LOONTMOVE FIREWOODL BUY IT NEAR WHERE YOU BURN IT

Invasive Species and Firewood Movement

Invasive species are one of the greatest concerns in southern forest management both in rural and urban environments. Global trade and transportation are the main pathways through which species have traditionally moved into new places (National Plant Board 2010). Natural resource professionals are concerned that firewood movement has the potential to be another high-risk pathway for invasive species to enter new ecosystems. Firewood is usually processed from trees that are unsuitable for other purposes and may have been stressed, crooked, damaged, diseased, insect-ridden, or dead. It is important to identify the cause of tree death, infection, or infestation because firewood processed from dead or dying trees can host invasive species. The invasive species can hide or lay dormant on or under the bark, or inside the firewood itself, escaping detection. If that untreated and raw firewood is moved, the invasive species can spread into new areas. Most of the invasive pests that are likely to be transported in or on firewood are insects or pathogens.

Types of Firewood

Three main types of firewood are sold: green, seasoned, and treated. Green and seasoned firewood can host invasive pests and, when transported, introduce a pest to a new area. Firewood can be



treated to reduce the risk of spreading invasive pests. The purchase and use of local firewood

(grown within a 50-mile radius of where it will be burned) is recommended because the risk of moving invasive pests is very low when firewood is burned close to where it was harvested. Below we identify characteristics of the three types of firewood:

- Green firewood is freshly cut wood that usually must be dried before burning. Green wood is white or lightly colored and poses the greatest risk because any insect or pathogen present in the wood has a greater probability of surviving transport to a new location.
- Seasoned firewood has been air dried typically for 6–12 months but sometimes as little as 3 months. Seasoned wood will have a lower moisture content and loose bark, it will be splitting or cracking at the ends,

What's In Your Firewood? Firewood movement is a major pathway for the introduction of destructive invasive pests to new ecosystems. Such pests hide in or on firewood and hitchhike to new locations when the wood is transported.

and it will have grayed if stored outside (Browning 2009). While this period of time may allow the wood to dry sufficiently for the purpose of burning well, insects and pathogens may still be present and living in the wood. Pests that inhabit seasoned firewood are often likely to be secondary, less aggressive species that do not attack live trees; therefore, seasoned firewood



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poses a lower risk than green firewood (Personal communication. 2012. Ronald Billings, Manager, Forest Health Program, Texas Forest Service, 200 Technology Way, Suite 1281, College Station, TX 77845).

- Treated firewood has been properly heat treated, kiln sterilized, or debarked to decrease the risk of transporting viable pests. Any treatment process should include proper inspection for risks and labeling to include the location of firewood production and the method of treatment. The preferred treatment depends on the type of pest to be eliminated.
 - Heat treating must occur in a facility that is certified by the U.S. Department of Agriculture and maintains a compliance agreement. This process raises the temperature of the center of the log to the minimum required and for the time specified; this is necessary to sterilize the firewood. Regulations specifying time and temperature requirements of this treatment (T314-a) can change over time. Check with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine to find up-to-date information.
 - Kiln sterilization involves drying wood in an insulated chamber. There are many different kiln technologies and designs available. Kilns must allow for the control of temperature, humidity, and air circulation to meet the treatment standards of the U.S. Department of Agriculture (T404-b-4) for properly drying firewood. The maximum thickness of allowable wood is three inches for this treatment type.
 - Debarking is often achieved using a machine (debarker) that removes the bark and the outermost one-half inch of wood from firewood. This treatment method reduces the risk of transporting insects and pathogens living in, under, or on the bark, but it is not an effective treatment for insect pests or pathogens living in the wood. Heat treating and kiln sterilization are preferred treatment methods.

When purchasing firewood, consumers have several types from which to choose. The current recommendation is to buy and use local firewood when possible. If local firewood is unavailable, treated firewood is the next best option to minimize the risk of transporting pests.

Firewood movement

People often transport firewood for use during outdoor recreation associated with camping, fishing, hunting, ATVing, mountain biking, hiking, skiing, and rock climbing. Firewood movement can be classified according to the distance traveled. Moving firewood short distances can increase the local or leading edge dispersal of pests, which results in the gradual expansion of the pests' ranges into new areas. For example, campers often move firewood 100 or 200 miles (Jacobi 2007). Less often, firewood is moved greater distances and poses a risk for the long distance spread of pests. For example, commercial firewood distributors and regional or national retail distribution chains can move large volumes of firewood long distances. Lower volumes of firewood can still travel long distances with campers and outdoor enthusiasts for recreation purposes and with homeowners for use in heating homes and cabins in the winter (Jacobi 2007). Invasive pest movement by firewood can be the first step in the spread of an invasive species. Preventing and recognizing this invasive pathway can help resource professionals stay up to date on the management of invasive species.

Additional Information

www.dontmovefirewood.org www.nationalplantboard.org https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs

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