

## Process of Making Charcoal

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### INTRODUCTION:

The type of charcoal used in the making of Black Powder (BP) can have a dramatic effect on how BP performs in respect to it's burn rate and the amount of force it will exert when it is burnt (power, the amount of force produced from a measured amount of expended fuel). Charcoal, in this case, starts out as wood. Not all wood makes good charcoal and not all good charcoals make good BP. The only way to know if a source of wood, made into charcoal, will produce a quality BP is to try a sample of it. Fill a tort with a sample of the wood in question and COOK it by building a camp fire around the tort. Cooking is really not the proper word to describe what you do to make charcoal. Roasting would be a better word to describe the heating process that is required to make charcoal. What is a tort? A tort is a sealed container with a hole or holes to relieve steam and gas that is produced during the COOKING/ROASTING process. Charcoal is simply the CARBONIZED portion of the original wood.

### CARBONIZATION PROCESS:

- 1) Fill a tort with as much wood as you can. A partially fill tort is a waste of the fuel used to heat the tort and maintain it at a high enough temperature long enough to drive off all the moisture and volatile gases. The image below shows young Sugar Maple branches.



- 2) Fire the tort for as long as necessary to drive off all the moisture and volatile gases leaving only CARBON in the tort. When the flame (burning gases) goes out, it is done.



- 3) Remove the tort from the fire and ALLOW IT TO COOL. DO NOT OPEN A TORT BEFORE THE CHARCOAL HAS COOLED DOWN. If you open a tort while the charcoal is HOT, it will ignite and all your hard work will be reduced to a white ash.



- 4) Dump the contents of the tort into an empty 5 gallon bucket and use a flat end shovel to chop up the large pieces of charcoal into smaller 1 ½ " chunks.
- 5) Fill a 6" or better 8" ball mill jar almost full with this chunky charcoal. The jar should be about 1/3 rd full of hardened lead milling media before the charcoal is added.
- 6) With the mill shown below, it only takes about 10 – 15 minutes of milling to reduce the chunky charcoal into a fine air float product.



- 7) Store in double zip lock bags.

NOTE: The tort shown above has only one ¼" hole punched into the cover near the lid handle.



Ballmill on it's stand

Newly designed ballmill under construction.

*New mill jars are 8" in diameter, 11.5" long and have HDPE (High Density Poly-Ethylene) end caps with O ring seals. These new jars will NOT leak, even when filled with water. The mill on the left is 33" wide x 21" deep and can run three jars at the same time. Each jar can hold 1500 grams of KNO3 or about 500 to 600 grams of BP fuel.*