

# MAKING MAPLE SYRUP FOR THE FIRST TIME – WITH BUCKETS

**Trees:** The most common tree that is utilized in the maple industry is the Sugar Maple (*Acer saccharum*). The sugar maple has the highest sugar content in its sap reaching above 3%. In addition, other maple species like red maple, silver maple, and Norway maple can be tapped and used to make maple syrup. However, their sugar content is not as high.



**Collecting:** Buckets are emptied into a collecting tank usually on a truck or tractor. Then the collecting tank is brought to a central holding tank at the sugarhouse.

**Boiling:** Sap is transferred into the evaporator. The evaporator is basically a large pot on a woodstove. It has a large surface area so that the sap is in contact with more of the heat, resulting in a faster boiling rate. As the sap is boiling in the evaporator, the water evaporates away, concentrating the syrup. Syrup is ready to bottle at 7 degrees above the boiling point, which is 219 degrees Fahrenheit. However in Connecticut, the boiling point of syrup actually varies above and below 219 depending on atmospheric pressure that day. The best way to determine if the syrup is ready is to use a hydrometer. A hydrometer measures the specific gravity of syrup and is very easy to use and accurate.

A rule of thumb is the quicker that you boil the sap, the lighter the finished product will be. If you hold sap too long before boiling, the syrup will be darker. This is due to bacteria in the sap that eats away at the sugar in the sap, thus degrading the finished product.

For more information, visit: [www.ctmaple.org](http://www.ctmaple.org)

**Tapping:** It all begins when the temperature rises above freezing during the day and falls below freezing at night. These conditions trigger the sap to flow up the tree. This usually occurs in early to mid-February through the entire month of March in Connecticut. In order to acquire the sap, you must tap into the tree. This is done by drilling a 7/16" drill between 1" to 1.5" deep. The drill should be angled slightly upward so that the sap will drain downward into the spile. Spiles, also called spouts or taps, can be purchased at some retail stores or maple syrup equipment dealers. The spile is placed in the hole and tapped gently with a hammer until snug. Buckets are placed on the hook. Sap flows through the spile directly into a bucket. Large operations generally have a network of plastic tubing all leading to a collection tank. Trees have to be 10 inches or more in diameter to tap and spiles can be placed at any height that is easily accessible. A healthy tree can produce a gallon of sap a day on a good day. It takes about 40 gallons on average to make 1 gallon of syrup.

## Guideline for number of taps per tree

Diameter (inches)	Number of taps
10-17	1
18+	2



**Bottling:** Syrup must be filtered first when it is hot. Felt filters are the best to use. They filter out foreign materials and niter. Niter is a concentration of natural salts and minerals that participate out of solution during the boiling. Niter is not harmful to eat but it can cause your syrup to be cloudy. The goal is to get clear syrup. Syrup must also be bottled above 180 degrees Fahrenheit to be sterile/hot packed. After bottling, turn the bottle upside down for a few seconds so that a sterile seal forms around the lid.