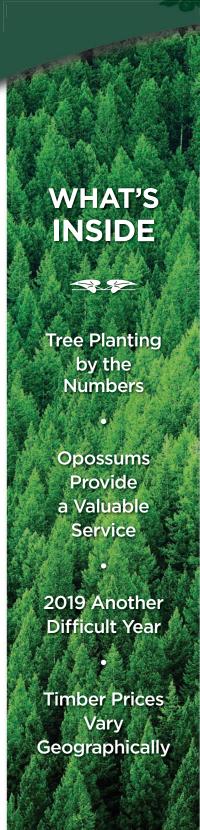
THOMPSON Forest Consultants, Inc.

Issue 20, 2020



MASS TIMBER'S ATTRIBUTES PRESSURING CEMENT INDUSTRY

Concrete — the mix of water, aggregate, and Portland cement — is battling for the market share it has enjoyed for decades in low- to mid-rise construction, while also addressing issues stemming from its environmental footprint. The competition is coming from mass timber, which is gaining

renown amid an expansion in usage.

The aesthetics and structural aspects of mass timber have caught the eye of architects and builders, as wood's popularity in mid-rise building construction grows.

Consequently, it's also grabbed the attention of concrete interests, who have generated marketing campaigns extolling the virtues of their product, while citing the perceived disadvantages of mass timber.

That attention alone indicates that the concrete industry is taking competition from wood seriously.

Clemson University's Snow Family Outdoor Fitness and Wellness Center is the first building made from southern pine cross laminated timber east of the Mississippi River.

Mass timber proponents cite environmental attributes as one if its biggest advantages over concrete. Carbon emissions from the manufacture of cement comprise 7-8% of the world's total, according to reports.

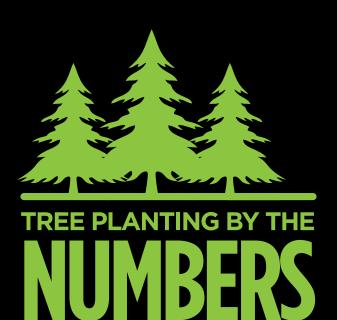
Production of cement in the U.S. emits the second-greatest amount of gases in the economy's manufacturing segment, behind iron and steel. In contrast, lumber production does not show up on the EPA's long list of emitters. More importantly, the forestlands generating lumber are a vast carbon sink, removing CO2 from the atmosphere, wood advocates say.

The forest products industry for decades has been under the scrutiny of environmental groups. With mass timber, wood used in tall-building construction is perceived by many to be an environmentally responsible alternative to traditional tall-building materials.

To combat the growth in mass timber, the concrete industry has keyed on safety issues. Thus, the threat of fire is used by the industry to discourage the use of mass timber. However, building codes, which include fire suppressing materials and sprinkler systems, have been amended to limit fire danger in these buildings.

The "Build with Strength" program is a multimillion dollar campaign administered by the National Ready Mixed Concrete Association, promoting to architects, builders, and building code developers the benefits of concrete construction in the low- to mid-rise building sector. The NRMCA warns members that pro-wood advocates are busy at the state and local levels, promoting the use of wood in tall-building construction. The NRMCA website's "Monthly Activity Report" is subtitled: "Stopping wood through building code advocacy."

Reprinted from Random Lengths, July 26, 2019



US Forest Nursery Seedling Production for 2017-18 Season

South Carolina Forest Nursery **Seedling Production for** 2017-18 Season

South Carolina Forest **Nursery Seedling Production** for 2017-18 Season as Percentage of US and **US South Production**

Bareroot Seedlings as Percentage of SC Seedlings Produced (1% Container)

Hardwood Seedlings as Percentage of SC Seedlings Produced (Conifer 99.6%)

South Carolina for (Assuming 550 trees/acre) OPOSSUMS PROVIDE A VALUABLE SERVICE

Adapted from National Wildlife Federation Blog, blog.nwf.org

Opossums seem to be a very misunderstood animal. Despite marsupial in North America.

Researchers credit opossums with a wide variety of activities their ancestors fed on dinosaur eggs so many years ago.

5,000 ticks per year.

If you notice an opossum, consider its role in the ecosystem before disturbing it. Just because an opossum looks dead or near death does not mean it is dead. Opossums famous act of "playing opossum" is an involuntary response to threats. Opossums go catatonic, "grin" and excrete a foul smelling liquid to deter predators. Opossums playing opossum will recover in 1-4 hours.

WHAT IS A BABY OPOSSUM CALLED?

Extra credit: What is a group of opossums called?

tracing themselves back to the time of the dinosaurs, 65 million years ago, opossums are the Rodney Dangerfield of animals, "who don't get no respect." Opossum is derived from Algonquian for "white animal" and they are the only

to control pests, including ticks and garden pests such as snails and slugs. Opossums eat almost anything, such as all snakes, acorns, rats, mice, and carrion. Opossums are highly resistant to snake venom and not prone to carry rabies! Of course, opossums also feed on bird eggs just as

With increased populations of deer ticks and occurrences of Lyme disease, opossums are especially helpful. Opossums are exceptional groomers and any tick attempting to attach to a opossum has a 5% chance of not being eaten itself. Researchers credit a single opossum with consuming about date through July and 6% above the same period in 2017. Our clients are heavily exposed to the plywood market as well. US and Canadian plywood production were both down 5% through September as compared to 2018. About 25% of plywood consumed in the United States came from overseas in 2019 as a stronger dollar helped imports. US producers recently filed a suit against Brazilian plywood (8.4% of US consumption) for

Sawtimber prices continued their slide as more logs hit the

market and manufacturing production increased incrementally.

Shipments of southern yellow pine lumber were up 1% year to

PINE SAWTIMBER AND CHIP'N'SAW

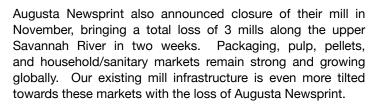
In 2018, we had high hopes for Canfor to construct a new sawmill in Washington, Georgia. Since then, Canfor, a publicly traded company, nearly sold itself to a private investor who already owned 51% of the company, but the deal fell through. The new Washington sawmill has not broken ground. Slightly farther way, Georgia Pacific started up its new state-of-theart sawmill in Warrenton, Georgia. Both mills were announced within days of one another in early 2018.

PINE PULPWOOD

structural deficiencies.

Pine pulpwood markets were solid until late 2019. Three major pulpwood-buving mills announced closures in early

November. Georgia-Pacific announced the closure of its McCormick sawmill and its Allendale OSB mill. The McCormick mill bought sawpulp, which is a straight larger pulpwood tree, to make only 8' 2x4s. This mill had many headwinds, including inability to increase the size of the physical plant, limited product line, outdated equipment, decreasing supply of timber in the narrow sawpulp range, and increased competition from Enviva Pellets and the refitted Graphic Packaging/International Paper mill in Augusta.



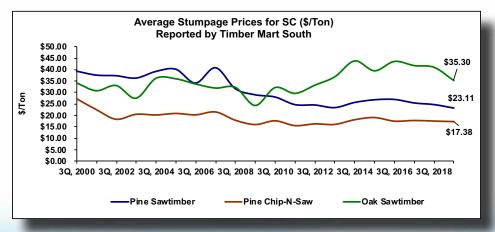
HARDWOOD SAWTIMBER

2019 ANOTHER DIFFICULT YEAR

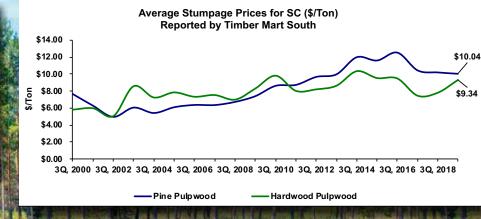
Hardwood sawtimber prices collapsed in 2019, largely due to Chinese tariffs. Chinese tariffs placed on exports of red oak, walnut and other hardwoods have cut almost 50 percent of the revenue in the industry since 2017, according to the American Hardwood Export Council. The value of hardwood lumber exports to China were second only to soybeans, which have gained much more news coverage. Frank Stewart, executive director of the West Virginia Forestry Association, says "There is no other market to absorb 32,025 shipping containers of American red oak that sold to China in 2017." White oak prices are at a large premium to red oak locally.

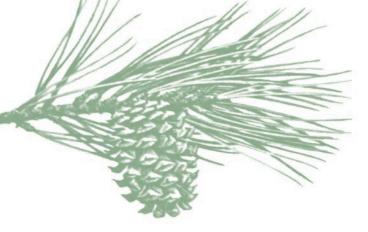
HARDWOOD PULPWOOD

Hardwood pulpwood markets weakened in late 2019. Dealers seemed to struggle to deliver the small volumes found in pine plantations. This market has been a vo-vo for some time.









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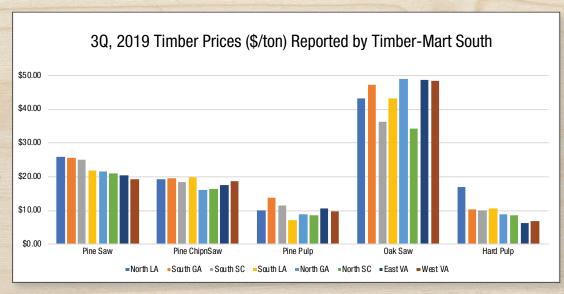
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Our services include: Forest Consulting • Real Estate & Acquisitions • Land & Timber Appraisals • Forest Management Plans • Timber Sales & Logging Supervision • Reforestation • Timber Investment Analysis • Prescribed Burning & Site Preparation • GIS Mapping & Analysis • Hunting Licenses

TIMBER PRICES VARY GEOGRAPHICALLY

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When an investor looks to purchase timberland or construct a wood facility, their decision becomes very localized. Timber-Mart South reports prices for 2 market areas in each of the 11 southern states, making 22 reports. Consulting firm Forisk wisely segments South Carolina into 5 markets and Georgia into 7 markets, most of which cross state lines. These markets are unique in the types of wood consuming mills present. Timber is expensive to transport and the marginal cost of transportation usually negates the benefit of hauling logs or pulpwood from a "low price" market into a "high price" market.



Average market prices can be quantified but they are of limited use for almost all small landowners. There are major local variations in specifications, weather conditions, supply, reporting and unit conversions, making prices difficult to compare. Many of us quickly forget the low price sale but long remember the high price sale. Please see the above varying prices reported by Timber-Mart South for various markets. Most of our clients overlap the two South Carolina Timber-Mart markets.