

Conservation

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The Tide of New Canadians

Over 350,000 Immigrants Arriving Yearly—They Aid Production, Increase Consumption; But Aggravate the Slum Problem

Few people stop to think what the tide of immigration pouring in annually means to this country. During the last fiscal year (ending March 31, 1912) over 350,000 immigrants entered Canada, and month by month the number is increasing. The addition of these producers and consumers to Canada's population means greater demands for all the necessities of life, a larger supply of labor for all productive undertakings and greater civic problems; for, notwithstanding the amount of free land available, a large number of the immigrants gravitate to the cities and add their number to the already large slum population.

The following table shows the number of immigrants entering Canada in the past five years, classified according to the country of origin:

Immigration into Canada, 1908-12

Fiscal Year	Britain	U.S.	Other Countries	Total
1908	120,182	58,312	83,975	262,469
1909	52,901	59,832	34,175	146,908
1910	59,790	103,798	45,206	208,794
1911	123,013	121,451	66,620	311,084
1912	138,121	135,710	82,400	356,231

Ten years ago, the total annual immigration was only 67,379. In that time, therefore, the increase has been slightly over 425 per cent., while in the past five years, it has amounted to nearly 35 per cent.

Western Water Powers

Work of the Commission of Conservation in Collecting Data

The Prairie Provinces' water-powers upon which fairly definite information is available are mostly all confined to the southern portion of the provinces. This is a rather unfortunate coincidence and is likely to mislead the uninitiated regarding the total potentialities of these provinces, as the larger water-powers are situated in the north, on the Athabaska, Peace, Slave, Churchill, Nelson and other rivers. As even a preliminary survey of these rivers will be of great value,

the Commission of Conservation has undertaken this work. During the last two summers, its Hydro-Electric Engineer, Mr. L. G. Denis, has been in the field making measurements of flow, height of falls, etc. Last year, the many rapids of the Athabaska river were investigated and the flow of the Peace and other rivers was measured. This year, the work included many long miles of travel, mostly by canoe, the western limit of the trip being the Peace River canyon in the north-eastern portion of British Columbia, while the northern limit was Fort Smith, on the Slave river. On the return trip the several rapids and falls in the Clearwater river and the upper waters of the Churchill were investigated. The general impression created by these large northern water-powers is that they will undoubtedly become of great value in connection with the wood-pulp industry. The raw material is close at hand, the only retarding factor, at present, being the lack of means of transportation and access. The details obtained by these investigations will be included in the Commission's forthcoming report on the "Water-Powers of Western Canada."

Newspapermen who desire to reprint illustrations used in "Conservation," from time to time, can obtain the plates by communicating with the Commission of Conservation at Ottawa. All that is asked, is that the cuts be returned promptly, so that their use may be made as general as possible.

Contributors to Canada's Wealth

The Amounts Contributed by the Leading Industries

It is always of interest to compare the values of the products of each of the leading industries of a country. Everyone will tell you that Canada is immensely rich, but when you demand particulars, they are not so readily forthcoming as are general statements. Canada has, as yet, made such statistical progress as to permit a close comparison of this kind to be made for a particular year. The following figures, however, are approximations of the value produced annually by our greatest natural resources, and by manufacturing:

Field Crops and Dairy Produce	\$604,800,000
Forest Products	161,093,000
Minerals	102,300,000
Fisheries	29,965,000
Value added to raw products by manufacturing	563,630,000

Crop Rotation Distributes Labor

A Factor in the Solving of the Farm Help Problem

With a rotation of crops there may be an economy of labour. It distributes the labour throughout the year, since different crops are sown at different times and come to maturity at different times. The continuous employment of men may be very advantageous, in that the farmer will be able to secure better help if he is able to offer steady employment.

The careful results of raising single products in extended districts may be seen in the great wheat districts of the Northwest. For many of the men employed in the rush season to take care of the grain crop there is very little true home life. Men are often herded together like cattle, sleep where they may, and subsist in the best way they can. The work is hard while it lasts, and then it abruptly ceases, and the men are left to find work wherever they may. This intermittent labour is demoralizing, especially to the younger men; and the higher the wage and the shorter the period of service the worse it is. The welfare of the workman and his family should receive consideration.

The man following a rational rotation and who keeps live stock is in a position to secure the best class of help because he can give employment the whole year through. One thing that was clearly brought out by the Agricultural Survey in 1911, by the Committee on Lands of the Commission of Conservation, was that the labour problem is a very serious one and is becoming very acute in many places. The homegrown help is by all means the most satisfactory and the man who follows a rotation and distributes the work over the year will not be so dependent on outside help as the single cropper is, especially at the rush season.

TO OUR READERS

"Conservation" is being published primarily for the use of newspapermen. In the form in which it has previously appeared it was difficult for the newspapermen to make clippings without mutilating articles on the reverse side of those clippings. It has been decided, therefore, for the present at any rate, to print on one side of the paper only.

Petroleum Resources of Canada

Shale Deposits in the Maritime Provinces—Tar Sands in the West—Petroleum as a Locomotive Fuel

While the actual petroleum resources of Canada are comparatively small, nevertheless the potential resources are considerable.

In New Brunswick and Nova Scotia there are enormous deposits of oil shales which are valuable as a source of oil. On an average these shales will give a higher yield of crude oil per ton than the oil shales worked so extensively in Scotland.

In the vicinity of Fort McMurray and Fort McKay on the Athabaska river, Alberta, there are enormous deposits of tar sands. The bitumen in the tar sand is the residue from evaporated petroleum and it has been estimated that there is 6½ cubic miles of solid bitumen in the tar sands exposed on this river.

Although enormous quantities of oil have evaporated from this district, nevertheless it is probable that accumulations of petroleum exist where the geological structure was such as to prevent its escape. This is also substantiated by the fact that natural gas occurs in quantity in districts where the tar sands are capped by overlying measures.

If large quantities of petroleum were discovered in Alberta, it would be a factor of great importance to the railway interests which operate in the Rocky Mountains and Jasper Parks and in other forest areas in British Columbia and Alberta.

Oil as a Locomotive and Marine Fuel

The Canadian Pacific Railway is now using oil-burning engines on its main line between Kamloops and Field in British Columbia. The Grand Trunk Pacific and some of the Canadian Pacific coast steamships also burn oil, and other boats are being changed from coal-burners to oil-burners. The oil is obtained from the California oil-fields. If supplies can be obtained at the prices now prevailing, its use will be very largely extended. Its cleanliness, the greatly decreased smoke, the decrease in the number of firemen required, the economy particularly in intermittent service, the increased efficiency—two boilers with oil, in steamship service, giving same steam as three with coal—and other considerations make it an almost ideal fuel.