Technical Bulletin #8

WHAT KIND OF WOOD TO BURN

A Greenwood furnace operates with greatest efficiency when burning large, unsplit, seasoned wood logs. If the log fits in the door, it will burn. Small logs and split logs are fine too, but they tend to burn faster and slightly reduce the burn time of the load.

IMPORTANT NOTES

1. BURN WHOLE WOOD ONLY. Never burn coal, wood scraps, pallets, corn, pellets, garbage, rubber, gasoline, or any oil products.
2. Never use chemicals, gasoline, lantern fuel, kerosene, charcoal lighter fluid or other flammable liquids to start or "freshen up" the fire.

The furnace burns unseasoned (green) wood too, but there will be a reduction in heat output. Seasoned wood has a moisture content of approximately 20%, while freshly cut wood contains up to 50% moisture. It takes about 1,000 BTUs to evaporate each pound of moisture in a log, so the greener the wood, the greater the energy diverted from heating your home. This is why dry wood produces 10-30% more useable heat for your home.

Heat output also varies with the specie of wood burned with hard woods producing more heat than soft woods. However, local availability is the most important factor in selecting a wood to burn. We recommend using whatever wood is most economically available in your area.

Here are some useful tips to help you in buying wood.

- A cord is a stack of wood 4 feet high, 4 feet wide and 8 feet long. Allowing for air pockets, a cord is approximately 85 cubic feet of wood.
- On average, a pound of wood produces 8,600 BTUs of heat, regardless of species. So dense heavy woods deliver more heat per cord. Consider this fact when comparing prices for different kinds of wood.
- A good time to cut or buy green wood is in late winter or early spring. Cut it to length, stack it so that air circulates through the pile, and shelter it from the weather. Seasoning usually takes about 18 months.
- If you cut your trees in the spring or summer, leave them "unlimbed" until the leaves wither. The withering process draws moisture from the wood. Then, cut the wood to the longest length that will fit in the furnace firebox. The longer the stick, the longer the fire will hold.

The amount of heat extracted from a cord of wood varies with the species. The U.S. Forest Products Laboratory compiled the following figures, showing weights and energy content for various species of wood. The energy content figures assume seasoned wood with 20% moisture content.

Heat Content of Wood by Species

Wood Species	Cord Weight (lbs)	Energy Content (million BTUs/cord)
Alder	2,708	17.6
Apple	4,140	26.5
Ash, Black	2,992	19.1
Ash, White	3,689	23.6
Aspen	2,295	14.7
Basswood	2,108	13.5
Beech, Blue	3,890	26.8
Beech, High	3,757	24.0
Birch, Black	3,890	26.8
Birch, Gray	3,179	20.3
Birch, Paper	3,179	20.3
Birch, White	3,179	20.3
Birch, Yellow	3,689	23.6
Box Elder	2,797	17.9
Butternut	2,100	14.5
Cedar, White	1,913	12.2
Cherry	3,120	20.0
Cherry, Black	2.880	19.9
Cottonwood	2,108	13.5
Elm, American	3,052	19.5
Elm, Oyen	3,052	19.5
Elm, White	3,052	19.5
Fir, Balsam	2,236	14.3
Fir, Douglas	3,196	20.6
Hackberry	3,246	20.8
Hemlock	2,482	15.9
Hickory	4,327	27.7
Hornbeam, Eastern	4,267	27.3
Locust, Black	3,890	26.8
Maple, Red	2,924	18.7
Maple, Sugar	3,757	24.0
Oak, Red	3,757	24.0
Oak, White	4.012	25.7
Pine, Jack	2,669	17.1
Pine, Norway	2,669	17.1
Pine, Pitch	2,669	17.1
Pine, Ponderosa	2,380	15.2
Pine, Western	2,236	14.3
Spruce	2,100	14.5
Spruce, Black	2,482	15.9
Tamarack	3,247	20.8