# Conservation

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## Every Sugar Maple Should Be Tapped

**Interesting and Profitable Facts About Canada's Initial Sugar-Making Process**

Canada's dependance on imported sugar, now a scarce commodity, can be materially lessened by increased production of maple sugar this spring. Except in farm homes in Quebec where it is used on the table, maple sugar has been regarded as a luxury. This should not be so, as it can now be produced on a small scale where no additional help has to be paid for, at a somewhat lower cost than the present retail price of the sugar ordinarily used.

Every pound of granulated sugar that can be exported is needed overseas, and Canadian farmers should increase the production of maple sugar and syrup this spring by tapping every maple tree that is large enough. The sap runs at a time when farm work is at a minimum and no increase in the labour supply is therefore needed.

A mature, thrifty maple will yield about 12 gallons of sap, composed of about 95 per cent water and 3 per cent sugar, with a residuum of mineral matter. Large-crowned trees, or trees grown in the open bush, with long trunks, produce the most sap. The ideal weather conditions for sap flow are moderately warm days and freezing nights.

To tap a tree, bore a half-inch upward-sloping hole one inch deep, on the sunny side of the tree. There are many varieties of sap spouts available. The best sap pails are made of tin or galvanized iron, with covers. The sap is gathered at least daily, and boiled down in the boiling house, or in the farm kitchen. The process is simply one of evaporating the water content until the sap becomes of the consistency of syrup, or of a weight of 11 pounds to the gallon. The syrup should be strained through flannel, which leaves the product perfectly clear.

In making sugar, the syrup should be re-boiled until it begins to crystallize, or 'sugar-off'. This point may be determined by pouring a little into ice-water or on the snow. If the syrup becomes waxy, it has been boiled sufficiently. It is best to reduce the syrup to sugar in small quantities. Before pouring it into moulds, stir slowly to reduce the temperature, and thus avoid granulation.

Where production is undertaken on a larger scale, much more elaborate equipment is necessary.

## Technical Training for Boys and Girls

**Proper Development of Resources Will Require Skilled Labour**

Probably 100,000 boys and girls from 14 to 16 years of age annually leave school in Canada to engage in some occupation connected with manufacturing, agriculture, mining or transportation. The present general plan of education does not provide sufficiently for these young people. They are stepping out into the world to find their way, with an almost entirely literary education. The apprentice system in our industries is almost a thing of the past, and the youth in our factories and other business organizations is left to pick up a smattering of his future occupation as best he may. Notwithstanding this, every manufacturer will agree that properly trained help is the best investment. Germany, in the past few years, has amply demonstrated the value of technical training.

Canada has very important natural resources requiring capacity to develop them. What are we doing to produce this capacity? How many of our farmers' children know the qualities of soil and the proper fertilizers to use for best results? Mgr. Choquette has told us of the Belgian farmer's knowledge of his land and his scientific use of it. Can we hope to meet him on even terms? How many metal workers know the composition and working qualities of their raw materials. Do our carpenters, textile workers, employees in our ceramic and other industries know why they perform certain operations and why they secure the results they do?

We are not doing justice to the rising generation. At the close of the war, Canada will no doubt see an influx of immigrants from the European countries. Their system of industrial training has put them in a position to understand the theoretical as well as the practical side of their means of livelihood. Canada will have to meet these European countries in competition for trade, and, to do so successfully, her manufacturing and other lines of activity must utilize all trained help available; to secure this result it will be necessary to give the most important positions to our foreign-born residents. We may then realize, too late, that we have been unfair to our own children. Industrial training schools with night classes should be a part, and an important part, of all educational work, and attendance of pupils, up to at least 18 years of age, should be compulsory.

## Binder Twine Made Out of Flax Straw

**New Process Said to be Completed to Use Prairie Flax Straw Formerly Burned**

The Flax Fibre Development Association of Regina, Sask., announces that it has discovered a process for manufacturing flax straw into binder twine, commercial twine and yarns for weaving into heavy sacking and towelling. Heretofore, the flax straw of the three western provinces, amounting to over 1,000,000 tons annually, has been burned after threshing.

It is said that experiments carried out this autumn with the new binder twine showed that it bound 99 per cent of the sheaves perfectly, a better result than was obtained with sisal twine. A co-operative company is being formed to manufacture the new twine.

### COLOUR vs. QUALITY IN SALMON

The sale price of canned salmon depends more on the colour of the meat of the fish than upon its flavour.

Because the colour is pale, the best flavoured salmon on the Pacific coast is least in demand upon the market. The inferior salmon, of a rich red colour, brings the best price, and takes the lead because of its colour, this having no relation to excellence of flavour or edible superiority. — *Dr. E. E. Prince, Chairman of the Biological Board of Canada.*

## Should Pay Only for Heat Value in Coal

**Government Would Save Money by Purchasing Coal by Test**

It is estimated that the Dominion Government burns over $1,000,000 worth of coal yearly, and yet scarcely any of this vast quantity is purchased under rigid, detailed specifications. Private corporations as well as governments in Canada buy coal mainly on its reputation or trade name, rather than under contracts specifying the heating value of the coal, its ash and moisture contents and other characteristics. To get proper value for his money, the consumer must know the heating value of the fuel he purchases.

The United States government spends $8,000,000 annually on coal, all of which, since 1906, has been bought on rigid specifications and subjected to chemical analyses and heating tests. If coal not up to contract is delivered by a contractor, he is paid less than the standard price for it.

### DOWN WITH PATRONAGE

The greatest single obstacle to the efficient conservation of Canada's forest resources has been the patronage system of making appointments in fire-protection services.

### PREPARE FOR NEXT WINTER

*Unless all signs fail, the coal shortage next winter will be more acute than this winter, and every effort should be exerted to provide a supply of dry hardwood. Farmers and villagers will be expected to look after themselves, but in cities and towns the responsibility is devolving upon the municipal authorities. These should lose no time in organizing to have wood cut, hauled and stored to dry during the summer. If this is not done, the situation next winter promises to be very serious indeed.*

(See also page 6, "Getting Wood Fuel for Next Winter.")