

Lumber from Your Own Backyard

Hire a sawyer and his machine to reap furniture-grade lumber at great savings

by Gus Carlson



Early on in my career as a sawyer, I spent an entire day in a customer's yard cutting lumber for a barn frame. From time to time, I'd notice someone peeking through the curtains. When I'd finished up, the couple who lived there finally came out. They both helped me pack, and as we worked, I learned it had been the woman who had watched all day from the window. She was awestruck by the process of turning trees into lumber. As we were saying our good-byes, she touched my arm and said animatedly, "It's really like a miracle, isn't it?" Amen.

Hiring a sawyer to bring in a portable bandsaw mill is a great way to get lumber at a good price. Even if you don't live on a wooded site, chances are good that sometime during the year a friend, relative or neighbor will need a tree removed. Logs from

Locating a sawyer

These sawmill manufacturers can refer you to the owners of their mills.

Better Built Corp., Wilmington, Mass.; (508) 657-5636

Kasco Manufacturing Co. Inc., Shelbyville, Ind.; (317) 398-7973

Norwood Sawmills, Amherst, N.Y.; (800) 567-0404

Timberking, Kansas City, Mo.; (800) 942-4406

Timber Technology, Earlysville, Va.; (804) 978-4636

Wood-Mizer Products, Inc., Indianapolis, Ind.; (800) 553-0182

these trees can be cut into boards right on the spot for much less than you would pay at a lumberyard

A bandsaw mill doesn't waste much wood

The advantages of having a bandsaw mill do the sawing are many. I have owned and operated such a mill for several years. The mill is mounted on wheels and can be towed on the highway with a pickup truck to the site where the trees were cut. This eliminates the difficulty and cost of transporting logs and, even more important, puts the milling operation directly under your observation. You're guaranteed to get all the lumber cut, and you can advise the sawyer how you'd like the log sawn. My mill, which is fairly typical, can saw logs up to 36 in. dia. and 21 ft. long, so all but the largest trees can be accommodated.

Another advantage of having your lumber bandsawn—especially for craftsmen interested in furniture-grade lumber—is that so much less wood ends up as sawdust than with any other method of milling (see the photo at right). Compared to a circular-saw mill, a bandsaw yields 25% to 30% more board feet from the same log. Chainsaw mills waste even more wood than a circular sawmill. I know—I owned one for years.

Bandsaw-mill manufacturers advertise this fact, but I still had a hard time believing it at first. Repeated measurements have convinced me, however, that a bandsaw consistently yields at least 25% more than the International Log Scale (an industry benchmark) suggests when sawing lumber 2 in. thick or less.

Finding a sawyer can sometimes be a challenge, but try looking in the yellow pages under "sawmills," or check the local paper's classified advertisements if you live in a relatively rural area. Also, the manufacturers of these mills provide a referral service, hooking up mill owners with people who have logs they want sawn (see the box on the facing page).

As with any custom work, you should give your sawyer a date as far in advance as you can. Chances are you'll be dealing with a small, independent businessman who has a backlog of five or six customers or orders and who must juggle logging, skidding, milling, kiln-drying and making deliveries. Order early or, even better, put in a standing request or one with a flexible date.

Avoid the very large and the very small

The cost of having lumber milled depends either directly or indirectly on the sawyer's production rate, so it's in the customer's best interest to understand the basics. Production rates vary according to a number of factors starting with the make and model of the mill. The larger the motor, obviously, the faster the saw can cut. Also, hydraulic log turners, loaders and clamps speed up production quite a bit. Even with a full contingent of hydraulics, there are still times when logs—especially large ones—have to be manipulated manually.

The logs themselves also make a difference in how fast a sawyer can process lumber. Hardwoods are a bit slower to cut than softwoods, with hickory the slowest, at least in my area. The size of the logs and dimensions of the lumber affect production rates as well: The smaller and shorter the logs, the slower the rate. Logs smaller than 8 in. dia. and less than 8 ft. long are too small to produce much lumber. At the other end of the spectrum, really huge logs are difficult and



Furniture or firewood: a logs-to-lumber checklist



Here's the payoff. At least some furniture-grade lumber is probably hiding in that backyard tree. But think carefully before calling in a sawyer.

How big is the tree?

- Logs smaller than 8 in. dia. and less than 8 ft. long are too small to produce much lumber.
- Without special equipment, really huge logs are difficult and dangerous to handle.

What condition is the tree in?

- Nails, barbed wire and other foreign objects can be imbedded in trees around houses and along fence lines.
- Crooked, split, rotten or insect-infected logs just aren't worth it.
- Avoid muddy logs unless the lumber is especially valuable.

Can a sawyer get to the tree?

- Easy access for trucks and a flat, clear spot for sawing are advantages.

It's not all suitable for furniture

- Lower-quality lumber will account for more than 50% of the tree's yield.



A big walnut tree is a prize. In most cases, it's not worth the time and effort to remove mud-encrusted bark from a tree. A black walnut this big, however, is a different story.



When you're ready to call a sawyer



Getting a custom job—An experienced sawyer can coax the best possible lumber out of a log. If you want to save money and speed production, offer to help.

When do you need the lumber?

Make arrangements with the sawyer as far in advance as possible; they're often very busy.

Are you willing to lend a hand?

A willingness to help can save you money and allow you to dictate how the log is sawn.

What kind of mill does the sawyer have?

A sawyer with a bandsaw mill will get you more lumber with less waste.

How do you want the wood cut?

It takes far less time to slab a log into consecutive planks than it does to saw for grade, but when your goal is top-grade lumber, the extra effort is worth it.

Where do you want everything?

Decide where logs will be stockpiled, where slabs will be discarded and where the finished lumber will be stacked.

This lumber is wet and heavy. Freshly cut boards like these may have a moisture content of 60%. Lumber should be stickered for proper drying, a process that will take at least a couple of months.



dangerous to handle without equipment like a backhoe or front-end loader. And it takes far less time to slab a log into consecutive planks than it does to saw for grade, which involves turning a log continually to look for its best face (see the photo at left).

I won't even consider cutting muddy logs unless they're very valuable (large walnut logs, for example). Lots of time can be wasted skinning the muddy bark off with axes, and if the mud isn't removed, the blade will dull almost instantly (see the bottom photo on p. 53).

Other dangers to the blade abound: Trees from around houses and along fence lines often harbor hidden nails, barbed wire and other foreign objects. Porcelain insulators are the worst I have hit. I charge \$20 each time the blade hits something. To sharpen and set a blade may take 20 minutes or more, and a new blade (1¼in. wide with 7⁄8 in. between teeth) costs about \$25.

Don't bother with crooked, split, rotten or insect-infected logs. I make it a point to inform the customer when a log is not worth the effort. You should ask the sawyer you hire to do the same.

A well-organized milling site makes a big difference in maintaining steady production, too. Hilly or rough ground with rocks or stumps can slow things down and create hazards. Allow plenty of room, not only for the mill but also for trucks and tractors used to move the logs or lumber. A flat, clear spot perhaps 60 ft. sq. will do. Think in terms of where logs will be stockpiled, where slabs will be discarded and where the finished lumber will be stacked.

Often, customers want to help. I generally welcome it, and I enjoy working with them. Having help loading logs and off-loading slabs and lumber can nearly double the rate of production. Also, I'm sympathetic to woodworkers' desires to participate in making lumber from their own trees for their own furniture.

Price may be by the board foot or by the hour

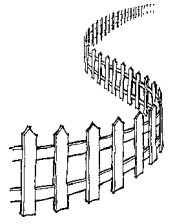
So how much does it cost to have lumber milled? I use two pricing methods: a board foot rate (one board foot is a volume of wood an inch thick, a foot wide and a foot long) and an hourly rate. When all the factors affecting production are known and there are several days of work (so things have a chance to average out), I feel comfortable quoting a board foot price—about 30 cents per board foot when working alone or as little as 20 cents per board foot if the owner helps. The board-foot price is often preferred by customers because there are seemingly no unknowns.

For smaller jobs or those with unknowns, I quote an hourly rate. For mill and sawyer, a charge of \$35 an hour is realistic, at least in my part of the country. In such cases, any site preparation or help or equipment furnished by the customer will maximize the time the saw is actually cutting the log. And only that yields lumber.

My experience has been that, even with inexperienced help, in eight or 10 hours, no more than 1,000 bd. ft. will be cut. At an average retail price of 75 cents per board foot (remember that we're talking about



Often 50% or more of a log will be less than furniture grade. Finding a use for lower-grade lumber will often determine whether sawing a log makes sense financially.



green, roughsawn lumber), that's \$750 worth of lumber for which you might pay \$350. Using the hourly rate, I've never had anyone say or even hint that they got a bad deal, probably because I always let the customer know how it will work out beforehand. The \$35 per hour and the 30 cents per board foot rates boil down to the same thing.

Keep in mind that this freshly cut lumber has a moisture content of 60% or so. It can be used immediately for outdoor utility structures like barns, fences and sheds, although flooring, siding and roofing boards should be air dried to, say, 20%. I know this isn't a universally shared opinion, but I think lumber for use in heated interior spaces should be kiln dried, a process that may add 30 cents per board foot to the cost of the lumber and may take several months or more depending on how long it's first air dried. That's still a bargain.

Not all of the lumber will be perfect

The value of the lumber depends upon its grade which, in turn, depends on good logs and the sawyer's skill—his ability to make every cut count. Grading rules can be quite complex, sometimes

reading like a set of tax-filing instructions. The basic goal, however, is straightforward and simple to understand: no knots, no splits, no stains, no worm holes, no defects—just straight, fine-grained, clear lumber. Generally speaking, the best lumber comes from the bottom of the tree—the first, or butt, and maybe the second log. The higher logs have more limbs and, therefore, more knots. Even the lower logs have knots in most cases, but they lurk deep inside the log, closer to the center. It's from the outside of the lower logs that the best lumber can be expected.

Oddly enough, finding a use for lower-grade lumber will often determine whether sawing a log makes sense financially. Often 50% or more of a log will be less than furniture grade, and you simply cannot leave half of the lumber in a pile, unused and unwanted, and still show a profit. Some milling projects never happen because there's not much of a market for the lower-grade lumber. Long live barns and fences. □

Gus Carlson harvests, saws and dries wood in and around East Haddam, Conn. He's also a retired architect who designs structures for his lumber customers.

Turning a nuisance tree into new kitchen cabinets

The property was surrounded by big, unkempt, leafy, maples and white oaks. Many weren't in the best of possible locations, such as the 60-ft.-tall white oak jammed right against the front of the house, splitting the view and the walkway in two. To my wife, this piece of Connecticut real estate we were considering was a nest of problems, including the faux Western-themed interior. "Bonanza Lite" we called it.

But I fell in love with the idea of living in a grove of trees. I saw opportunity in the living lumber at our doorstep. Only after I convinced my wife that the big white oak would make beautiful kitchen cabinets was she willing to make a bid for the house.

The owners gratefully accepted our offer and fled to California, leaving us a frighteningly tall, homemade snow gauge.

A few months later, the chainsaw crew arrived. It was music to my ears. Two guys finished off that big tree on a chilly February day, chipping all the smaller branches and leaving four 8-ft.-long logs and a jumbled pile of firewood.

A few days later the sawyer arrived. He was a big guy, dressed for the job in heavy cotton duck outerwear. I asked what had

motivated him to buy a \$25,000 sawmill with all the bells and whistles. He said he owned some acreage covered with southern pine and had harvested a chunk of it for his own use. But his dream, to build a log cabin with his son and use the mill to cut all the lumber needed for the home had been dashed. His son, following a serious accident, was no longer capable of strenuous activity. These days, the sawmill mostly sat idle in his garage.

I watched as he set it up, the machine still shiny and new looking. He seemed happy to put it to good use, to be breathing fresh air, like in the days when he worked as a utility company lineman. Manhandling thousand-pound logs, getting covered with fresh sawdust and working an eight-hour day still appealed to him.

There was one worry to contend with: hidden nails, a curse bedeviling most trees close to homes. The sawyer asked and I agreed to pay for damaged bandsaw blades. Sure enough, there were nails, but luckily only in the last log. After adding up all the costs—the tree trimmer and the sawyer and a couple of bandsaw blades—my 400 bd. ft. of clear quartersawn oak cost about \$1.50 a board foot, less than half the prevailing rate for kiln dried.

The leaves are falling now on the stickered pile, which has been exhaling water vapor for about eight months. It's time to haul it inside, to get the moisture content down from the current 14% to about 8%. By mid-winter, those boards will be reshaped into drawers and frame-and-panel doors. And then the Bonanza-Lite era of our kitchen will be ushered out gleefully with crowbar and sledgehammer.

—Anatole Burkin, associate editor



Homegrown lumber—The author harvested about 400 bd. ft. of white oak from a yard tree for about \$1.50 a board foot.