Seasoning Timber

What is seasoned wood and why the need or bother for it to be seasoned?

Seasoned or dry wood is a term used to describe timber that has dried out. Wet or green wood is freshly cut and still retains a large percentage of water and sap.

When wood is alive it has a certain amount of water in its body. The water within a tree combines with other chemicals producing what we call sap. When the tree/branch/limb is severed, or uprooted, it stops growing and water remains inside. This water/moisture/sap evaporates over time with the cells of the wood shrinking to accommodate this. The wood also becomes significantly lighter (as I found out when I was carrying unseasoned wood through a forest and my friend was carrying the seasoned timber!).

Shrinking may cause the wood to split, twist, and contort in all sorts of other weird and wonderful ways. By using wood that has very little moisture helps reduce problems later on.

Seasoned and Unseasoned Wood, Dry wood, and Moisture Content

Unseasoned, or 'wet' wood is cut live i.e. from a living tree, seasoned wood is that which has either been cut and allowed to dry out, or timber that has fallen to the ground i.e. from storms, and subsequently died and dried out.

Whether a piece of wood is wet or dry depends of the level or percentage of its weight that still contains moisture. Different woods hold different amounts of moisture (some woods can hold more than double their own weight in water), however regardless of this the amount of water in a piece of timber is referred to as the moisture content as a percentage of the weight i.e. a piece of timber weighing 10kg with a moisture content of 20% will hold 2kg of water.

The timber industry has come up with a standard accepted moisture content that most companies work within - less than 10%. When a piece of timber is within this margin it is deemed dry and fully seasoned. This is a commercial retail standard and difficult to achieve through domestic means. I am happy to use wood up to 15% moisture content and have not encountered any difficulties.

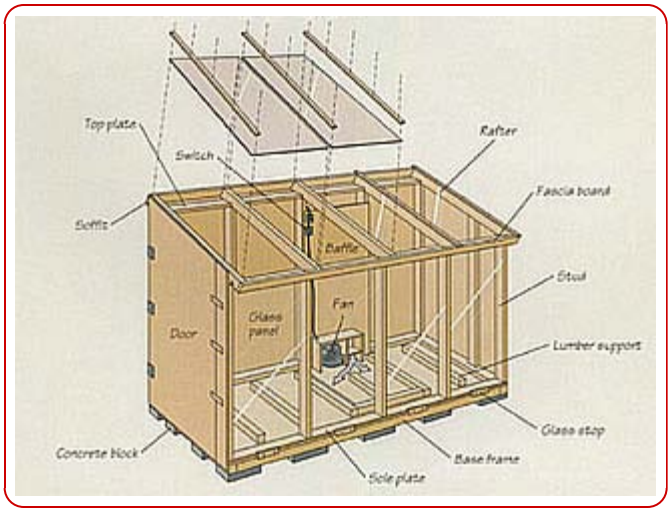
When setting out I was unsure what 15% moisture content would feel like, so I purchased a cheap(ish) moisture reader, so that I could double check when something was dry and be able to 'feel' when a piece was dry enough. Thanks to Axminster Tools for the image.

Kiln dry

Commercially and in quantity, wood is kiln-dried. This means the wood is placed in to a large kiln and heated for a period of time. The moisture within evaporates leaving the wood ready to work. Kiln drying is a fast and effective way of seasoning large quantities of wood. Some, more traditional wood users frown upon this technique stating that the wood needs to season naturally and that kiln-dried wood

some of its character. It is critical when kiln drying wood that the wood is heated evenly, as not doing so can cause misshaping during the shrinking process. A disadvantage of this process is that it is used for conventional standard shaped timber such as planks and posts that never seem to be the right size for didgeridoos.

I have not managed to locate (as yet) anyone willing or able to kiln dry logs as I have been told that due to the uneven shape the treatment would cause more problems than it is worth!



Air dry

The easiest and oldest method to season wood is to air dry it. Leave it in the air long enough and it will eventually dry out. This not only means allowing for warmth to evaporate the moisture at a rate less likely to cause the wood stress and therefore split and crack later on, to also allow air flow around the piece. For example, placing a piece of wood in the loft is NOT an effective way to season wood as there is little air flow to take the moisture away and also the temperature fluctuations can do more harm than good.

There is an old rule of thumb saying that for every inch of diameter wood should be seasoned for 1yr. This is not true, it is down to the individual bit of wood and the environment it is in.

In the woodland environment, wood is stacked evenly using spacers to allow air flow. I have collected wood from the same place within a wood with one piece being nigh on perfect (it had been laying on top of other pieces of timber), another piece (from the middle of the pile), being sound but requiring more time to season, and a third (from the bottom of the pile) still very wet and what's more, due to a large amount of mulch on the ground had started to rot and was infested burrowing insects.

I currently have a garage I store my seasoning wood in, however, before I had space I covered them up with a cheap tarpaulin, outside my house. I have found that to get wood dry enough to use, it normally takes 1-1½yrs (for an average didge sized piece of wood). Though do check the wood with the moisture reader above.

Sealing the Ends

Every piece of wood that I select is left for at least a few weeks. This is to allow it to settle and adjust to the change of environment. The wood may have surface moisture from rain or may appear dry due to a hot spell. I like them all to settle first.

EVERY piece of wood is then treated at each exposed end with PVA glue. The bark slows the drying process out, helping the wood to dry evenly. This reduces the risk of splits. Having the ends exposed gives the moisture a quicker escape route and therefore is more susceptible to imperfections. The PVA creates a barrier I liken to a synthetic bark that evens the drying process up. If there are any exposed pieces of the trunk or branch i.e. knots or bark that have been cut, fallen, or broken off, I also cover those areas with PVA.

Other Methods of Drying

Kiln and air drying are the most common methods employed to season wood, however there are numerous other ways the process can be conducted and speeded up. By placing the wood in flowing water for a period of a few weeks or so, the sap is washed out, and the wood when removed dries very quickly. Another method is to use a container such as an old (broken) fridge freezer. Place a 'daylight' bulb in the freezer (with the cooling apparatus disconnected), line the inside with tin foil and leave. The heat generated is akin to that of strong sunlight, especially reflected by the tin foil. I have tried neither of the above methods.

Surrogate kiln can be built, for example utilising a greenhouse. However doing so requires some knowledge as to correct temperature, air flow and evenness of drying. I have read several books with numerous suggestions for home-made kilns, but have deferred to letting it dry naturally, that way I can get on with the fun bit of making the didgeridoos.

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