FILE

Burn Dry Firewood for Safer, Cleaner Burning and Efficiency

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The higher your firewood's moisture content, the less efficiently it burns. Green (freshly cut) firewood is more than 50 percent moisture. If you don't let it dry long enough under the right conditions before you burn it, you get a smoky fire without much heat.

The smoke from a low-temperature fire contains gases and acids that condense in your chimney to form creosote. Creosote can ignite and cause a major fire. If you burn green wood, you need to clean your chimney more often to reduce creosote buildup and the risk of fire in your home.

Burning green wood also means you'll work harder to get your fire going. Some of the wood's water must boil and evaporate before the wood will support a flame.

Plan Ahead

You can avoid these problems in the following ways:

• Season firewood until it contains less than 20 percent moisture. This generally takes 6 to 8 months, depending on the weather, the type of wood (hardwoods usually take longer than softwoods), and how you prepare and store it.

• Cut firewood by late winter or early spring to allow enough drying time during hot, summer months for moisture to move through the wood's fibers and evaporate. If you wait until summer to cut and split your firewood, it won't be dry enough by the heating season (unless you use a wood dryer). Don't rely on Oregon's cool and humid fall to dry firewood.

Split and Stack Your Firewood

• Cut and split firewood soon after you fell the trees. Most wood is easier to split when it is green. Split wood dries faster because of the increased surface area. The exposed wood fibers allow moisture to escape more readily than the bark.

Split large rounds of wood into quarters to expose two sides of the wood's inner fibers. Split 5 to 6-inch rounds in half. You don't need to split smaller pieces.

• Remember to cut kindling. Splitting softwoods 1 inch thick is best. Having plenty of kindling on hand will help you to start fires easily. You won't be as tempted to keep a smoldering fire going all night.

• Stack your firewood off the ground to prevent absorption of ground moisture and allow air to circulate under the stack to reduce rot and insect infestation.

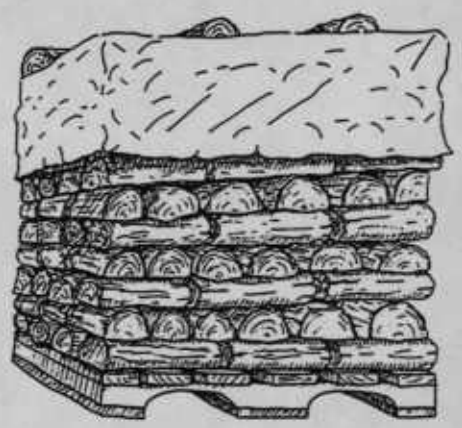
Concrete blocks provide a stable base for a raised stack. Space them to allow air to circulate between them. Wood pallets also make an excellent base. Or use wood poles laid on their sides and spaced to allow air circulation.

• Stack firewood so that air can circulate around the pieces. Crossing the wood log-cabin style promotes good air flow within the stack.

A simple and effective way to stack and shelter firewood is on a pallet, stacked log cabin-style, with a sheet of clear polyethylene draped over the top of the stack. Leave the sides open to allow air to circulate. Secure the polyethylene with a few pieces of wood or rocks. The polyethylene lets sunlight through to heat the stack and promote drying.

When exposed to sunlight, however, polyethylene has a limited life. It becomes brittle and tears with use. A UV-inhibited polyethylene lasts longer.

After the firewood is dry, you'll be handling the cover frequently to get to the wood. You may want to replace the polyethylene with a sturdier nylon or canvas tarp.



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Store Your Firewood Under Shelter

Provide a shelter to keep rain, snow, and ground moisture from re-wetting your firewood or preventing it from drying. The shelter can be an elaborate permanent structure or a simple cover draped over firewood stacked on pallets or cinder blocks. Just make sure it keeps precipitation and ground moisture off your wood and allows air to circulate around the stack.

You can construct an effective shelter along a fence. Attach a sheet of exterior grade plywood to fence posts with hinges. Drive posts to support the outside corners of the plywood to create a shed roof.

Determine When Your Firewood Will Burn Efficiently

Firewood is usually sold either green or seasoned, but seasoned is a relative term. What you really need to know is whether it's dry enough to burn efficiently. There are several ways to tell how dry the wood is:

• Cracking at the ends indicates that the ends are dry, although the center of the wood may still be wet. Knock two pieces of firewood together. They'll make a sharp cracking noise if they're dry. A dull thud indicates the pieces are wet.

• Devices are available that determine the moisture content of firewood by measuring its resistance to an electric current.

• You can also determine the moisture content of your firewood without using any special device:

Weigh a small piece of firewood cut from the middle of a large piece. Record the weight in ounces. Dry the small piece overnight at 200 to 300 °F in your oven and weigh it again. The difference in weight is the weight of the water in the wood. Divide the weight of the water by the oven-dry weight of the wood to find the moisture content of your firewood:

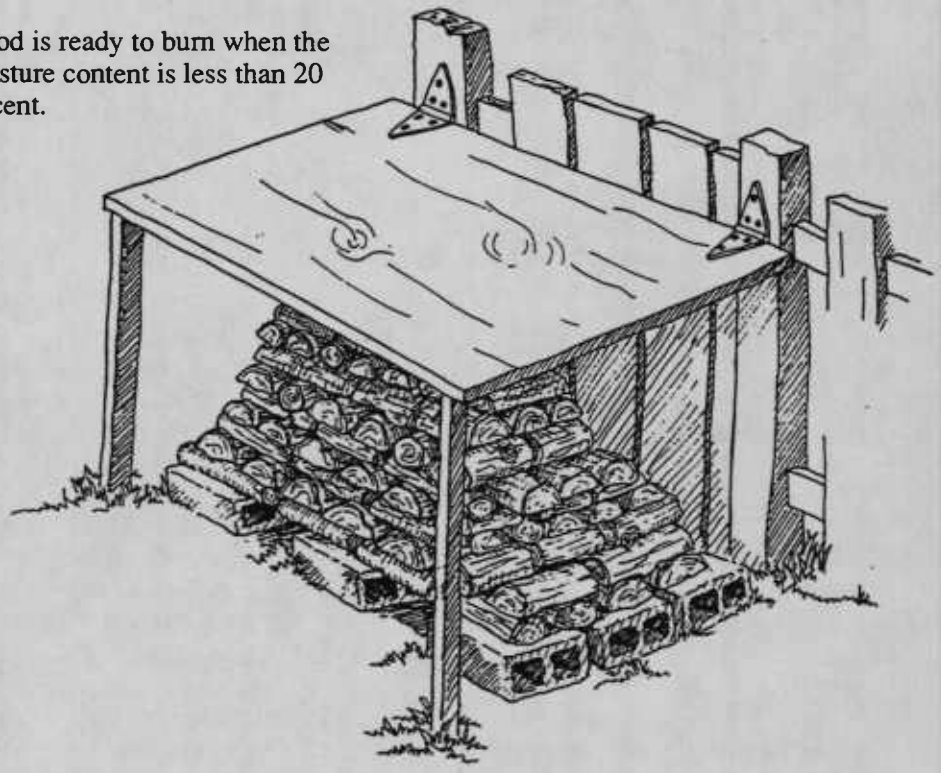
original weight of wood
− oven-dry weight of wood
= weight of water

$$\frac{\text{weight of water}}{\text{oven-dry weight}} \times 100 = \%\ \text{moisture}$$

Wood is ready to burn when the moisture content is less than 20 percent.

• Another way to check dryness is by selecting two or three pieces of wood from the stack and weighing them monthly. A continuous loss of weight means the wood is still drying. Two consecutive months without weight loss means the wood is ready to burn.

Properly burning dry firewood produces more heat from less wood. It deposits less creosote in your chimney and reduces the risk of fire in your home. Less smoke is released from your chimney, so you and your community can enjoy the benefits of cleaner air.



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