

A Sweet Deal

Homeschooling has enabled our family to experience the joy of producing our own maple syrup and has also afforded Tim an opportunity, at 14 years old, to run a small business.

By Amy Nicholson

Hath the rain a father? Or who hath begotten the drops of dew? Out of whose womb came the ice? And the hoary frost of heaven, who hath generated it? The waters are hid as with a stone, and the face of the deep is frozen. (Job 38:28–30)

My son Tim has a lot in common with his father, DJ; they both are scientists by nature and enjoy spending time outdoors. They are always investigating how things work, whether it be man-made machines or God's handiwork. Their inquisitive minds require them to constantly be working on projects. Three years ago, Tim and DJ embarked on a new venture that fostered their interests and God-given talents. With some second-hand steel buckets, taps, and a taste for adventure, they set out to make maple syrup.



Maple syrup can be produced only in a few places on this planet, and our home state of Connecticut is one of those places. We are blessed to live here and to have the flexibility in our schedule to “go with the flow” of the sap. The sap runs for a very short season—four to six weeks. The season is short because the sap flows only under certain conditions.

The cold nights and warm days of February and March cause pressure to build up inside the tree, and it is that pressure which forces the sap out of the natural orifices or man-drilled holes in the tree. Once the nights warm up and the tree does not experience those extremes in temperature, sap flow decreases. Likewise, if the days of mid-February do not warm up to temperatures over 40 degrees Fahrenheit, the sap will not flow.

Sugar-making season is a brief but busy period of time. The season runs from about Valentine's Day to St. Patrick's Day. Homeschooling has enabled our family to experience the joy of producing our own maple syrup and has also afforded Tim an opportunity, at 14 years old, to run a small business.



Tim uses a hand drill to bore a hole into an old maple in our yard, while his grandfather, Pepe, supervises. Metal buckets wait to be put to work!

How It All Began

Tim and his dad started off tapping the trees on our property. Friends up the street gave their permission to tap their trees, and so did the manager of the nearby cemetery. The first year, they tapped fifteen trees. They have since gone on to lease trees on the state property that abuts our backyard, thus creating their own “sugar bush.” They now have sixty trees for a total of 120 taps. (Trees with a 10-inch diameter can take one tap. Trees that are 20 inches in diameter can take two taps. Those that are 25 inches or more in diameter can take three taps.)

By increasing the number of trees they tapped, they also increased their work load. Not only did they have more buckets to collect, but they also increased their chances of losing the very thing they set out to collect, because gathering sap can be sloppy business. The sap, which is 98% water, will slosh around and easily spill out of the bucket. It is no fun getting soaked with sap on a cold winter morning!

To increase the efficiency of their growing operation and reduce the risk of spills, they replaced the metal taps with plastic ones that connect onto plastic tubes. They run the tubing from one tap to the next (downhill so gravity will assist) and collect it in a large, 275-gallon tote. This system is more efficient and cleaner. When they used buckets, they

also had to deal with insects creeping into the sweet sap. The tubing eliminates that problem.

Making the Syrup

Once the sap is collected, it must be boiled down to syrup. If the sap sits too long in the buckets, it will spoil. If it gets too warm, it will spoil. Since it takes 40 gallons of sap to produce 1 gallon of syrup, every drop is precious, and timing is crucial. The boiling process takes several hours and must be carefully monitored. It is a long, dull process, but this stage of production allows Tim time to work on his schoolwork. He can do this in the sugar shack, where he has a table set up for that purpose. In fact, this year we read *Uncle Tom’s Cabin* aloud there, amidst the cotton candy scent.

When the guys started, they were boiling sap in the kitchen. To Mom’s delight, they moved their operation out of the house. Actually, they moved it to the back of the house. With Dad’s carpenter skills, they built a sugar shack—now Tim was gaining experience in carpentry as well as sugar farming. Grampa used his metal-working skills to construct the divided metal “evaporator” pans and an arch. An arch is a special wood-burning oven upon which the long evaporator pans are placed. The wide span of the arch assures more rapid boiling and allows the heat to cover a larger surface area than a traditional pot-and-burner set-up.



Tim in the sugar shack he and DJ constructed, stirring sap in the evaporator pan Grampa built. The pans sit on an oven called an arch. This year Grampa even built a new arch.

Recipes

Maple Nut Softies

1/3 cup butter
1/3 cup confectioner’s sugar
1 egg
1/3 cup pure maple syrup
1/8 teaspoon salt
1/8 teaspoon baking soda
3/4 cup flour
1 cup crushed nuts

Preheat oven to 375 degrees. Cream butter and gradually add sugar. Blend until creamy. Beat in egg, syrup, salt, and soda. Mix in flour and then nuts. Pour into an 8 x 8 x 2 greased pan. Bake 18 minutes. Cut and roll in confectioner’s sugar.

Yield: 16 bars

Maple Mint Sorbet

3/4 cup pure maple syrup
2 cups coarsely chopped fresh mint
1/4 cup fresh lemon or lime juice
1 1/2 tablespoons finely minced lemon or lime zest

Combine 1 quart of water and the syrup in a saucepan and bring to a boil. Add the mint, reduce the heat, and simmer for 5 minutes. Remove from the heat and set aside to steep for 1 hour. Strain the syrup into a bowl. Add the juice and zest; refrigerate until very cold. Freeze in a bowl or ice cream maker. Shave and enjoy!

Nutritional Information

- Properly canned pure maple syrup will keep for one year. It contains manganese (for energy and antioxidants) and zinc (good for your heart and cholesterol), and it supports the immune system.
- Use maple syrup to sweeten:
 - Milk
 - Coffee
 - Tea
 - Lemonade
- Also tasty on:
 - Oatmeal
 - Ham
 - Carrots

Make Your Own Maple Syrup

If you live near maple trees, you can tap them and make your own maple syrup. The best time to do this is in late January or February.

Tap at least two sugar maple or red maple trees that have a diameter of at least 10 inches. To do this, use a drill with a 1/2-inch bit that's about 4 inches long, to make a hole in the tree. The hole should be drilled 3 feet above the ground and should be 2 inches deep. Trees with a diameter of 20 inches can take two taps, and trees with a diameter of 25 inches can take three taps. Once the hole is drilled, insert a tap. Metal or plastic taps can be purchased at specialty stores. Insert tap and hang a bucket below the tap. Metal sap buckets, plastic 5-gallon buckets, water dispenser jugs, or even plastic milk jugs can serve this purpose.

As you collect the sap, make sure to keep it cool so that it will not spoil. Once you have collected a quantity of sap, you are ready to boil it. Remember it takes 40 gallons of sap to make a gallon of syrup, so even if you want to make 1 quart of syrup, you'll need to collect 40 quarts of sap.

You can boil the sap in a large pot on the stove. This will take a while. As the sap boils, it thickens. The water evaporates and the sugar condenses. Be careful not to let the level of the sap in the pot get below 1 1/2 inches from the bottom of the pot, or it will burn. Use a candy thermometer, and boil the sap until it is 7 degrees above your area's boiling temperature or about 212 degrees Fahrenheit.

Filter the syrup into a glass bottle. If you are canning the syrup, make sure to do so at 180 degrees Fahrenheit to avoid spoilage and bacterial contamination.¹

With the new, safer equipment, the boiling process is more efficient. It also keeps the sticky syrup out of the kitchen. When the syrup reaches a temperature of 216 degrees Fahrenheit and a density of 66% sugar (measured with a hydrometer), it is ready. If it is boiled any longer, it will burn. Tim and his dad filter particulates (solid proteins) out of the syrup.

Tim and DJ determine the syrup's color grade with a grading kit. Sap collected early in the season produces syrup that is lightest in color and texture, and it has a buttery taste. As the season progresses, the syrup produced becomes darker brown, richer in texture and nutrients, and more "maply" in flavor. The color grade goes from grade A light, to medium, to dark, and finally to grade B. Once the syrup is graded, they bottle it in plastic and glass bottles of various sizes, label it with business tags, and sell it at the local chocolate shop.

Blessings and Challenges

Tim has been blessed in his new business venture. A friend mentioned to a local shopkeeper that Tim was interested in selling his syrup, and the shopkeeper said he would be happy to sell it in his store, **Three Oaks Chocolatier**.

When his hobby became a business, Tim faced some new challenges. His first step in marketing his product was to come up with a name for his business.

He and his dad decided to name it **Knife Shop Sugar Shack**, after the adjoining road and historic knife shop that formerly stood on that street.

Although Tim's dad helps him produce the syrup, Tim handles the business side of things himself. He set up an email account where customers can place orders (kssugarshack@gmail.com). He also used his computer skills to design business cards and the labels that accompany every bottle he sells. Tim has included this Scripture reference on his business labels:

Therefore, my beloved brethren, be ye steadfast, unmoveable, always abounding in the work of the Lord, forasmuch as ye know that your labor is not in vain in the Lord. (1 Corinthians 15:58)

Tim works with the shop owner to figure how much syrup he will need to stock his shelves, and he makes note of which items sell better. For instance, pint containers and glass cabins and maple leaves are quite popular. He knows that he will need to supply the store with a large quantity of those next year. Tim stops in at the shop periodically to check on sales, restock the shelves, and collect his profits. The owner of the shop collects a commission, but Tim takes home a sweet profit just the same.



Tim delivers his bottled syrup to chocolatier Wilfred Parilla of Three Oaks Chocolatier in Litchfield, Connecticut. (Notice the yummy chocolates in the cabinet and the chocolate rooster in the background!)

Since it takes 40 gallons of sap to produce 1 gallon of syrup, every drop is precious, and timing is crucial.

Tim has learned a great deal of science, math, and business through this undertaking. He has gained experience working with business owners and understands the concept of investing money to make money. He is looking to expand his business to include additional stores. He has learned about problem-solving and the importance of perseverance through trial and error.

Tim has also learned about God's sovereignty. He sees how God is in control of His business. God made the trees, and in His infinite grace and wisdom, He sprinkled a little sugar in some of those trees. He provided Tim and DJ with the knowledge and tools to tap into that resource and make something useful from it.

It may seem as if Tim and his dad are doing the work, but it is really God's operation. If God designs a short season, Tim will collect less sap than he will in a long season, and he therefore will produce less syrup and make a smaller profit. Such was the case last year. The sap season started two weeks late (by our calendar, not God's). Consequently, their syrup production was down from the previous year.

This year was better for them. They started "on time" (by our calendar and God's, apparently!). They collected a total of 700 gallons of sap over six weeks; that boiled down to 15 gallons of syrup. No matter how fancy his equipment or how efficient his system, Tim's profits depend on the trees and weather, and that is God's business, not ours. 🙏

Amy Nicholson

Amy is married to DJ, her high school sweetheart. They homeschool three wonderful children—a computer genius, an artist, and a princess. When not tending her chickens or children or husband, Amy enjoys writing. She hopes to make a career of it some day. Maybe when the chickens move out. Amy can be contacted at amylynn.nicholson@gmail.com.

Endnote:

1. www.howtomakemaplesyrup.com



Tim posing by his beautifully wrapped syrup

Ad Space