

Shell bark Hickory.....	100	Yellow Oak.....	60
Pig nut Hickory.....	95	Hard Maple.....	60
White Oak.....	81	White Elm.....	58
White Ash.....	77	Red Cedar.....	56
Dogwood.....	75	Wild Cherry.....	55
Scrub Oak.....	73	Yellow Pine.....	54
Witch Hazel.....	72	Soft Maple.....	54
Apple tree.....	70	Chestnut.....	52
Red Oak.....	69	Yellow Poplar.....	52
White Beech.....	65	Butternut.....	51
Black Walnut.....	65	White Birch.....	48
Black Birch.....	63	White Pine.....	42

The same species of wood will vary in density and amount of moisture, and consequently heat giving power, according to its various stages of growth, and the nature of the soil, climate and kind of exposure to which it is subjected. Trees grown in low, damp and sheltered situations will generally be found less dense, and their foliage and branches less tightly put together, than such as grow in open fields and in high and dry situations.

In the ordinary way of burning wood, either in stoves or in open fire places, there are two stages: In the first, heat comes chiefly from the flame; in the second, from red hot coals. Soft woods are more active in the first condition, and hard woods in the second. Soft woods produce much flame in a state of combustion, but have little coal, while their conditions are usually reversed in cases of hard wood. The cause of this partly arises from soft woods being more porous and more readily filled with atmospheric air, the oxygen of which supports combustion more rapidly. But, perhaps, the chief cause arises out of their differences in chemical composition. "Pure woody fibre, or lignin, from all kinds of wood, has exactly the same composition; a compound atom of it containing 12 atoms of carbon, 10 of hydrogen, and 10 of oxygen,—or, there is just enough oxygen in it to combine with all its hydrogen, and change it to water in burning. But in ordinary wood the fibre is impure; that is, connected with other substances which particularly alter its composition. The hard woods are nearest in composition to pure lignin, but the softer woods contain an excess of hydrogen. For this reason, they burn with more vehemence at first; more carbon is taken up by the hydrogen, in producing flame and smoke, and the residue of coal is diminished. The common opinion that soft wood yields less heat than hard (*equal weights*) is an error; it burns quicker, but it gives out an intenser heat in less time, and is consequently better adapted to those uses where a rapid and concentrated heating effect is required."

The price of wood for fuel has of late years greatly advanced in Canada, and although at present that article partakes of the depression common to other things, it is pretty certain for the future that fuel will command a high price in all the older settled portions of the Province. Hence the necessity of preserving the productive portions of the native forest, by the encouragement of second growth trees, and of economizing fuel, by the use of improved stores and the keeping of firewood dry, and only using it when it is properly seasoned. The expense of erecting a capacious wood shed is but a trifle compared with the loss that is sustained by the present too prevalent practice, in most parts of the country, of allowing firewood to rot without any kind of protection. When cut and piled out of doors, with a slight covering on the top, wood may be generally preserved, and will amply repay the little extra trouble and expense. In all yards and premises where these common sense precautions are not heeded, and where wood is allowed to lie about without order or protection, an untidy and disagreeable appearance is witnessed, and much loss and inconvenience are experienced in this important item of domestic cost and management.