

66 FOR IMMEDIATE RELEASE: January 8, 2010

A few cold-resistant thoughts on Southeast timberland are offered

By Curtis Seltzer

The consensus thinking among economists is that the U.S. economy will grow about three percent in 2010. Some, however, believe that it will muddle along with no consistent growth for at least several years, and maybe more. A minority argue that a second dip is in the offing.

The growth rate in the broader economy has always directly impacted prices for traditional wood products, such as lumber and paper. New-home construction has been a reasonably reliable driver of demand for and prices of many lumber products. Southeast pine -- to use a shorthand -- has ridden both home construction and fiber needs for many years. The question is: Will these historical horses still be pulling the Southeast's wagon in the future?

Take housing.

Our population has grown to about 306 million. The number of new one-family houses built from 1975 to 2008 dropped from 875,000 annually to 819,000, but those bookends don't reveal a fairly steady growth to about 1.65 million in 2006, and then the familiar crash to half that. During the same period, the average number of square feet in new one-family houses increased by more than 50 percent, from about 1,650 to 2,520 in 2008.

It's reasonable to expect that new-home construction will pick up, probably slowly, if only because of our growing population. But we might start preferring smaller new houses, consistent with an aging population and income-limited younger people having small families. We may use more wood per house, however, rather than less, as a substitute for metal and petroleum products. We may also shift toward more multi-family and fewer single-family new constructions as a result of continuing income pressure on the middle class.

I'd net this out in terms of Southeast timber as a prediction for maybe a one percent minimum, or a little more, annual growth rate in house-related lumber during the next 15 years.

Southeast pulp and biomass demand is even harder to predict.

I can't see how most of the traditional paper markets -- such as newsprint and coated products -- will show much growth, given the shift to electronic information exchange and alternative supply sources. New paper mills are not being built in this country. Pulp will continue to find markets as feedstock in construction products, however.

So what might Southeast pine be used for in the future if some -- but not all -- of its current markets look sort of soft going forward?

Cellulosic ethanol. As we know, 10 percent of our gasoline is now ethanol, most of which comes from corn. Federal production mandates and subsidies underpin this industry. The corn-based ethanol industry may not be able to stand on its own with gasoline prices under \$3.50 a gallon. Some have questioned whether there's a net energy benefit in the corn process.

I'd put on the table all of the corn questions and more for cellulosic ethanol from trees. Maybe a cost-efficient, energy-efficient process is out there, but the experience with coal-based synthetic fuels may be more applicable. Yes, you can make gasoline out of coal, but it's always more expensive than alternatives and involves tricky environmental issues. I wouldn't count much on wood-based ethanol. Other sources of cellulosic feedstock are available.

As of February, 2009, Reuters reported a total capacity of 3.07 million gallons/year of cellulose-based operating pilot plants, only one of which was in the Southeast--a 1.4 mgd plant using bagasse in Louisiana. This includes all types of cellulose feedstocks, not just wood.

Commercial-scale plants not yet opened using all forms of cellulose amounted to a capacity of 225 mgd. This included Georgia's Range Fuels plant of 20 mgd and a Gulf Coast Energy plant in Florida (25 mgd), both of which used woody biomass. Finally, there was a total of 83.47 mgd in pilot or pre

commercial cellulose plants nationally, of which three woodies were in the Southeast with a total capacity of 17.4 mgy.

Taking all three categories together, they amount to about 60 mgy of Southeast wood-ethanol capacity if all the commercial plants open and all pilot plants come on. That's not much of a hook to hang a timberland-investment strategy on.

Pellets. Make sense to me.

Europe is a growing market for U.S.-produced pellets. It has 450 pellet plants in operation, with more coming on, which may become a good market for Southeast wood. West Coast pellets are being shipped there. Global pellet production was about 10 million tons in 2008. It's expected to double in five years, with growth in the U.S. market moving ahead at a fast pace.

The U.S. has not moved very quickly into pellets, particularly as a source of generating electricity. Most U.S. pellets are burned as wood-stove heat.

Electricity generation from woody biomass. This, too, seems like a horse that's ready to run.

In 2007, the U.S. had 346 electricity-generating plants burning solid wood or wood liquids that had a total nameplate capacity of 7,510 MW, or only about 0.007 percent of total generating capacity. That's a pittance.

Power generation seems to me to be an obvious growth sector for wood, particularly in the Southeast and East of the Mississippi. The technology is there. Wood biomass is priced competitively with coal. It can be burned in a dedicated facility or in a co-generation scheme. It has fewer environmental negatives than coal, which it should displace.

The wildcard in Southeast timber is the possibility of widespread use of a very short-rotation species, such as a cold-hardy Eucalyptus, that could be harvested on, say, a seven-year cycle. Coppicing such a tree on Southeast plantations would provide oodles more wood volume ("oodles" is a rigorous macro-economist's term I learned in graduate school). Such a species would find a market in pulp, pellets and generating power. It would displace traditional planted pine stands, the extent to which is difficult to forecast.

ArborGen, the South Carolina partnership of International Paper, MeadWestvaco and Rubicon Ltd., has developed a Eucalyptus that seems to be good down to 10 degrees and would do well in the Deep South. It's likely to produce in the range of 10 to 15 dry tons of biomass/acre/year and can be harvested every five to seven years. Some environmentalists are challenging federal approval and introduction, based primarily on a concern that the Eucalyptus will invade and take over native forests and general opposition to tree plantations on biodiversity grounds. ArborGen's species should be available at some point in large quantities. It's expensive, but production volume should justify the high cost.

I've only touched the surface of these various ideas. But I think where I have led myself is to the position that the timber-producing value of Southeast timberland is probably as safe as anything else when everything is netted out, but the timber market environment will probably change fairly dramatically over the next 15 to 20 years. Timberland owners may want to consider getting into long-term supply arrangements for plantation production with a biomass plant to contain market risk.

Well, I've rattled on for much too long. It's a way of keeping my hands warm with outside temperatures at not much above zero.

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