accounting for 42 percent of total receipts for all mills.
- Seventy-eight percent of roundwood cut for pulpwood was retained for processing at North Carolina pulpmills. Roundwood pulpwood accounted for 59 percent of total known exports and 69 percent of total imports.

## Veneer Logs

- Output of veneer logs in 2011 totaled 41.7 million cubic feet, a 7-percent increase since 2009, and accounted for 7 percent of the State's total roundwood TPO volume (fig. 6).
- The number of veneer mills operating in North Carolina dropped by one to nine for 2011. Receipts of veneer logs increased 12 percent to 33.0 million cubic feet.

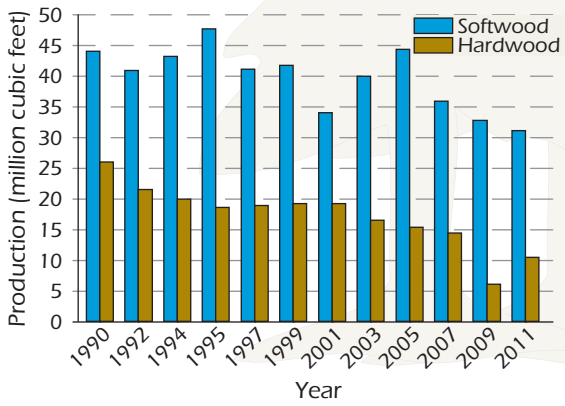


Figure 6—Roundwood veneer-log production by species group and year, North Carolina.

## 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 50.6 million cubic feet. Softwood made up 79 percent of the other industrial products volume.
- The number of plants producing other industrial products totaled seven in 2011. Combined receipts of other industrial products from softwood and hardwood totaled 41.1 million cubic feet. Industrial fuel accounted for 10.0 million cubic feet, or 24 percent, of receipt volume for this category.

## Plant Byproducts

- In 2011, processing of primary products in North Carolina mills generated 231.5 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 100.1 million cubic feet, while bark volume totaled 55.5 million cubic feet. Collectively, sawdust and shavings made up 33 percent of total residues, or 75.9 million cubic feet (fig. 7).

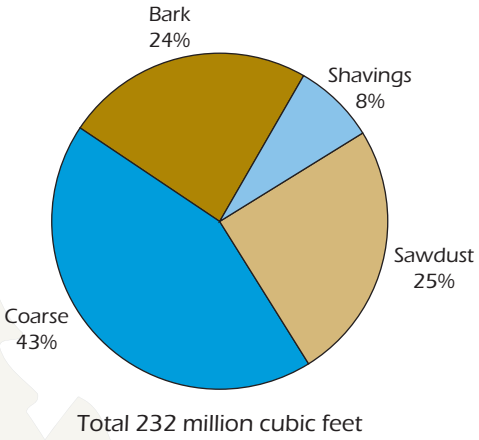


Figure 7—Primary mill residue by residue type, North Carolina, 2011.

- The processing of saw logs generated 186.5 million cubic feet of mill residues, accounting for 81 percent of the total residues produced (fig. 8).

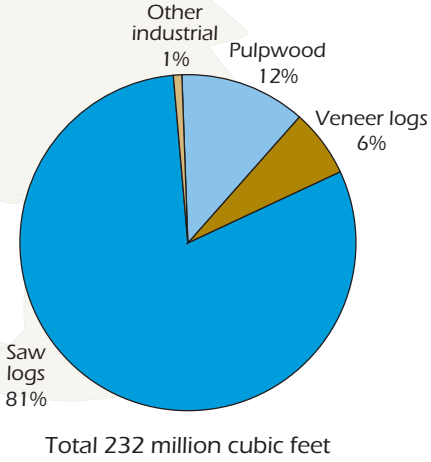


Figure 8—Primary mill residue produced by roundwood type, North Carolina, 2011.

- Nearly 100 percent, or 231.3 million cubic feet, or, of the wood and bark residues were used for a product. While <1 percent of the residues were not used for a product, 42 percent were used for fiber products, and 37 percent of the residues were used for industrial fuel (fig. 9). Eighty-nine percent, or 89.4 million cubic feet, of the coarse residues were used for fiber products. Sixty-one percent of the bark, sawdust, and shavings were used for industrial fuel.

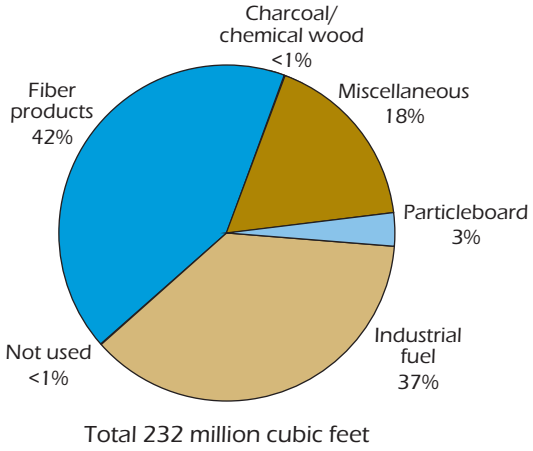


Figure 9—Disposal of residue by product, North Carolina, 2011.

## How to Cite this Publication

Bentley, James W.; Cooper, Jason A.; Howell, Michael. 2014. North Carolina's timber industry, 2011—timber product output and use—forest inventory and analysis factsheet. e-Science Update SRS–094. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 4 p.

How do you rate this publication?
Scan this code to submit your feedback
or go to www.srs.fs.usda.gov/pubeval

You may request additional copies of this publication
by email at pubrequest@fs.fed.us
Please limit requests to two per individual.

Load of pulp logs headed to pulpmill.
(photo by James Bentley)

## Contact Information

**James W. Bentley, Forester**
Forest Inventory and Analysis
Southern Research Station,
USDA Forest Service
4700 Old Kingston Pike
Knoxville, TN 37919
Phone: 865-862-2056 / Fax: 865-862-2048
Email: jamesbentley@fs.fed.us
Southern FIA: http://srsfia2.fs.fed.us
National FIA: http://fia.fs.fed.us

**Jason A. Cooper, Forester**
Forest Inventory and Analysis
Southern Research Station
USDA Forest Service
4700 Old Kingston Pike
Knoxville, TN 37919
Phone: 865-862-2009 / Fax: 865-862-2048
Email: jasoncooper@fs.fed.us
Southern FIA: http://srsfia2.fs.fed.us
National FIA: http://fia.fs.fed.us

**Michael Howell, Forester**
Forest Inventory and Analysis
Southern Research Station
USDA Forest Service
4700 Old Kingston Pike
Knoxville, TN 37919
Phone: 865-862-2054 / Fax: 865-862-2048
Email: mhowell@fs.fed.us
Southern FIA: http://srsfia2.fs.fed.us
National FIA: http://fia.fs.fed.us