



# Firewood

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Firewood can be extremely helpful for heating homes with efficient wood burning stoves or complementing an outdoor adventure with a bonfire. Small woodlands could be a source of personal use firewood as well as a commercial venture (if there is enough land). This fact-sheet covers some important information that landowners should consider before venturing onto their land to harvest firewood.

## How much do I need?

Firewood is generally measured in cords. One cord is a tightly stacked pile of wood that is eight feet long, four feet wide, and four feet tall. In general, a home will need about 3.5 cords of firewood to survive the winter. A typical woodland can produce about one third of a cord per acre per year if managed sustainably. This means that in order to get that 3.5 cords for every winter, landowners will need a minimum of 10 acres of land. This is an extremely middle of the road estimate since the amount of wood will depend on the heat generated from the wood burned and the type of stove. Wood that is denser can burn hotter and longer than less dense wood. Hickory and Osage-orange can burn hotter than southern yellow pine and basswood. Do not pay attention to “hardwood” or “softwood” labels when selecting wood. Certain hardwoods are dense (hickory) while others are light (birch). The same is true for softwoods.



This firewood stack is approximately 1.5 cords.

## Getting the Wood

Most firewood operations can select from trees that have fallen because of natural causes or salvaging from

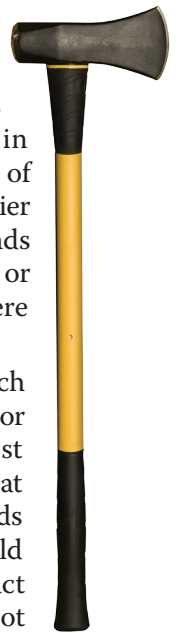
logging debris remaining after timber harvests. Trees to be cut down for firewood should be selected from those posing the highest risk to life and property and those with low vigor or poor quality. Woodland owners with potential aspirations for future income from timber harvests should not cut down trees that might have substantially more value as other products, such as veneer or lumber. Firewood can also be collected from other people’s property as long as permission is granted. Most national or state forests allow low level firewood harvesting on their lands with a proper permit.

## From Trees to Firewood

The best tool to start turning trees or logs into firewood is a chainsaw. Proper training and safety equipment is a must before operating a chainsaw. Any landowner that is uncomfortable with using a chainsaw should not use it. Trees should be felled and de-limbed before cutting the logs into smaller rounds that are firewood size in length for further processing. Err on the side of producing smaller rounds because they are easier to transport and will dry faster. These rounds can then be transported by a tractor, ATV, or loader back to a central processing area where the splitting takes place.

Split wood without the bark will dry much faster than storing unsplit rounds. A large four or five pound axe will work well for splitting most wood. The best tool is called a splitting maul that is a combination sledgehammer and axe. Rounds should be placed on a platform (usually an old stump) high enough to get maximum impact from a single swing. The platform should not be the ground to avoid hitting feet, rocks, or material that can damage the tool blade such as metal or concrete. A mechanized hydraulic splitter will remove all the physical labor but may be a big expense to justify unless a lot of wood needs to be split.

Eye protection should always be worn when processing firewood using any method.



A splitting maul is a combination axe and sledgehammer and is the ideal tool for manually splitting firewood.



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## Seasoning and Storage

Seasoning is the most important factor in getting good firewood. It's a fancy word for drying. Firewood needs to be seasoned a minimum of six months but one year is preferred. That means next year's firewood must be collected while using this year's. Firewood must be dried because energy will be wasted when burning the wood because the fire will spend most of its energy evaporating water out of the wood. Drying or storage stacks should be placed at least 30 feet from any structure to avoid being a fire hazard. The stack should also be four to six inches off the ground to allow for full air circulation, avoid moisture on the ground, and not attract wood destroying insects. Firewood should not be stacked in an area in perpetual shade because sunlight increases drying speed.



*This drying rack is ideal because it is four inches off the ground, away from other structures, and not completely exposed to rain but still open to allow for sunlight and airflow to reach the wood although there is a lot of shade.*

## Transporting, Selling, and Buying Firewood

Because of the threat of invasive insects and diseases, people should not transport firewood very far from where it was cut. Numerous tree killing insects, such as the emerald ash borer, have increased their spread because of people taking firewood with them to far flung camping sites. This also holds true for landowners selling firewood to other people. Remind buyers to burn the wood nearby and not contribute to the spread of deadly insects and diseases. While firewood may show no readily visible signs of bugs, holes, fungus, or other signs of infestation that does not mean they are not there. Insect eggs and fungi spores are extremely small and difficult to detect. Even if all the wood is burned, there's still a chance an insect, egg, or spore has escaped into the new ecosystem. Don't take the chance!



***Firewood should not be transported far from its original location even if the bark is removed to limit the spread of invasive insects and diseases.***

## For Commercial Firewood Operations:

Please review these factsheets for further information: Forestry Emerald Ash Borer Shipping and Hauling Hardwood Firewood [FORFS17-15] and Emerald Ash Borer Procedures for Ash Lumber, Firewood, Logs, and Sawmill Residuals [FORFS17-14].

### ***For More Information***

**Kentucky Division of Forestry:**  
<http://forestry.ky.gov>

**University of Kentucky**  
**Department of Forestry:** <http://ukforestry.org>

[DontMoveFireWood.org](http://DontMoveFireWood.org)

## References

- Klase, W. and K. Tiles. 2012. Harvesting firewood from your woods. University of Wisconsin-Extension. GWQ060 I-09-2012. 20 p.
- Marcouiller, D. and S. Anderson. Firewood: how to obtain, measure, season, and burn. Oklahoma Cooperative Extension Service. F-0440. 7 p.
- Marcouiller, D. and S. Anderson. Managing your woodlot for firewood. Oklahoma Cooperative Extension Service. F-9439. 4 p.