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OVERRUN IN SECOND-GROWTH YELLOW-POPLAR

Second-growth yellow-poplar is reaching merchantable size in the Southern Appalachians in increasing quantities each year. Although the timber is young and logs are small, it produces lumber of sufficiently high quality to supply the needs of Carolina wood-using industries.

One of the difficulties in appraising second-growth yellow-poplar stumpage has been lack of overrun information. This research note helps fill the void by reporting bandmill overrun studies by log grades (table 1) and diameter classes (fig. 1).

Table 1. --Board feet and percent overrun of second-growth yellow-poplar by log grade from two bandmills

Mill	Log grade	Scale			Scale	
		Lumber tally	International 1/4-inch	Scribner Decimal C	International 1/4-inch	Scribner Decimal C
		----- Board feet -----			----- Percent overrun 1/ -----	
A	1	8,173	7,380	675	10.7	21.1
	2	12,079	10,436	957	15.7	26.2
	3	10,565	9,773	855	8.1	23.6
	Total	30,817	27,589	2,487	11.7	23.9
B	1	9,452	9,330	873	1.3	8.3
	2	14,828	14,765	1,371	.4	8.2
	3	12,574	11,695	1,064	7.0	18.2
	Total	36,854	35,790	3,308	3.0	11.4
Combined	1	17,625	16,710	1,548	5.5	13.9
	2	26,907	25,201	2,328	6.8	15.6
	3	23,139	21,468	1,919	7.8	20.6
	Total	67,671	63,379	5,795	6.8	16.8

1/ Percent overrun = $\frac{\text{Lumber tally} - \text{net log scale}}{\text{net log scale}}$

Nearly 500 factory grade logs from 200 trees were sawed at two bandmills and the resulting lumber tallied and graded. When the International 1/4-inch rule was used, overrun totaled 6.8 percent; when Scribner Decimal C was used, overrun totaled 16.8 percent. There was no clear correlation between overrun and log grade; as usual the smaller logs showed a higher overrun than larger logs. Cull was a minor item in these studies, averaging less than 3 percent.

The difference in overrun between mills was principally caused by differing end products. In Mill A, where overrun totaled nearly 12 percent above International $\frac{1}{4}$ -inch log scale, over 41 percent of the total production was in stock $\frac{5}{4}$ inches and larger. Mill B, with a total overrun of 3 percent above the same scale, concentrated its cut in $\frac{4}{4}$ inch stock.

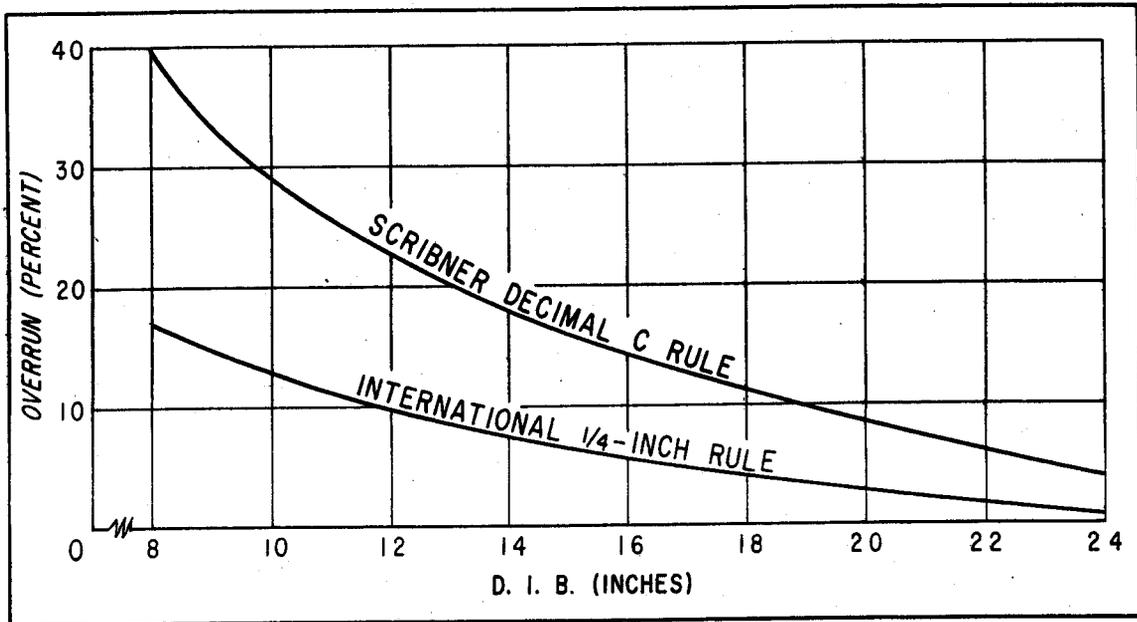


Figure 1. --Relationship of log diameter (inside bark at small end) to percent overrun in second-growth yellow-poplar sawed in bandmills (factory grade logs).

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