

# AGRICULTURAL GUIDE

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## Preparing wood for your wood stove

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This guide sheet describes one strategy for people who cut and burn one to several cords of wood yearly. If you cut and prepare your wood, have a plan, whether it be this one, a modification, or one of your own design. A well-planned, one-person operation reduces the work required to produce a cord of well-prepared fire wood. It also should increase the efficiency of your stove, reduce creosote production, and reduce air pollution.

### Logs or cutting stock

The logs should be cut in multiples of the desired final length of your cord wood. For example, 16 inches, plus or minus 2 inches, is a popular length that will fit most stoves. When cutting your logs, remember that they can't be very long if one or possibly two people are going to do most of the handling. Cut out crotch wood, and leave it in the woods unless you have neighbors who operate a conventional fireplace. They may be able to use these pieces. Do not accept elm unless that is all you can get and you don't mind a lot of extra effort when it comes to splitting the wood. If you have to take elm wood, shorten the length of your cordwood by 2 or more inches.

### Cutting to length

The wood pieces you deliver from the forest will average 16 inches long for pieces with a large diameter, then 32, 48, 64, and 80 inches long as the diameter of the logs decrease. You will need a sturdy sawbuck (which you can make). Its cross pieces should be 16 to 20 inches apart (Figure 1). The last cut on any log should be made between the cross pieces, first with a down cut from the top until it just begins to

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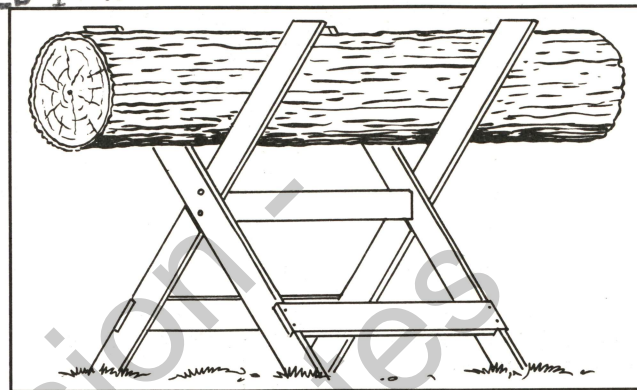


Figure 1. You'll need a sturdy saw buck.

pinch and then an up cut from the bottom to sever the two parts. Be sure your crossbuck allows clearance for your saw from the bottom.

I've had good luck with an electric 14 inch-chainsaw for bucking the logs. The electric saw is rather inexpensive and has the advantage of turning on and off easily. The motor in my saw provides ample power and has proven to be a sturdy machine.

As an option, some may choose to cut the logs to firewood length with a gas-powered field saw. Instead of using the crossbuck, they choose to cut the logs on the ground and simply roll them half a turn for the final cut.

### Splitting your wood

This job requires more skill than the other steps in preparing stove wood. To do a good job, you must become fairly skilled (accurate) in swinging a splitting maul, and you must be able to *read* the knots and cracks in a piece of wood, so you can determine where to hit the log for best results with the least effort.

There are a number of splitting tools on the market; some are quite widely publicized. In the September 1980 issue of *Country Journal*, David Tresemer describes some practical research he did comparing 10 different splitting tools. With limited production (one to several cords per year), he got the best results with a standard 8-pound splitting maul.

It is important to have a splitting block. Instead of using it above ground, treat the block with a wood preservative and submerge it in the ground so that the top protrudes about 1 inch above the ground (Figure



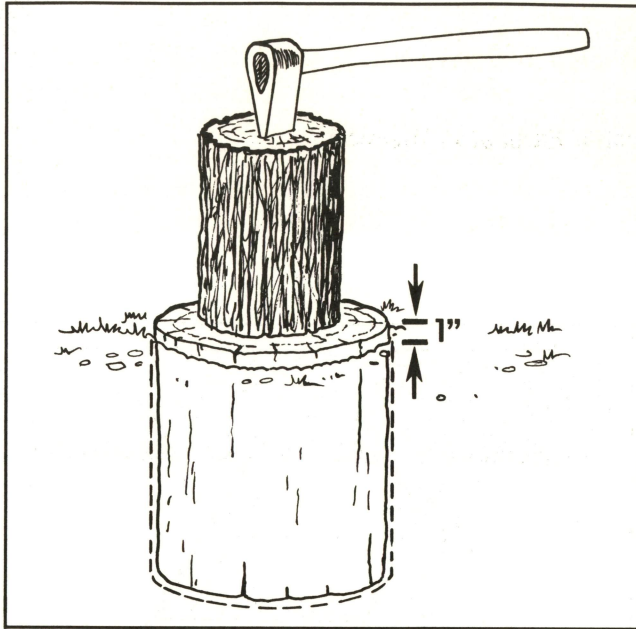


Figure 2. Submerge the splitting block so it protrudes about 1 inch above ground.

2). A large, used auto tire can be used effectively with the block. The tire placed over the block holds wood pieces in an upright position and prevents split pieces of wood from *flying* off.

Before starting to split your wood, decide on the maximum single cross section dimension (Figure 3). It is probably a good idea to make this dimension slightly less than the smallest dimension of your stove door. For purpose of discussion, let's assume that you select 6 inches as your minimum splitting dimension. This means that all round pieces greater than 6 inches in diameter should be split into four or more equally sized pieces. It is probably a good idea to split pieces less than 6 inches in diameter as well because doing so increases the surface area of the wood. Thus, wood dries faster and burns better. Wood splits easier when it is green.

### Splitting strategy

Some people use the term *reading*. That means they observe the easiest way to split the wood in terms of grain direction and knot placement.

Here are some indicators:

- If you can detect by branch angle or taper which was the top of the piece of wood as it stood in the tree, invert the piece (place the top side down). This allows you to split with the longitudinal grain.
- If the piece to be split has a large knot, try to place your blows perpendicular to the knot. If you must place a hit parallel to the knot, offset the blow from the knot as much as possible.
- With pieces large in diameter (greater than 12 inches in diameter), split pieces off the outside edge first

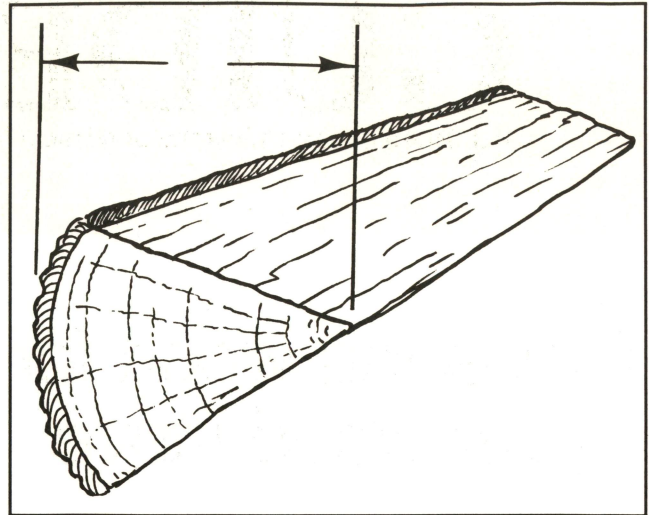


Figure 3. Before splitting your wood, decide on the maximum single cross section dimension.

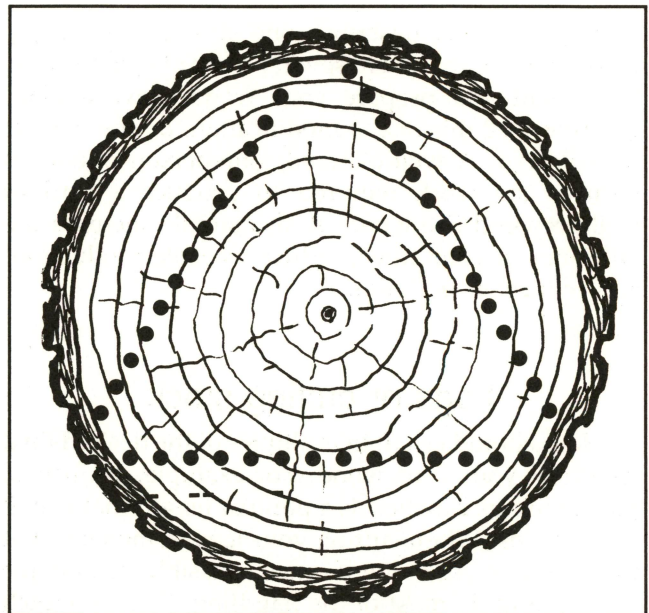


Figure 4. With pieces large in diameter, split pieces off the outside first.

(Figure 4). Split the remaining core piece as necessary, so it will be accepted within the 6-inch minimum rule used in this example.

### Stacking and drying

Stack your cord wood preferably in a sunny spot where the wind can move freely through the stack. It is nice to cover the wood pile, but frequently this is not practical.

Fresh wood often has a moisture content of 50 percent or more. The wood should dry to 20 percent moisture content or less. It will take a minimum of one

drying season (spring through fall) to dry. Therefore, the wood you plan to burn in winter should be stacked and drying by spring. Many people have poor results with their wood burning stove because their wood is too green. Frequently, they wait until late summer or early fall to put in their wood supply. If you buy your wood, assume that the wood you get is wet. Therefore, you should buy your wood in the spring, stack it, and let it dry for the winter.

## Operating the stove

It is not the purpose of this guide sheet to discuss this topic. However, having done a good job preparing the wood you must also develop a good, safe operational technique with your stove. For the best results in terms of efficiency, buy a smaller, rather than a larger stove and burn *hot*; that means you don't *hold* a fire or cut it back to a smolder as frequently.

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