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When Using Wood to Heat your Home, Species Matters

In order to avoid home energy costs, some people are turning to firewood as their primary source of heat. Not all trees are good choices for firewood. The heat firewood produces when burning will depend on the dry weight of the wood. In general, the more biomass the tree has, the more heat it will produce. This biomass is measured by the weight per cord, or 128 cubic feet, of wood.

Here are some of the best trees for firewood that grow well in our area:

- Osage orange, at 4800lb/cord
- Black locust, at 4200lb/cord
- Bur oak, at 3800lb/cord
- Red oak and mulberry, at 3500lb/cord
- Silver maple, at 3000lb/cord

Some of these trees have special considerations when using as firewood. Wild Osage orange and black locust trees, while they have the highest densities, will also have thorns that will make them difficult to transport. Some species will also spark thanks to sap or resin underneath the bark, especially evergreens like pines and spruces. Therefore, these species must be closely managed if burning in an open fireplace. They won't be a problem if burned in a wood-fired boiler.

If trying to grow your own firewood, here are some considerations for what and how to plant. Species will have the greatest amount of impact on how much wood you are going to get. We already mentioned which species have the greatest densities, but speed of growth also plays a key role in the effectiveness of wood burning. Black locust, mulberry, and silver maple will have the fastest growth habits, meaning that the turnaround time for harvesting will be lower. However, black locusts can be invasive, and silver maples have the lowest density per cord, so mulberry trees are a good middle-of-the-road option for density and speed of growth.

If planting new trees for firewood, you want to space the trees close – between 4-6' feet apart, to encourage upright growth with little branching. Control weeds at the base of the tree for the first two years, and harvest fresh trees after 5 years. Many trees will resprout and can be reharvested

successively. Start with 1 acre of trees and plant a fresh acre every year for 5 years, so that you can get most of the firewood you need in a rotation.

If using firewood for recreational activities like camping, it is very important to buy firewood where you are camping and not bring firewood with you to or from the recreation site. Insect pests like the elm bark beetle, pine sawyer beetle, and emerald ash borer overwinter in downed wood, including firewood. Moving these wood species to new areas increases the likelihood that the pest will become established in that area and begin destroying native tree stands. This is especially important with ash firewood, as the emerald ash borer has not made it to our area yet, but could easily make the jump if bringing firewood home from southern Missouri or Arkansas. If you have any extra firewood, pass it on to the next campers at your site so that you don't accidentally come home with any unwanted guests.

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