

# How to tap maple trees and make your own syrup

## What trees can be tapped and when

The sugar maple tree has the highest concentration of sugar in its sap, but you can make maple syrup from any species of maple tree, including black, red, silver, and box elder. For a sugar maple tree, it usually takes about 40 gallons of sap to make one gallon of syrup. Other kinds of maple trees have less sugar in their sap – it may take close to 60 gallons of box elder sap to produce one gallon of syrup.

Sap runs best when temperatures drop below freezing at night and rise into the 40s during the day. In Minnesota these conditions typically occur between mid-February and early April. Once temperatures stay above freezing and leaf buds appear, the maple syrup season is over.

## Tools you'll need

- Drill (brace) with 7/16" or 3/8" drill bit
- Hammer
- Assorted containers to collect sap. Covered containers are best, to keep debris out. Plastic buckets, milk jugs, and coffee cans work well.
- Large pan for boiling, preferably low and broad. A pan with a large surface area will increase the rate of evaporation during the boiling process.
- Candy thermometer
- Wool felt or cheesecloth filter material
- Spiles or tapping spouts
  - Make your own spiles from ½ inch wooden dowels cut into three inch lengths. Drill a 1/8 inch hole through the center of each dowel. Taper at one end so the spile will fit snugly into the tree tap hole. Notch the top of the wide end of the spile to support the sap collection container.

## Tap the tree

First, determine how many taps you will put in the tree. Over tapping damages trees.

<b>Tree Diameter</b>	<b>Taps</b>
Under 10"	0
10" - 14"	1
15" - 19"	2
20" - 24"	3
25" or larger	4

Holes should be two to four feet above ground. Drill your hole at a slight upward angle, about three inches deep. Use a hammer to lightly tap the spile into the hole. Don't hammer the spile too far in or it may cause the wood around the hole to split, which results in lost sap flow. Hang a sap container from the spile.

Empty your sap containers once a day and process the sap immediately or store it in a cool place out of direct sunlight until you are ready. You should have at least ten gallons of sap before you start boiling.

## **Process the sap into syrup**

Making syrup from sap is a simple process of boiling and evaporation. To turn 40 gallons of sap into a single gallon of syrup, you will be "cooking off" 39 gallons of water. Because of the moisture generated in the process, it's best to do the boiling outside when possible, ideally over a wood-burning stove.

Pour your sap into your cooking pan and bring it to a boil. As the water boils off, add more sap. Take care to add only small amounts of sap at a time, to avoid killing the boil.

Attach the candy thermometer to the side of your cooking pan. 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 boiling. 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, the sap has become syrup!**

Strain the hot syrup twice through cheesecloth or felt, pour it into jars and refrigerate.

For long-term storage, you can also use Mason jars and can the syrup.