

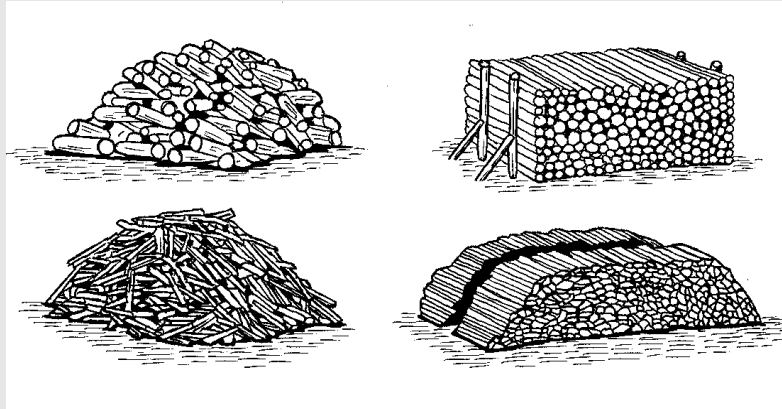
Legal Measures

The *cord*, *cubic foot*, *cubic yard*, *stacked cubic metre*, and *weight* are the only legal volume measurements defined under the Weights and Measures Act for selling fuelwood unless it is sold prepackaged. The *face cord*, *short cord*, *thrown cord*, *processed cord* and other such common terms are not legal measures in Canada. It is perfectly acceptable, however, to sell wood as a part of a cord or by cubic dimensions.

A *cord* is defined as "128 cubic feet of stacked roundwood (whole or split, with or without bark) containing wood and air space, with all bolts of similar length piled in a regular manner with the longitudinal axes approximately parallel".

For example, wood stacked to measure 4' x 4' x 8', or 4' x 2' x 16' constitutes a cord because each stack occupies 128 cubic feet.

The illustration on the right shows stacked and unstacked wood. The metric unit, called a *stacked cubic metre*, is defined as "one cubic metre of stacked roundwood (whole or split, with or without bark) containing wood and air space with all bolts of similar length piled in a regular manner with the longitudinal axes approximately parallel". Therefore, wood piled to measure 1 m x 1 m x 1 m, or any equivalent combination of dimensions, constitutes a stacked cubic metre - m³ (stacked).

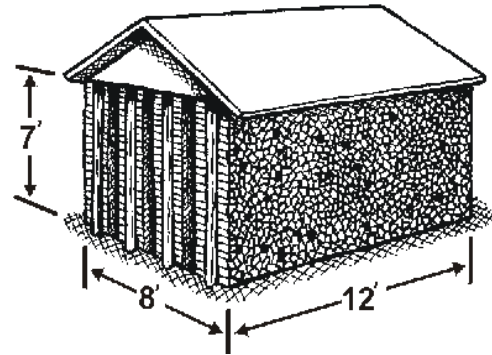


Some Hints to Receive Fair Measure and Maximum Benefit from Your Firewood

- ✓ Order your wood in the spring (green wood is cheaper than seasoned), and
- ✓ dry outside under cover for at least six months.
- ✓ Most suppliers provide mixed hardwood species; however, some will make an effort to provide a particular species if you request in advance. Energy content varies depending upon species.
- ✓ Clearly inform your supplier of the quantity of wood you require in cords, cubic feet, or cubic metres only. Tell them that you require a receipt upon delivery stating volume of wood supplied, and that you will be measuring the wood after delivery to confirm you received what you paid for. (*Receipts are required by law.*) Get a commitment from them to make good on any shortage discovered.

A Wood Shed is a Wise Investment!

By knowing how much your storage area holds, any shortage will be immediately evident when you stack your wood.



Construct a clearly defined storage/drying area for your firewood that will hold the quantity you order each year. A wood shed with the above dimensions will hold approximately four cords of wood (assuming shed is filled with 4 tiers of 16" wood).

References:

Scaling Manual. 1997. N.S. Department of Natural Resources, Truro, N.S. Version 2.0
A Guide to Buying and Storing Your Winter's Wood. N.S. Department of Natural Resources, Truro, N.S.

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A GUIDE TO BUYING and MEASURING STACKED FIREWOOD



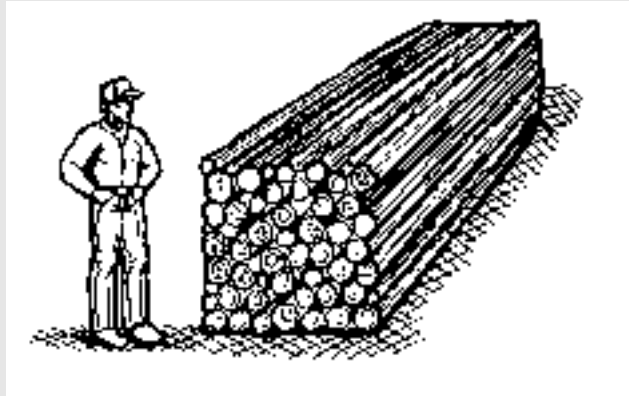

NOVA SCOTIA
Natural Resources

How do you know you received fair measure for your money when your firewood is delivered?

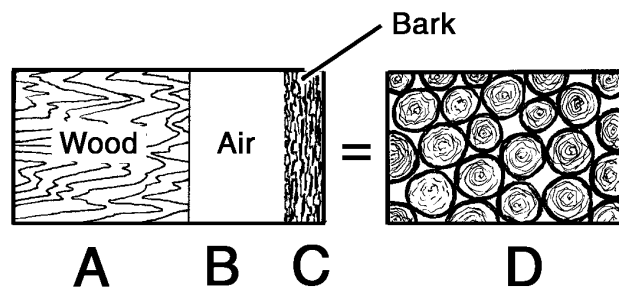
Buying firewood can sometimes be confusing. Furnace oil, propane, electricity, or wood pellets can be easily and accurately measured. Firewood is more difficult to measure, but the steps outlined in this pamphlet will make it easier.

Eight foot lengths, two foot lengths, 16" lengths, roundwood, split? It doesn't matter! When you tightly stack firewood, and calculate the volume, you must receive the volume you paid for. If you ordered by the cord, it must stack up to at least 128 ft³ for every cord you paid for! If you ordered by the cubic metre, you must receive at least one cubic metre for every cubic metre you paid for.

Whether wood is 8 ft., bucked, or split when delivered is irrelevant!



Be aware that wood received in 4 or 8 foot lengths will occupy less space when it is cut and split; however, the total amount of wood will not change. In other words, a cord of wood in 16" lengths contains considerably more energy than a cord of wood in eight-foot lengths.

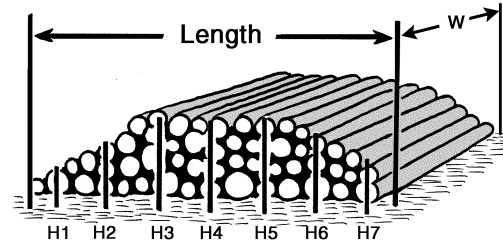


- A. 73 Cubic feet of Wood
- B. 40 Cubic feet of Air Space
- +C. 15 Cubic feet of Bark
- = D. 128 Cubic feet or 1 Cord of Wood

Cross-section of a cord of 8' wood indicating solid wood, air space and bark space.

How to Measure Stacked Wood

Measuring (or scaling) stacked wood is simple. First, find the length (L) of the stack using a tape or a measuring stick.



Estimating pile length, height and width.

Next, determine the height (H) of the stack by measuring several heights at the mid-points of equal intervals along the stack. As you measure the length, mark with lumber crayon or felt marker the points on the face of the stack where height measurements are to be taken. The maximum recommended interval is 5 ft. or 1.5 m.

When the wood within an interval is stacked unevenly, estimate the average height within that interval. To determine the average height of the pile, add the heights from all the intervals and divide by the number of intervals.

Stack width (W) equals the average length of the bolts. Measure at least one width per interval. Average these to find the overall width.

When measuring eight-foot wood you can obtain a more accurate volume calculation by measuring L and H on both sides of the stack and averaging. Deduct for voids in the stack (i.e., large air spaces, or logs with missing centres).

How to Calculate Volume

After all measurements have been taken, calculate the gross volume scale (GVS) using the following formulas:

Cords

(measured to nearest 0.1 ft.):
where "L" is the length of the stack; "H" is the height of the stack; and "W" is the width of the stack:

$$\text{GVS (cord)} = \frac{L' \times W' \times H'}{128}$$

Example:

$$\text{GVS} = \frac{16 \times 4 \times 5}{128} = 2.5 \text{ cords}$$

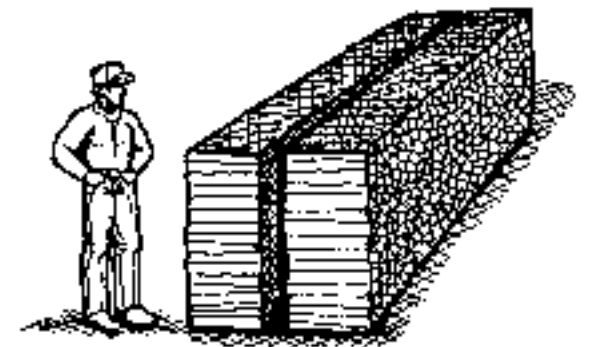
Stacked Cubic Metres

(measured to the nearest cm or 0.01m)

$$\text{GVS} = L(\text{m}) \times W(\text{m}) \times H(\text{m})$$

Example:

$$\text{GVS} = 5.0(\text{m}) \times 2.4(\text{m}) \times 2(\text{m})$$



Note: Scaling or measuring wood accurately can take years of practice. This pamphlet is intended only as a guide.