A Fact a Day about Canada

from the

Dominion Bureau of Statistics

No. 274. Fri. July 1, 1938 -- B. C. Fishing Boats

British Columbia's fishing industry used a few more vessels and boats in catching fish and shellfish last year than were at work in 1936 and there was a modest increase in the number of fishermen working on the fleet. The capital investment in vessels and boats was over seven million dollars, which was one quarter of a million more than the year before.

Altogether, 8,402 vessels and boats were fishing in 1937, or nine or ten more than in 1936. There were 11,034 fishermen working from them, a total which was slightly more than 100 above the earlier year's figure. In each year, of course, the industry also employed a number of carrying vessels and scows.

Gasoline boats used by the fishermen increased sharply in number. All told, there were 6,858 of them, valued at more than four million dollars, the number showing an increase of about 250 over the 1936 total. This jump in the number of gas boats might be expected to be reflected in a substantial increase in the grand aggregate of fishing boats and vessels of all kinds, but there happened to be a similar drop in the number of sailboats and rowboats, with the net result, of course, that there was not much difference between 1937 and 1936 totals.

On the "gear" side of the story the big entries in each of the two years were those covering salmon drift nets, salmon purse seines, hand lines, and purse seines, respectively. The salmon drift nets decreased somewhat in number in 1937 and their total value, $933,700, showed a drop of about $93,000. More salmon purse seines were in use than in the year before and on the value side there was a gain of something more than $50,000. Other seines and hand lines both decreased somewhat in number but value totals increased.

No. 275. Sat. July 2, 1938 -- Tourist Attractions

"The National Parks of Canada" points out that: "Among Canada's greatest tourist attractions are her national parks, areas of outstanding scenic beauty or interest which have been set aside by statute for the use and enjoyment of the people. Including a total area of 12,525 square miles, these national reservations differ widely in character and vary in purpose. They conserve the wild life of Canada under natural conditions, preserve sites memorable in the nation's history, and help to maintain the primitive landscape in its original state. Not the least is their value as national recreational areas, for they provide, in contrasting settings, unequalled opportunities for the enjoyment of outdoor life."

For purposes of comparison, Canada's National Parks are divided into separate classes, which include the scenic and recreational parks, the wild animal parks or preserves, and the national historic parks. In the first group are Banff, Jasper, and Waterton Lakes National Parks in Alberta; Kootenay, Yoho, Glacier, and Mount Revelstoke National Parks in British Columbia, Prince Albert National Park in Saskatchewan, and Riding Mountain National Park in Manitoba. In Ontario are Point Pelee, Georgian Bay Islands, and St. Lawrence Islands National Parks, recreational areas

typical of the region. Recent additions to the system are Cape Breton Highlands National Park in Nova Scotia, and Prince Edward Island National Park.

The special wild animal parks which exist for the protection of once nearly extinct species such as the buffalo, wapiti or elk, and the pronghorned antelope, were established as preserves for these interesting creatures whose former habitat disappeared with the settlement of the west.

No. 276. Sun. July 3, 1938 -- A New Settlement at Yellowknife Bay

Yellowknife Bay is situated on the north arm of Great Slave Lake. It was named after the Yellowknife tribe of Indians, a tribe whose numbers have dwindled to about 150. They were named after the knives of native copper which they once carried.

The prospect of new discoveries of minerals in this area has caused an increase in population, mostly miners and traders. In order to accommodate the incoming settlers, the Department of Mines and Resources is endeavouring to plan an orderly settlement by surveying an area of approximately forty acres to be subdivided into 125 lots.

During the winter months there were 350 people in the settlement and since the spring break-up the number is increasing. Already a drug-store, a post office, three wireless stations, a Royal Canadian Mounted Police detachment, a branch of the Canadian Bank of Commerce, several small stores and restaurants and a hotel are located at Yellowknife. Two licences to operate motion picture theatres have been issued. A lawyer has opened an office in the settlement.

Yellowknife is accessible by both water and air. The bay provides a good aeroplane harbour for both winter and summer use.

The Yukon and Northwest Territories are now supplying silver, gold, copper, lead and radium ore to Canada's vast mineral industry. Last year's mineral production from this northern area was valued at close to four million dollars, a gain over 1936 of 1½ million dollars.

No. 277. Mon. July 4, 1938 -- Rehabilitation Work - 1

A comprehensive outline of the difficulties and problems which are being successfully combated by the Prairie Farm Rehabilitation Board in the rehabilitation of the Prairie drought areas was given in a recent issue of "Scientific Agriculture" by Dr. E. S. Archibald, Director, Dominion Experimental Farms Service and Chairman, Land Utilization Committee, Prairie Farm Rehabilitation Act. The agricultural area in the Prairie Provinces comprises 55,700,000 acres of the 74,000,000 acres of cultivated land in Canada. Fully 54,600,000 acres are in grain and fallow, of which 13,000,000 acres are fallowed annually. Again, of the 40,000,000 acres of range and unimproved pasture in Canada, fully 33,000,000 acres are in the Prairie Provinces.

It should be remembered, states Dr. Archibald, that the drought area of recent years has been settled during the last 20 to 40 years during a cycle of years when

rainfall was normal. The past eight years have been subnormal, yet it should not be forgotten that this area has contributed the largest percentage of wealth in wheat alone during the past 20 years to the sum of $7,000,000,000. Vast values of other grains, beef, sheep, bacon, and poultry products also come from this area. What has been done, will again be produced. Hence the great national importance of replanned, readjusted, and rehabilitated agriculture in this area.

Succeeding years of disastrous drought, grasshopper damage, soil drifting, and necessary large scale relief to farmers in central and southern Saskatchewan, southwestern Manitoba, and southern Alberta, covering a period of five years, inclusive of 1934, convinced the Dominion Government that drastic and large scale rehabilitation measures were necessary if the enormous earning power of Western Canada, due to a population of most capable farmers in their particular type of production, was to be retained.

No. 278. Tues. July 5, 1938 -- Rehabilitation Work - 2

In April, 1935, an act called the "Prairie Farm Rehabilitation Act" was passed unanimously in the House of Commons. The organization of Dominion Departmental forces, with wherever possible the co-operation of Provincial Departments of Agriculture and Lands, was immediately undertaken. The many lines of endeavour fall into three general groups: (a) cultural; (b) land utilization, including the administration of reorganized agricultural community work, and (c) water development.

Cultural includes research, demonstrations, co-operative assistance to farmers in soil drifting control, soils research, pasture improvement, also soils, pasture, insect and economic surveys, comprising District Experiment Substations, reclamation stations, grass seeding, agricultural improvement associations, tree planting, soil drifting, aerial surveys, new rust resistant grains.

Under land utilization, the solution of the problem of farmers who have been located on light poor soils incapable of maintaining an agricultural population obviously is to determine the type of agriculture to which this land may again be adapted, entailing the establishment of community pastures, reserve grazing areas, staff organization, irrigation districts and feed and fodder relief inspection.

Water development has been one of the major activities in assisting the largest number of farmers with the making of dugouts to retain runoff water for domestic purposes and for livestock, small stock watering dams, small irrigation dams, community and municipal water projects, and large water development projects for irrigation, many of which have been completed and are now in full use.

No. 279. Wed. July 6, 1938 -- Sawdust for Heating

Until lately sawdust has been more or less a waste product. With the discoveries made in the Forest Products Laboratories of the Department of Mines and Resources in co-operation with combustion engineers, a very practical and profitable use has been found for it.

With the aid of an auxuiliar grate, sawdust can be used for fuel in any standard

heating unit. It burns freely, requires little attention and makes a fire which is easily controlled. Other points in its favour are its cheapness, lightness and the fact that it is very low in ash content.

Already in British Columbia more than 15,000 homes, offices, theatres and other buildings are using sawdust for heating purposes.

Think of the amount of sawdust produced by the trees cut down and sawn into lumber every year in Canada. The Forestry Branch estimates that two billion cubic feet of standing timber is the annual harvest. That amount of timber would make a pile as big as 800,000 box cars piled together.

Formerly regarded as unavoidable waste, sawdust can now be turned to a profit for millowners. It is estimated by the Forest Products Laboratories that the sawdust produced annually in Canadian sawmills is sufficient to cover fifteen or twenty city blocks to a depth of one hundred feet. Thousands of dollars will now be saved from the refuse burners.

No. 280. Thurs. July 7, 1938 — Canadian Reindeer

Progress reports on the fawning of Canada's reindeer herd, just received by the Department of Mines and Resources, reveal that approximately thirteen hundred fawns had been added to the herd at the end of the first week of May. Fawning began about the first of April and was expected to continue until about the end of May. Complete figures will not be available until after the July round-up, but a marked increase over the 1,181 deer born last year is indicated.

The herd has shown steady growth since the original 2,370 reindeer were delivered to the reindeer station in the Mackenzie Delta area in 1935. Notwithstanding the usual losses incidental to reindeer herding, and the annual slaughter of surplus stock (steers and aged females) to provide food and clothing for local needs, the deer numbered more than four thousand at the last round-up. The animals as a whole have adapted themselves to the climate and local conditions on the reservation, and the herd has now developed to the stage where extension of the reindeer industry in the interests of the Eskimo population is receiving serious consideration.

Several Eskimos have been in training with the Government herd, but it is now proposed to establish a native herd and to increase the opportunities for the younger natives to learn reindeer husbandry. The plan being considered at present is to separate eight or nine hundred deer from the Government herd and place them in charge of two native families under the supervision of a Government officer. These deer would then be regarded as a native herd.

No. 281. Fri. July 8, 1938 — Dominion Fish Hatcheries

Helping to maintain and increase Canada's stocks of fish, the sixteen main hatcheries and several subsidiary establishments operated by the fish culture workers of the Dominion Department of Fisheries distributed last year nearly 61,832,000 fish eggs, baby fish and older fish in those parts of the country where the fisheries are under federal administration. Hatcheries were operated in the three Maritime Provinces and in British Columbia. At the end of the year, by the way, the

departmental hatcheries concerned with sport fish propagation in British Columbia were transferred to the provincial authorities, who have to do with sport fishing in non-tidal waters.

During the early part of 1937 the department also directed the operation of hatcheries in Alberta's national parks, but at the expense of the National Parks Bureau. At the end of March, however, the Parks Bureau assumed the entire responsibility in connection with the operation of these plants.

Species propagaged at departmental hatcheries in 1937 included, in the east, Atlantic salmon, Ouananiche, Sebago salmon and Speckled, Rainbow, Kamloops and Salmon trout. In British Columbia the hatcheries handled Sockeye, Coho and Kennerly's salmon as well as Steelhead, Kamloops, Speckled and Cut-throat trout. Outside of national parks and those areas where fisheries administration is a federal function, the fish culture work carried on during the year was conducted by provincial authorities.

No. 282. Sat. July 9, 1938 -- Canadian Sheep

We are well aware that Canada is not a sheep raising country in the sense that some others are, such as New Zealand and Australia, the United Kingdom, etc. Our consumption of lamb and mutton is much less than that of very many countries.

Why that is so is not easy to understand, but it is the fact. However, here is what Dr. Barton, the Deputy Minister of Agriculture, said to some sheepmen recently at a meeting held in Ottawa:

"There will always be a place for wool, and always be a place for lamb as meat; there never will be substitutes for them. Lamb as a meat will withstand any competition.

"The sheep industry throughout Canada is now in a reasonably healthy condition, and it is today in much better shape for development than it was a few years ago. The Dominion Department of Agriculture co-operating with the Provincial Government and other agencies have done something to bring this situation about. In several respects the sheep industry has outdistanced some other branches of the livestock industry in Canada. There has been notable progress in the handling of wool, though the market may not always be what sheep raisers would like. The world has grown smaller from the standpoint of market outlets. Everyone now has access to it. Competition is becoming keener; in fact in some respects there is almost a war at times in regard to price.

"It is encouraging to see the interest the young people were taking in sheep. This was particularly in evidence in the Ottawa Valley where a sheep club had been formed. Canadian breeders have an enviable reputation throughout the world. They have a great heritage to inspire them. Last year sheep from Canada were exported to New Zealand and Newfoundland, and now there are inquiries coming from South America." He referred to the outstanding success that Canadian exhibitors have attained year after year at the International Live Stock Exposition at Chicago.

No. 283. Sun. July 10, 1938 -- Point Pelee

As many as a thousand whistling swans and a like number of geese were recently seen at one time in the ponds and marshes of Point Pelee National Park, in southern Ontario. Improved water conditions in the marshland during the last year have resulted in a notable increase in water fowl, and all over the water area are thousands of wild ducks which have become so tame that they approach within a hundred feet of the park office and roadway and do not appear to frighten easily. Other fowl and birds that inhabit the meadows and woodlands of the park appear to be exceptionally plentiful this spring, with the pheasants so numerous that it is not uncommon in driving a mile to see fifty or more of these birds. Starlings, which go up in crowds of hundreds, are fairly abundant, and several small bevies of quail have been noted. An outstanding increase of muskrats is reported, while other wild life, such as raccoon, rabbit, fox, and black and grey squirrel, is up to normal.

Point Pelee National Park is a striking illustration of the value of even a small national park in a heavily-populated area, both as a wild life sanctuary and a vacation land. Occupying an area of only about six square miles and easily accessible from the great industrial centres of Detroit and Windsor, this picturesque region attracts in the neighbourhood of 300,000 people yearly and, at the same time, literally teems with wild life.

Lying as it does within the main route followed by thousands of wild fowl and other birds in their northern and southern migrations, the park forms one of the outstanding sanctuaries for birds in Eastern Canada. The interior of the park contains many acres of marshland, where wild ducks, Canada geese, and swans find shelter and food among the beds of wild rice so plentiful there. Many southern species of bird life not usually found in other Canadian localities are either common residents or regular migrants at Point Pelee.

No. 284. Mon. July 11, 1938 -- Summer Field Work

There are forty-one parties engaged in geological investigations and seventeen in topographical mapping in little known sections of the country this summer. Of the former, nine are in British Columbia, two in Alberta, four in Saskatchewan, five in Manitoba, four in Ontario, six in Quebec, three in New Brunswick, two in Nova Scotia, one in Yukon, and four in the Northwest Territories. Additional to these, one party is engaged in the collection of mineral specimens in eastern Canada.

Three of the seventeen topographical parties have been assigned to British Columbia, four to Alberta, one to Saskatchewan, three to Quebec, one to Nova Scotia, three to the Northwest Territories, and one to Yukon. In addition, a party is engaged in physiographic studies in the eastern Arctic.

Five parties placed in the field by the National Museum of Canada will be engaged chiefly in the gathering of new information on Canadian fauna, flora, and native races, and in the collection of new specimens for the Museum. The program includes biological and botanical investigations in British Columbia, Alberta, Manitoba, and Ontario, as well as archaeological studies in Ontario.

No. 285. Tues. July 12, 1938 -- Old Age Pensions

The Old Age Pension is payable to any British subject of seventy years and over who is not receiving an income of as much as $365 a year. He or she must have resided in Canada for twenty years and must have lived in the province in which the application is made for five years immediately preceding the date of the commencement of pension.

The Act also provides that an applicant must not have assigned or transferred property for the purpose of qualifying for a pension. Indians are not eligible to receive old age pensions.

The provinces are charged with the payment of pensions, the Dominion government reimbursing each province quarterly, to the extent of 75 percent of the net cost. Previous to 1931 the Dominion paid one-half of the amount. All the provinces are operating under this agreement.

In 1927 British Columbia was the first to have this Act become effective, followed by Manitoba and Saskatchewan the next year and by Ontario, Alberta and the Northwest Territories in 1929. Payment of pensions commenced in Prince Edward Island in 1933, in Nova Scotia in 1934 and in New Brunswick and Quebec in 1936.

At March 1, 1938, the total number of pensioners was about 176,000. The Dominion Government has contributed over 123 million dollars to these pensions since the inception of the Act. Last year's contribution was 28½ million dollars.

No. 286. Wed. July 13, 1938 -- The Canadian Indian

There is no foundation for the common belief that the Indians of Canada are a vanishing race. While their numbers have varied considerably during the last thirty years, declining from 110,000 in 1907 to 104,000 in 1924, latest returns show that there are now approximately 114,000 Indians resident in the Dominion.

Like those of other races, Indian problems are determined largely by the climatic and physical features of the areas in which they live. In southern Ontario, southern Quebec, and parts of the Maritime Provinces the Indians are engaged largely in agriculture, and some of them find employment in nearby industrial centres. Another group occupies the great hinterland comprising the northern parts of the provinces from the north shores of the St. Lawrence River to the Mackenzie Valley and Yukon Territory. These people are dependent mainly on hunting and trapping for their livelihood, and the Department has set aside large tracts of land in certain provinces, where only the Indians are permitted to hunt and trap. Efforts are being made to have this policy extended wherever feasible, having regard to the interests both of the Indians and of wild life conservation.

A third group of Indians is found in the Great Plains region and in the foothills country of Alberta, where their lands are suitable for agriculture and stock-raising. In 1878, when the buffalo herds were virtually wiped out, these Indians had to turn to farming and ranching, and within two generations a large number of them have developed into prosperous, self-reliant farmers. Still another group of Indians inhabit the northwestern coast of British Columbia. These people had developed a highly organized culture before the appearance of the white man. They are fisher-folk, trained to the sea, and for many years have been prominent in the fishing industry.

No. 287. Thurs. July 14, 1938 -- Indian Education

Marked progress has been made in the education of Indian children in Canada since the inauguration of day and residential schools for them, and in almost every year increases have been recorded both in the number of pupils enrolled and in the percentage of attendance. Enrolments now total 18,297 Indian children, of which 9,040 are in residential schools. There are 80 residential schools, 275 day schools, and 10 combined Indian and white schools in operation throughout the Dominion under the supervision of the Department of Mines and Resources, which spent $1,821,000 on Indian education during the last fiscal year.

Progressive attempts are being made to bring the Indian educational policy into closer conformity with the actual life needs of Indian children. Steadily increasing emphasis has been placed on the importance of manual training, and material has been supplied in an attempt to encourage gardening and carpentry work among boys, and dressmaking, crochet work, and elementary domestic science among girls. Special emphasis is placed on hunting and trapping in areas where the livelihood of the Indians depends largely upon the game resources. An opportunity for practical training is afforded to boys of teen age who are attending school by granting them special leave from their classes so that they may accompany the hunting and trapping expeditions.

New school buildings, modern in every respect, are replacing old structures, and better qualified teachers are being attracted to the Indian schools. Plans have been prepared for the construction of day schools equipped to provide an educational program designed to meet the needs peculiar to the reserves on which such schools are established. It is hoped that these schools will become focal points in community life-- centres to which Indian children and adults will turn for guidance, instruction and inspiration.

The response of the Indians to the efforts to advance them to a position of independence and self-support has been a major factor in the success of the work. An encouraging feature has been the increasing demands for agricultural and homemaking short courses and the tendency and willingness of the Indians to recognize the value and distinctiveness of their arts and crafts. Consideration has been given to ways and means whereby the Indian population can be encouraged to conserve still further their ancient crafts and thus increase the cultural life of the nation.

No. 288. Fri. July 15, 1938 -- Fish Stories

The Department of Fisheries makes a very interesting series of fish stories, such as the following:

"Fish foods are one of the best food sources of calcium, which is necessary for the development, growth and maintenance of bones and teeth in the human body."-- True? False?

True. Fish foods are also valuable sources of such other important mineral nutrients as iodine, iron, phosphorus, and copper.

"Canada's lobster fishery is entirely an Atlantic Coast fishery but it is more important than the lobster fishery of any other country."-- True? False?

True. The Dominion's lobster catch is much larger than that of any other nation and in recent years it has been worth about $4,400,000 annually in marketed value.

"Fish foods, in general, are more easily digested than meats."-- True? False?

True. Fish tissues are tender because fish, living in water and buoyed up by the water, do not have to develop the strong muscles and ligaments which land animals must have.

"Canadian sardines contain no other vitamin than 'A'".-- True? False?

False. Little herring are the raw material of Canada's sardine canning industry and sea herring contain at least three vitamins-- A, B and D.

"Cod, haddock, hake and cusk, and pollock are the fish used in Canada's dried fish industry, an Atlantic Coast industry." -- True? False?

True. Most of the dried fish is dried cod but cusk, haddock, hake and pollock are also put up in dried form. British Columbia markets drysalted herring and salmon but "drying" and "drysalting" are different processes.

No. 289. Sat. July 16, 1938 -- Forest Fires

The great forest fires that have occurred on Vancouver Island and the fact that this is the holiday season suggested that another reference to forest fires is timely.

In an appeal for forest fire prevention, the Department of Mines and Resources, Ottawa, points out that forest fires in Canada during the last ten years have caused a direct loss of more than forty-eight million dollars. This statement does not tell the whole story, as it is impossible to estimate in dollars and cents the indirect losses in soil fertility and scenic value and the damage caused by floods, soil erosion, and the lowering of water levels in streams, all of which are the inevitable results of extreme denudation.

Forest fires are by no means a modern evil, as scars on ancient trees give mute evidence of forest fires long before the advent of civilized man. Most of these prehistoric fires were probably started from lightning, but in recent years with the improvements in transportation facilities and the increasing use of the forests for recreational purposes, eighty-five per cent of all forest fires have been caused by man, either wilfully or by carelessness.

The high percentage of man-caused fires can be greatly reduced by the exercise of caution on the part of the public, and all those who travel in or near the forest are strongly urged to be careful with fire at all times. The late spring is one of the greatest danger periods in the year, and various forest protection agencies throughout Canada including Dominion, provincial and private, stand ready to face the danger of fire which follows the drying winds of late April and early May. These winds remove the moisture from the previous year's dead vegetation, leaving it dry and highly inflammable. Not until the June rains and the advent of new green vegetation will this fire hazard subside. Two other danger periods when fires will spread rapidly and assume large proportions are in the summer months during protracted periods of dry hot weather, and again in the fall, after the ground vegetation has been killed by early frosts and subsequently dried out by high winds and hot sunny days.

In providing the raw material for Canada's third primary industry, the forests are a great source of national wealth and employment, and the problem of safe-guarding this great heritage against the constant threat of destruction by fire is therefore of utmost importance to all. The forest resources are so interlocked with the many phases of personal and industrial life of the country that to destroy them wantonly, or to stand heedlessly by while they are devoured by flames, is to impair the basis of the nation's social and economic existence.

No. 290. Sun. July 17, 1938 -- A Legend of Marengo

Canada has been devoting a great deal of attention to the development of her poultry industry. There are about 39,564,000 head of poultry on Canadian farms. Recently there was held in Montreal a banquet in connection with the first Poultry Promotion Congress under the auspices of the Canadian Produce Association. Not only did chicken-- as was natural-- prove the masterpiece of the menu, but Monsieur Thomas, a noted chef, who fried them, was asked to give an address on the value and utility of poultry at the dinner table. He enlivened his remarks by giving the story of the origin of fried chicken, describing it as the legend of "Chicken Saute Marengo".

He said that on June 14, 1800, Napoleon in one of his lightning strokes defeated the Austrians at Marengo, and in celebration of his victory invited his leading generals to dinner that evening.

Unfortunately the field kitchen had been unable to keep pace with the rapid advance, although Napoleon's chef, Dunant, in a light van, had pressed forward with the staff. The van, however, was not provisioned and Dunant was faced with an almost unsurmountable problem. Napoleon had said dinner, and dinner there would have to be. Dunant spied a farm house in the distance and at once dispatched two battle-scarred soldiers of Napoleon's escort to see what they could find. The old soldiers were hard put to it but they managed to way-lay three wandering chickens and gather a few rare tomatoes and a bunch of garlic. With these materials Napoleon's chef had to uphold his reputation and comply with the Imperial order.

The chickens were hastily killed, plucked and cut into pieces. Meanwhile oil was being heated on an improvised stove, and in no time the pieces of chicken were browning and simmering. With a few drops of brandy sprinkled on top, the dinner was served and was highly praised by Napoleon and his staff.

No. 291. Mon. July 18, 1938 -- The Sociable Beaver

Experiences in Canada's National Parks have demonstrated that the beaver, long regarded as an animal which very definitely preferred his own company to that of human beings, is really more sociable with man than has been supposed. The beaver, like the other so-called "wild" animals of Canada, responds to the human friendliness which he finds in the national parks. He is an intelligent animal, very quick to sense danger, but once convinced that humans mean him no harm, he proceeds about his business.

However, this fraternal feeling is not confined solely to the parks. Now comes

word from Red Deer, Alberta, that beaver, operating in Waskasoo Creek, have actually invaded the city limits.

Few animals can be regarded as so typically Canadian as the beaver. From the earliest times he has been associated with the history of Canada. His industry and intelligence are held to represent outstanding qualities of Canadian character. In preserving him, and bringing his true qualities to public recognition, the national parks have done a national service.

No. 292. Tues. July 19, 1938 -- Progressive Agriculture

The Dominion Experimental Farms Service has 183 illustration stations and 47 district Experiment Sub-stations. Nineteen of these stations are in British Columbia, 24 in Alberta, 51 in Saskatchewan, 17 in Manitoba, 17 in Ontario, 51 in Quebec, 20 in New Brunswick, 17 in Nova Scotia, and 14 in Prince Edward Island.

By visiting the illustration farm annually on a specified field day, residents of the countryside are brought face to face with what is being done in progressive agriculture. At the field day they discuss the work, ask questions, and listen to lectures which impart the findings, figures and facts that have a definite bearing on local problems and conditions. Neighbouring farmers may also obtain from the operator of the illustration farm pure seed grain and breeding stock for improvement of their home produce.

In the illustration station program of farm organization and development, the sale of livestock and dairy products makes up the principal source of revenue of 131 of the 183 illustration stations and the 47 district experiment sub-stations. On the remainder, specialized grain farming, which includes the sale of wheat, oats and barley, is the chief farm income. On many of the 131 stations, particularly on those that have been in operation for a considerable period, well-bred high-producing herds now appear.

On some farms in Canada, the number of milch cows kept is small in comparison with the size of the farm, and in consequence of the relatively low production, the cash return is inadequate to meet living expenses, taxes, and other necessary expenses. Hence, in the illustration station program, the aim is to develop sufficient revenue from the sale of milk, beef, pork products, poultry or cash crops, such as cereals, grasses, and clovers to meet the necessary operating expenditures, which include comfortable support of the home on the farm.

No. 293. Wed. July 20, 1938 -- Farm Woodlots

Farm woodlots contribute about one-third of the volume of Canada's total forest production. As statistics for these special forest areas can only be obtained from the decennial census, the most recent figures available are those for 1930, in which year the cut of all forest products from farm woodlots amounted to 33 per cent of the total volume cut in Canada, and accounted for 21 per cent of the total value of primary forest products. Forest products from farms in 1930 included firewood valued at $29,129,280, logs for lumber $5,938,544, pulpwood $5,662,302, maple sugar

and syrup $3,067,696, fence posts $1,024,697, railway ties $546,432, telephone poles $358,121, and other products to the value of $933,066, which made a grand total of $46,660,138.

Owing to their accessibility farm woodlots are capable of more intensive culture by which higher yields and higher values can be secured than in extensive forests. A well-managed woodlot consisting of hardwoods can produce a cord of fuelwood per acre per annum in perpetuity. From his farm forest the farmer can raise most, if not all, of the fuel he requires, thereby reducing greatly his cash outlay, and at the same time providing himself with employment at a time when there is little other activity on the farm. Considering the small amount of labour and expense involved the yield from woodlots compares favourably with field crops. Compared with anthracite coal at $16.50 per ton hardwood has a fuel value of about $10 to $12 per cord, while the average value of all field crops in 1930 was $26.10 per acre-- $12.26 per acre for wheat, $14.74 for barley and $17.22 for oats.

Some authorities claim that for the well-balanced operation of a farm from 10 to 20 per cent of the land should be devoted to forest. In an investigation conducted in Ontario it was found that in counties which had the largest percentage of well-managed woodlots the agricultural population was more prosperous than in those which lacked sufficient woodlots.

Apart from their importance to agricultural economy, farm woodlots contribute to wild life resources, and maintain a much higher population of insect-eating birds, song birds, and upland game birds than does either a bare, de-forested area or a large tract of uniform woodland. Birds nesting in woods and shelter-belts aid in controlling insects, and thus serve to protect the farmer against serious losses from the depredations of insect pests.

No. 294. Thurs. July 21, 1938 -- Limestone

Limestone, which constitutes about 87 per cent of the Canadian stone production, surpasses any other rock in the number and diversity of its uses and in the quantity consumed for industrial purposes. It is marketed in a variety of forms ranging from large squared blocks of dimension stone, for use in construction, to extremely fine dust, used chiefly as a mineral filler. The bulk of the output is crushed and screened for use as road metal, concrete aggregate, railroad ballast, and as flux in metallurgical plants.

Large quantities are also marketed in the crude or broken state for use in chemical and metallurgical industries. In the rock wool industry-- the newest of the limestone industries-- siliceous and argillaceous dolomitic limestone, or calcium limestone, is converted into a light, fibrous insulating material known as "rock wool" which is being widely used as a thermal and sound insulation, and as an acoustical material.

A use of limestone that is capable of enormous development is in agriculture. Though the necessity of applying limestone or lime to agricultural land in order to maintain or increase soil fertility has been emphasized for years by authorities on agriculture the quantity so used in Canada is still very small, whereas if the proper quantity were applied it would constitute one of the principal outlets.

A number of new limestone quarries were opened in Canada during 1937, and sev-

eral quarries that had been idle for some time were reopened. Limestone is quarried in all provinces except Prince Edward Island and Saskatchewan, and the Canadian production in 1937 for general use, exclusive of that used for building stone, lime, and cement is estimated at 5,190,000 tons valued at $3,990,000 compared with 3,704,451 tons valued at $2,894,859 in 1936. The production for all purposes in 1937 is estimated at 7,700,000 tons. The increased production was largely from quarries in Ontario and Quebec, which supply the greater part of the output, and was due in a large measure to an increased demand for limestone for road construction, railway ballast, and for use in the chemical and metallurgical industries.

No. 295. Fri. July 22, 1938 -- Fish and Chips

A recipe these hot summer days may be in order. It relates to fish and chips, a dish the Britishers have made famous. A Canadian tourist tells us with poetic licence that it saved his life one day lately when he was at the point of starvation.

Cooking Canadian fish for use in fish and chips is very simple. The desired quantity of fresh fish is cut into pieces of convenient size, each piece is dipped into batter, and then dropped into smoking hot fat and cooked until the batter covering takes on a light brown colour. All that then remains to be done is to drain the pieces, put them on the serving dish, and bring them to the table with the potato chips.

Different cooks sometimes prefer different kinds of batter for using in cooking fish in deep fat but one recipe suggested by a cookery demonstrator on the staff of the Dominion Department of Fisheries is as follows: Take a cup of flour, three-quarters of a cup of milk, one egg, a teaspoonful of olive oil, and a quarter of a teaspoon of salt; beat the egg slightly, add the salt, oil, milk and flour, and mix well.

Numbers of restaurants in Canada frequently have fish and chips on their menus, and others could follow their example with profit. The management of one successful group of restaurants in Central Canada, for instance, makes fish and chips one of its feature dishes. In preparing, say, thirty portions at one of the restaurants in the group or chain the following ingredients are used: Eight pounds of Canadian fish and a batter made by mixing a pound and a quarter of flour, a pint and a half of milk, two eggs, and a teaspoon and a half of baking powder. It is essential, the chef in charge says, that the batter be allowed to stand for one hour before it is used.

The Fisheries Department does not say what is the best variety for Fish and Chips -- no doubt, taste is all. Suppose whitefish is used, it is interesting to note that whitefish is the most valuable species taken in Canadian inland waters. It occurs in each of the provinces having commercial fresh water fisheries. The catch last year was valued at over one and a half million dollars.

No. 296. Sat. July 23, 1938 -- The Lunenburg Fleet

Famed in the fishing industry for generations, the "lunenburg fleet" comprising sixty-nine vessels in 1936 was slightly larger than it had been in the year before, but fewer of the schooners engaged in the "salt fishing" which has long been the traditional enterprise of the deep-sea craft based at this Nova Scotia seaport. Of late years there has been more and more of a trend toward "fresh fishing" on the part of the Lunenburg vessels, or in other words, a trend toward more fishing for the fresh fish trade rather than concentration almost wholly upon making catches for use in the trade in dried fish.

While fewer Lunenburg vessels went salt fishing last year and their total catch decreased, their average catch was higher. From the "frozen baiting" trip, the spring trip, and the summer trip alike the landings showed an increase per schooner. All told, the three trips to the banks yielded the fleet about 7,965,000 pounds of cod, a decrease of approximately 375,000 pounds compared with 1935. Most of the production was credited to the summer trip when 25 vessels brought ashore about 5,555,000 pounds, or a little more than was landed by 28 vessels in the corresponding trip of 1935.

Another Atlantic coast fleet of importance, though perhaps less well known than the Lunenburg fleet, is based in the Caraquet district of northeastern New Brunswick. With 121 vessels in 1936 it is bigger in numbers than the Lunenburg group of deep-sea craft, but most of the Lunenburg schooners are larger.

Canada has perhaps the largest fishing grounds in the world, and her list of food fishes embraces nearly sixty different kinds. Unrevised figures place the 1936 sea fisheries catch at 980,000,000 pounds with a landed value of more than $16,600,000. Canada's export trade in fisheries products in 1936 exceeded $25,000,000.

No. 297. Sun. July 24, 1938 -- Smallpox

The Canadian Press carried a story recently which stated that a member of the crew of a vessel arriving at Halifax had died of smallpox. Fear of the disease sent almost half the population of the city in haste to the physicians for vaccination.

Smallpox is a dreaded disease which at one time in Canada, as in other countries, carried off great numbers of the people. When a case of it occurred in a community the people knew great fear. Those who recovered usually carried to the grave with them deeply pitted marks upon their faces. Early in the present century these pitted faces were quite common in Canada. Vaccination has combatted so successfully the ravages of the disease that there were only two deaths from smallpox in 1936 and two the year before.

Dr. John J. Heagerty in his book "Four Centuries of Medical History in Canada" mentions that the earliest records of smallpox among the Indians of Canada are to be found in the Jesuit Relations of 1635. The Indians believed that the disease was given them by the Jesuits and resolved upon their massacre. Near the beginning of last century, Dr. Jenner, the Edinburgh physician who discovered the antidote, sent to the Five Nations a copy of his book for their instruction in using vaccine. That book is now in the possession of the Dominion Archives at Ottawa.

Our control of most diseases nowadays is so well nigh perfect that it is difficult for us to realize the extent to which epidemics spread before we had adequate means of checking them. For example, in the year 1800 there was a smallpox outbreak in Nova Scotia and before twelve months had passed there were eight thousand cases.

The first outbreak of smallpox in the Western Hemisphere, says Dr. Heagerty, occurred in the West Indies in 1507, just fifteen years after the discovery of America; whole tribes were exterminated. The disease was taken to Mexico by Spanish soldiers in 1520 and the deaths among Indians, it is said, numbered 3½ million. The celebrated Pocahontas, the friend of the Virginian settlers, died of smallpox in 1616 in her 22nd year. She contracted the disease during a visit to England. In 1633 the distemper caused terrible havoc among the Indians of Massachusetts. "The Hurons were decimated by the smallpox and the Iroquois", says an old account of 1640. A quarter of a century later more than one thousand Iroquois died of the same disease. The Abenakis were heavy sufferers.

No. 286. Mon. July 25, 1938 -- Indian Medicine

Dr. Heagerty tells us that when the French reached Canada, accompanied as they were by skilful doctors and nursing Sisters, they found the Indians possessed of a knowledge of medicine and surgery that was in some ways the equal of their own. In their application of the properties of the vegetable kingdom they were probably superior to the French physicians. They had remedies for each and every occasion, expectorants, emetics, purgatives and astringents, as well as other treatments that required advanced skill and knowledge. Their medicine man, much exploited by the writer of fiction, was only a concession to superstition and not the curator of their medical knowledge. Their system of medicine was an unwritten one that was handed down from generation to generation and, in spite of the manifold defects of such a system, was surprisingly complete. In the hands of the women of the tribe was placed the treatment and care of the sick.

In contrast with smallpox, which was brought here by the white man, mal de terre, or scurvy, might be described as a disease native to North America. Jacques Cartier lost almost all his people the first winter he passed in this country. It was a common disease and was called land disease. Scurvy broke out among the Pilgrims after their arrival in New England in 1621. In two or three months half of their company died. The Jesuits frequently suffered from it.

During the past century the presence of scurvy in Canada was associated chiefly with lumber camps. A continuous diet of bacon, beans and coffee, with an absence of fresh vegetables during the winter months, favoured its existence. Even today we have scurvy occasionally but in most cases the disease is recognized before it has progressed very far and the horrible type of case seen by the early settlers is a thing of the past. It made its appearance in the drought belt of the Prairies last year among people on relief. It was due to the scarcity of fruit and vegetables. Governmental action was taken at once. There were twelve deaths from scurvy in Canada in 1936.

We get a picture of the advance medical science has made since the days of the early settlers when we are able to say that in the last year or so there have been no deaths from leprosy and none from bubonic plague.

No. 299. Tues. July 26, 1938 -- White Man's Disease

It will be seen from the foregoing how powerful a part the white man's diseases have played in destroying and exterminating the great Indian tribes. The tragedy was that the Indians were unable to meet the requirements which the malady demanded to effect a cure. They had no knowledge whatever of that plague.

Leprosy is another of the very dreadful diseases. It has taken a heavy toll of life in days gone by. Robert the Bruce died of it. So far as is known it appeared for the first time in Canada at Tracadie, New Brunswick, in 1815. From 1815 to 1924, 319 lepers have been admitted to the lazarette.

Cases of bubonic plague were brought by the King's ships to Canada in 1710, 1718 and 1740, and caused epidemics. The fleas of rats and other rodents are the carriers, just as mosquitos are the carriers of yellow fever. At the present time the Department of Health is making a study in British Columbia and Alberta to ascertain if ground rodent fleas in these provinces are infected with the plague bacillus. Plague infected fleas have been found on ground rodents in California, Washington, Montana and Utah. About twenty years ago there were two cases on a ship sailing from Montreal to Bristol. The ship had sailed originally from Alexandria in Egypt. All ships entering Canadian ports are now obliged to undergo fumigation at least once a year.

Further elucidation of the advance of medical science which is reflected in the Vital Statistics issued by the Bureau may be obtained from Dr. Heagerty's two valuable volumes entitled "Four Centuries of Medical History in Canada". They should be read by everyone interested in the progress and development of this Dominion. They are a revelation.

No. 300. Wed. July 27, 1938 -- Waste Not, Want Not

We all know the jingle which deplores the throwing away of potato skins, for--

"The skins feed the pigs and the pigs feed you,
Dear beloved brother is that not quite true?"

Canada has taken the juncture to heart and is applying the waste not, want not theory to her apple trees. A project is under consideration for the construction of a pulp and paper mill in Canada in which certain expensive grades of paper would be produced from prunings of apple trees.

It is estimated that from 1,500 to 4,000 lbs. of prunings are produced on each acre of orchard each year, and that as the Dominion has millions of acres of fruit lands concentrated in closely planted areas, raw material might be laid down in the proposed mills far more cheaply than existing sources of material.

It has yet to be proved that the apple prunings are better adapted for such high grade papers as cigarettes and magazines than wood pulp, but the fact that the experiment is to be made at all shows how wide is the sphere of activity of the Canadian research worker.

No. 301 Thurs. July 28, 1938 — Petroleum in the North

Petroleum products are playing an important part in the opening of Canada's newest mining frontier in the Northwest Territories, where the time-honoured means of transportation by dog and canoe have been supplanted largely by airplane and motor boat. Modern transportation methods have been of invaluable aid in mineral developments in the North and this vast expanse, embracing more than one-third of all Canada, now seems destined to play an important role in the economic life of the Dominion. Regions rich in minerals of economic importance are now served by fleets of modern-type aircraft equipped with skis in winter and pontoons in summer, while steam and Diesel-powered boats and tugs tow freight-laden scows and barges northward down the Mackenzie River route during the navigation season.

For the transportation requirements of a country so vast in extent as the Northwest Territories, an ample supply of gasoline is required, and to meet this demand caches of gasoline are strategically placed throughout the actively developed regions of the Arctic and sub-arctic for the convenience of aviators, prospectors, traders, fishermen and even native Eskimo and Indian trappers. Fuel oil is indispensable to mining operations, and the discovery several years ago of oil at a point fifty miles below Fort Norman on the Mackenzie River has greatly aided developments. Oil from this source is used at present to drive Diesel-powered units at various properties, and with further refining may be adapted to heating and cooking purposes in hospitals, schools, and police and trading posts, thus materially aiding the conservation of timber resources.

The oil wells near Fort Norman operate only during the summer months, about ninety days, and at present have a combined capacity of 350 barrels daily. In 1937 they produced 11,500 barrels of oil compared with 5,339 barrels in 1936 and 5,053 barrels in the 1935 season. During the summer months tanker barges move oil on regular schedule to the Eldorado mine on Great Bear Lake, and to Great Slave Lake to supply the Yellowknife Bay and Gordon Lake mining areas. Last year an 8½-mile pipe-line with storage tanks was constructed to overcome the bar to navigation at St. Charles rapids on Great Bear River, about 1,200 miles north of the international boundary.

No. 302 Fri. July 29, 1938 — Elbow Room for Trout

The Department of Fisheries has been making an interesting experiment in New Brunswick, and has discovered that whatever may be the case with humans, environment is much more important than heredity when it comes to fish. The story may, perhaps, best be told by a racy report on the subject issued by the Department itself:-

"There are Speckled Trout in many New Brunswick streams, but in one of the less important brooks examined by the Department's fish culture people it was found that the stock showed stunted growth. They grew to maturity but under-nourishment was printed all over them. When 900 of them were captured by the fish culturists for experimental purposes they were found to average only five inches in length and only about an ounce in weight. It's no slander to call a trout of that size a "poor fish". In October, 1935, the 900 captives were transferred to the Department's hatchery at St. John. They didn't have to hustle for their own food there. The hatchery staff saw to it that they were given all the food they would eat, most of it liver, by the way.

"By the time a year had rolled around the fish had increased their weight to an average of 3.7 ounces and their length to slightly more than nine inches. A month later, in November, 1936, between six and seven hundred of them were marked for identification purposes by the removal of the right pectoral fin and they were then set free in two St. John County lakes-- Beaver and Ping-Pong. Last year a number of the marked fish were recaptured in the lakes. Some of them taken in Beaver Lake measured eleven inches. In Ping-Pong the average was a little more than that and the average weight was better than ten ounces. All of the recaptured fish showed the dash and spirit of the normal Speckled Trout. They rose readily to surface lures and the flesh was firm and well-flavoured.

"The introduced marked fish are taking on the characteristics of the fish native to each lake. This experiment seems to confirm the view that stunted and small Speckled Trout will assume normal size and growth when transferred to suitable environment with plenty of food".

"In other words, perhaps fish from over-stocked streams can be used to increase the trout population in waters where there aren't fish enough."

No. 303. Sat. July 30, 1938 -- Bees and Honey

It looks as if Canada is going to have a great increase in honey production this year. The manufacturers of beekeepers' supplies have been very busy. Their output in 1937 made an impressive gain.

Last year, it will be remembered, the production of honey was a disappointment. Although the number of colonies of bees had increased by 20,000 over the previous year, the crop at less than 22,000,000 pounds was the smallest since 1926 with the exception of 1932 when it dropped to 19,000,000 pounds. There had been heavy losses of bees during the winter and winter killing of clovers which are the main sources of nectar. To cap the climax, the unfavourable weather conditions during the summer months took a heavy toll over wide sections of the country, particularly in Ontario, Western Manitoba and the drought area of Saskatchewan. The record high was almost 30,000,000 pounds in 1931.

"Wonders will never cease" came readily to our lips when we read an amazing dispatch from Tokyo not long after the Japanese invasion of China had begun. We were told quite seriously by the Associated Press that a Nipponese scientist had discovered that bees could be used for communication purposes.

Dr. Nihon Matsu of Yamagata Hospital was said to have found that bees could be trained to carry messages at the speed of 30 miles an hour for a maximum distance of three miles. Because of their smallness bees would be more efficient than pigeons or dogs-- and more warlike.

Our own Department of Agriculture provides us with the interesting information that it requires approximately 40,000 bee-miles of flight to make one pound of honey. Bees carrying home a pay-load of .0001 pound of nectar must land on millions of flowers before they have enough to make one pound of honey.

Ten years' experimental work at the Brandon Farm shows that it is much more profitable to carry colonies over the winter than to kill the colonies in the fall and bring in package bees in the spring.

No. 304. Sun. July 31, 1938 -- What War Does

The story of the past twelve months is the story of war and rumours of war, with world peace threatened. Some countries are throttling or endeavouring to throttle neighbour states while others are girding on their armour for an expected conflict.

What happens to peaceful commerce when a country is invaded is a lesson which the annual trade figures, just completed, convey. We are all affected. War-torn Spain has always been a good customer of Canada; in late years a great many Canadian automobiles have been sold there. Three years ago these alone accounted for over 2½ million dollars. Our total exports of all commodities have now sunk to $22,000 in one twelve-month period.

China has been invaded by powerful armies and our trade, imports and exports combined, has declined by 4½ million dollars since a year ago.

We are still getting a little coffee from Ethiopa-- not very much of it-- not, indeed, so much as we were getting formerly-- only about four thousand dollars' worth. Some people prefer the flavour of Abyssinian coffee to any other. It grows wild in the new Italian colony. Our exports to that country are practically nil.

Turning to a more pleasant subject, you will recall that recently the Irish Free State, or Eire as we shall have to learn to call it, and the United Kingdom have buried the hatchet. Their trade war is ended and in the new agreement Canada is on the same ground floor. Our exports to Eire have been increasing at a fast rate recently and during the past fiscal year have jumped from three million odd to five million odd.