

PRICING SAP. *Reprinted from Farming, the Journal of Northeast Agriculture. March, 2011*

Part of my job as a maple extension specialist is to find answers to the many maple related questions that come from producers. These can be as diverse as “what is the water activity of maple syrup,” “can a fuel cell be used to power a remote vacuum pump” “what is the recommended cultivar for planting sugar maple,” or “what is the best way to pump sap uphill.” In this column I will discuss one of the most frequently asked questions: how to price sap.

Not every sugarmaker realizes that there is a good market for maple sap. Many large producers buy sap from one or several people in order to increase their syrup production, and this provides an opportunity for someone who wishes to be in the maple business but is not ready, or does not have the capital to buy the equipment needed to process sap into syrup. To sell sap, you only need maple trees and a collection system; although many sugarmakers who sell sap also have the means to deliver it to the buyer. Some sugarmakers boil for part of the season and for various reasons, such as running out of wood, sell the remainder of their sap crop to another producer. If you are in the business of selling sap, keep in mind that any forest management that improves the sugar content of your trees will increase the value of each load of sap.

So how much money should you expect to make selling sap? While anyone is free to negotiate a price with a willing buyer, a commonly used formula proposes that half the value of a gallon of syrup comes from the sap, and the other half comes from boiling, filtering and turning it into usable syrup. Sap is valuable when it is high quality—fresh, cool, and collected using food grade materials. It is also assumed that at that price, you will be delivering it to the buyer. If not, don't worry, you can likely still find a buyer, but you will be paid somewhat less for the sap—perhaps 40% of the value of the finished syrup, depending on the distance from your woods to the buyer's sugarhouse. When we say that half the value of the syrup comes from the value of the sap, we are talking about the bulk value; i.e. the value if sold in a drum to a packer. Retail value is more, because in order to sell retail, the syrup must be canned, advertising paid for, a store or internet site set up, etc, so more of the value of syrup in a store comes from things the producer does after receiving the sap.

The actual calculations are not difficult. Bulk buyers in the past year have been paying somewhere around \$2.50 - \$2.75 per pound, depending on grade, which translates into \$27.50 - \$30.25 per gallon (assuming 11 lbs of syrup per gallon). To make this example easy, we can say that the bulk price is \$30; thus \$15 is the value of the high quality sap needed to make a gallon of syrup. How much sap does it take to make a gallon? According to the well established Jones Rule of 86, it will take 86 gallons divided by the sugar content of the sap. If your load of sap contains 2% sugar, which is a common average sugar content for sap from forest-grown trees, then it will take $86/2$ or 43 gallons of sap to make a gallon of syrup. At that sugar concentration, the value of each gallon of sap is $\$15/43$ or a little less than 35 cents per gallon. Thirty five cents might not sound like much, but consider that a 500 gallon load delivered is worth \$175. With a good vacuum system, 1000 taps might produce 15,000 gallons of sap in a season, which could be sold for \$5250.

Here is a shortcut formula that will give you the same price as the one we just worked out: **(bulk price per pound/15.64) x (percent sugar)**. You can test this formula: just enter \$2.74 for the price of a pound of syrup and you will get \$0.35 per gallon with 2 percent sap.

There are a few final things to consider when buying or selling sap. First, a small difference in the sugar concentration of your sap can make a big difference in its value when you are selling thousands of gallons. An inexpensive tool for accurately determining sap sugar concentration is a sap hydrometer, which is floated in a container of sap, much like a syrup hydrometer is used—buy one from your maple dealer. Second, the buyer or seller should have an accurate flowmeter (water meter) to attach to a pipe for determining the volume of sap you are delivering. Third, get receipts in writing when you deliver your sap. Last, be aware that in most cases the buyer will not know the bulk price he will receive for his syrup when he gets your sap—thus the final reckoning of the sap value comes some time after delivery.