

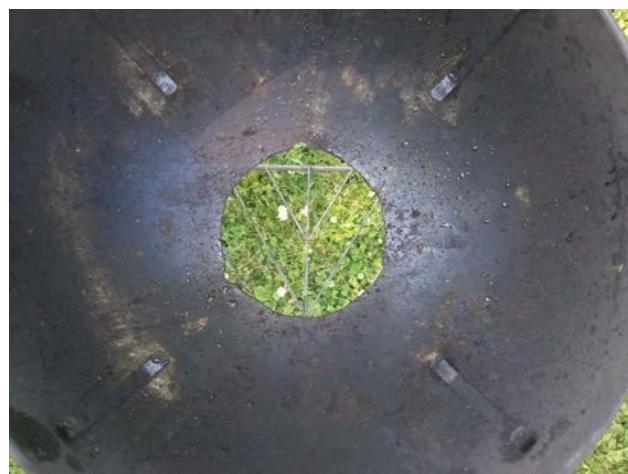
iCan Webber Conversion

Make charcoal, Don't burn it!



June 24, 2012

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notes

1. Primary air holes in the bottom of the tuna fish can, the fuel chamber, are 7/64s in the outer ring of 19 and in every other hole inner ring of 10. The alternate holes in the inner ring are 3/32s.
2. The larger secondary air holes are 3/8s slightly enlarged with a spike. The ring of supplemental secondary air holes are 5/16s. There are 18 of these between the three sets of larger holes in the pyramid configuration. The three pyramids of larger holes are evenly spaced around the top can.
3. I use three cups of wood pellets as my standard load of fuel. This will have a start to finish run time of about 50 minutes, after it which it self extinguishes. I let it 'smoke out' for two minutes before I carefully quench the Biochar in cold water. Be careful. The fuel chamber will be very hot. Use heavy gloves, or better, offset pliers when you handle it. Also be aware that the hot charcoal will generate live steam when it hits the cold water.
4. I use gelled fire starter to get the top layer of wood pellets going. Another option is to soak about 6 table spoons of wood pellets in 90% rubbing alcohol for about 5-6 minutes, drain well, and then spread across the top of the fuel load, which I have pre-positioned in the Weber. Ignite immediately as the alcohol will evaporate relatively quickly.
5. A fiberglass measuring tape is very handy for locating the positions of the various holes you are going to make. I always use the metric side as it gives finer grained measurements. It makes things easier if you make pilot holes with a very small, sharp, nail.

Testing your conversion:

- place a pot of very cold water on the top grill in the Weber just over the flames. At the end of 50 minutes there should be very little soot on it (the no soot test). Soot indicates unburnt carbon monoxide = incomplete combustion = waste.

- after you quench the Biochar, give it good stir then: there should be few if any floaters, there should be no brown bits (complete conversion to charcoal), the water should be clear (not milky with ash), when you smell a handful of warm Biochar it should have no odor (not smell of old creosote), when you vigorously crush some char between your finger is should rinse off cleanly in the quench water (the no soap test), and when you chew on a few bits it should be gritty but have zero flavor.