

Bolts Salvaged From Cull Oaks?

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Can you afford to take short, clear lengths from hardwood trees that have too much cull and defect to yield standard logs? Certainly you can, if you restrict operations to species for specialty or high-value products like persimmon for golf club heads and white oak for tight cooperage.

But how about bolts from cull oaks on upland pine sites? Though a bolt operation in such material offers many difficulties, at least one Southern firm is currently trying it. That firm is Potlatch Forests, Inc., of Warren, Arkansas.

At Present

The Potlatch operation, being experimental, is on a comparatively small scale. The bolts are being cut from areas where pine and hardwood sawlogs have already been harvested. Ordinarily the hardwoods remaining after such an operation are regarded as culls and the company spends money deadening them. One aim of the bolt trial, according to Bruce Mety, woodlands manager for Potlatch, is to reduce the costs of timber stand improvement work.

The bolts are being cut by the contract logger for a small mill that formerly produced hickory handle stock. Bolt lengths are 42 inches. All loading in the woods is done by hand onto a skid-sled. The sleds are skidded to a woods road, where the bolts are transferred to a "bob-tail" truck that takes them to the mill.

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The one-time handle mill saws the bolts into 4/4 lumber on rip tables. The present output is 3,000 to 4,000 board feet per day. If the undertaking shows promise, the efficiency of the plant, as well as of the woods operations, can obviously be improved.

Almost all of the clear, green blanks are being delivered to the air-seasoning yard of a local manufacturer of a special type of parquet flooring. The precision German machine used for cutting the thin, narrow pieces of flooring will not tolerate knots. At present, the plant is using No. 1 Common or better standard lumber, which it works into clear cuttings for the machine. The current market price of standard No. 1 Common lumber is about \$105 MBF, rough air-dried. The clear, green blanks from the bolt mill are being delivered for \$75-\$80 per M. The costs of drying and handling the blanks are still to be investigated.

The Future

The parquet flooring market, by itself, is not a final test of the economic feasibility of a bolt operation. The margin of returns over the always-high costs of handling short material might be improved by producing items of greater value—small dimension, stair treads, and the like.

Because the amount and concentration of bolt material largely affects the feasibility of the operation, a tally of bolt possibilities was made on three areas of Potlatch land. According to Mr. Mety, these areas were typical of the acreage for which the operation is designed. All hardwoods were inspected closely and tallied only if they would

yield four-, six-, or eight-foot bolts free of all but a few well-spaced minor defects. A tally was also taken of the additional volume suitable for crossties but not for clear bolts. The board-foot volume in bolts and ties is shown in Table 1. On the average, these stands contained 765 board feet per acre (International 1/4-inch rule) of clear bolt material, over four-fifths of which was in red and white oak. There was 405 board feet per acre of common structural quality in tie lengths.

On both pine and hardwood lands throughout the South there is a tremendous volume of usable bolts in hardwoods that are cull for saw-log purposes. A practical way of utilizing

Table 1.—Board feet per acre of usable bolts and ties (International rule, 1/4-inch kerf) on pine-hardwood areas near Warren, Arkansas.

Area	Red oak		White oak		Other		Total	
	Bolt	Tie	Bolt	Tie	Bolt	Tie	Bolt	Tie
1	460	165	277	195	0	0	737	360
2	133	225	469	170	195	0	797	395
3	355	350	225	45	181	65	761	460
Av.	316	247	323	137	125	22	765	405

this material would help reduce the number of trees that have to be deadened and might return some small stumpage fees. It would also reduce the drain on the limited supply of high-quality timber. In these ways, bolt operations could make forestry feasible in many stands that are otherwise doomed to neglect or high-grading.

Even though "cull" timber is superabundant, bolting is not likely soon to become general and widespread. But in several parts of the South furniture or dimension plants are now importing hardwood lumber from considerable distances. Here the bolter's low stumpage and transportation costs might enable him to profitably make a high-quality product from relatively low-grade trees.



Clear stock from cull trees? The two red oak bolts in the foreground came from trees that had recently been girdled. They will be sawn into clear blanks of the kind shown at the right.