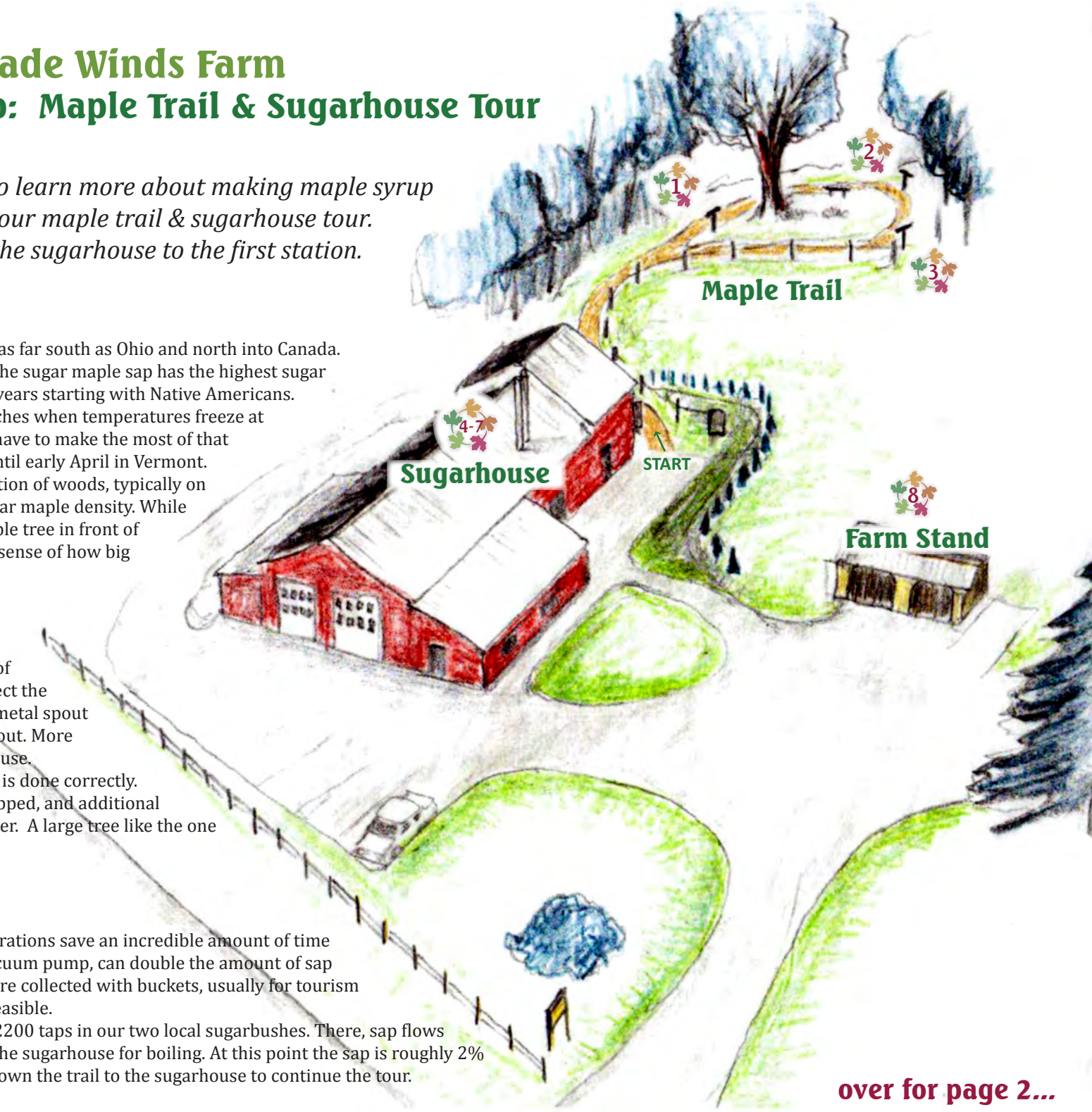
Vermont Trade Winds Farm
Sap to Syrup: Maple Trail & Sugarhouse Tour

Welcome to our farm! To learn more about making maple syrup we invite you to explore our maple trail & sugarhouse tour. Follow the path behind the sugarhouse to the first station.



1 The Sugar Maple

The Sugar Maple (Acer saccharum) is found as far south as Ohio and north into Canada. While other maples and birch can be tapped, the sugar maple sap has the highest sugar content and has been tapped for hundreds of years starting with Native Americans. The sap flows from the roots up into the branches when temperatures freeze at night and thaw during the day. Sugarmakers have to make the most of that six-week period, usually from late February until early April in Vermont.

The "sugarbush" or maple orchard is the section of woods, typically on sloping land, that is managed to maximize sugar maple density. While our main sugarbush is down the road, the maple tree in front of you, probably over 140 years old, gives you a sense of how big they can get, even on shallow rocky soil!

2 Tapping

A "tap" is the hole drilled into the sap wood of the tree where a spout is then inserted to collect the sap. This maple tree core shows a traditional metal spout with a bucket hook and the modern plastic spout. More historical spouts are on display in the sugarhouse.

Tapping does not injure the tree as long as it is done correctly. Only healthy trees over 12" in diameter are tapped, and additional taps can be added for every 12" of tree diameter. A large tree like the one behind you might have as many as three taps.

3 Collection

With tubing networks, modern sugaring operations save an incredible amount of time in sap collection and with the addition of a vacuum pump, can double the amount of sap collected! Only a small portion of taps today are collected with buckets, usually for tourism purposes or where a tubing system is not as feasible.

The taps here are just a fraction of the total 2200 taps in our two local sugarbushes. There, sap flows into large tanks and are then trucked here to the sugarhouse for boiling. At this point the sap is roughly 2% sugar and only faintly sweet. Continue back down the trail to the sugarhouse to continue the tour.

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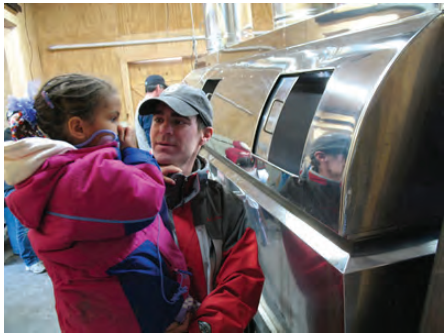
4 Reverse Osmosis

At our farm, like nearly all commercial sugaring operations, a reverse osmosis process is used to remove up to75% of the water before boiling even begins. This drastically reduces energy consumption as it takes the sap from 2% to roughly 9% sugar. The enriched sap is pumped to a holding tank upstairs. The process also yields 100% pure water as a biproduct that is used for cleaning equipment.

5 The Sap Pan

In this pan, the enriched sap is continuously fed from the holding tank upstairs and boiled down from 9% to roughly 20% sugar. While some commercial evaporators burn oil, our wood fired evaporator uses only firewood sustainably harvested from the forests on the farm.



6 The Syrup Pan

In the syrup or finishing pan, the sap is boiled down further to the final 66.9% sugar that officially makes it Vermont Maple Syrup. The temperature of the syrup is closely monitored, and the syrup is quickly removed when ready. The sugarmaker does a final density check with a hydrometer to make sure the density is 66.9% Brix. All in all, it takes about 40 gallons of sap to make one gallon of syrup!

Syrup production by the Numbers:

12” minimum diameter of a maple tree in order to be tapped

6 average number of weeks in sugaring season

66.9% sugar content of Pure Maple Syrup

40 gallons of sap to produce 1 gallon of syrup

41% of US syrup produced in Vermont in 2011. More than double any other state!

7 Filtering

The final product is run through a filter press, to remove any remaining impurities and “sugar sand” in the syrup. Without filtering, the syrup would have a “cloudy” color and would form sugar crystals during storage. Diatomaceous earth is added as a filtering aid, which is a white powder made from naturally occurring sedimentary rock deposits. The filter aid is filtered back out of the syrup, but in the process it allows the thick syrup to pass through the paper filters easily. From here, the syrup is either put directly into jugs or in larger storage drums.

Now head back up to the Farm Stand to sample the different grades of syrup!

8 Grades of Syrup

Syrup is graded into four main categories based on color; Fancy, Medium Amber, Dark Amber and Grade B. The darker the color, the stronger the maple flavor is.

The grade of syrup produced depends on both the sugarmaker and mother nature. Lighter syrup is usually produced earlier in the season, while the darker syrup is typically produced at the end. Sap sugar content, outside temperatures, sap freshness, and how vigourously the sap is boiled – are all factors in what grade is produced. See if you can taste the difference!

Thanks for taking the tour! Don’t forget to take home some of our Pure Vermont Maple Syrup and sample our other delicious maple products. Enjoy the sweet life!