



Collecting sap at Notre-Dame du Bon Conseil, Quebec.

Sugaring time in rural Canada

One of North America's most delicious confections is also its oldest. When European explorers first arrived on this continent, they found the Indians of the Northeast managing maple-groves, tapping the trees, gathering and evaporating the sap and consuming maple syrup. The newcomers were not long in imitating them, and eventually improving on their methods.

The production of maple syrup is an industry peculiar to Canada and the United States, which between them made about 3,218,000 gallons in 1973. In Canada, which accounts for 76 per cent of world production, the Province of Quebec is in a near-monopoly position, having produced 73 per cent of the country's output in 1973. The industry is also located in Eastern Ontario, Nova Scotia and New Brunswick.

In Quebec, production is greatest in three regions – the Beauce, the area around Quebec City, and the Eastern Townships – which account for 34, 12 and 10 per cent respectively of the province's output.

In the United States, the industry is found in rural regions of 13 northern states from Maine to Minnesota.

Altogether, some 60,000 seasonal workers in both countries collected almost 120 million gallons of sap from 15 million trees in 1973, to produce syrup with an estimated retail value of nearly \$20 million.

Although all maple species produce a sap from which syrup can be made, the sugar maple yields the largest amount of syrup from a gallon of sap. Forest-grown trees are the best producers, but appreciable quantities can also be tapped from ornamental trees.

For the best sap-production, a tree should have a short bole topped with abundant foliage. Successful management of a maple grove consists largely in obtaining the greatest possible number of such trees.



A young visitor to the sugar-bush peeks into an old-style wooden sap-bucket.

Tapping techniques

The methods of tapping have developed considerably since the days when the Indians cut a notch in the trunk of a tree and inserted a wooden tube through which the sap dripped into a receptacle on the ground. Today, holes of a standard diameter – $7/16$ of an inch – are made with hand or power drills. Once through the bark, the hole is drilled to a depth of three inches, slanting slightly upward to facilitate the downward flow of sap. A plastic or metal spout is then inserted into the hole.

The trees are usually tapped about the middle of March, when temperatures have reached about 5°C (41°F). The sap will continue to run until the weather becomes too warm for too long – usually about the end of April.

Collecting the sap

Sap must be collected within 48 hours after it runs and must be filtered and boiled as soon as possible. If it is allowed to become warm before boiling, a darker syrup of poor quality may result.

Most sap is still collected in the traditional way – in buckets (many today plastic) that hang from the spouts and are emptied regularly into vats that are hauled to the evaporators by horse-drawn sleds or mechanical vehicles. In many operations, however, this method is being replaced by the plastic hose and vacuum system. In this method, now in use by about one in 20 producers, the sap flows into quarter-inch plastic tubing attached to the spouts at about four feet above the ground and is fed to a one-inch master-line that carries it to a tank supplying the evaporators.

Evaporating the sap

Maple syrup is obtained by boiling down the sap in an evaporator divided into several sections through which the sap flows. It must reach a temperature of 4°C (7°F) above the boiling-point of water. For example, if the thermometer shows that water boils at 99°C (210°F) at the location of the evaporator, then under the same conditions maple syrup will be ready at 103°C (217°F). To prevent boiling over, a piece of fat is usually hung above the sap. As soon as the bubbling froth touches the fat, it recedes.