widely recognized business theory states that there are three strategies that allow a company to create and keep a competitive advantage. One strategy is to become the industry's lowest cost producer. Another is to produce a product that is unique in a way that has value to customers. Finally, a company can focus its efforts on a particular market segment and serve the segment better and more efficiently than can other companies.

Each of these strategies can provide a company with a competitive advantage. However, for small- to medium-sized hardwood lumber producers, the focus strategy may be the most appropriate. Low cost production often requires investments in production equipment and/or timberlands and producing a unique product may require extensive product and market research. Both of these strategies may be beyond the resources of small companies.

If a company is to serve a particular market segment well, it must have an understanding of the needs of the customers in the segment. For some hardwood lumber producers this is not a problem—they have known their customers for a long time and have a good feel for their needs. But what happens when a lumber producer wishes to diversify by serving a new market segment? How can he determine what product characteristics are most important to customers in the new segment?

In order to help answer this question, the department of wood science and forest products at Virginia Tech, in cooperation with the Southeastern Forest Experiment Station of the Forest Service, studied four segments of the market for hardwood lumber. These segments were: furniture, cabinet, dimension and flooring, and molding/millwork manufacturers.

Each of these market segments represents an opportunity for the hardwood lumber producer who can effectively serve their needs. Dr. William Luppold estimates that together these market segments used 3.2 billion board feet of hardwood lumber in 1987—approximately 28 percent of total U.S. production and over one half of the non-pallet market. Since several of the segments use higher grade lumber, they account for an even larger percentage of total hardwood lumber value.

Since 1987, these market segments have remained significant users of hardwood lumber. Dr. Luppold states that “Lumber use in most of these market segments has remained stable since 1987. The exception is the flooring industry, which has increased its lumber use.”

In this article we explain how our study was conducted and the characteristics of companies (i.e., potential customers) that were included. We also discuss the hardwood lumber purchasing characteristics of companies in each of the market segments. Part 2 will explore the product characteristics that lumber buyers consider to be most important and reasons for dissatisfaction when purchasing hardwood lumber.

The Survey
The largest U.S. firms in each of the market segments were surveyed, and 55 usable responses were received. These respondents were asked about the characteristics that they considered most important when purchasing hardwood lumber, and why. The results of the survey are discussed in the next section.
segments were included in the study. Companies were identified through a review of published listings such as the Furniture Design and Manufacturing Top 300, Who's Who in Kitchen Cabinets, and trade association membership lists. In addition, input from individuals familiar with the segments was used to help identify large companies. The person responsible for purchasing hardwood lumber was identified during telephone conversations with personnel at each of the companies. A survey was then mailed directly to that person. The largest companies typically employed someone with the title of lumber purchaser. More commonly, however, lumber purchasing responsibility fell to company presidents or vice-presidents. Surveys were mailed to 403 companies in May of 1989. A total of 252 companies (63 percent) generously took the time to provide information. All responses were anonymous. The large number of respondents in the dimension and flooring category allowed the category to be split into separate groups for analysis. The survey included companies in all regions of the United States. However, the largest portion of responding companies was located in the south and midwest regions. Approximately 46 percent of the responding companies reported annual sales of less than $10 million. Twenty-six percent reported annual sales in the range of $10-24.9 million, and the remainder of companies had annual sales in excess of $24.9 million.

Millwork companies were the smallest in terms of number of production employees (an average of 77 per company). Furniture companies employed the most people, with an average of 82 per company.

Lumber Purchases
Responding companies used a total of 1.39 billion board feet of hardwood lumber annually—approximately 43 percent of the total annual lumber use by all companies in the market segment. The companies purchased the majority of their lumber directly from sawmills (Figure 3). However, brokers and wholesalers were also important sources of lumber.

Volumes
The average volume of lumber purchased ranged from 1,649 MBF/Company/Year for cabinet manufacturers to 12,948 MBF/Company/Year for flooring manufacturers. Between these extremes were molding/millwork (2,610 MBF/Company/Year), dimension (3,526 MBF/Company/Year), and furniture producers (8,426 MBF/Company/Year).

Species
Overall, the most purchased species were red oak, white oak, and yellow poplar (Figure 4). The remaining domestic species each accounted for less than seven percent of total lumber purchases and imported species made up less than three percent of purchases. Red oak was also the single most purchased species within each of the market segments (Figure 1).

Grades
Overall, No. 1 and No. 2 common grades of lumber were purchased most often by responding companies (Figure 5). However, the market segments differed in terms of the mix of lumber grades they purchased. For example, No. 1 common lumber ranged from 15 percent of total purchases among flooring producers to 60 percent among furniture producers (Figure 2).

Buyer Satisfaction
Are companies in these market segments satisfied with the lumber they purchase? Generally not—only 11 percent of the companies reported being completely satisfied when purchasing hardwood lumber. None of the dimension stock companies were satisfied. Part two of this article, to be featured in the August issue, will explore the reasons for this dissatisfaction and the importance of various product and supplier characteristics.

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