

INCREASES IN STUMPAGE PRICES LEAD TO LOSS IN MARGINS

For the last 20 years, the Hardwood lumber industry has dealt with changes in demand, increases in equipment costs and government regulations. Still, the one change most noticed by Hardwood sawmill operators is the escalating price of stumpage. In Ohio, Red Oak stumpage increased by nearly 650 percent between 1975 and 1995, while White Oak and Yellow Poplar stumpage has increased by more than 475 percent and 375 percent, respectively. However, prices of No.1 Common Appalachian Red Oak, White Oak and Yellow Poplar lumber have increased only by 360 percent, 300 percent and 200 percent, respectively. These changes have decreased the market margin or difference between lumber and stumpage price. This decrease is not limited to Ohio but is commonplace in the Appalachian region.

Market margins are affected by several factors, including log harvest-

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ing and processing costs and sawmill profits. Since the mid 1970s, Hardwood loggers and sawmills have reduced costs through increased production efficiency and product recovery or yield. Sawmills also have increased emphasis on customer service, proprietary products and marketing.

These changes, combined with competitive market forces, have caused sawmills to increase their bid prices for Hard wood stumpage. However, the changes in stumpage prices and lumber prices have not been identical among species. Furthermore, these changes seem to be affected by the

Hardwood market price cycle. In this paper we will examine the differences in the market margin for Appalachian Red Oak, White Oak and Yellow Poplar.

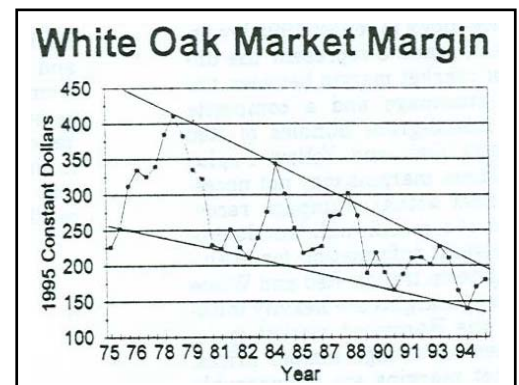


Figure 1. Market margin between the price of White Oak stumpage and mixed-grade bundle of White Oak lumber.

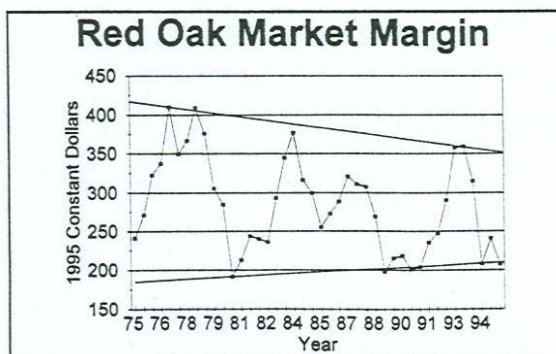


Figure 2. Market margin between the price of Red Oak stumpage and mixed grade bundle of Red Oak lumber.

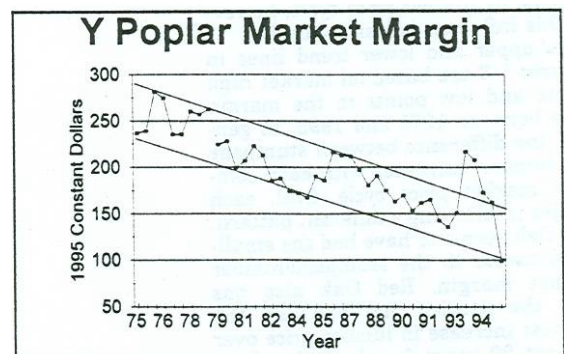


Figure 3. Market margin between the price of Yellow Poplar stumpage and mixed-grade bundle of Yellow Poplar lumber.

DATA DEVELOPMENT

Stumpage price data for this study were obtained from the Ohio Agricultural Statistical Service with the Ohio Department of Natural Resources, Division of Forestry. Ohio stumpage prices were used in this analysis because it is the only consistently published long-term price series available. It should be noted that although this price series may have a similar trend to stumpage prices in other Appalachian states, anecdotal evidence by industry indicates that stumpage prices may be more volatile in other states. This increase in volatility does increase risk but does not affect the trends examined in this paper.

Lumber prices were obtained from the Hardwood Market Report without adjustment for transportation costs. To account for different grades of lumber sawn from Hardwood logs, lumber prices were calculated for mixed-grade bundles. Red and White Oak bundles consisted of 15 percent FAS, 40 percent No.1 Common, 25 percent 2A and 20 percent 3A. Bundle prices for Yellow Poplar were estimated in similar FAS and 1C percentages but consisted of 25 percent 2A and 20 percent 2B. Although these bundle prices may not represent every situation that exists in the Appalachian region, they do reflect market trends. To eliminate the influence of inflation over the last 20 years, all stumpage and lumber prices have been adjusted by the producer price index to reflect 1995 levels.

Figures 1, 2 and 3 represent the difference or market margin between the price of stumpage and a composite price of mixed-grade bundles of Red Oak, White Oak and Yellow Poplar lumber. These margins may not necessarily reflect actual stumpage recovery values of a specific mill, but do provide consistent information for evaluating long-term trends. Red and White Oak market margins are heavily influenced by the Hardwood market cycle. During periods of high lumber prices, the market margins are considerably higher than those during periods of lower lumber prices. The market margin for

Yellow Poplar also seems to be affected by lumber price cycle; however, this influence is less noticeable.

The upper and lower trend lines in Figures 1-3 are based on market high points and low points in the margin cycle between 1975 and 1995. In general, the difference between stumpage and lumber decreases with each complete market price cycle. Still, each species is following a different pattern. Red Oak seems to have had the smallest decrease in the stumpage/lumber market margin. Red Oak also has been the species that has had the greatest increase in lumber price over the last 20 years for all grades. It is believed that the continual increase in Red Oak lumber demand, and the resulting increases in Red Oak lumber prices, have caused the stumpage/lumber market margin to decrease only moderately on the upper trend line and increase slightly on the lower trend line.

The market margin for White Oak has been declining since 1975 on both the high and low sides of the Hardwood market price cycle. However, this decline is, in part, the result of factors not reflected in Figure 1. The first factor is export of White Oak veneer and sawlogs. Some higher grade logs that result from White Oak stumpage sales in Ohio and other states in the Appalachian region are exported. Exports of higher-grade logs may increase stumpage prices without affecting the price of mid- and lower-grade logs. Secondly, many higher-grade White Oak sawlogs processed in the United States are used to manufacture higher priced quarter-sawn lumber. Still, plain-sawn White Oak lumber prices have not increased as fast as Red Oak lumber prices. These lumber price trends have contributed to the decrease in the stumpage/lumber market margin shown in Figure 1.

Of the three species examined, Yellow Poplar has shown the most serious decline in the stumpage lumber market margin. Although the price of Yellow Poplar stumpage has only increased by 64 percent (in inflation adjusted terms!), Yellow Poplar lumber price has decreased by 15 percent. This decrease has been most pronounced in 1C prices and has

resulted from relatively weak domestic demand.

Therefore, the relative profitability of producing Yellow Poplar lumber seems to be decreasing. The one exception to this trend was the large increase in Yellow Poplar price that occurred in 1993-94 and the resulting break in the long term upper trend line. It remains to be seen whether the 1993-94 spike in Yellow Poplar price reflects a change in the Yellow Poplar price cycle or was just a one-time response to extreme market conditions.

SUMMARY AND CONCLUSION

This analysis found that the market margin between Hardwood stumpage and lumber price has been declining for all three Hardwood species examined. Note that the decline in the lumber/stumpage market margin is the result of a competitive and efficient Hardwood lumber market similar to that in most competitive businesses.

The decline in Red Oak market margins was considerably lower than the decline in Yellow Poplar margins. Since 1975, the market margin for Yellow Poplar has been dropping on both the high and low sides of the Hardwood market price cycle. These trends suggest that production of Red Oak lumber has, for the most part, remained more profitable than the production of Yellow Poplar lumber. The one exception to this finding is the spike in Yellow Poplar lumber price and market margin that occurred in 1993 and 1994. If this spike reflects a long-term change in the Yellow Poplar market, then Yellow Poplar lumber production may become more profitable.

The stumpage/lumber market margin for White Oak is more complex. Although White Oak lumber prices have followed a steady cycle since 1975, this cycle has been decreasing in size or amplitude. However, White Oak stumpage prices also are affected by log exports and quarter-sawn lumber production. Therefore, the production of White Oak lumber may be more profitable than indicated in Figure 1.