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FARM AND DAIRY & RURAL HOME

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The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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The Spring Sugar Harvest

An Optimist Visits His Friends' Sugar Bush—By F. M. Christianson

THERE are several red letter days on the farm each year. One is when we thresh; another the day we butcher, but the day of all days, to the farm boy and girl, is the day we "sugar-off." On these days the youngsters all want to stay at home from school, but especially on the latter occasion. The reason is no doubt that everybody has a sweet tooth and maple-sugar, like honey, is a sweet that never cloy and never makes one ill.

Our physical economy is so constructed that we need sugar, and it is but another token of the wisdom of our Heavenly Father that sugar harvest comes just after the winter, when we have been eating fats (carbohydrates) and the system is growing tired of it, and so He provides us carbon—in a new form and of such a nature that we relish it.

The sap run comes with the first warm days of spring, because there is more sap in a tree in winter than in summer. Through all the long summer the sugar-making tree was accumulating sap, and during the winter, while the tree is apparently idle, it has nevertheless been very busy changing the sap through its cells and pores into sugar. The sap, with its large sugar-content, has greater density than and causes the air found in the interstices and cellular structures of the tree to expand under the warm sun's rays, and it is this pressure that gives sap a tendency to flow on the first warm days of spring.

Why Sap is Sweet.

Sap is a clear, colorless, slightly sweet liquid made up of water, sugar and mineral matter such as iron, potash, magnesia and lime, and the delightful flavor of maple-sugar is due to a combination of these various salts during the boiling process. As soon as we were in the bush we had a drink of sap from the spile. There is life in a spile! It seems to contain all the invigorating properties attributed to winter.

The flow of sap begins about the middle of March, and continues till the middle of April. It may even start in February, and has been as late as the first of April. The sap is not found inside of the tree, but in the sapwood, which is about two or three inches in from the outer wood. So it is a mistake to bore great deep holes in the trees to receive the spiles, for they do not readily heal over, and, besides, they yield the dark sap. All that is required is a hole having half an inch diameter, about one and a half to two inches deep, pointing the sugar spile slightly upward during the boring. The hole should be on the south side of the tree for the sun shines there first. East is next best. The earliest sap runs are sweetest.

Originally the boiling of sap was done in huge cauldrons, suspended over an open fire, out of doors, but my friends have just installed a modern, up-to-date equipment with evaporator and all. Thursday and Friday was ideal sap weather, and

it was to see the chrisening of the plant that I was invited over. It is a vast improvement over the old method. The evaporation consists of several open pans, three feet wide and from 15 to 18 feet long, with partitions from side to side placed at intervals and opening one into the other at alternate ends to give an increased evaporating surface. The pans have often corrugated bottoms, and this greatly increases the evaporating surface of the pans. The collected sap is poured into a large tank at one end of the evaporator, and runs its course around the partitions, and when it gets into the last compartment it is of the required thickness.

Automatic Regulation of Evaporation.

The evaporation is supplied with an automatic flow regulator, so that the flow of sap increases or diminishes according to the degree of heat under the pans. Quick evaporation of the sap as soon as gathered means little decomposition and the high-

est flavor. The best flavored syrup is made when the sap is not deeper than one and a half inches in the evaporating pans.

There is no flow of sap during the night, because the sun is absent, but the flow starts again on warm days, and will continue as long as heat and cold alternate. The sap runs best when it is raining and snowing, and that makes the work often hard and disagreeable, but every one is always happy and cheerful in the sugar bush. I think it must be working with nice things, and that affects the whole outlook and results in good cheer.

This evaporator is nicely located near the centre of the bush in a neat shanty with plenty of dry wood stored close by. The men were gathering the sap into huge hogheads placed on bob-sleighs and drawn by teams of horses through the bush in the shanty; some were cutting wood to feed the fire; others watched the white liquid in the evaporator take on a yellow tint as it gave up its water-content in its progress through the pans, and still others of the visitors were eating syrup.

Spring Sounds.

The woods were resonant with life; birds fitted through the trees; the whack of the axes and the tink tank of the sap into the buckets were delightful spring sounds in the ears of the laborers. There never was a syrup making without its "sugaring-off." Heat has varying effects on sugar and the secret of success lies in knowing just when to take it off the fire. Syrup will "thread" at 218 degs. F. If it is then poured into a pan full of clean, pure snow it immediately turns into a waxy mass, and each bit is a delicious caramel-like piece of confectionery.

The syrup was continued boiling and tasted again for the "blow" state, 230 degs. F. A clean fresh-willow twig was bent into a circle to make the test, and dipped into the boiling syrup. On its removal a film formed in the loop, and this was the sign that it was ready to "sugar." The syrup was at once removed from the fire and stirred constantly for some time till it began to get granular, when it was poured into forms. These cakes thus formed are the maple sugar cakes offered for sale in the best candy stores. The only tree that yields sugar sap of any value is the hard, rock or sugar maple. These names all indicate the same tree. The hard maple is the most valuable tree in North America. Its hard wood is used for railway cars, shipbuilding, and in many kinds of construction work requiring a fine strong wood. The bird's-eye and curly woods so much prized in cabinet-making come from this tree. Much wood is used as fuel and gives an ash rich in potash. But we love the tree most for its maple sugar. A good healthy tree will yield from

(Concluded on page 15.)



\$20,000 From a Brood Mare

AT a county fair one sometimes runs onto startling object lessons, which usually carry their inspiration. In one of the stalls at the La Salle County Fair in Illinois stood an American-bred Percheron mare. Above her stall a banner was hung, with this inscription:

"Beauty of Highland 18611. A Percheron mare 21 years old on April 12, 1914. The produce of this mare and her daughters sold by us amount to \$13,697.50. The descendants now owned by us, conservatively valued amount to \$6,500. Total \$20,197.50. She has had fifteen foals; three have died. Will a good Percheron mare pay? If properly handled, yes.—W. E. Prichard, & Sons."

We understand that this firm has in its barns two aged Percheron mares which have produced some \$30,000 worth of stock. There is a story here worth telling, and our readers will be privileged to learn it.—Breeder's Gazette.