PLANT LOCATIONS REFLECTING TIMBER SUPPLY AND COSTS

Same companies are sidestepping traditional locations to take advantage of raw material situation.

HENRY SPELTER
FOREST PRODUCTS LABORATORY

This column was written for years by Tom Malone of Washington state University, followed in the past two years by Terry Sellers of Mississippi State University. To be asked to follow in their wake is an honor but also somewhat of a challenge, like trailing an aircraft carrier in a tug boat. After some thought, discretion won over valor and I said no. As an alternative. I suggested I could make occasional contributions as part of a rotating group of authors.

I am an economist by training who, by virtue of where I have been over the last 20 years, has had the chance to learn up close about a wide range of technological trends and innovations in forest products manufacturing. I am a well informed generalist, but a generalist nonetheless and I rely on my research colleagues for accurate information when it comes to the more technical areas of the industry. And I rely upon many of you, as I have over the years in visits to your plants, conversations with you over the phone, and discussions at meetings and trade shows, to remain tuned to the practical issues and concerns in the wood products business. I hope this relationship continues and I invite those of you who are so inclined to contact me with suggestions and comments on topics of interest to you.

My general approach to tasks has been to collect bits of information related to some topic and assemble them in such a way so that the key issues emerge. We all have a store of knowledge and experiences, but few of us know everything. Combining many individual experiences is valuable in confirming assessments or providing new insights. It is my intent to present information in this way as a means to help see the proverbial forest that is often obscured by the individual trees.

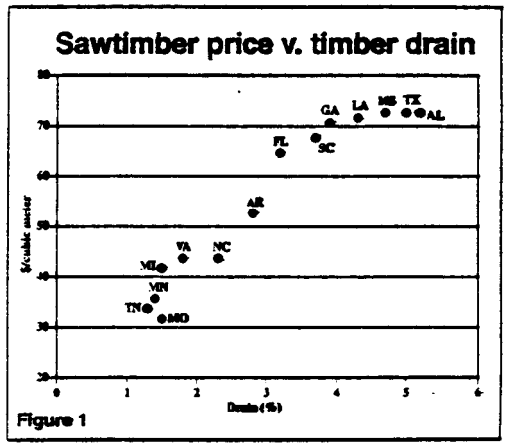
By way of illustration, consider a plant operator who may be contemplating expanding and is concerned about the availability and price of timber. The information he knows most is confined to his own circumstances. A more useful basis for a plan would be knowledge of what everybody else is using and paying in his county, state or region. and how that relates to the respective availability of timber.

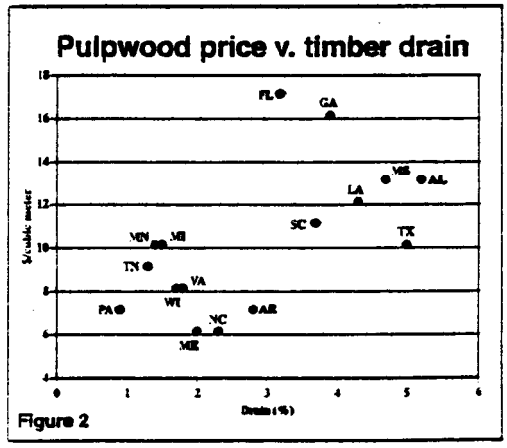
Over the years we have compiled much data on primary wood using plants throughout North America. Among other things. we have each major plant's location and output capacity. By combining the capacities of the lumber, plywood and board plants and adding in timber receipts at pulp mills, we can get fairly comprehensive estimates of the timber drain occurring within states.

To complement the drain estimates, we extracted from the Forest Service data base information on roundwood inventory volumes in each state, defined as trees 12 or more centimeters (five in.) in diameter. Combining the drain and inventory numbers in a ratio provides a compact measure of the overall timber situation within each state.

Along with these, we have assembled information on timber stumpage prices throughout the continent from a variety of public and private vendors. We can contrast this information with the timber drain ratios to determine what, if anything, they say about timber costs. Figures 1 and 2 summarize this exercise for pine sawtimber and pulpwood, respectively. To withhold the confounding effects of changing federal timber policies, we looked only at Eastern states where federal timber constitutes a relatively small part of the timber supply.

The first figure shows a wide range of pine sawtimber prices across states which are clearly related to the intensity use. In states such as Alabama and Texas, the drain approaches 5% of the available wood. which means that the inventory is being turned over every 20 or so years. It should not be surprising, therefore, that users of larger, better trees pay a premium relative to states where the overall drain ratio is much lower, such as Minnesota or Virginia.





Analysis of timber use/supply indicators shows that the core wood producing Southern states of Texas, Louisiana, Mississippi, Alabama, Georgia and South Carolina are closely utilizing their present wood grow-

ing capacity. Their drain/inventory ratios range from 3.7% to 5.2%. while their drain/growth ratios are 74% a higher, implying that their utilization levels are near their sustainable rates at present growths.

A second group of states at the fringes of the core group emerges as an intermediate cost area. These include Florida, North Carolina. Virginia and Arkansas, as well as Northern states such as Maine, Wisconsin and Michigan. Their dram/inventory ratios range from 1.5% to 3.2%, while their drain/growth ratios range from 40% to 64%. These somewhat lower use intensity levels are reflected in more moderate sawtimber prices.

Finally, there is a low cost group of states located primarily in me eastern hardwood belt into which the softwood industry has not moved in a large way. These include Kentucky, Tennessee, Missouri, Minnesota, Pennsylvania, New York and West Virginia. Their drain/inventory ratios are as low as 0.4%, while their drain/growth ratios lie between 14% and 41%. Pine sawtimber prices are about half as high as in the top tier of states.

Figure 2 shows the same drain/inventory rates plotted against pine pulpwood prices. While the relationship is not as exact. a general correlation remains in evidence.

New inventory data being gathered may show timber availability to be less restrictive. Large volumes of pines planted in lands under the Conservation Reserve Pmgram a decade or more ago will be reaching a size where they will begin to be counted. Still, these data are indicative of the relative demand/supply relationships for timber in various regions of the country and help explain why more plants are being sited away from the traditional areas such as the South in favor of places such as northern Alberta, Quebec and Ontario, and in states such as Oklahoma, Michigan, Wisconsin, Tennessee and West Virginia.

In maneuvering for an advantage in a competitive commodity market, there hardly is a better edge to be found than low wood costs. But to take advantage of these, operations have to be flexible in what they process because a single desired species may not be available in the volumes found in mom traditional areas. Processes on the other hand that are able to handle a variety of species can thrive. OSB of course has been a prime example of a process able to use "off" species to make products that were once primarily made from softwoods. But there have been other operations built in lower cost areas based on utilizing such species as yellow poplar a aspen for products including structural plywood and laminated veneer lumber.

The full study is available from the Fores t Products Laboratory in a report FPL-GTR-103, entitled "Wood-based panel plant locations and timber availability in selected states." It also appears on the website at http://www.fpl.fs.fed.us **PW**

Henry Spelter is with the Forest Products Laboratory in Madison, Wis. He can be reached al (608) 23I-9380 or at hspelter@facstaff.wisc.edu