

## **Heating with Wood**

Many residents of Ferry County use wood, for winter heat and more firewood likely will be burned as the cost of other energy sources, such as oil and electricity rises. In order to use firewood effectively, an understanding of species' characteristics and firewood volumes is needed.

WSU Ferry County Extension hopes this information is helpful. Firewood from different species or types of trees varies widely in heat content, burning characteristics and overall quality. See the table of firewood facts, amount of heat per cord of dry wood, and information on other characteristics that determine firewood quality shown below.

General firewood traits of common woods found in Ferry County (can vary)

Species	Average Heat/Cord (1,000,000 BTU's)	Ease of Splitting	Coals
Douglas-Fir	20.7	Easy	Fair-Good
Western Larch	22.3	Easy	Good
Lodgepole and young Ponderosa Pine	17.2	Difficult	Poor
Ponderosa Pine	16.2	Easy-Difficult	Fair
Spruce	15.5	Easy	Poor

Green firewood may contain 50% or more water by weight. Green wood produces less heat because heat must be used to boil off this water before combustion can occur. Green wood also produces more smoke and creosote than dry wood. This can lead to creosote buildup and dangerous chimney fires. So, firewood always should be purchased dry or allowed to dry before burning. Some species such as pine also give off more creosote which requires cleaning the chimney more often.

Although firewood dry weight is important for determining heat content, firewood is normally bought and sold by volume. The cord is the most common unit of firewood volume. And is an evenly stacked pile containing 128 cubic feet of wood and air space, though a cord is generally thought of as a stack of wood 4' tall, 8' long and 4' deep. To figure the number of cords in another size or shape pile, determine the pile's cubic foot volume and divide by 128. A randomly piled stack of wood generally will contain more air and less wood than one neatly piled. Some dealers sell wood by the face cord or short cord. A face cord is a stack of wood 4' high, 8' long, and as deep as the pieces are long. Pieces are commonly 12-18" long, so a face cord may contain 32-48 cubic feet of wood and air. Another common firewood measure is the pickup load. This is an imprecise but common measure. A full-size pickup with a standard 8' bed can hold about  $\frac{1}{2}$  of a full cord, or 64 cubic feet, when loaded even with the top of the bed. Small pickups loading will decrease this amount further. A randomly piled stack or pickup load of wood will contain more air and less wood than one neatly stacked. Crooked, small diameter and knotty or branchy pieces also reduce the amount of wood in a pile.

Buying firewood: Species, volume, dryness and need for splitting should be considered when buying firewood. (Western Larch splits easily; Lodgepole Pine and young Ponderosa Pine can be very tough). Portions of the information provided in this article came from Cooperative Extension, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln and local experience. Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.