

A COMPARISON OF MARKET NEEDS TO THE SPECIES AND QUALITY COMPOSITION OF THE EASTERN HARDWOOD RESOURCE¹

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ABSTRACT: Many markets for hardwood lumber have experienced growth in recent years. Eastern and Central hardwood lumber production reached an estimated 11.2 billion board feet in 1988, a twenty year high. Wood furniture, flooring, and exports have also experienced growth in the last ten years. During the same period, annual growth on eastern hardwood forests has exceeded annual removals. However, species and grade compositions do not match demand. These differences can affect timber harvest and the availability of raw material.

MARKET NEEDS

A recent study (Bush et al. 1989) provides information concerning the species and grade needs of large companies in several segments of the market for hardwood lumber (millwork, dimension parts, flooring, furniture, and cabinets). Red oak is the single most demanded species -- comprising almost one-half of lumber purchases by flooring, dimension, and cabinet producers. White oak constituted 49 percent of wood use by flooring manufacturers but accounted for less than 10 percent in each of the remaining markets. Yellow poplar accounted for 18 percent of wood use in the millwork market and 16 percent in the furniture market.

Lumber demand in the furniture, dimension and cabinet markets was dominated by the #1 and #2 common grades. The millwork market used large portions of high grade material (46% Firsts and Seconds). The majority of purchases by flooring manufacturers (53%) were #2 Common grade.

Species and grade use in the pallet and export markets for hardwood lumber have been studied by McCurdy et al. (1988) and the Forestry Sciences Laboratory in Princeton, West Virginia, respectively. The export market consumes oak, yellow poplar, maple, and other species in high grades (70% FAS, IF or Select). Pallet manufacturers consume large amounts of oak and mixed hardwood lumber in #2 common and lower grades.

THE RESOURCE

Sawtimber inventories of many eastern hardwoods are increasing (Table 1). The existing resource includes significant quantities of oaks (Figure 1), species which account for much of the market demand, as well as a large portion (46%) of mixed hardwoods. Demand for these mixed species is variable except in the production of pallets. Approximately 60 percent of the existing sawtimber volume is in relatively low grade 3 and 4 logs (Figure 2). Due, in part, to the proportion of low grade logs, the potential grade output from the resource is skewed toward of #2 common and lower grade lumber (65% of total output). In most markets, the demand for these grades is relatively small.

Matching market needs to the resource can be accomplished, in part, through the substitution of one species for another. This process already occurs as a result of price and availability differences. The relative low quality of the existing inventory poses a greater problem than that of species distribution. Since many markets utilize high grade lumber, complete utilization will depend on continued demand from markets such as flooring and pallets. Alternatively, changes in consumer acceptance or processing technology may be needed to ensure utilization of low grade material.

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Table 1. Hardwood Sawtimber on US. Lands: Growth in Selected Species (Bones 1987)

| Species | % Change 1977-1987 |
|----------------------|-----------------------|
| Oaks | +35 |
| Yellow Poplar | +54 |
| Hard Maple | +38 |
| Soft Maple | +66 |
| Hickory | +22 |
| Birch | +11 |
| Sweetgum | +22 |
| Cottonwood and Aspen | +46 |
| All Species | +33 |

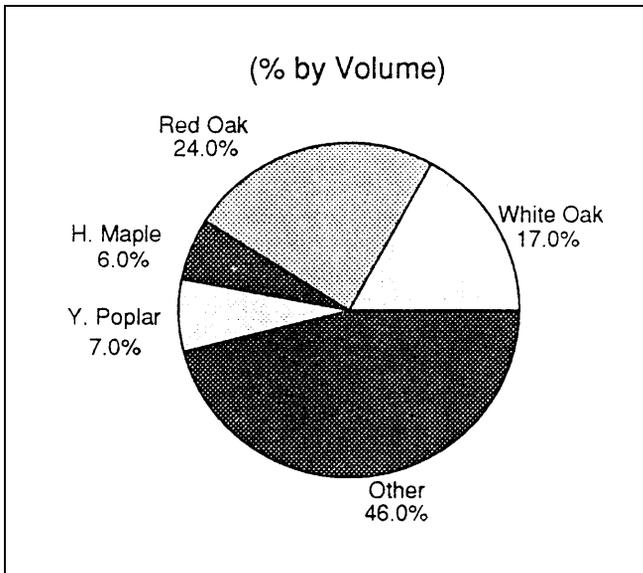


Figure 1. Eastern U.S. Sawtimber by Species (Waddell et al. 1989)

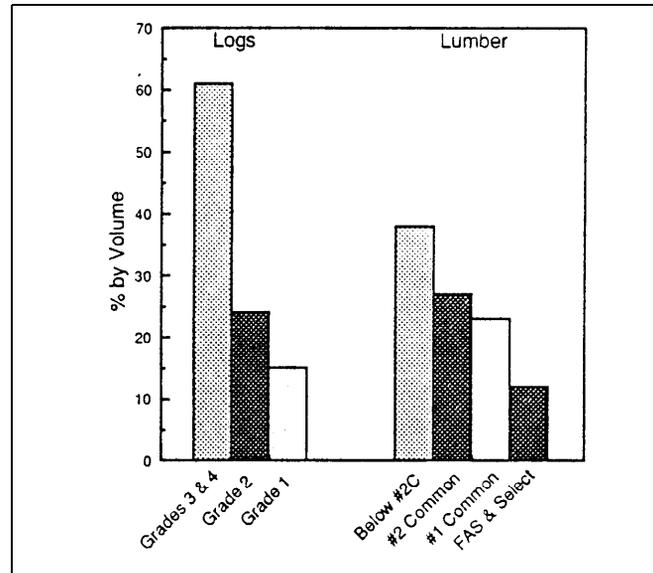


Figure 2. Sawtimber Log Grades and Lumber Grade Output Potential: Eastern U.S. Select Hardwoods (Araman 1989)

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