Maple Syruping in Your Backyard

WHAT TREES CAN BE TAP

Maple Syrup can be made from any species of maple tree. Trees that can be tapped include; sugar, black, red, and silver maple, and boxelder trees. Of all the maples, the highest concentration of sugar is found in the sap of the sugar maple. Generally the ratio of sap to syrup for the sugar maple is 40 to 1 (40 gallons of sap yields 1 gallon of syrup). Other species of maple have lower concentrations of sugar in their sap. For example; it may require 60 gallons of Boxelder sap to produce 1 gallon of syrup.

WHAT TOOLS ARE NEEDED

The tools required for a small maple syruping operation are found in most homes or can be easily obtained:

- Drill (brace or electric) with 7/16" or 3/8" or 5/16" bit (depending on size of spile you using.
- Hammer
- Collection containers-*plastic buckets, milk jugs, or coffee cans work well*
- Large boiling pan (preferably low and broad)
- Thermometer (Candy thermometer)
- Wool felt or cheesecloth filter material
- Spiles or tapping spouts – *Spiles can be purchased or made from ½" wooden dowels cut to 3" lengths. Drill an 1/8" hole through the center of each dowel and taper at one end so the spile will fit snugly into the tree tap hole. A notch should be made on the top of the wide end of the spile to support the sap collection container or tapered for tube fitting.*

WHEN TO TAP TREES

Alternating freezing and thawing temperatures are necessary to create the pressure which causes the sap to flow when the tree is tapped. Therefore, sap runs best when temperatures drop below freezing at night, and rise above freezing (into the 40's) during the day. In Minnesota these conditions generally occur during the month of March. However, because weather conditions vary somewhat from year to year, and from one location to another, trees can sometimes be tapped as early as mid-February or as late as April. Once temperatures stay above freezing, and the leaf buds appear the maple syruping season is over.

HOW TO TAP TREES

Drill a hole in the tree, 2'- 6' above the ground. The hole should be drilled at a slight upward angle to a depth of about 3". Use a hammer to lightly tap the spile into the hole. Do no tap the spile too far into the hole as it might cause the wood around the hole to split- resulting in lost sap flow. Hang a collection container from the spile or run a tube from spile to bucket on the ground. It is best to use containers that have a cover to keep out rain, snow, and other forest debris. Empty sap containers once a day and process sap immediately or store in a cool place out of direct sunlight until you are ready. It is recommended that you have at least 10 gallons of sap before you start the evaporating process.

HOW MANY TAPS CAN YOU PLACE IN ONE TREE

A healthy tree with a 10-18 inch diameter should have no more than one tap.
A healthy tree 18-25 inches in diameter should have no more than two taps.
A healthy tree with a diameter greater than 25 inches should have no more than three taps.
{Diameter = Circumference divided by PI (3.14)}

HOW TO PROCESS SAP INTO SYRUP

To make syrup from maple sap, it's a simple process of boiling and evaporation. Since substantial quantities of water will be "cooked off" most of the boiling should be done outside preferably over a wood burning stove (gas and electric will work also). Pour your sap into a large cooking pan. (A pan with a large surface area will increase the rate of evaporation during the boiling process) As the water boils off, add more sap. Take care to only add small amounts of sap at a time to avoid killing the boil. Use a candy thermometer attached to the side of the pan to monitor the temperature of the sap. As the sugar in the sap becomes more concentrated, the temperature of the boiling sap will rise. When the sap darkens and the bubbles become smaller, you are approaching the final stages of the boil (about 217 degrees). At this point pour the sap into a smaller pan and continue boiling on your indoor stove. **When the temperature of the sap reaches 219 degrees (103.9 Celsius), the sap has become syrup** (Or reduce heat and let it evaporate longer for thicker sweeter syrup). To finish the syrup making process, strain the hot syrup twice through cheesecloth, or felt, pour into jars and refrigerate; for longer storage, the syrup can be pour into Mason Jars and canned. **To make maple sugar:** Reduce heat and let it evaporate slowly until you can use a small hoop (loop) utensil, dip into syrup and can blow a bubble. Remove from heat source, let it sit and cool; will form into harden sugar.