

Make Sure Your Firewood is Properly “Seasoned”

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It may still be summer and the last thing you want to think about is winter . . . however if you heat with wood then you should have your wood supply cut and stacked for the upcoming heating season by now. Or if you are planning on buying firewood make sure the wood is fully dry and ready to burn to avoid throwing money up the chimney by using wood that still has high moisture and little BTU content.

Freshly cut wood has a very high moisture content. As much as 60 percent (or more) of the weight of a tree is water. At least some of this water must be removed before trying to use it as a fuel wood. Several bad results can occur from burning wood that is not fully dried to below 25 percent moisture content. (Such wood is referred to as “green” wood). As that discussion mentions, the effective available heat is MUCH less, not just because there is less wood fibers in each pound of wood put in the wood burner, but that a good percentage of that heat must be used to evaporate all that water before those wood fibers can burn. Another VERY important consequence of burning green wood is that the presence of all that moisture tends to keep “putting out” the fire, and therefore making it burn very poorly, which tends to produce a lot of creosote and pollution. Don’t Do It!

Generally, the way this drying is accomplished is by “seasoning” it. Firewood is cut to length and then seasoned (dried) in a stack, with air being able to get to it, for at least 9 months before burning. The natural 60 percent-70 percent moisture content must be reduced to about 20 percent to burn well. The wood cells don’t lose much moisture through the bark; the moisture is most effectively removed through the cut cells at the ends of each piece. That’s why logs which have lain in the woods for years may still have a lot of moisture and may not burn well (unless cut and dried.) We have heard of people cutting up these downed trees and immediately putting them in a wood burner! And the wood burns poorly! Now you know why!

OK! So, sometimes, it turns out to be NECESSARY to burn some green wood. Which species would be best under those conditions? It turns out that the desirability is NOT the same as for seasoned wood! While they are living, various species of trees have different moisture contents. If you suitably dry them all, that difference rather disappears. But, while still green, it becomes significant.

It is possible to correlate both the heat-content of the wood fibers and the green moisture content to form a table of desirability for those situations when green wood must be burned.

Excess moisture is that percentage above the desirable 20 percent seasoned moisture content.



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