

THE MAPLE SUGAR INDUSTRY IN NEW BRUNSWICK

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MAPLE trees are found in nearly all parts of New Brunswick, but are most abundant and reach their greatest stage of development in the hill regions. These are for the most part in the central and southwestern portions of the province.

During the period of early colonization, the making of maple sugar and syrup was a regular feature of spring activity on nearly every farm. Cane sugar was expensive and difficult to obtain, and the colonists had little ready money to spend. The maple trees furnished a sweet which could be obtained by labor alone. In some districts, remote from the sea, colonists were, for years after settlement, almost entirely dependent upon the produce of their woodlots for the sugar used in the household.

The clearing of land, the changes brought about in agricultural practices through the years, but most of all, the improvements made in the facilities for the transportation of products, had their effect on farm home sugar-making. At present the manufacture of syrup and sugar is carried on upon only a small proportion of the farms of the province. The present tendency seems to be for specialization in production by a comparatively small number of farm lot owners in and around a few centres. It is perhaps due to something more than coincidence that these centres of sugar-making are near the places where sugar-making was first practised by the pioneers of colonization. The organization of the New Brunswick Maple Sugar Makers' Association, in 1933, took place within two miles of the farm lot of Jean Baptiste Cyr, who made sugar for sale in pre-Loyalist days. Near there also, according to tradition, the members of the Milicite Indian tribe, in prehistoric times, gathered for the spring sugar-making. On an island in the Saint John River, but near the still maple-covered hillsides, stood their council house. Their council house was seen and described by the early white explorers, who mentioned that in the spring season the Indians met there to assign family hunting rights and to plan the activities of the year. Only four miles distant is the legislative building of the present period, where the representatives of the people meet for much the same purposes in the same sugar-making season.

THE EARLY HISTORY OF SUGAR-MAKING

According to tradition, the Indians inhabiting the Saint John Valley in prehistoric times were well acquainted with the practice of sugar-making.

Their three principal village sites were near maple-covered hills. It is true that these hills were good hunting fields, but it seems very probable that the products of the trees were valued in the economics of the Indian households.

The present chief of the tribe has presented to the Fredericton museum an ancient brass kettle, said to have been long used in connection with tribal feasts. It is identical in form and manufacture with the kettles found in several places in the province in the so-called "Pot burials" of prehistoric times. In these "Pot burials", skeletons wrapped in cedar bark cloth have been found beneath entire or broken brass pots of from fifteen to twenty gallon capacity. The supposition is that the Indians obtained these in trade from the early Basque fishermen who visited the coast of Acadia, and that they were used for tribal feast purposes. It is perhaps significant that almost all of these "Pot burials" have been found near maple-growing areas, and there is at least the possibility that one use for the kettles may have been in the boiling of maple sap for sugar making.

In one of the bulletins of the New Brunswick Historical Society, mention is found that Jean Baptiste Cyr, Acadian colonist of 1770 in what is now York County, N. B., was an early commercial sugar producer. His home stood on the bank of the river along which passed travellers from Halifax to Quebec. "Vont-ils en avoir de quoi a croquer", is said to have been a common greeting used by him to travellers, which resulted in he being called "Le Vielle croc". The place name, Crock's Point, commemorates the place of residence of Jean Baptiste Cyr. Near by is Sugar Island, another place name associated with early Loyalist sugar-making.

In 1795, Jean Baptiste Cyr and family, with the other members of the Acadian colony, moved a hundred and fifty miles further up the river to found the settlement of Madawaska. They were far removed from the centres of trade, and in a country abounding in maple trees. There Cyr and his descendants made sugar for home use over a long term of years. As late as 1876 we find mention in a paper by Professors L. W. Bailey and Edward Jack of the University of New Brunswick that

The French inhabitants of the county of Madawaska are the largest manufacturers of sugar, and there is but little other used in the county.

In the early publications relating to New Brunswick, scant mention is found of sugar-making. One of the earliest references found by the writer is in Abraham Gesner's *New Brunswick*, published in 1847. Gesner was the first provincial geologist, and travelled extensively over the province, making a survey of the rock formations. On pages 254-255 of his book the following description of sugar-making appears:

The inhabitants of a number of districts derive considerable advantage from the manufacture of maple sugar. This is obtained from the sap of the hard or rock maple (*acer saccharinum*). In the spring of the year, especially in March when the frost is leaving the ground, and particularly at the period when it freezes at night and thaws during the day, an incision is made in the tree—or what is better, a hole is bored with an auger and the sap contained abundantly in the trunk is carried off by a small spout into troughs of fir or vessels made of birch bark. At evening it is collected and evaporated in pots or boilers, and stirred off into sugar. In one of the best sugaries eight hundred trees are tapped, and a ton of sugar is produced annually. It is cast into moulds of bark, and the cakes weigh from ten to twenty pounds. Besides a wholesome sugar, a delicious syrup is made which is usually eaten on pancakes; and at the close of the season the sap by fermentation produces good vinegar. It is regretted that so many groves of maples have been felled. The tree is very valuable for its saccharine properties, and the sap may be extracted from it without any injury to its growth. In parts of the United States the inhabitants have begun to plant maple in orchards for no other purpose than its sugar, and almost any settler in New Brunswick who has felled these trees has since been sorry for the act. The sap of the grey birch yields a substance resembling manna. Picnic parties frequently visit the sugaries, where they are treated with a kind of candy called "long stick".

Professor Johnston, the Scottish agriculturist, who made a survey of the agricultural possibilities of the province in 1849, made no mention in his official report of the maple industry, but in Volume 2 of his *Notes on North America* he made brief mention of the failure of maple sap to flow on days when the wind was from the south, and speculated upon possible causes. He also mentioned that at Richibucto the farmers gave but little attention to sugar-making.

The earliest estimates of production which have been found were made by Alexander Monroe, Civil Engineer of Bay Verte,

N. B., in a book published in 1855, from which the following quotation is taken:

The sap of the rock maple is used in the manufacture of maple sugar; it is allowed that the average produce of each tree is a little over a pound weight. When properly manufactured, the sugar is very delicious and is wholesome and even medicinal. In a pecuniary and commercial point of view this manufacture is very profitable. The quantity made in the province in 1851 was 350,957 pounds, worth at least 10,000 pounds sterling.

In *The Woods and Minerals of New Brunswick*, by Professors L. W. Bailey and Edward Jack, published in 1867, mention was made that the maple tree grew most abundantly in the western part of the province:

North of the Tobique one can travel for more than forty miles in a straight line through a growth composed very largely of this tree.

A large quantity of sugar and molasses or treacle is yearly made in the months of March and April.

Ten years later, Charles H. Lugin, in a government publication for intended immigrants entitled, *New Brunswick, Canada, Its Resources Progress, and Advantages*, made this brief mention of the maple industry:

Maple sugar is a regular article of commerce, the quantity produced annually being about half a million pounds.

All of the sugar-making was carried on in somewhat crude ways until the last decade of the nineteenth century. There was a small sugar bush on the writer's home farm, and there he saw the tapping gouge replace the triangular axe-cut. This in turn was followed by the auger and cedar "sap-spile", then by the cast iron "spile" and the special tapping bit, and later by the galvanized sap spout.

The first containers for sap were the wooden troughs cut from split fir billets hollowed out by the adze. These were followed by wood tubs of two gallon capacity, made like the old time butter firkin. These in turn were followed by the tin sap can of cylindrical form without a taper, as in the modern sap bucket.

In boyhood days the boiling of the sap was done in large suspended iron pots, with the final boiling and sugaring off in round-bottomed pots on the kitchen stove. Next followed the use of a square tin or galvanized iron pan, a foot deep and

large enough to cover the top of a stove placed in a special building known as the "sap house".

The Grimm evaporator came into use about 1890, and made possible the rapid expansion of sugar bush operations. In King's County, Mr. D. P. Wetmore was one of the pioneers in the use of a modern evaporator method of sugar making. He was followed by Capt. Wm. Shamper, who tapped some 1200 trees and made a high grade syrup. At about the same period W. A. Colpitts in Elgin, Albert County, began the extensive manufacture of sugar, and for forty years the Elgin sugar has been in demand on the Saint John market.

In York County, Geo. Love, Claude Haines, R. E. Holyoke, Chas. Reynolds, Thos. McKeen, Byron McNally, James Cliff and Gilbert Dykeman were among the first commercial manufacturers of syrup.

At present the manufacture of maple syrup and sugar for sale is carried on chiefly in the counties of Albert, King's, York, Madawaska and Restigouche. Manufacture for home use is carried on to a limited extent in all the other counties of the province.

Until 1938 practically all of the syrup and sugar making was from the sap of trees on granted land. In that year and in 1939 an attempt was made to utilize some of the maples in the Renous region of Northumberland County, which stand on Crown Land lots under lease to lumber companies.

The following information concerning the organization of the New Brunswick Sugar Producers' Association has been supplied by Mr. O. C. Hicks, Secretary of the Association:

The N. B. Maple Sugar Producers' Association had its genesis at a meeting at Lower Queensbury, York County, on June 7, 1933. Among those present were: Messrs. W. G. Clark, now Lieut. Gov. of the Province, Fredericton, M. L. Dunphy, Fredericton, R.R. no. 7, Tilley Bird, Burt's Corner, George Love, Fred Barr, George McNally and other Queensbury residents. A resolution to organize an Association was supported, and a request was later presented to the Minister of Agriculture, Hon. Lewis Smith, that O. C. Hicks be permitted to devote time to the secretarial work. Again, on February 15th, 1934, the decision was ratified at a formal meeting held at the office of the Department of Agriculture, Fredericton, when representative makers from various counties were present. These gentlemen included: E. F. Rice, Edmundston, Elias Daigle, St. Hilaire, J. Andre Doucet, Paquetville, W. G. Clark, Fredericton, M. L. Dunphy, Arville Currie, Edwin Parent, Arthur Clark, George Love and others. (E. R. Holyoke. Total 18).

The objects of the Association were declared to be:

- (a) To promote and encourage extension and improvement in the quantity and quality of maple products manufactured.
- (b) To carry on propaganda and advertising for more efficient selling of maple products.
- (c) To have a strong representative organization of producers.
- (d) To undertake the co-operative purchase of supplies needed in the industry for the benefit of its membership.

An annual membership fee of \$1.00 is required. The membership in 1934 was 24 persons. The expansion in the scope of the service in supplying syrup bottles is indicated by the following record of sales:

1934.....	15	gross approximately
1935.....	52	gross
1936.....	56	"
1937.....	61½	"
1937.....	139½	"
		and 40 gross of pint decanters.
1939.....	89½	gross

The membership in 1939 was 41.

The 1938 sales of glass were exceeded one car-load.

Gummed labels of a uniform style and quality have been supplied to members at cost during the last five years, and last season for the first time "Cellophane" wrappers for maple cream sugar were furnished at cost.

In the *Canada Year Book* for 1939 a table appears which presents an estimate of the maple sugar and syrup production in the year 1936, 1937 and 1938, as follows:

New Brunswick, 1936	131,500 lbs. sugar,	value \$27,600
1937	116,500 " " "	22,100
1938	118,200 " " "	24,800
1936	11,200 gal. syrup,	" 18,700
1937	5,600 " " "	9,700
1938	23,300 " " "	37,900

MEMO ON THE BIRCH BARK CONTAINER USED FOR THE COLLECTION OF MAPLE SYRUP IN THE EARLY DAYS

From an Acadian we have word that on some of the new colonization farms of New Brunswick the birch bark "cassé" is still used in the home manufacture of maple sugar. As one of the first of the many useful articles made from forest products, and one which has persisted in use from the aboriginal period,

it is well worthy of mention. Many of the older sugar makers remember their use, and there are a few ancient specimens in the collections of early articles of local handiwork.

The "cassé" or "casso" was made from the bark of the paper birch, and several forms seem to have been used. The most common form was a rectangular vessel holding from one quart to one gallon, and made by folding up the ends of a rectangular sheet of bark and clamping the folds in place with cleft sticks. This simple form could be quickly made, and it had many uses. It was a common container for wild berries in summer, as a drinking vessel and as a mold in which to pour the crystallizing maple syrup.

A larger and more sturdy form of "cassé" was made from thick and strong birch bark, cut, folded and laced with portions of root or bark to a supporting frame of withes or ash splints. In the Queensbury Parish maple groves, York County, the somewhat rare shrub, Leatherwood, *dirca palustris* L., was found among the maple trees, and its bark was used in lacing the birch bark to its supporting framework. These containers usually took the form of deep round or oval bowls which would hold, in some instances, several gallons of liquid.

Still another form of "cassé" was made cylindrical, somewhat like a modern wood pail. The birch bark sides were attached to a round wood bottom, while the upper rim was strengthened by a hoop of wood.

As a container of maple candy, a simple cone of birch bark, a "gagoose" was sometimes used. The "long stick" mentioned by Gesner was the ancestor of the modern "candy sucker", and was made by gathering some of the soft candy on the end of a stick and twirling it around until a hard lump was formed.

The "cassé" were very light, and one of the difficulties attending their use was that high winds often dislodged them. Another was that when they were set upon snow, the melting of the latter under the bright sunshine of March and April would cause them to "skid" and upset the collected sap. To overcome these difficulties they were often placed on a roughly constructed "nest" of branches, and held in place by a stone placed in the vessel. Since stones could not always be readily obtained in the sap running season, it was customary to collect in the summer and autumn a store of such "cassé stones".

Smooth, water worn stones from the river banks were selected for this purpose, and since the children had this collecting as one of their tasks, they naturally selected the most brightly colored and "pretty" stones available. The geologists

and archaeologists of the future may have a chance to put forward interesting theories as to how water worn lumps of quartz and felsite were transported to positions high on hillsides and far from running water. It may be that these "cassé stones" will serve to mark the sites of old maple groves, and the birth places of an industry long after the trees have disappeared.

A NOTE ON THE USE AND ABUSE OF THE MAPLE FOREST

Great areas of the hill region of New Brunswick once supported mixed stands of maple, birch and beech. These formed the so-called "hardwood" ridges of all the counties along the Saint John River and its tributaries. In land clearing operations, the trees in thousands of acres of this forest were cut down and burned, while the growth on thousands of other acres was destroyed by forest fires which got out of control. Right down through the years, "old growth maple" has been the chief fuel used in the towns and villages. In Fredericton and Woodstock, hundreds of cords of it are still sold every year. At present a considerable part of the fuel used in Northern Aroostock County, Maine, is "old growth maple" trucked across the border from the great hardwood ridges of Carleton, Victoria and Madawaska Counties. For the most part this is cut from trees which have required a full century to grow. Many of the trees are mature, and it is desirable that they should be utilized, but it does seem that in the cutting there should be some consideration given to the possibility of maintaining stands of maple for other possible uses.

A recent development is the cutting of maple railway ties for the creosote lumber trade. In the publication of the Bureau of Statistics, "The Lumber Industry", we find mention that, in 1936, 15,565 maple ties were cut and in 1937, 20,629.

Forest fires have destroyed great areas of old forest. In 1922 the writer travelled through the great hardwood area north of the Tobique where Prof. Bailey mentioned forty miles of maple forest in 1876. It was a magnificent forest in 1922, miles on miles of giant trees. Some years later it was seen again, miles and miles of blackened, decaying trunks, truly a terrible example of the waste caused by the carelessness of man. There are still great areas of maple forest of the same type remaining, but the destruction continues, and it may be that, as a people, we will sometime realize that the comment of Abraham Gesner in 1847 "that he who fells the trees will regret his act" is as applicable to our generation as it was to that in which he lived.