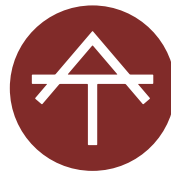




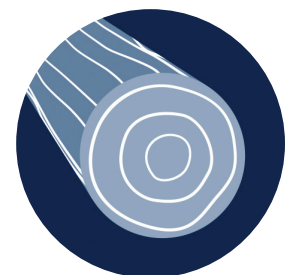
Forest Economic Advisors

Timber Supply Dynamics in the U.S. South

A Joint Study with:



TIMBERLAND
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The Shifting Inventory Dynamics in the US South Will Shape Tomorrow's Timber Markets

The Timber Inventory Situation in the US South is having a Profound Impact on Timber Markets

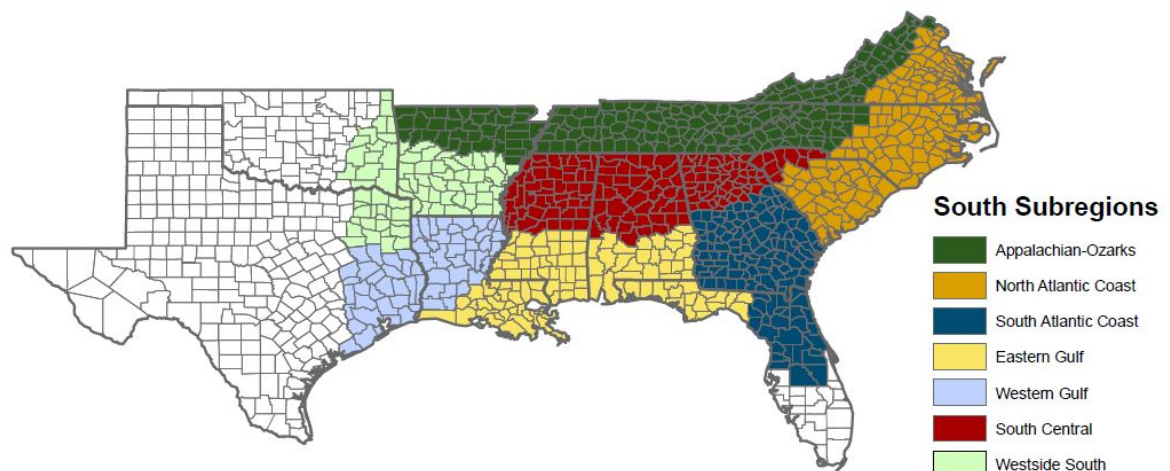
The US South timber inventory levels have risen sharply over the past decade. Depressed harvests during the Global Financial Crisis coupled with higher productivity on the managed pine plantation resource has created significant imbalance in the Southern timber markets. Sawtimber stumpage prices have fallen to the same levels as prices during the early 1990s on a nominal basis and the lowest levels in over 35 years on an inflation-adjusted basis.

Southern Timber Supply Dynamics Will Shift in Coming Years

Looking forward, demand on the Southern timber resource will increase. Supply constraints in other North American producing regions have led to significant investment in the South's forest products industry. The increase in demand will not be distributed evenly across the South and will result in contrasting supply conditions across the region, with inventory levels declining in some regions while others remain elevated. This will have a direct impact on regional timber prices, wood costs for the forest products industry and timberland investment decisions.

The Timber Supply Dynamics in the US South Study will provide answers to:

- Where has the timber inventory expansion been the greatest?
- Where are the most productive softwood resources located?
- Which regions will see the largest increase in harvest levels?
- Which regions have the greatest supply available for future capacity expansions?
- How will shifting age-classes on the pine plantation resource impact timber supply?
- Which regions will see the strongest timber prices over the next fifteen years? Which regions will see the weakest?



Data & Analysis

A Comprehensive Timber Supply and Demand Study with In-depth Analysis

This study is the product of an extensive modeling collaboration between Timberland Appraisal and FEA. Individual supply models were developed for seven regions in the US South incorporating the latest timber inventory information with an integrated outlook on timber demand. This study provides a 15-year outlook on important timber resource characteristics such as standing inventory volume, timberland acreage, age-class, harvests by end-use and product and timber prices on a region-by-region basis.

Timber Stumpage Prices
\$/Green Ton

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Softwood Sawtimber

South	39.10	34.90	36.50	36.00	38.10	40.00	38.20	37.00	31.10	26.90	28.00	24.00	23.40	24.50	25.70	25.80
North Atlantic	42.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
South Atlantic	43.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
Eastern Gulf	44.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
Western Gulf	37.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
South Central	42.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
Westside South	39.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30
Appalachian-Ozarks	29.20	38.20	38.60	36.80	37.40	40.20	39.50	38.10	33.40	30.00	30.00	24.10	25.20	24.70	24.80	24.30

North Atlantic Coast Private Planted Pine Timberland as a Share of Total Pine Timberland, 2014



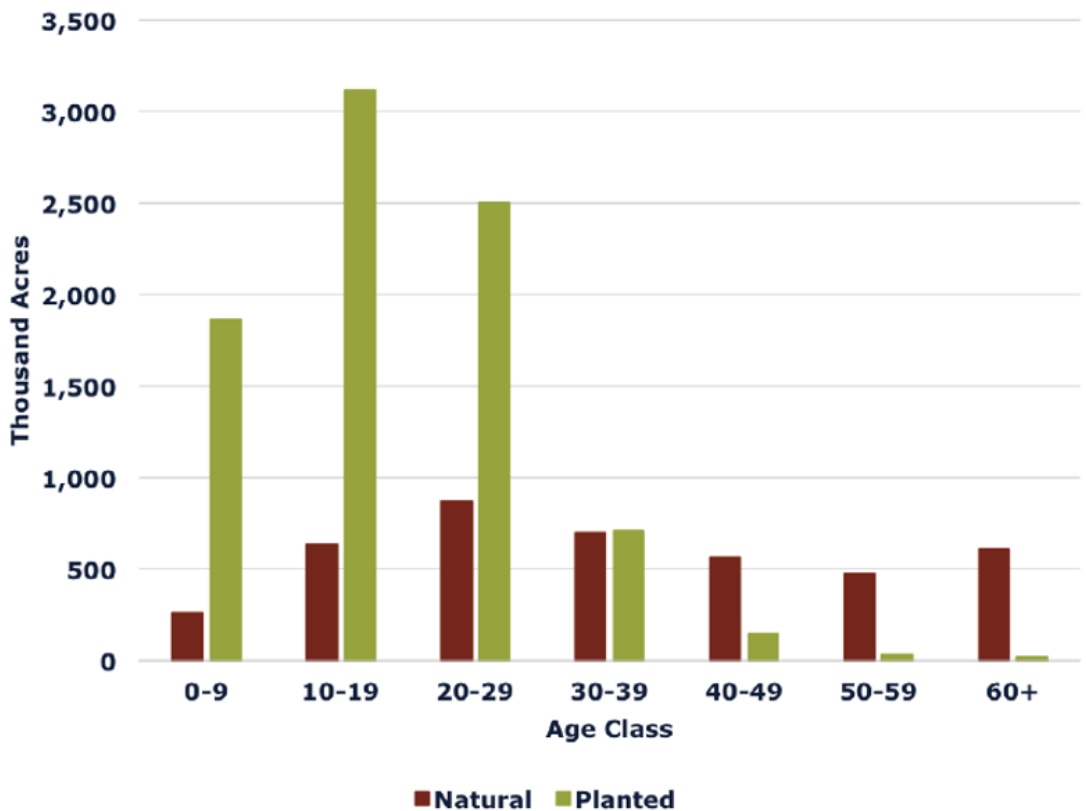
Chip-n-Saw

South	27
North Atlantic	26
South Atlantic	34
Eastern Gulf	30
Western Gulf	22
South Central	32
Westside South	21
Appalachian-Ozarks	21

Softwood Pulpwood

South	7
North Atlantic	8
South Atlantic	11
Eastern Gulf	8
Western Gulf	7
South Central	7
Westside South	6
Appalachian-Ozarks	6

Eastern Gulf Private Pine Timberland by Origin and Age-Class



Study Team

RICHARD LAMONT

President, Timberland Appraisals, Inc.

Rick LaMont, President of Timberland Appraisal Inc., is a professional forester and graduate of Oregon State University in Forest Management. He has over 35 years of experience in timberland appraisal services, harvest scheduling analysis, and timber supply and demand forecasting. He annually appraises over two million acres of timberland in the Pacific Northwest and is a Certified General Appraiser in four states. He has published numerous timber supply and demand studies of the Pacific Northwest, US South and the Pacific Rim.

ROCKY GOODNOW

Vice President, Timber, Forest Economic Advisors

Rocky Goodnow is Vice President of the North American Timber Service at Forest Economic Advisors LLC and is responsible for FEA's outlook on the North American timber markets. Rocky has been analyzing the North American timber markets since 2002 and leads the development of FEA's timber econometric models, which are used in the analysis of future demand on wood fiber resources, regional timber supplies, and timber values. He is the primary author of FEA's Timber Quarterly Forecasting Service publications.

JED BRYCE

Forest Analytics and Appraisal Manager, Timberland Appraisals, Inc.

Jed Bryce has a Master's Degree in biometrics from the University of Washington's College of Forest Resources. He has worked on numerous research projects involving growth and yield modeling, lumber recovery and tree form. Using advanced analytics, Mr. Bryce routinely integrates growth and yield models with statistical software. He is an associate appraiser and biometrician with Timberland Appraisal Inc., and has been appraising investment grade timberlands for five years.



Timber Supply Dynamics in the US South



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This agreement is between Timberland Appraisals Inc, Forest Economic Advisors, LLC and _____ (Purchaser).

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To confirm your acceptance of this proposal, please have an authorized employee fill in, sign and return a copy to Timberland Appraisals Inc, or Forest Economic Advisors, LLC. Once signed by both parties, this document shall constitute a legal binding agreement between both parties, as defined in the attached Standard Terms and Conditions.

For any questions, please contact Lisa Kelly, at lkelly@getfea.com or 978-944-2610.

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