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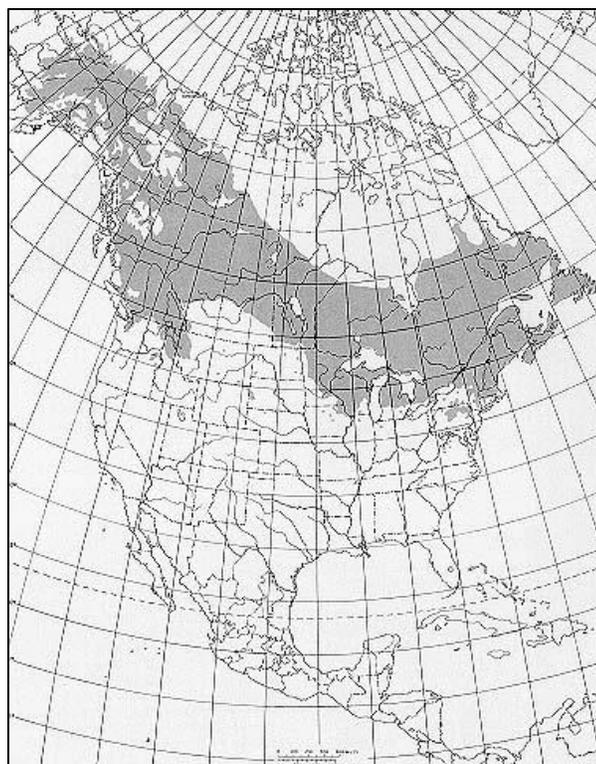
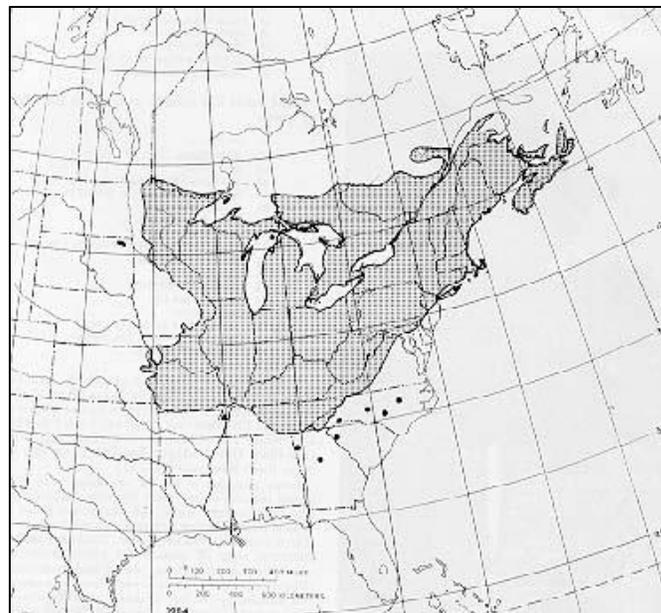
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A MAPLE SYRUP PRODUCTION INDUSTRY IN MISSISSIPPI, PROBABLY NOT, BUT PERHAPS AS AN INFREQUENT HOBBY



**Historical range of
sugar maple (*Acer
saccharum*)**

USDA Forest Service



**Historical range of
paper birch (*Betula
papyrifera*)**

USDA Forest Service

A MAPLE SYRUP PRODUCTION INDUSTRY IN MISSISSIPPI, PROBABLY NOT, BUT PERHAPS AS AN INFREQUENT HOBBY

When watching movies, or visiting up north, have you ever wondered if we could tap maple trees here in Mississippi to produce syrup. Although I have read many who believe trees cannot be tapped here, mainly those who don't even live here, I don't know why we couldn't. Now most certainly, I am not suggesting we start a Mississippi maple syrup industry, but I am suggesting as an infrequent hobby or niche market it could be done. Folks in parts of Alabama and Georgia have. I am not necessarily telling you to tap trees, but the weather forecast next week (January 13, 2024), for Raymond at least, would certainly be feasible weather conditions up north. It is supposed to be 26° tonight on Friday 12th.

Sat 13	55°/25°
Sun 14	46°/28°
Mon 15	42°/16°
Tue 16	28°/9°
Wed 17	41°/23°
Thu 18	55°/24°
Fri 19	38°/17°
Sat 20	37°/15°
Sun 21	43°/26°
Mon 22	52°/36°

For sap to run, you need freezing nights with daily temps above freezing. I would think 40°-45° during the day and 20°-25° at night would be ideal. Variations, while still satisfying the freeze-thaw condition, would still yield sap, just not the ideal. Plus too warm of temperatures during the day (e.g. 55° or greater) would likely spoil the sap.

It should be clear that several species of trees can be tapped. I am most familiar with sugar maple (plus red maple) and paper birch (river birch could be tapped). In fact, paper birch is probably more widely geographically tapped around the World than sugar maple. Probably not because it is preferred necessarily, but because sugar maple has a limited geographic range. Paper birch tapping is significant in places like Alaska and Russia, and many parts of Canada.

The picture on the right shows the limited geographic range of the maple syrup industry. But maple syrup can be produced wherever the freeze-thaw weather conditions are conducive. https://en.wikipedia.org/wiki/Maple_syrup



Why don't here we tap here in Mississippi, my thoughts are probably because:

1. Traditionally, few days a year are conducive, and for those days that are, it is probably not in a two week long consecutive period like up north. Probably not worth the investment commercially financially, but also logistically, given the "sugar" contents of species here.
2. We don't have sugar maple, it has the highest "sugar" content of maples. Red maple is ok, but it is not sugar maple. Plus we don't have paper birch. What do I mean by "sugar" content? Well it is generally accepted 40 gallons of sugar maple sap boils down to make 1 gallon of syrup. However, 100-110 gallons of paper birch sap is needed to make 1 gallon of syrup. A lot more work for paper birch - now with that said, its sap runs much more than sugar maple. Some report that boxelder (remember it is in the *Acer* genus like maples) requires around 60 gallons of sap to make 1 gallon syrup. Making syrup is not for the faint of heart.
3. During freeze-thaw conditions, our days will likely be warmer here relative to the North, and this could spoil the sap. Remember, around 40° during the day is an ideal temperature. A temperature of 55° could spoil the sap. Plus some say snow is needed to keep sap fresh, but I don't think it is absolutely necessary, particularly when collecting sap as a hobby.
4. Plus, usually not an extreme concern, but any damage to a tree could create health issues. Particularly given our warmer temperatures here. There are likely other reasons as well.

Perhaps now you understand why folks in places like Minnesota prefer sugar maple to paper birch. Beyond that, there is a difference in taste. With that said, paper birch syrup is actually very good as well, sort of more with a caramel-like taste. Perfect case was my wife and I, our property in Minnesota only had paper birch trees and no maples (well one poor maple), thus we tapped birches. In Minnesota, tapping was common in March, but depending on the winter, it could be February or even June (we tapped one year in June). Remember, you need the freeze-thaw conditions for a few consecutive days (I would say a minimum of one week is best). In Minnesota it was a big thing, sort of like Mardi Gras in Louisiana and perhaps barbeque or the blues here in Mississippi.

So, in a nutshell, what do you need to do:

1. Order spout taps – there are many places on the web. Make sure to have some type of glass jar to put the syrup into when finished. You will need some type of heat source for the boiling down of the sap to syrup (e.g. stove, OUTSIDE propane stove, or wood stove or pit). To be simple, use a gallon jug bottle, preferably a gallon water bottle. Drill a hole, across

from the bottom of the handle, only wide enough for the tap to fit through when collecting the sap. The hole will be used to hang the gallon bottle on the spout. There are of course more formal collection containers that can be purchased, buckets can also be used.

2. Find suitable trees. I would think any maple - red, silver, or Florida would be fine. Or, alternatively, river birch or another birch species. Maples should be at least 10 inches and birches at least 8 inches in diameter at 4.5 feet above the ground (diameter at breast height). I would suggest just putting in one tap per tree.

3. About 4 feet above the ground drill a hole with a slight angle upward so that the sap flows down into the bottle; drill about 1.25-2 inches into the tree (you could mark this length on your drill bit prior to drilling with a piece of tape). Select your drill bit based on the spout type that you purchase (usually 7/16" or 5/16" or 19/64"). When drilling, run the drill not only going into the tree, but also as you pull out the drill bit to help remove the wood fiber. Grab a hammer, then take your spout tap and gently hammer it into the hole. Take it easy, don't split the hole! North side of the trees, south side, there is a science there – but we are just hobbyists.

4. Put the gallon bottle on the tap carefully - ensuring the sap will drip into the bottle.



Drill the hole at a slight angle upwards, about 1.25-2 inches into the tree, to ensure the tap will result in the sap draining down into your gallon bottle.



Snow is likely preferred to keep the sap fresh, but it isn't necessary. Beyond that, it can be annoying to transport collected sap through the snow – here it is just one tree, but if you are tapping 20 trees collecting sap is a lot of work.

5. Now collect the sap. In Minnesota, I would leave for work in the morning and in the evening the birch trees would have a gallon of sap, maple trees probably half of the gallon or less. Here is where snow helps to keep the sap cool and fresh during the day - but as long as daily temperatures are not too high the sap should remain fresh. Either boil it immediately or freeze it for up to two days (or longer like me which is probably not ideal). Collecting the sap can be a lot of work – particularly if you are tapping many trees and the snow is deep! **SAP SHOULD BE CLEAR, IF MILKY IT LIKELY SPOILED – TOSS IT!**



In Minnesota, usually paper birch produced around one gallon of sap from the morning to late afternoon. Sugar maple may have produced about half of that, if not even a ¼ of that amount of sap (but the sugar content is much higher relative to birch). I am not sure about our species and soils here in Mississippi. It might be less, but most likely more sap will be produced during a work day – but the sugar content will be less – thus more work to get a gallon of syrup.

Hopefully you see the sap line in the gallon bottle.

6. Now comes an even harder part, the cooking down of the sap into syrup - e.g. boiling the maple sap down 1/40th to get syrup. Eventually the hard part becomes dangerous, because near the end of boiling down, some extra cook time can ruin the syrup! There are a variety of heat sources: 1.) inside the kitchen but it gets a little steamy and **it can ruin your**

kitchen (can you say stove vent fan or dehumidifier), 2.) OUTSIDE propane cooker but that can get expensive, 3.) some type of wood pit or wood stove.

By freezing the sap you cheat a little and you can reduce the cook down time because some of the water in the sap should separate while freezing, allowing you to pull it out. May not be the best thing to do, and perhaps that is why my syrup was not sold commercially.



Freezing the sap for a day or two rather than cooking it immediately after collection allows you to reduce the cook down time since the water will partially separate from the remaining “sugar” sap. Lift the ice out and throw it away.



Cooking inside on the stove is possible, but there is a lot of steam, and remember there could be some particles in the sap which may create issues with your wallpaper or painted walls. The use of wood outside may take a little longer, but it is certainly cheaper if you use waste pine or low valued hardwoods, and you don’t have issues with steam in the house.



Propane cookers can also be used, but it will be a little costly. THIS STAGE TAKES SOME TIME – SO BE PATIENT!! What is hard is having the patience near the end of the boiling, because a moment away could be disastrous.

Actually many folks when boiling outside using propane or wood, will transfer their syrup to smaller pots and finalize the boiling down on their stove because of the attention needed to finish the process.

7. NEAR THE END OF THE BOIL DOWN DON'T OVER COOK BECAUSE ONCE AGAIN YOU CAN RUIN THE SYRUP.

Actually many folks when boiling outside using propane or wood, will transfer their syrup to smaller pots and finalize the boiling down on their stove because of the extreme need for detailed attention to finish this process.

8. When the consistency and color is what you want, pull the pot. You will then need to strain the syrup before bottling it, largely to remove what is called "sugar sand". There are a variety of straining approaches, all the way from purchased cheese cloth and Orlon filters to cheap paper towels. Apparently red maple has more "sugar sand" granules.

Well, there you go, you now have syrup. Make sure to refrigerate it. One **IMPORTANT** thing to note is that if you are going to use wood, it will likely ruin your pot for regular cooking.



Near the end of the boil be careful not to overcook the sap, it will burn the syrup and ruin it.



The final step is the straining of the cooked down sap, now syrup.



Different colors of birch syrup. It is my understanding that if produced commercially these would be sold as different grades of syrup. These were produced at the fictitious and now defunct VanderSchaaf Farms.



There are many types of spouts or taps. I am not necessarily recommending this type.