
Acreage Living

IOWA STATE UNIVERSITY
Cooperative Extension

Craig Hertel
Greene County Extension Education Director
104 West Washington Street
Jefferson, Iowa 50129-1920
515-386-2138

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Harvesting Firewood

by Shawn Shouse, ISU Extension Field Specialist/Ag Engineer, SW Area Extension Center
Phone: 712-769-2600 - e-mail: sshouse@exnet.iastate.edu

On a cold winter morning in 1985, I stumbled to the basement in my pajamas to rekindle the fire in our wood-burning furnace. I had stuffed the firebox full the evening before and choked the air supply down in an attempt to make it burn all night. But now the fire was reduced to a small pile of ash and embers and the house was a chilly 55 degrees. I piled in a good stack of fine, dry kindling and trudged up the stairs to have some breakfast.

Fifteen minutes later, feeling nourished and somewhat more awake, I returned to the furnace to find a roaring fire and a dull cherry red flue pipe. In a moment of panicked indecision, I opened the draft diverter to (I hoped) let some cooler air go up the chimney. Instantly I was rewarded for my mistakes by a sickening roar as though a jet engine had just started in the bowels of my home. The flue pipe color blossomed to a radiant bright orange. My pulse rate hit 160 as flames began to lick out of the bottom of the chimney while (I presume) the chimney outside took on the appearance of a thirty-foot roman candle.

Hours later, watching from the driveway as the fire department ventilated the last of the smoke from our

house (which very fortunately did NOT go up in flames), I pondered whether I really knew what I was doing in selecting, harvesting, curing, and using firewood.

As it turns out, I had made a whole series of bad decisions that contributed to our chimney fire experience. I am thankful we lived to learn from these mistakes and hope the information and references in this article can help you avoid an experience like mine.

Using firewood safely and successfully requires attention to the selection, curing, and proper burning of the fuel. If you plan to use firewood next winter, you need to begin now with the steps of selecting, harvesting, and curing your wood.

Hardwoods make better firewood than do softwoods. They produce more heat energy per pound of wood, burn longer, and produce less smoke and soot. The most desirable Iowa species for firewood include ash, birch, hard maple, hickory, pecan, and oak. Second choices include cherry, soft maple, and walnut. These woods produce high amounts of heat energy, are relatively easy to split and ignite,

and produce few sparks. Of course, other wood species will work, but their properties make them less desirable as a fuel wood source.

Properly drying the wood, commonly called "seasoning" or "curing," is extremely important for good burning. Dried wood will ignite more readily, burn hotter, and produce less creosote and tar in the chimney. Remember the roar that turned my flue pipe bright orange? The fuel that created such an intense chimney fire was months of accumulated creosote and tar from slowly burning wet wood.

Firewood cut green should dry for a full year for best results. Because drying is driven by heat energy, most drying occurs during the spring, summer, and fall. Evidence of drying can be seen in the form of severe "checking" or cracking on the cut ends of the wood pieces. For fastest drying, cut firewood to the desired burning length and split it to pieces less than eight inches across before stacking to dry. Stack the wood to get maximum airflow around the wood. Loose stacks or single rows with cut ends exposed work best. Avoid multiple rows stacked tightly together or large random piles. An open shed with good airflow or a rain canopy over an outdoor stack are good choices.

You can test for moisture content by cutting samples from the middle of a few pieces. Weigh the samples, then dry them in a 225-degree oven for 24 hours. Divide the loss in weight by the oven dry weight to calculate the percent moisture. For best burning, firewood should be below 20 percent moisture. Another method for evaluating drying is to mark a few pieces with chalk or paint. Weigh a bundle of these marked pieces every month on your bathroom scale. If the bundle of same pieces is still losing weight, the drying process is still proceeding.

Firewood is commonly sold in units called a "cord." A standard cord is a stack four feet by four feet by eight feet long, containing 128 cubic feet. This same cord of wood will make a slightly smaller stack if cut to shorter pieces. Depending on the species and

condition, cut firewood may cost \$25 to \$100 per cord. If you are willing to cut and cure the wood yourself, you may be able to buy firewood for as little as \$10 per cord.



When cutting, splitting and moving firewood, be certain to use appropriate safety equipment and personal protective apparel.

Safety glasses are essential. Other excellent additions include leather gloves, safety toe shoes, and hearing protection. Chain saws present a whole safety topic on their own. For a detailed discussion of chain saw safety, refer to Vermont Extension bulletin "Safety With Chainsaws" <http://www.ext.vt.edu/pubs/safety/chainsaw/chainsaw.html> or Kansas State Extension bulletin "Chainsaws-- Safety, Operation, Tree Felling Techniques, MF-2103" at <http://www.oznet.ksu.edu/library/forst2/samplers/mf2103.htm>

Once you have selected and harvested your firewood, the warm summer months will do the work of seasoning the wood for successful burning. Safe and efficient use of your harvested fuel is the last step. Understanding the combustion process and the characteristics of wood-burning stoves and fireplaces will help you get the most energy and satisfaction out of your wood fire while minimizing the risks. We'll save that topic for another article.

For more information on using wood fuel, ask your county ISU Extension office for bulletin NRAES 23 "Burning Wood and Coal" (\$5.00) or for web surfers, try "Firewood for Home Heating" at <http://www.ext.vt.edu/pubs/forestry/420-003/420-003.html>. For information on growing fuelwood, try these resources: ISU Extension bulletin PM 1295e "Fuelwood - Alternative Ag Enterprises", and University of Illinois bulletin "Fuelwood Plantations" at http://www.ag.uiuc.edu/~vista/html_pubs/FUELWOOD/TOC.HTML



Goodness, Gracious, Snakes Alive!

by Jim Pease, ISU Extension Wildlife Specialist, Ames
Phone: 515-294-7429 - e-mail: jpease@iastate.edu

“Arrgh! There’s a snake in the yard!” This is often the reaction of people who come into contact with these common Iowa wildlife. Unfortunately, in our hysteria, we often strike out at these creatures—with shovels, hoes, even lawnmowers—with lethal results. Our fears are often the result of a combination of childhood experiences and a great deal of misinformation. Educators find, however, that if we can replace the myths about these animals with facts, the fear is very often replaced with interest. Indeed, truth often is stranger than fiction!

Snakes are reptiles. As such, they have a backbone, often with over 300 vertebrae. They are “cold-blooded,” taking their body temperature from their surroundings and, therefore, seeking winter places that remain above freezing. They lay eggs and do not care for their young after birth. Two Iowa types, garter snakes and rattlesnakes, retain their eggs inside their bodies until they hatch, imitating a type of “live” birth typical of mammals.

The skins of snakes are smooth and dry, feeling much like the leather on your shoes. Most Iowa snakes see poorly and cannot wink at you; they have no eyelids! Instead, their eyes are covered by a clear single scale that is shed and replaced each time they shed their skin. While lizards have external ear openings, snakes have none. Their main sense organ, then, is their tongue. It is constantly flicking out, “tasting” molecules from the air to detect what is around them. Unlike humans, a snake’s tongue is not used for swallowing. Rather, snakes have rows of tiny curved teeth and separated jaws to “walk” their prey down their throat.

They move by means of the rhythmic movement, called “peristalsis,” of muscles on their bottom side. This movement allows the broad, strong scales on their belly (scutes) to push against rough surfaces and move forward. Having no legs or feet, they cannot dig holes, but can occupy dens made by small mammals like ground squirrels and chipmunks. They are extremely important predators, eating a variety of insects, grubs, worms, amphibians, and rodents.

The 28 species of Iowa snakes range from the tiny and uncommon 7-inch western worm snake to the common bullsnake which can be over five feet long. Most common are several species of garter snakes; the fox snake, and the bullsnake. Timber rattlesnakes are common only in some very localized areas. All other poisonous snakes are either exceedingly rare or absent in Iowa.

Keeping your foundation and siding in good repair will keep not only snakes from entering your house uninvited, but also mice and insects. Cleaning up hiding places like boards or piles of junk in the yard will limit available habitat for snakes. On the other hand, providing constructed well pits or other hibernacula below ground is an excellent way to attract these important predators to your property, if you so desire.

Snakes are a fascinating part of Iowa’s wildlife diversity. Watch them respectfully from a distance and you will learn to appreciate their adaptations and roles in the natural world.

For more information about snakes, contact the Iowa DNR for a copy of *The Snakes of Iowa*, a publication of the Iowa Wildlife Diversity Program.

Acreage Living is published monthly. For more information, contact your local county ISU Extension office.

Editor:

Shawn Shouse
ISU Extension FS/Ag Engineering
SW Area Extension
53020 Hitchcock Avenue
Lewis, Iowa 51544
PH: 712-769-2600

Layout & Design:

Paulette Cambridge
Office Assistant
SW Area Extension
53020 Hitchcock Avenue
Lewis, Iowa 51544
PH: 712-769-2600

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