Perceptions, Awareness, and Participation:
Sawmills and the CLT Market in the South
By Charles B. Gale, Richard Vlosky, Mason T. LeBlanc, and Rajan Parajuli

Richard P. Vlosky, Ph.D.
Director, Louisiana Forest Products Development Center
Crosby Land & Resources Endowed Professor of Forest Sector Business Development
Room 227, School of Renewable Natural Resources
Louisiana State University, Baton Rouge, LA 70803
Phone (office): (225) 578-4527; Fax: (225) 578-4251; Mobile Phone: (225) 223-1931
Web Site: www.LFPDC.lsu.edu
M ass timber has been produced and used in many forms over the past decade. Examples are glulam beams, laminated veneer lumber (LVL), and parallel strand lumber (PSL). More recently, new entrants have been developed and are being adopted in the North American engineered-wood family of products: Cross-laminated timbers (CLTs), nail-laminated timbers (NLTs), dowel-laminated timbers (DLTs), and mass plywood panels (MPPs) have experienced years of product testing and manufacturing learning curves, yet so far have gained limited market space.

CLT manufacturing has been an established industry in Europe for decades, but is in its infancy stage in the US and Canada. The potential markets for CLT in the US are enormous, if architects, developers, builders/contractors, and building owners accept the product as a substitute for steel and concrete.

Led by CLTs, North American mass timber-panel manufacturing is poised for substantial growth. It is projected to double in size in terms of projects and manufacturing capacity annually for the next four years. The awareness and understanding of this emerging market are accelerating, due to the International Mass Timber Conference—held in Portland, Oregon, for the past three consecutive years—as well as the efforts of Architects, Woodworkers, a national organization, to disseminate knowledge. This is just the beginning of a very long upward trajectory for an industry that will replace traditional construction materials, such as steel, concrete, and masonry, in many applications. Mass timber panels will also be used in conjunction with traditional building materials, further expanding markets and use. As the environmental, economic, construction, and aesthetic implications of using wood are better understood by architects, developers, builders, engineers, and government officials, the mass-timber industry will be firmly established in both nonresidential and residential construction in the future.

In North America, current mass-timber plants under construction include Katerra, Vaagen Brothers, and Smartlam’s expansions in the Pacific Northwest, all of which are medium-large-capacity facilities. A random sample was taken from the sawmill sector in the study region. Following the Tailored Design Method (Dillman 2000), pre-notification postcards, a first survey mailing with a postage-paid envelope, reminder postcards, and a second survey mailing were sent to the 824 study recipients. After accounting for undeliverable surveys—primarily firms that had gone out of business—incomplete surveys, and nonresponses, the adjusted response rate was 16 percent, with 96 usable responses. Tests for nonresponse bias at p = 0.05 level indicated this was not an issue. Comparisons were conducted for frequency by state for respondents, compared to viable nonrespondents and quantitative responses comparing first- and second-mailing respondents.

Survey Results
The highest survey response rates were from the states of Tennessee, North Carolina, and Mississippi, comprising 20, 16, and 14 percent of the collected responses, respectively. Most of the sawmills were moderately sized in terms of employment, with 32 percent of them employing 20–49

Figure 2. Respondents’ likeliness to sell lumber to a CLT manufacturer operating within their region (n = 78)
people, while only 2 percent employed more than 500. And 7 percent had fewer than four employees. Fifty percent of respondents were hardwood sawmills, 41 percent were softwood mills, and the balance produced other potential CLT feedstock products such as poles and posts.

What do they know about CLT? While the CLT market is poised for substantial growth, results indicate that respondents (n = 82) are generally unfamiliar with CLT. Almost half of the respondents, 46 percent, indicated they were not at all familiar with the product, while 41 percent were somewhat familiar, and 12 percent were very familiar. Two areas in which respondents reported the highest familiarity occurred in clustered groups located near the International Beams mill in Dothan, Alabama, and a region southwest of Birmingham, Alabama, as indicated by the heat map in Figure 1. The recent establishment of a CLT manufacturer within the region seems to be at least in gaining the attention of southern sawmills, as 59 percent of the respondents reported they knew nothing about the current CLT manufacturers within the US; only one percent were very familiar.

Will they sell lumber to CLT manufacturers? Can they meet CLT lumber requirements? While the lack of familiarity may be daunting to potential CLT manufacturers hoping to locate in the southern “wood basket,” about 37 percent of respondents claimed a positive likeness to sell lumber to a manufacturer operating within their region, while 4 percent of respondents claimed to have already sold lumber to a manufacturer. In fact, a larger portion of sawmills generally appeared to be either willing or on the fence about selling lumber to a CLT manufacturer versus being unlikely or not likely at all to regard the opportunity (Figure 2). About 81 percent of the respondents reported they would not require long-term contracts with manufacturers, but 56 percent said they would accept them. The capability of southern sawmills to produce CLT-grade lumber is of no issue. Nearly half of the respondents reported that they could meet the lumber specifications, with about 54 percent claiming that they could dry wood to a 10–12 percent moisture content, and 46 percent stating they were able to sort and provide higher-density wood.

What’s Next? Although this study established a general unfamiliarity with CLT and CLT manufacturers from the perspective of southern sawmills, the opportunity to increase knowledge and expand the industry presents itself. Sawmills expressed that they mostly preferred contact with CLT manufacturers, as well as the builders who use the material, as a means of improving the understanding of their opportunities within the market (Figure 3). This is an opportunity for CLT education providers to target this segment.

As previously mentioned, respondents expressed their willingness to cooperate with manufacturers, but they also shared a positive outlook on the level of CLT used by builders in the next year (Figure 4). As with any new industry, communication is crucial for efficient interactions between suppliers and manufacturers. In today’s world of social media and global interconnectivity at the tap of a phone screen, there are not many reasons limiting wood-products neighbors in the South from networking and ushering in a new era of building materials. Willingness and cooperation for a change are sometimes inherent; familiarity and understanding can be enhanced, and connections can be quickly established. It is now on the shoulders of the forest-products industry to develop the capability to bring about a change and a new market. In the words of Albert Einstein, “The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.”

Charles B. Gale is principal, Doug Fir Consulting, Portland, Oregon. Richard

Figure 3. Information that would improve respondents’ understanding of selling lumber to CLT manufacturers for use in building construction (n = 52); multiple responses possible.

Figure 4. Respondents’ estimated level of change in CLT use by builders in the next year (n = 62).

Vlosky is director, Louisiana Forest Products Development Center, and Crosby Land & Resources Endowed Professor of Forest Sector Business Development, School of Renewable Natural Resources, Louisiana State University AgCenter. Mason T. LeBlanc is a master’s student at the Louisiana Forest Products Development Center. Rajan Parajui is an assistant professor and extension specialist, Department of Forestry and Environmental Resources, North Carolina State University.

References


Link to SAF Journals

Digital editions and archives of the Journal of Forestry are available at academic.oup.com/jof and Forest Science at academic.oup.com/forestscience.

MEASURING UP TO EVERY TASK SINCE 1949.

Whatever your discipline, whatever your skill... We've been there, and know what it takes to get the job done right. It's just what you'll find in our catalog and on our website—thousands of professional quality products, each backed with our world class customer service. Go online, or call 800-360-7788 to order your FREE catalog.

FORESTRY Suppliers

Sales 800-647-5368
www.forestry-suppliers.com