

MAPLE SYRUP FOR UNDER \$100 PER QUART

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On a sunny Saturday morning in mid-February 1982 I was walking out to my woods with Stanley Hensler and Scott Heeren, two consulting foresters from Hamlet, Indiana. We were on the farm I had recently purchased near Three Oaks, Michigan, which is located in the extreme southwestern corner of the state, about sixty miles east of Chicago (as the crow flies, when it chooses to fly over fifty five miles of open water).

I had obtained Stanley's name from the Michigan Department of Forestry and had called him in early December, when the ground was still bare and the temperature moderate. He couldn't come then because he had fifty thousand Christmas trees to cut and sell. In January, it seemed as though every weekend was twenty degrees below zero. But I finally persuaded him to visit me in February, telling him the snow was only six inches deep in the woods. He probably didn't believe me, but he came anyway and brought Scott, his young associate. It turned out to be just in time to get me started on my maple syrup project, but I didn't know that then.

Stanley and Scott were waiting in the driveway of the farmhouse when my wife Andrea and I arrived that Saturday morning, and soon the foresters and I were slogging out through the snow to my woods. The snow was at least a foot deep everywhere and the drifts came up to our knees. I felt quite embarrassed at having asked these gentlemen to drive the forty miles from Hamlet and then walk for a mile and a half (the perimeter of my property) through deep snow just to look at my paltry fifty acres of woods, much of which was immature growth in abandoned pastures anyway. But they were cheerful and uncomplaining, undoubtedly making allowances for the ignorance of a city dweller.

I first took Stanley and Scott to the woods at the far north end of my property. Here,

at least, there were some trees that could be called timber. Even the foresters seemed to appreciate what they saw. “Nice tree,” Stanley said occasionally. I took this as a personal compliment. “You know,” he added a few minutes later, “this part of your property is all virgin timber. That’s not too common in this area, outside of the state parks.” Now I was bursting with pride.

Then Stanley and Scott began telling me what kinds of trees I had. With no more than a glance, they pointed out an ash, a beech, and a yellow poplar. I asked Stanley how he could identify the trees so quickly and so certainly in the middle of winter, without examining either a leaf or a twig. He attempted to explain the differences in the bark, and in the way the limbs grow.

“For example,” he said. “You’ve got a lot of nice mature sugar maples in this area here. You can tell them by their bark and by the fact that the limbs grow out opposite each other, not alternately as they do on an oak.”

I wasn’t absolutely sure what he meant, but I tried to follow what he was pointing out. Meanwhile, another more pressing question was forming. “Sugar maples? Are those what they make maple syrup from?”

“They are.

“When do they do that? What time of year?”

“Well, as a matter of fact, it’s almost that time now. Often starts in late February around here. Certainly March. As soon as we have freezing nights and warm, sunny days.”

I filed this information away carefully in my mind as we continued our survey of the property. We crossed southward through a ravine to an area of smaller trees. Stanley pointed out that not only were these trees much younger, but they also included varieties that we hadn’t seen in the more mature woods.

“When a pasture is naturally reforested, as is happening here,” Stanley said, “a large number of kinds of trees start growing. Here we have ash, oak, black cherry, aspen, basswood, red maple, and other varieties, as well as sugar maple and beech.” He pointed out samples of each kind as he named them. “The sugar maple and beech are the most tolerant

of shade, though, so after many years of growth, when all the trees are tall, those two varieties tend to predominate in the new growth because they can live underneath the taller trees while other kinds can't. Eventually, after hundreds of years, the sugar maple and beech predominate even in the mature trees, as in the old part of your woods we looked at first.

“So eventually all of my woods is going to be sugar maples?”

“Not all, but most. That and beech. Except in places where perhaps the soil is too wet or too dry for sugar maple. But I'm afraid you'll be long gone before that happens here. The trees in this area we're in now have only been growing for maybe thirty or forty years. It takes hundreds for what we call the 'climax' forest to develop.”

The idea of calling this “my” woods suddenly seemed a bit pretentious. A thing with a life cycle vastly longer than that of a man can hardly be “owned” by a man except in some petty, technical sense.

We crossed another ravine as we proceeded southward along the west edge of my property. The woods now was a bit older than that from which we had come, but nevertheless still quite immature. Here Stanley pointed out some larch trees that he said were not native but that must have been introduced to the area years ago. They were ugly things, I thought, but Stanley and Scott seemed to find all the trees beautiful.

Shortly before we came to the road at the south end of my farm we passed a gnarled old beech tree with a large hollow place inside it. If my woods were enchanted, I thought, this is where the fairies would live. Stanley liked the tree so much that he insisted on taking a photograph of Scott and me standing next to it.

When we finished our circumnavigation of the farm, we returned to the farmhouse to warm up. I asked Stanley how much he charged for his inspection. To my surprise he replied that I didn't owe him anything; he had enjoyed it. I asked if he would let me pay him for an appraisal of my timber (which I wanted in case I ever needed to establish the amount for tax purposes) and a written report on how I should manage it. He consented, and about a month later I received the appraisal and the report in the mail. On the front cover of the report was a print of the picture Stanley had taken of Scott and me standing in front of the old beech

tree.

Meanwhile, I had been doing some research on maple syrup. I called every hardware and farm supply store I knew of in the area of the farm, but none carried even the little spouts used to tap the maple trees, much less any of the equipment for boiling the sap down. I did, however, find a paperback book at a bookstore in Chicago that described the rudiments of syrup making, so I decided to give it a try, improvising as to the equipment. It was an excuse to be out of doors, and something to keep me busy at the farm while we waited for warmer weather.

In the absence of any proper metal spouts, I would attempt to use plastic straws. Instead of a metal pail such as I had seen in pictures on maple syrup cans, I would use plastic one-gallon milk jugs, as recommended by my book. And just in case the straws were inadequate, I picked up a length of clear plastic tubing from the aquarium department at a pet shop. The tubing, which cost three dollars, and the book, at five dollars, were my only significant expenditures. It was going to be nice to engage in a winter activity that didn't require a substantial investment, I thought.

Now I had to wait for a sunny day with the temperature well above freezing, and it didn't take long. On the last weekend in February the temperature was predicted to be in the mid-forties. That Saturday morning, with the temperature already up to the freezing mark, I packed my plastic straws, jugs, and tubes in a backpack, together with a little hand drill and bit, some small metal screw eyes, and pieces of plastic-coated wire. I persuaded Andrea's son Richard, who was home from college for spring vacation, to join me. Richard seemed only moderately interested in making maple syrup, but he loved skiing, and with even more snow on the ground than when Stanley visited, cross country skis were the only reasonable means of transportation around the farm.

We stopped several times on the way to the north end to look for sugar maples located closer to the farmhouse than those Stanley had identified. Despite Stanley's advice, and long minutes of studying the bark and bare twigs of a number of trees, I just couldn't be sure what was a sugar maple and what wasn't, so we continued on. It was hard enough, when we

eventually arrived at the north part of the woods, finding the maples Stanley had pointed out to me.

When we did finally locate a sugar maple, Richard drilled the first hole about two inches into the tree. Though we used only a quarter inch bit, the tiny drill made the task laborious. But almost as soon as the bit was pulled out, a trickle of sap began to flow. Elated, we inserted a piece of plastic straw. The sap ran nicely through the straw, but we were unable to direct the flow into a plastic jug without creasing the straw. We substituted a piece of plastic tubing and finally managed to get the sap dripping into the jug, which we fastened to the tree with the wire and a screw eye.

We drilled some more holes and attached some more jugs. After about two hours of work we had eight jugs in place, and a measurable amount of sap had already accumulated in the first ones. We returned to the farmhouse to warm up, eat lunch and wait.

In the late afternoon we skied out to our sugarbush again. Two of the pieces of plastic tubing had come loose, and one of the holes didn't seem to be producing any sap to speak of. But enough sap had collected to fill two new gallon jugs we had brought out with us. We each placed a full jug in a backpack and skied back to the house. I discovered that eight pounds of sap on my back made the skiing more difficult. Something would have to be done about that.

Now all we had to do to enjoy pure maple syrup was boil the sap. My book said that thirty-two gallons of sap would make a gallon of syrup, so two gallons of sap should make a cup. I put a pan on each of the four burners of our electric stove, filled them with sap, and turned on the heat. Andrea watched my efforts silently, refraining for some reason from her earlier enthusiasm for the project. "Are you sure you want to use all four burners at once?" she asked.

In ten minutes all the pans were bubbling merrily. In twenty minutes the air in the kitchen had become perceptibly thick with humidity. In thirty minutes the kitchen windows were coated with moisture. And in forty five minutes a faint cloud had definitely formed in the kitchen. Yet there was still over a gallon of sap left to boil away.

At this point Andrea decided to climb up on a stool to inspect the wallpaper she had painstakingly installed in the kitchen over the previous month. “The corners are coming loose,” she announced. She climbed down. “And how am I going to fix dinner?”

“Okay. Okay,” I said. “I get the point. I’ll turn off one of the burners.”

“Two,” Andrea insisted. “Or more.”

I consolidated my sap into the two deepest pans, and Andrea proceeded to prepare dinner. The cloud dissipated, but the windows remained as wet as ever. I had now become conscious of a not entirely pleasant odor that was emanating from the boiling sap. It reminded me of cooking sweet corn. I didn’t say anything about it, but I was not going to be very happy if this odor indicated the taste of the syrup. Could I have possibly tapped the wrong trees, I wondered.

By the time dinner was over, there was less than a quart of sap left. It tasted sweet, but it sure wasn’t syrup yet. So we waited some more. In half an hour, we were down to a pint or so, but it wasn’t the least bit thick. Finally, we reached the cup level at which I had expected to stop boiling, and the sap still dripped like water off the spoon.

Now I was really having doubts about the trees I had tapped. But oddly, as my enthusiasm was waning, Andrea and Richard seemed to be taking more of an interest. The sap was very sweet, and it had taken on a very pale amber color. This seemed to encourage them.

Finally, when there was something more than half a cup left, millions of tiny bubbles began appearing, and the boiling liquid started to rise suddenly in the pan. I quickly removed it from the burner, and the bubbles subsided. This time, when I dipped a spoon in the liquid and held it up, a little sheet formed on the side of the spoon. We had produced our first syrup.

Now came the crucial taste test. When the syrup had cooled, each one of us, in turn, delicately placed a spoonful of the light amber liquid in our mouths. I was relieved to find that it tasted nothing like the odor I had noticed. In fact, it was quite good, causing a particularly pleasant sensation on the back of my tongue. But I didn’t taste any of that strong maple flavor I remembered experiencing with Vermont maple syrup.

“Well, what do you think?” I asked the others.

Richard was noncommittal, but Andrea wasn't. “It's fabulous!” she said. “It's the best syrup I've ever had. It's got the nicest mild taste, not like that awful Vermont stuff. George, you're so clever.”

I wasn't so sure, but I didn't disagree. “Aw shucks,” I said.

“I hope you'll make some more,” Andrea continued. “But not in the kitchen.”

We decided to use most of our syrup as a topping for the vanilla ice cream in the freezer. The result was disappointing. Although the sweetness of the syrup remained, all of its flavor was lost in the much stronger flavor of the ice cream. Now we just had to make some more syrup, to try on a more complimentary foodstuff.

The next morning Richard and I skied out to our sugarbush again. The temperature had dipped well below freezing during the night, and we were disappointed to find that little more sap had accumulated. We decided to tap some more trees to maximize our collection for the day if the sap started to run again. The job was even more difficult than the day before because the drill bit had dulled. And as we tried to force the bit into the third tree it broke off. But at least we had two new taps, making ten in all

The day warmed rapidly, and the sap ran once more. In mid afternoon, just before returning to Chicago for the week, we gathered five more gallons. In the meantime, while we waited, I had driven up to Bridgman, where a hardware store was open on Sunday, and paid five dollars for a plastic sled. (Total. expenditures now thirteen dollars--still a pittance.) I put the five capped gallon jugs on the sled, tied a rope to the sled and around my waist, and skied back to the house with the sap and sled in tow, like a one-man dog team. It wasn't pretty, but it was easier than carrying the jugs on my back. I had solved the sap transportation problem (or so I thought).

We didn't have time to boil down any of the new sap at the farm so we brought it back to Chicago with us. Andrea wisely forbade use of even one burner of our new kitchen stove at home for syrup making, so I had to find an alternative before the sap spoiled. I considered using our Weber charcoal. grill in the back yard until. I figured how much charcoal it would

take. Then I remembered an old electric fry pan we had stored away in the basement. I found it, dusted it off, brought it upstairs and plugged it in. It still seemed to work.

The electric fry pan presented a nice large heated area which ought to speed the boiling. But it was so shallow that I feared we could not easily keep it full. My maple syrup book gave me the answer. It pictured a small pan used to boil sap over which was placed a large tin can with a small hole punctured in the bottom. This device, which the book called an “automatic sap injector,” not only provided a sap reservoir but also caused the sap to be warmed (from the steam generated below) before running into the boiling pan.

I set up a similar rig and soon had it purring on our back porch, where there was fortunately an electrical plug. Andrea reluctantly agreed to tend it during the day when she was home, and I watched over it in the evening. I measured its boiling rate at a modest three quarts an hour, which permitted it to produce a cup of syrup in about four hours. It wasn't fast enough for me to consider opening a roadside syrup stand, but then it didn't cost anything either (not counting the ten cents per hour for electricity).

We made close to a pint of syrup that week and enjoyed it immensely on pancakes, waffles, and even plain toast, repeatedly telling ourselves that despite its negligible maple flavor our syrup was actually better than anything we had ever bought. Andrea even believed this, and she clearly has a much more discriminating palate than I do. The next Friday night, now the first weekend in March, we returned to the farm, anxious to collect more sap and expand our syrup supply.

When I skied out to the sugarbush Saturday morning I found that again some of my plastic tubes had come loose and sadly spilled their sap on the ground. But not all had, and the weather had been warm enough to cause more sap to run yet cool enough to keep it from spoiling. I brought a good six gallons back on my sled. The trip was more difficult this time, for the snow had melted during the past week, leaving occasional patches of mud and puddles that had to be circumnavigated.

We boiled the five gallons down on Saturday, and on Sunday, despite continuing problems with the tubing, I collected another four plus gallons, which we again brought back

with us to process at home. We did so, our syrup production for the year now exceeding a quart, and I also did something else. I returned to the bookstore, where I found yet another paperback book on syrup making (cost: four dollars, bringing total expenditures to a mere seventeen). This new book contained a comprehensive listing of syrup equipment suppliers, the nearest of which was located in a place called Aniwa, Wisconsin. I telephoned Aniwa to discuss my spout problem and was advised that for only twenty eight dollars they would ship to me immediately not only ten nice new aluminum sap spouts, but also ten metal holders and ten four-gallon plastic sap bags to go in them. I couldn't say no. It was so ecologically wasteful to allow the spillage of precious sap that my current taps were causing. The money wasn't just for syrup; it was for economizing natural resources. (Total outlay now forty-five dollars--about the price of one inexpensive ski.)

The following weekend Andrea and I were committed to a long-planned trip to see her parents in St. Louis, so we had to interrupt our sugaring (or so we thought). We took with us a small sample gift of our output. When we arrived there late Friday evening we insisted on giving everyone a taste, which they thoroughly enjoyed. The next morning Dr. Maxwell, Andrea's father, asked me how we had gone about making the syrup. I was only too happy to tell him in great detail. He wanted to know even more. "I'm glad to find someone so interested in our project," I said.

"Well, you see," he replied. "I've got this good-sized sugar maple tree in the back yard, and I was wondering . . ."

We commenced assembling a set of sugaring supplies. Dr. Maxwell didn't have any plastic tubing, but he did have some plastic straws that were flexible. (I wished I had thought of those earlier.) He also had an old brace and bit, a bit rusted but still very serviceable. And we found an empty plastic milk jug and a nail and some string to tie it up with.

The weather in St. Louis that weekend was clear and cool, but above freezing--ideal sugaring conditions. The brace and bit was the perfect tool for tapping Dr. Maxwell's tree--vastly better than the little hand drill I had been using. And the flexible straw worked just fine as a tap. By the early evening our one tap had produced more than half a gallon of sap,

which we proceeded to boil down on Mrs. Maxwell's stove. The Missouri syrup we produced was very similar to that we had brought with us--only the slightest maple taste, but extremely sweet and good on the tongue. The next morning, before Andrea and I left to return to Chicago, Dr. Maxwell was already out in his yard adding another tap to his tree. I waited until he finished to ask if I could possibly borrow his brace and bit for the next few weeks. He gladly agreed; he didn't have any more sugar maple trees, and I did.

When we arrived back in Chicago the supplies I had ordered from Aniwa were waiting for us. Now I was more anxious than ever to go to the farm, but I had to wait until Friday. As it turned out, the wait wasn't consequential. The weather system that had made it cool in St. Louis had made it downright cold in Chicago and southwestern Michigan, and when we got to the farm the next weekend it was apparent that there had been very little sap activity while we were gone, even though we were now past the middle of March. All we had were some lumps of ice in the bottom of the jugs.

On this trip we were accompanied by my daughter Stephanie, who had come home for spring vacation from her boarding school. I had promised her that going to see the sugarbush would be worth the trip, but a few lumps of ice in the bottom of empty milk jugs weren't very exciting. I know she was thinking "Big Deal, Dad," but she had the tact not to say it. She did stay to help me put in the new taps with Dr. Maxwell's brace and bit. I appreciated this; it wasn't pleasant standing around out there in the cold. At least the taps went in easily, and the bags and holders I put up looked much more professional than the plastic tubes and milk jugs.

That evening the weather changed, and the temperature actually rose during the night. By Sunday morning it was well above freezing. Surely the sap was now running, but we decided to wait until early afternoon to go out and collect it before we returned to Chicago.

By the time Andrea, Stephanie and I started out to the sugarbush the temperature had risen into the fifties. We now had no choice but to walk, because the patches of mud had grown so large as to render skis unusable. The mud was slick and difficult to walk through, but an even bigger problem was created by the huge ponds collecting in the field from the

melting snow. We managed to get past these but only because we all had on high rubber galoshes. When we arrived at the sugarbush we did indeed find the sap running, and with the additional taps there were now well over ten gallons collected. The problem was how to get it back to the house without my sled. I finally concluded that I could carry three gallons on my back and Andrea and Stephanie two each. The rest we left behind. We managed to do it, making frequent rest stops, but it wasn't easy.

We returned to Chicago and had all the new sap boiled down by midweek. The temperature was rising well above freezing every day now, and I began to worry about two things: (1) how we would ever get all the sap collecting in my new bags processed in our little fry pan, and (2) whether that sap would be any good by the time we got back to the farm the following weekend.

In order to solve the first worry I began thinking about alternative evaporators. The kitchen stove was clearly out, and I had rejected the idea of using our Weber grill. Just at that time the hardware stores, in anticipation of spring and summer, were starting to promote their propane gas grills. In one of my books I had read that a commercial oil-fired evaporator should use about three gallons of heating oil to make a gallon of syrup. I checked out the relative BTU content and prices of oil and propane. I concluded that if I could get the same kind of efficiency from a propane grill as that achieved by a commercial oil-fired evaporator (a mighty big if) I could keep my fuel costs below five dollars per gallon of syrup (if I ever made a gallon). So I went and bought a gas grill from Sears for two hundred dollars. We needed it at the farm for cookouts anyway, I reasoned. (Total expenditures now two hundred forty five dollars. About the same as one round-trip airfare to Aspen).

Of course we didn't have any pans big enough to utilize the space inside the grill, but Sears did. They had a nice big stainless steel (for better heat conduction) steam table pan that even came with a lid. Total expenditures now two hundred seventy five dollars.

In order to alleviate my second worry I needed Andrea's help. "You know," I said to her on Thursday morning, "this weekend is the last one in March. The sap won't be running much longer, and then we'll have to wait a whole year before we can make any more syrup."

“True.”

“So it would be a terrible shame if all that sap that’s collecting over there this week were to spoil before we can get it on Saturday.”

“You’re not going to take off from work just to go over earlier, I hope.”

“No, I guess I couldn’t justify that. But what were you planning to do today?”

It wasn’t easy, but I persuaded Andrea to drive over to Michigan to empty our sap containers while I was at work. I’d take the South Shore Line to Michigan City where she could meet me that evening, and I’d commute in to Chicago on the South Shore on Friday.

While I worked that morning I kept thinking about how Andrea was doing. By lunch time I figured she must have already brought a load of sap back from the sugarbush. Had all of our bags been full? Was the sap still clear and fresh? By two o’clock I just had to find out. I called the farmhouse. After five rings I was ready to hang up; Andrea must still be out working. Then she answered.

“Hi, how’s it going?” I asked cheerfully.

There was silence at the other end of the line. Then I recognized the quiet sounds of my wife crying. Something was seriously wrong.

“Are you OK?” I said, dumbfounded as I always seem to be when women cry on the telephone (or off the telephone, for that matter).

“No, I’m not OK.” Andrea burst into something like crying sobs. “How could you have asked me to do this? Do you know how absolutely impossible it is to walk out there in the mud? My feet get stuck in it. It must be a foot deep. When I do manage to pick my foot up, my boot comes off. I fell down constantly, head first, with that damn sap still on my back.”

I let her cry, not really knowing what else to do. Then I tried to reassure her of my concern and my chagrin at having suggested this caper in the first place. “Just forget about the damn sap,” I added.

Andrea didn’t say anything more.

“I’ll see you in Michigan City at six thirty,” I finally said, just before she hung up.

I wasn't sure Andrea would be waiting for me when my train pulled in, but she was. "I'm sorry," I offered.

"You just called at the wrong time. But don't expect me to go back out there to get your sap any more."

When we arrived at the farm it was too dark for me to go to the sugarbush, but I could tell just from the squishiness of the lawn how serious the mud problem was. Yet despite the difficulties, Andrea had managed to bring back five gallons of sap. That meant two trips. "You went out there twice?" I asked.

"Well, you wanted it collected, didn't you?"

"I sure do love you," I said.

On Friday evening it froze, so that Saturday morning I was able to go collect some more sap without dealing with the mud. But even on firm frozen ground it was getting harder and harder to carry sap jugs for a half mile on my back. If the evaporator were only out where the trees were, I realized, then all we would have to carry back would be the syrup.

At least we had enough sap to justify using our new gas grill and pan. I went to a nearby campground and filled the propane bottle, then brought it back and hooked it up. We didn't achieve the efficiency described in my book, or the speed I hoped, but the rig worked, and it was considerably faster than the fry pan. We made over a quart of syrup that weekend, bringing our season total to well over three quarts. We also brought some sap back to Chicago with us to use in the fry pan, but, perhaps because of a slightly diminished enthusiasm, we accidentally let it boil too far, producing a gooey, unusable mess.

That turned out to be the end of the run for us for 1982. There were a few more days that season when the sap flowed, but we weren't able to get to the farm in time to use it. Shortly before the middle of April I pulled out my taps and collected my jugs.

We had produced close to a gallon of syrup and had spent two hundred seventy five dollars. This was, admittedly, somewhat more (about two hundred thirty five dollars more) than we would have had to spend for a gallon of pure maple syrup in the grocery store. But we had all our equipment to use again next year. Of course, by next year I wanted to build

a little sugarhouse and evaporator out in the woods, not to mention buying some more taps and bags. But what the heck, that shouldn't cost much more than a two week vacation for two at Innsbruck, and think of all the syrup we'd have to show for it.