DEPARTMENT OF TRADE AND COMMERCE

CANADA

A FACT A DAY ABOUT CANADA

FROM THE

DOMINION BUREAU OF STATISTICS

NINTH SERIES

1942 - 1943

Published by Authority of the Hon. James A. MacKINNON,
Minister of Trade and Commerce.

25 cents per annum

May

C O N T E N T S

James Muir,

Editor.

No. 214. -- Wear Glass.

Glass! Oh yes, you say, that's the stuff that won't bounce, -- the brittle, unbendable substance from which windows and bottles and dishes are made.

That's right, but you're wrong. Glass not only bends but has the pliability and softness of silk, the tensile strength of steel and even clothes are fashioned from it. Beautiful decorative glass fabrics, plain and coloured, now hang in the form of attractive drapes, table cloths and lamp shades -- washable, unshrinkable and non-inflammable. This is glass in its new fibrous form. And it's come by in this fashion:

Sand and other mineral ingredients are carefully and precisely mixed according to formulae to form a batch, which is melted and moulded into marbles weighing about a quarter of an ounce each. Following a minute inspection, the marbles enter specially designed furnaces. Through 200 tiny holes in the bottom of the furnace the glass filaments, fifteen times as fine as human hair, are drawn continuously at the rate of about a mile a minute. The filaments are brought together to form a strand and from then on regular textile machines are used. There you have it -- glass cloth in the making.

Twenty-five years ago glass-making was still in its medieval infancy. Today it's a vital industry. All our glass technologists and ceramic engineers are essential to the war program. Had it not been for ceramic workers developing and perfecting procelain insulation the giant strides that have been made in wartime electrical work would have been impossible. In this field of ceramics one of the most interesting features of the war has been the development of electrically heated diving suits for deep-sea divers.

Abrasives have been essential; ceramic engineers brought about the manufacture of optical glass equipment in Canada and a plant near Toronto now turns out optical glass which was previously secured from Germany in large quantities. In 1942 we imported practically all of it from the United States with some coming from the United Kingdom.

No. 215. -- Sand and High Gravel.

One of the principal items of provincial expenditures during the past two decades has been highway construction. The mileage at the end of 1941 was about 121,000 miles of surfaced roads and 441,000 miles of dirt roads. Of the surfaced roads, around 105,000 miles were gravel or crushed stone; 13,800 bituminous surfaces; 2,438 portland cement, concrete and asphalt. During that same year commercial production of sand and gravel in Canada totalled around 32,000,000 short tons.

Deposits of gravel and sand are numerous throughout eastern Canada, with the exception of Prince Edward Island, where gravels are scarce. Quebec and Ontario are the largest producers in the Dominion. Owing to the widespread occurrence of gravels and sands and to their bulk in relation to value, local needs for these materials are usually supplied from the nearest deposits, as their cost to the consumer is governed largely by the length of haul. Hence the large number of small pits and the small number of large plants. Some grades of sand particularly suitable for certain industries command a much higher price than does ordinary sand.

Most of the gravel used for road work comes from pits worked for that purpose. Usually a portable or semi-portable plant is used to extract enough gravel

to supply the immediate need and then a sufficient reserve is built up, in the form of stock piles, for two years' requirements. Road pits may remain idle for two years or more. The amount of gravel produced from year to year thus fluctuates, depending on the program of road construction and improvement. Intermittent operation also applies to railway pits, which may remain idle for several years.

Part of the gravel used is crushed, screened and in some cases even washed and the proportion thus processed is increasing steadily. Some Provincial Highway Departments have used crushed instead of pit-run gravel on their main highways for a number of years. Most of the large commercial plants are equipped for producing crushed gravel, a product that can compete with crushed stone.

The amount of sand consumed follows the trend of building activity, as most of it is used in the building industry for concrete work, cement, and lime mortar, or wall plaster. The sand must be clean, that is, free from dust, loam, organic matter or clay, and contain but little silt, and is usually obtainable from local deposits. Other important uses of sand are for moulding in foundries, filtering of water supply, and glass-making, all of which require special grades of sand.

War conditions did not materially affect the total consumption of sand and gravel, as the extra amount absorbed by war services is partly, if not wholly, offset by a decreased activity in ordinary industry due to the war.

Every province except New Brunswick and Prince Edward Island produces natural bonded moulding sand. By far the greater part of the output has come from the Niagara peninsula. Occasionally new deposits have been opened up, mostly in Ontario and in the western provinces.

One of the greatest roads built in Canada in the light of strategic importance, is the new Alaska Highway. This is a 1,600 mile roadway, 24 to 36 feet wide, extending from Fort St. John, British Columbia, through Whitehorse to Fairbanks, Alaska. It was virgin territory, and a pioneer air route, in the spring of 1942; on November 20, 1942, it was officially opened for wheeled traffic. About 10,000 United States engineer troops and 4,000 civilians, of whom half were Canadians, hewed their way through the bush, bridged the rivers, overcame mountain grades and surfaced a roadbed, to permit a continuous journey by car before the year was out.

The maximum grade in hill country is seven per cent; in foothill country, five per cent. The agreement between Canada and the United States requires that the United States complete the work and maintain it for six months after the War after which all sections in Canada will be returned to Canadian jurisdiction.

No. 216. -- Radio Communication.

The first radio communication in Canada took the form of radio-telegraphy in 1901, between Chateau Bay, Quebec and Belle Isle, Newfoundland. Today it is a publicly owned organization named the Canadian Broadcasting Corporation. It succeeded the former Canadian Radio Broadcasting Commission in 1936 when less than half the country was effectively covered by broadcasting stations. Now less than four per cent of the population of Canada is to be found in unfavourable listening areas for Canadian radio presentations. There were 51,960 radio stations of all classes in 1941. The C.B.C. national network is made up of 10 C.B.C. owned stations, 26 privately owned affiliated stations, and 25 privately owned supplementary stations. The total power of C.B.C. stations is 213,250 watts and of the privately

owned network stations 63,700. Plans are being laid at the present time to set up a powerful international short-wave transmitter that will give Canada world-wide audience.

Radio is playing a tremendous part in this war. During the fiscal year ended March 31 last year, the CBC's total program production amounted to 12,760 hours representing 40,886 programs, the highest figure it ever reached. The task of providing accurate information about events at home and abroad and of retaining the links that bind Canadians in other parts of the world with their homeland takes precedence over all other CBC activities. Programs devoted to the interests of farmer and labour are becoming more and more important as the war years pile up. Naturally, too, programs designed to interpret the latest governmental regulations and legislation as they affect the individual, find place in broadcasting schedules. The CBC news service is available to all radio stations to which there are land lines. Newsrooms are maintained at Halifax, Montreal (which provides news in both English and French), Winnipeg and Vancouver with a central newsroom at Toronto.

The CBC Overseas Unit in Great Britain has played an important part since the war began in helping to bridge the expanse separating Canada and the Motherland. One of the CBC members attached to the Unit accompanied the Canadians on the Dieppe raid in August last year.

No. 217. -- Radio Programs.

Mainly because of the war, spoken word radio programs have increased, with the result that musical programs have dropped. Word programs consist of news, addresses by national leaders, women's service talks, discussions and educational features. During the year ended-1942, 45.7 per cent of CBC programs consisted of the spoken word. Of this type of program, news commentaries, resumes and special events broadcasts occupied more than one-fifth of the year's total broadcasting. Market, weather, stock reports etc., also take up a large proportion of the time set aside for word programs. The number of BBC-originated programs has shown a distinct increase. This is attributed to the broadcasting of additional BBC programs dealing with our war effort and broadcasts from Canadians overseas to relatives and friends in Canada.

Time devoted to American exchange programs is decreasing. Two years ago American programs comprised 30 per cent of the broadcasting schedule, while during the fiscal year ending March, 1942, it fell to 18.5 per cent. On the other hand CBC also has exported fewer programs to the United States.

Care is taken to provide well-balanced programs for Canadian listeners. So music and variety still come in for a good share of the time, amounting, in fact, to about 51 per cent of the total. Taking November, 1941, as a representative month for a basis of discussion, it is interesting to note the time devoted to the various types of musical entertainment. In that month almost 15 per cent of the hours were taken up with music classified as "light" -- light concert style. Next in popularity seemed to be semi-classical which took up about 11 per cent. A close third came dance music with 10 per cent of the hours, then classical and symphony. Sacred, Opera and Old-Time music comprised the lowest number of hours. Going on the premise that programs are styled to suit the majority of listeners, it would seem that there are a goodly number of music lovers in Canada, listeners who understand and appreciate the art as expressed by both modern and ancient composers. And because music still "hath charms to soothe the savage breast" it has been recognized that programs of that nature play an important part in helping to provide the element of relief necessary if industrial and farm production is to be maintained and increased.

No. 218. -- Radio in Schools.

School broadcasting has made great progress in gaining recognition from the educational world in the Dominion. British Columbia and Nova Scotia now have the work on a well-established basis. During the winter of 1941-42 it was arranged to extend the British Columbia school broadcasts to the three Prairie Provinces and to originate one program a week from Winnipeg and Vancouver alternately for the four Western Provinces. Educational broadcasting was launched on the French network of the CBC in the same year. Under the name of Radio College a series of some 250 lectures was broadcast in French for the benefit of young people of high school or art courses' age.

Educational programs generally included language, arts, music, health, social studies, citizenship and science. A Library program was carried on the western network. Broadcasts were given as a rule by well-known specialists in the various subjects. Children's stories, music, history, geography, scientific studies, and industries of Canada comprised much of the time devoted to Educational programs on all networks. These have been a valuable means of spreading knowledge of Canada among listeners, not only here in Canada, but also in the United States and Latin America.

Apart from their immediate use in schools, radio programs of this kind are invaluable to invalid children and children in isolated districts taking their schooling by correspondence courses. Bulletins may also be secured which give an outline of the courses to be taught and suggestions for their use in the classroom.

During the past year the Canadian Council of Education for Citizenship presented on the CBC network a national series of six programs which dramatized the lives of great Canadian statesmen. These were presented during school hours so that students, who are "citizens-in-the-making" could learn of the outstanding personalities of their own country.

Educational programs number, on the average, about 130 a month, at least during months when schools are in session.

No. 219. -- More Facts and Figures about Radio.

This is the time of year when all owners of radio receiving sets are being urged to buy their licences. There are two classes of private receiving licences, one for battery operated receivers, which amounts to $2.00 a year, and the other for electrically operated sets costing $2.50 for a year. Free licences are issued for crystal receiving sets and to blind persons, schools, hospitals and charitable institutions, also for receiving sets installed in barracks, mess-halls, canteens or recreational rooms for the gratuitous entertainment of members of His Majesty's naval, military or air forces on Active Service.

In the Fiscal Year 1942-43 up to the end of January 1,699,766 radio receiving licences were purchased. Ontario and Quebec being the densest populated provinces recorded the largest totals, with British Columbia, Saskatchewan and Alberta next in order. During the same period 5,906 licences were issued to the blind, 972 to schools, 238 to the Canadian Active Service Forces, 93 to owners of crystal sets, 80 to Charitable Institutions, and 34 to the Government. The annual sum paid for licence fees amounts to well over $3,000,000.

According to the number of private receiving licences that were issued in each province during the fiscal year 1941, the estimated population for each receiving

licence was about 24 in the Yukon and Northwest Territories; 15 in Prince Edward Island; 11 in New Brunswick; 9 in Quebec, Nova Scotia, and Saskatchewan; 8 in Manitoba and Alberta; 6 in British Columbia.

Licence fees for privately owned commercial broadcasting stations is determined by the power of the station and the density of population within its service radius and varies from $50 per year to $10,000.

No. 220. — Special Radio Stations.

Radio communication facilities of several different types are essential for the safe and accurate navigation of ships and aircraft and, in order to meet the requirements of Canadian as well as foreign ships plying Canadian waters and aircraft flying over Canadian territory, the Department of Transport has established networks of direction-finding, marine radio beacon, aviation radio range, radiotelegraph and radiotelephone stations.

Four distinct networks of stations provide a complete radio aids-to-navigation service for ships. These networks serve the following areas: Great Lakes, Gulf of St. Lawrence and Atlantic Coast, Hudson Bay, Strait, and sub-Arctic; and Pacific Coast. During the fiscal year 1941, Governemnt radiotelegraph stations on the east coast, west coast, the Great Lakes, and Hudson Bay and Strait handled 354,380 messages or 8,278,512 words.

A public commercial station situated at Drummondville, Quebec, provides transoceanic radiotelegraph and radiotelephone services to Great Britain and Australia, and a radiotelephone service to Newfoundland. These are all owned and operated by either private individuals or companies incorporated under the laws of the Dominion or one of the provinces. The limited coast stations are generally privately owned and provide a ship-to-shore communication service with ships owned or operated by the lincesees only. The facilities of the stations are also open to the general public. An invaluable means of contact is thereby provided with mining camps, lumber mills, exploration and survey parties, trading posts, and many points that would otherwise be cut off from the more settled parts of Canada. In 1941 there were 82 marine radio stations.

The radio services provided for aviation may be divided into two categories; first, those furnished on behalf of aircraft flying trans-Canada routes; and secondly, those intended for aircraft flying trans- tlantic routes. This phase of radio in Canada is being rapidly developed; the service will include the completion of a chain of radio range stations extending from coast to coast along the Trans-Canada Airway and on important connecting routes. Stations are located at airports approximately every 100 miles and transmit signals that enable pilots to navigate entirely by instruments. Routine weather reports are also broadcast hourly. There were 47 aeronautical radio stations in 1941.

No. 221. — Fishing Down by the Seas.

When it comes to delivering de-livered fish, the west coast fishermen are right in there.

For years greyfish, or dogfish, have been considered nothing but a nuisance because of their greedy ill-mannered habit of marauding. In the course of time,

however, it was found that their carcasses could be used in making meal and oil. Later on examination revealed that the fish carry most of their oil content in the liver and further research showed that the liver oil contains valuable amounts of vitamin A. That was when part of a fish became greater than the whole.

Greyfish are members of one of the largest families of shark-like fish and are abundant on both coasts of Canada. Practically all of the oil made from them however, has been coming from British Columbia. Prices varied somewhat in different parts of that province last year, but the average return obtained by British Columbia fishermen from liver sales was more than 16 cents a pound. On the other hand the de-livered greyfish brought only $2.00 a ton. So fishermen found that they could obtain bigger cash returns by themselves marketing the liver than by selling the whole to the reduction plants, and they threw the de-livered fish carcasses back into the sea.

As a result, last year, though an increased number of men in the district went fishing for dogfish, and their aggregate catch was big, the quantities of grey-fish meal and body oil produced by the local reduction plants were the smallest in years.

Meanwhile, down on the Atlantic coast packers putting up canned fresh herring last year for use toward meeting the food needs of Britain did a mighty good job on the quality side. Inspection of the finished product was compulsory and out of the pack of 214,801 cases for Britain fewer than 700 were below first quality. To be exact, the first quality or Grade A fish made up 99.7 per cent of the total.

No. 222. — Age Structure of Canadian Population.

The principal change that has taken place between 1931 and 1941 in the age structure of the population of Canada may be summarized as follows: children and young persons under 20 years of age constituted 37.5 per cent of the population in 1941 as compared with 41.6 per cent in 1931; the population between 20 and 64 years of age represented 55.8 per cent of the total population in 1941 as compared with 52.8 per cent in 1931; the population 65 years and over, was 6.7 per cent of the total population in 1941 as compared with 5.5 per cent in 1931. In brief, the figures quoted above indicate a trend toward an aging of the population of Canada.

In no province has the number of children under 10 years of age increased by as great a percentage as the total population of the province concerned. Indeed, in only four of the provinces, the Maritime Provinces and British Columbia, were there more children under 10 years of age in 1941 than in 1931. In Quebec, the decline was slight, while in Ontario and the Prairie Provinces it was more marked, being about 6 per cent for Ontario and Alberta, 13 per cent for Manitoba and 20 per cent for Saskatchewan. The case of Saskatchewan merits special examination. In the decade 1931-1941 the population of that province declined by 25,793 persons. During the same period the population under 10 years of age decreased by 43,249, while even the population from 10 to 19 years of age fell off by 20,170.

The age group, 20 to 44 years of age, showed increases in numbers over this decade in every province with the exception of Saskatchewan. In Prince Edward Island the population in this age group rose from 27,129 in 1939 to 31,727 in 1941, an increase of 17 per cent; in Nova Scotia, from 164,587 to 208,661, or by 27 per cent; in New Brunswick, from 129,506 to 157,778, or by 22 per cent; in Quebec, from 1,014,471 to 1,233,587, or by 22 per cent; in Ontario, from 1,283,186 to 1,444,900,

or by 13 per cent; in Manitoba, from 256,242 to 274,661, or by 7 per cent; in Alberta, from 273,671 to 295,089, or by 8 per cent; and in British Columbia from 261,849 to 309,619, or by 18 per cent. In Saskatchewan the population in this age group decreased from 325,463 to 316,697, or by 3 per cent. In most provinces the rate of increase in this age group was greater than shown for all ages.

The same tendency for the population to increase at a faster rate in the age group, 45 to 64 years of age, than for all ages was true for most of the provinces. Summarizing the figures by provinces it may be stated that the percentage increase in the population in this age group between 1931 and 1941 for all provinces combined was 23.4 per cent as compared with a percentage increase of 11.1 per cent for all ages.

The tendency of the population in the older age groups to form a larger proportion of the population is indicated by a comparison of the relative increase in the population 70 years of age and over and the population of all ages over the past decade. In connection with Old Age Pensions, the age group, 70 years and over, may be of some interest. In only one province, Prince Edward Island, has this group increased by a smaller percentage than the total population. The following comparison of the percentage increases in this group and the percentage changes in the total population of the provinces (the latter in brackets) is instructive: Prince Edward Island, 4 per cent (8 per cent); Nova Scotia, 14.4 per cent (12.8 per cent) New Brunswick, 18 per cent (12 per cent); Quebec, 26 per cent (16 per cent); Ontario 31 per cent (10.4 per cent); Manitoba, 48 per cent (4.2 per cent); Saskatchewan, 47 per cent (-2.7 per cent); Alberta, 61.4 per cent (8.7 per cent); British Columbia 85 per cent (18 per cent).

No. 223. -- Brome and Crested Wheat Grass.

"Mid-Western Agriculture greatly needs more permanent meadows and pastures" writes the editor of the American Bee Journal, and he adds this wise remark, "The man who unlocks the secrets of nature deserves special consideration by his fellows who profit by his efforts." He was discussing the question of creating on this continent meadows and pastures somewhat like the famous English pastures which have been used continuously for decade after decade.

There was once work being done on the estate of the late Earl of Rosebury which is situated near the city of Edinburgh in Scotland and when the workmen began to dig to make the foundation of some building that was to be erected they found that the turf was about a foot thick. Sheep had been pastured on it for generations.

The problem that farmers and other owners of land here are facing is how to grow meadows and pastures that will be more or less continuous. It appears that most of the meadows and pastures in mid-North America are based on short lived legumes. Red clover and sweet clover go out in two or three years after which the farmer plows up the meadow and plants corn of one kind or another. Blue grass and white Dutch clover are the base of many pastures and the white clover is a biennial, while Blue Grass dries up in mid-summer when it is very badly needed.

A life-time meadow and a similar pasture, therefore, would add greatly to the stability of the farm community. Many farmers plant alfalfa for a hay crop but while it lasts longer than the clovers it does not as a rule stand for more than five or six years. The editor of the American Bee Journal says this very interesting thing, remarking that the recent dry seasons have brought brome grass to public attention because it stands more dry weather and lasts longer. He says that a plot of brome planted by his field editor in 1908 still offers a perfect stand after

thirty-five years but lacks a legume for balance and a life-time meadow with a legume would remove much of the present uncertainty for the farmer.

In western Canada large scale regrassing programs have been carried on for the last six years or so. Experiments have proven the worth of crested wheat grass for the brown soil out there, and it is now the predominant cultivated grass. Crested wheat grass has germinated better and shown itself to be an efficient utilizer of moisture under dry conditions. Although regrassing has been done mainly for the purpose of preventing soil erosion and increasing the grazing capacity of abandoned fields and overgrazed areas, the effect of the grass on the chemical and physical properties of the soil is also an important factor.

Experiments with crested wheat grass record a large increase in the field capacity where the grass was sown, and a net increase in the available moisture-holding capacity. These results were found mainly on coarse and medium-textured soils; no significant increases were discovered in the fine-textured. However, in practically all soils the sod samples possessed a higher percentage of both organic carbon and nitrogen.

No. 224. -- Poison Ivy.

In these days of war when the maximum effort is required of everyone and time lost through sickness is highly expensive in terms of war effort, experts recommend that total relaxation in time off duty is of great importance. If the gasoline ration or tires on the family car do not permit a joy ride far out into the country, why not pack a hamper of food and take the family off to some shady nook for a picnic for the day?

These are usually delightful outings, but for the unwary and the untutored the day may end on a sad note. Nature has garbed herself in all manner and types of growing things to make her beautiful and attractive. While most of these plants are of great benefit to mankind, there are a few found that should be avoided at all costs. Perhaps the leader amongst this type is poison ivy. Beware this plant; it will cause you suffering. Learn to recognize it, for it has many guises.

Poison ivy is one of the worst vegetable poisons in North America and it is to be found growing under a variety of conditions, wet or dry, shaded or exposed, and in any sort of soil from pure sand or rocky ground to rich woods or fields. While widely distributed across Canada, complaints of poisoning are most numerous from Ontario and the adjacent parts of Quebec, especially from the wooded lake and highland regions so attractive to campers and picnickers.

Experienced picnickers in preparing the outfit for the day take the precaution to include a piece of strong laundry soap. Many remedies have been suggested to allay the burning and irritation caused by the coming in contact with poison ivy, but one of the simplest is immediate washing the parts affected with strong laundry soap.

It may readily be confused at first sight with Virgina creeper. However, the leaves of the Virginia creeper appear in leaflets of five. The leaves of poison ivy are borne alternately on the stem in threes, similar to the strawberry leaf. In early summer, poison ivy has a whitish flower on a green background; the Virginia creeper has clusters of blue fruit on red stalks. So remember:

If I have five -
Let me live and thrive;
But if I have three -
Don't touch me.

No. 225. -- Science and Agriculture.

The gross value of agricultural production reached a particularly high point in 1942, thus reflecting the magnificent war effort of our Canadian farming community. Those who toil in the fields from dawn 'till dusk are the workers in Canada's biggest business. Not only is this 'first' position due to the collective efforts of each individual farmer but the scientist who stands behind the farmer is due considerable credit.

The achievements of the scientific work being carried on by the Department of Agriculture in saving the agricultural and forest industries of Canada are of inestimable value to the community. The development of rust resistant wheats has removed the danger of enormous losses by black stem rust. The provision of control measures against the menace of grasshoppers in Western Canada is saving millions of dollars every year.

The introduction of large numbers of parasites of the European spruce sawfly into the spruce forests of Canada, and the subsequent multiplication of these parasites by the hundreds of millions is proving a factor in controlling a major threat to one of the most valuable of the natural resources of the country. The control of virus diseases of potatoes is of substantial benefit to the industry.

Chemical and bacteriological research and analyses in connection with food products, agricultural crops and soils have proved to be of invaluable service. The research work on diseases of farm animals and poultry, and the manufacture of veterinary biologics is a contribution to the notably high health standard of Canadian live stock. Moreover the inspection and quarantine services are a continual help in preventing the introduction of destructive pests and diseases.

It is only in comparatively recent years that science in agriculture has demonstrated its importance. Because of the significant contributions the agricultural scientist has made, he is no longer regarded with indifference by farmers. He is more properly regarded as a business cooperator, who performs an essential service in the economical production of food and agricultural products in wartime.

No. 226. -- Shelterbelts.

Soil erosion immediately brings to our minds the thought of shelterbelts.

Out on the Prairies where the winds blow free, shelterbelts mean a lot to farmers and they know only too well that the benefits resulting from them more than compensate for the time and labour involved in planting and maintenance. More especially is this true in dry years than in wet. However, prospective planters must be patient and realize that specific effects from them may not be apparent until they have been planted for several years.

Farmers with established field shelterbelts favour those with more than one row of trees. There are several points which decide the number of rows it is best to plant. A belt of more than one row is more difficult to cultivate and keep free of weeds. On the other hand where more than one row of trees is planted, there is greater snow accumulation, better protection, slower melting of snow in the spring, economy in land use because of marginal cultivation, and more likelihood of a natural forest floor being built up.

In the West, caragana is a favourite shelter tree. A single row, about twenty to thirty feet high and fairly dense may be expected to reduce the wind

velocity to a distance of four hundred feet to leeward. At two hundred feet the wind velocity will be about half of that in the open. To the extent the wind velocity is reduced there is a proportionate reduction in soil drifting, in the rate of evaporation of moisture from the soil, and in the amount of transpiration of water by crop plants. Snow accumulation resulting in increased grain crops may be expected up to distances varying from fifty to two hundred feet to leeward of fairly dense field shelterbelts. Although such increases will vary from season to season, from location to location, and from crop to crop, a conservative expected average increase might be five bushels per acre. In dry years there will be a high grain straw ratio.

The ideal direction in which to plant a field shelterbelt is at right angles to the prevailing winds. North and South plantings are favoured by the majority of planters. Field shelterbelts planted across the face of sloping land are also considered valuable in preventing erosion and drifting. It should be remembered that grains planted close to trees will suffer from lack of moisture when the trees require and use all the moisture within the area occupied by tree roots.

Many planters with perennial hay crops near field shelterbelts have reported greatly improved crop yields. Livestock producers to whom pasture and hay are equally as important as grain will do well to consider this point. The increase no doubt results from early summer growth stimulated by additional moisture from melting snow. Shelter to livestock in both summer and winter is also provided by well established and vigorous trees.

If planters give their field shelterbelts proper care and systematic management by way of marginal cultivation, control of insects and diseases, and elimination of damage and injury by livestock and perennial weeds so tree growth may be steady, strong and uniform, they will soon reap the benefits of their labours.

No. 227. -- Racial Origin of the Canadian Population.

The racial composition of the population of Canada, as shown by the Census of 1941, revealed that one out of two persons was of British Isles origin, roughly one person in three was of French origin, one out of six was of other European descent, one of every hundred was Asiatic, and a similar proportion, Indian and Eskimo. Compared with 1931, the distribution showed a slightly lower proportion of persons of British Isles races, and a correspondingly higher ratio of persons of French racial origin. Actual percentages of the total population in 1941 by groups, with percentages for 1931 in brackets, were as follows: British Isles races, 43.7 (51.9);French, 30.3 (28.2); Other European, 17.8 (17.6); Asiatic, 0.6 (0.8); Indian and Eskimo, which included half-breeds on reserves in 1931 only 1.1 (1.2).

A comparison of the net changes during the past decade showed that persons of British Isles origin increased in numbers from 5,381,071 to 5,715,904 or by 6.2 per cent. The population of French origin increased from 2,927,990 to 3,483,038, or by 19.0 per cent., and other European races rose from 1,825,252 to 2,043,926, a gain of 11.9 per cent. On the other hand, the number of Asiatics dropped from 84,548 to 74,064, a decline of 12.4 per cent, caused chiefly by a falling-off in the number of Chinese in Canada. The population of Japanese origin remained fairly constant, amounting to 23,149 in 1941, or 0.8 per cent less than in 1931. Comparing the other European races individually, the largest proportionate gains were noted in the following origins: Netherland, 42.9 per cent; Czech and Slovak, 41.2 per cent; Ukrainian, 35.9 per cent; Hungarian, 34.5 per cent; Polish, 15.1 per cent; and Italian, 14.7 per cent. Those showing a falling-off in number were: Austrian -22.5 per cent; Roumanian, -15.0 per cent; Russian, -5.0 per cent; Finnish, -5.0 per cent; and German, -1.9 per cent.

Comparing the principal racial groups in the various provinces, the 1941 Census figures showed that British Isles races were relatively most numerous in Prince Edward Island where 82.8 per cent of the population was of British Isles origin, followed in turn by Nova Scotia, 77.0, Ontario 72.1, British Columbia 69.9, New Brunswick 60.5, Alberta 50.2, Manitoba 49.4, Saskatchewan 44.4 and Quebec 13.6. In the Province of Quebec, persons of French origin comprised 80.9 per cent of the population, in New Brunswick 35.8 per cent and in other provinces ranged from 15.7 per cent in Prince Edward Island to 2.7 per cent in British Columbia. Other European races collectively were proportionately highest in the Prairie Provinces, accounting for 47.0 per cent of the population of Saskatchewan, 41.1 per cent of the population of Alberta, and 39.7 per cent of the population of Manitoba. As compared with 1931 all procinves except Nova Scotia showed a slight drop in 1941 in the proportion of British Isles races to the total population. The relative number of persons of French origin increased slightly in all provinces, while small proportionate increases in other European races were confined to Ontario and the Western Provinces. Asiatic races, with 57.3 per cent of their number in British Columbia, formed 5.2 per cent of the population of that province in 1941, as compared with 7.3 per cent in 1931. In each of the other provinces they formed less than one per cent of the population.

Due to preferences for certain occupations, some racial stocks in Canada are predominately city dwellers, while others are to be found mainly in rural areas. The Italian, Jewish and Chinese races are examples of the former type. In 1941, 80.9 per cent of the population of Italian origin resided in urban localities, 96 per cent of that of Jewish origin, and 78 per cent of the Chinese. On the other hand, roughly two-thirds of the German, Netherland, Russian, Scandinavian and Ukranian populations were found in rural areas. In most cases, the proportions were very similar to those in 1931. Russians and Ukrainians, however, of whom 72.7 per cent and 70.5 per cent respectively, were living in rural areas in 1931, showed a trend toward urban localities, the percentage in rural areas in 1941 falling to 66.8 and 66.

No. 228. -- Conjugal Condition of the Population.

Final Census figures reveal that single persons constituted 54.1 per cent of Canada's population of 11,506,655 in 1941. Married persons accounted for 41.2 per cent, widowed 4.6 per cent, and divorced 0.1 per cent. In 1931, 57.4 per cent of the population were enumerated as single and only 38.3 per cent as married. The actual increase in the number of married persons amounted to 764,953 or 19.3 per cent, while the number of single persons showed a much smaller increase over 1931 of 279,156, or only 4.7 per cent. The higher rate of increase in married persons over the single resulted in considerable part from the changing age distribution of the population since 1931, i.e., from the increase that has taken place in the proportion of persons at marriageable ages and older persons to those of younger ages. Further proof of this is seen in the rise in the number of widowed persons from 437,595 in 1931 to 525,121 in 1941, a relative increase of 20 per cent.

Among the provinces, Quebec showed the largest proportionate number of single persons to the total population. Single persons of all ages represented 60.3 per cent of the population of Quebec, and married persons 35.7. On the other hand, the highest ratio of married persons was noted in British Columbia, where 47.8 per cent of the population were married, and only 46.5 per cent single. Ontario also showed a large proportion of married persons, with 45.1 per cent of the population en enumerated as married, and 49.4 per cent as single.

All the provinces recorded an increase in the number of married persons since 1931. The number of single persons, however, declined in Manitoba and

Saskatchewan, and showed only slight relative increases in Ontario and Alberta. The percentage increases, or decreases (-), in the number of single persons, with the increases of married persons in brackets, were as follows: Prince Edward Island 6.1, (12.3); Nova Scotia 8.0, (20.1); New Brunswick 8.1, (19.1); Quebec 12.4, (22.3); Ontario 2.6, (19.2); Manitoba -4.7, (15.9); Saskatchewan -9.4, (6.3); Alberta 1.7, (17.8); British Columbia 7.5, (28.9).

The distribution by shex showed that of the 6,230,568 single persons in Canada, 53.3 per cent were males, a ratio almost identical to that in 1931. The number of married persons also revealed a slightly higher ratio of males 50.7 per cent of the total of 4,736,143 married persons being of the male sex. The paradox in the excess of married males over married females is explained by the fact that wives of certain of the foreign-born males were not residing in Canada at the date of the Census.

The number of divorced persons in Canada at the 1941 Census was almost double that shown in 1931, increasing from 7,441 to 14,032, although they constituted but 0.1 per cent of the total population in 1941. The majority of divorced persons resided in urban localities, and most of these were large urban centres of over 30,000 population, with only 3,863 being counted in rural Canada. Persons who were married but permanently separated for domestic reasons numbered 80,137, with almost three-fourths residing in urban areas. Comparative figures as to the number permanently separated in 1931 are not available.

No. 229. -- Religious Denominations in Canada.

Results of the 1941 Census show that nine of the principal religious denominations in Canada had more than 100,000 adherents, and five others, from 25,000 to 100,000. Leading Protestant denominations were the United Church of Canada, whose followers comprised 19.2 per cent of the total population, the Anglican, comprising 15.2 per cent and the Presbyterian Church, 7.2 per cent. Adherents of the Roman Catholic Church, including those of Greek Catholic faith, accounted for 43.3 per cent of the population. Figures for each of the religions having more than 100,000 **followers,** with percentages of the total population in brackets, are as follows: Anglican, 1,751,188 (15.2); Baptist, 483,592 (4.2); Greek Orthodox, 139,629 (1.2); Jewish, 168,367 (1.5); Lutheran, 401,153 (3.5); Mennonite, 111,380 (1.0); Presbyterian, 829,147 (7.2); Roman Catholic, 4,986,552 (43.3); United Church of Canada, 2,204,875 (19.2).

The religious denominations of the various provinces showed noteworthy differences. In the province of Quebec, persons of Roman Catholic faith comprised 86.9 per cent of the population, and in New Brunswick, 48.2 per cent. In Ontario and the Prairie Provinces they formed roughly one-fourth of the population, and in British Columbia, only 13.9 per cent.

Almost 30 per cent of the population of Ontario were followers of the United Church of Canada, approximately one-fourth of those in Prince Edward Island, the Prairies and British Columbia, and one-fifth in Nova Scotia. These ratios dropped to 13.8 per cent in New Brunswick, and 3 per cent in Quebec.

Anglicans were most numerous pro rata in British Columbia and Ontario, comprising 30 per cent and 21.5 per cent respectively of the populations of these provinces. Nova Scotia followed with 17.9 per cent, and the Prairie Provinces averaged about 15 per cent. The lowest proportions of Anglicans were noted in Quebec, with 4.9 per cent, and Prince Edward Island with 6 per cent.

Presbyterians also formed relatively larger percentages of the populations of Ontario and British Columbia than for all provinces combined, amounting to almost 12 per cent in each of these two provinces. Prince Edward Island showed the highest percentage, however, with 15.5 per cent of the population recorded as Presbyterians. Proportions in other provinces ranged from 8.7 per cent in Alberta to 1.7 per cent in Quebec. Baptists were relatively most numerous in Nova Scotia and New Brunswick, amounting to 15.4 per cent and 13.4 per cent of their respective populations, followed by Prince Edward Island with 5.7 per cent and Ontario with 5.1 per cent.

Adherents of the Greek Orthodox Church together with Lutherans and Mennonites were found mainly in the Western Provinces. Persons of Jewish faith were concentrated in the three central provinces of Quebec, Ontario and Manitoba, with relatively small numbers in the remaining provinces.

The relative changes since 1931, for most religious groups were not substantial. Some, however, showed significant gains over the past decade. Persons reported as Pentecostals more than doubled between 1931 and 1941, increasing from 26,301 in 1931 to 57,646 in 1941, while the Evangelical Church followers increased from 22,213 to 37,002, a gain of 66.6 per cent. Mennonites increased by 25.5 per cent, Greek Orthodox 36.4 per cent, Roman Catholics 16.4 per cent, Adventists 15.1 per cent, Mormons 14.9 per cent, Christian Science 9.7 per cent, United Church of Canada 9.3 per cent, Salvation Army 9.2 per cent, Baptist 9.1 per cent, Jewish 8.2 per cent, Anglican 7.1 per cent, and Lutheran 1.8 per cent. Presbyterians recorded a decline of 4.8 per cent, and Confucians and Buddhists a drop of 5.0 per cent.

Some religious denominations were found mainly in rural areas, while others predominated in urban localities. Examples of the former type, with percentages of the total adherents in rural areas are as follows:- Adventist, 73.2; Greek Orthodox, 59.0; Lutheran, 66.3; and Mennonite, 86.9. Those mainly urban were Anglican, 62.0; Confucian and Buddhist, 61.4; Christian Science, 74.3; Jewish 96.1; Presbyterian, 61.3; and Salvation Army, 76.0. Other religious denominations were divided fairly evenly between rural and urban localities.

No. 230. -- Official Language and Mother Tongue.

According to the 1941 Census 1,474,009 persons in Canada could speak both official languages, that is English and French. About 70 per cent of these resided in urban areas and 30 per cent in rural areas. This number represented 12.8 per cent of the total population of Canada at the date of the Census as compared with 12.7 per cent at the 1931 Census. Among those who spoke one of the official languages, 7,735,486 spoke English only and 2,181,746 French only. There were also 115,414 persons in Canada at the 1941 Census who could speak neigher English nor French, as compared with 275,165 in 1931.

At the 1941 Census 6,488,190 persons reported English and 3,354,753 gave French as mother tongue. Other languages reported as mother tongue by 50,000 or more persons were: German, 322,228; Ukrainian, 313,273; Yiddish, 129,806; Polish, 128,711; Italian, 80,260; Norwegian, 60,084; Netherland, 53,215; and Russian, 52,341. By mother tongue in the Census is meant, the language learned in childhood and still understood by the person.

Persons reporting German as mother tongue were very largely found in the Prairie Provinces and Ontario. Over 70 per cent resided in the Prairie Provinces, and 20 per cent in Ontario. About 80 per cent of the population with Ukrainian mother tongue were located in the Prairie Provinces and about 15 per cent in Ontario. Four-fifths of the population whose mother tongue was Yiddish were found in Ontario and

Quebec, about equally divided between these two provinces, and another 13 per cent in Manitoba. Just over half of the people with Polish mother tongue resided in the Prairie Provinces, and 35 per cent in Ontario.

Persons reporting Italian as mother tongue were concentrated in Ontario, with 53 per cent of the total, and Quebec accounting for 27 per cent. About 70 per cent of the people with Norwegian mother tongue resided in the Prairie Provinces, while 17 per cent were found in British Columbia. Over three-quarters of the population reporting the Netherland mother tongue were located in the Prairie Provinces and another 15 per cent in Ontario. Over half of the people whose mother tongue was given as Russian were living in the Prairie Provinces at the 1941 Census, another quarter in British Columbia and 16 per cent in Ontario.

No. 231. -- Signals in Wartime.

It is not difficult to appraise the value of rapid and dependable means of communication, especially in wartime. Try to visualize the army, air force or navy attempting to operate successfully without signals. Their efforts would be much less effective. Whether on the offensive or defensive, signals are indispensable in warfare -- they are the nerve centre, the very eyes of the organization around which our armed forces have been built. Wireless, telephone, telegraph, teletype and even carrier pigeon are all playing an essential part on all the battlefronts all over the world.

In this global war, military intelligence is transmitted over thousands of miles, from continent to continent and from hemisphere to hemisphere as easily and as quickly as from house to house in any Canadian municipality. Today, Canada is in the forefront as a supplier of these weapons of "winged words". Besides filling the needs of the armed forces, Canada is exporting communications equipment to Britain, Russia, India, Australia, New Zealand and the United States. Canadian-made radio sets are seeing service in every theatre of war, for virtually all tanks, guns and ships are radio controlled.

Canada is also a large producer of secret ground and air detection apparatus, some of which is so complicated that several flat cars are required to move one set. The Dominion, because of its fine research facilities, is the sole producer of some of this equipment and is supplying it to the United States as well as to Britain.

The problem of designing, producing and maintaining signals equipment is an enormous one. Unlike civilian radios, which are designed to operate under near perfect conditions the military radio must function as well at 50 degrees below zero as at 150 above. It must operate unaffected by high altitudes, moisture or corrosive effects of salt water. It must withstand the terrific pounding received in fighting vehicles. To meet these conditions, exhaustive tests are conducted in Canadian radio laboratories and in the field on each type of equipment before it is adopted and the design finalized.

Each new type of tank, armoured car or other radio-equipped vehicle introduces new problems of installation and suppression of radio interference caused by static electricity and electrical mechanism. There is a never-ending search for new equipment. For this purpose the Signals Production Branch of the Department of Munitions and Supply maintains a research divisions which is constantly delving into new fields.

No. 232. -- Picture Shows

"Take your girlie to the mov...ies, if you can't make love at home ..!" Whether more and more young blades are taking the old song to heart, or whether the girlies are out on their own is not to be found in Bureau records, but it is known that almost 180 million admissions to motion picture theatres were chalked up last year. That means about 17 million more tickets were sold than in 1941, raising box office receipts, exclusive of all taxes, from $42 million to $47 million.

There are over 1,240 theatres in operation in Canada and if each one had a complete "sell-out" at every performance there would be more than 531 million admissions in a year. As a matter of fact it is estimated that each person in the Dominion, man, woman and child, spent about $4.10 on movies last year. That may seem like a lot of money but it was probably considered well spent. A good moving picture bolsters morale. Ask any soldier or sailor or boy in airforce blue. Men and women under arms at home and abroad find decent, satisfying and cheap entertainment in the theatres. They would be lost without such means of passing time.

Should their duties take them across the world to the Middle East, say to Egypt, a movie will be like an oasis in the desert. But they will still be able to follow the antics of Mickey Mouse and Betty Boop because there are about 120 theatres there, some of them open air, and most of the pictures shown are made on this continent. There is no dubbing, but French subtitles are superimposed and Arabic translations are thrown on a side screen. Palestine, Iraq and also Iran have movie theatres. Audiences in Iraq seem to have difficulty in understanding animated cartoons, however, so musicals are favoured, but adventure stories and sentimental stories of a morbid character attract large crowds. German films have been completely eliminated from the market in Iran since the Anglo-Soviet occupation in August, 1941. French films are also gradually disappearing.

But getting back to Canada where the war has boosted movies higher than ever in the million dollar bracketed industries. Although centres of war activity recorded the most marked increases in ticket sales over earlier years, advances were shared by all provinces. Ontario, Quebec and British Columbia and the Yukon boasted the three largest audiences. Halifax movie goers increased in number to an outstanding degree, accounting for the gain in the Province of Nova Scotia considerably in excess of those recorded for other provinces.

Besides being used for entertainment, moving pictures are going to school. Students in public schools are learning their geography lessons, their social studies, their science by the aid of motion pictures; men in the forces master their new jobs by receiving some of their instruction through the medium of moving pictures. There's no doubt about it, movies are doing a magnificent war work, fighting against complacency with their up to the minute newsreels, bringing far-off battle fields to our own back doors; providing recreation and relaxation from the toils of war for soldier and civilian alike; and speeding up and simplifying education in all walks of life.

No. 233. -- Roll, Roll, Rolling Along.

Mankind has an insatiable appetite for experimenting. Take bicycling for example. Assuming that our original means of locomotion was travelling about on all fours, the next daring step was to see if two wouldn't do just as well. That fact ascertained to our now dubious satisfaction, we weren't content until we had hitched together a couple of wheels, a steering gadget and pedals and convinced ourselves

that it was possible to ride the contraption. One of the first men to perform this remarkable feat of courage and balance was a blacksmith by the name of Kirkpatrick Macmillan, who might have been a Scotsman.

That all happened about two hundred years ago. From that first awkward affair without pedals grew the present-day streamlined speedy and comparatively safe machines we call bicycles. Since rationing knocked our limousines back on their retreads and AA cards, more people have become acquainted with cycles. In the first year of the war in fact, 86,500 bicycles were made in Canada, a 30 per cent increase in production, having a selling value of over two and a half million dollars. The next year, 1941, saw a still further advance and 100,838 bicycles rolled from our seven factories. Many of our bicycle frames and rims are made in the United Kingdom and the complete machine is assembled over here. Much of this re-assembling work is done in British Columbia.

Cycling has become so popular that proposals to build special paths for the sole use of bicycles are being considered. According to a recent announcement in Quebec a three-foot lane on either side of the highways subject to the restriction that riders must proceed single file, may be built. At the beginning of the century there were many cinder bicycle paths in Ontario. However, these were designed to spare riders the discomfort of dusty, rutty roads, not to protect them from motorists, because at that time cars were about as scarce as the proverbial hens' teeth.For years in sight-seeing areas, like Banff, Alberta, bicycles built for two have been rented out to tourists.

Although Canada's export trade in bicycles is not very large, it most certainly does exist. In 1941 we exported 233 wheels, many of them going to Australia. Motor cycles are in the limelight at the present time because of their extensive use in the army by signalmen, dispatch riders and mail carriers. Most of these are imported, mainly from the United States and the United Kingdom.

Under recent orders of the Wartime Prices and Trade Board, several restrictions have been placed on the manufacture and sale of bicycles and parts. This is primarily for the conservation of metals needed in machines more vital to our livelihood. Prices at which bicycles may be sold or offered for sale have been ceilinged at $42.50 in Ontario and Quebec and $45.00 in all other provinces for men's cycles and for ladies' bikes the maximum price has been set at $43.50 in Ontario and Quebec and $46.00 in all other sections of the Dominion.

No. 234. -- Birthplace of the Population.

Out of a total population of 11,506,655 at the 1941 Census, 9,487,808 persons were born in Canada. The Canadian born represented 82.5 per cent of the population of Canada in 1941 as compared with 77.8 per cent in 1931. The population born outside of Canada was distributed at the 1941 Census as follows: British countries, mainly British Isles, 1,003,171 or 8.7 per cent of the total population; European countries, 653,705 or 5.7 per cent of the total; United States, 312,473 or 2.7 per cent of the population of Canada; and 49,498 born in Asia and in other and unspecified countries, or 0.4 per cent of the Canada total.

The percentage of the Canadian born in the population of each province was higher in the Eastern provinces than in the west in 1941. Over 90 per cent of the population in each of the Maritime Provinces and in Quebec was born in Canada. In Ontario 80.6 per cent of the population was Canadian born. The percentages for the Prairie Provinces were as follows: Manitoba, 73.5 per cent; Saskatchewan, 73.3 per

cent and Alberta, 67.5 per cent. Most of the remaining population in the Prairie Provinces was born in the British Isles and in European countries. Approximately 10 per cent of the population in these provinces was born in the British Isles and about 12 per cent in European countries. The percentage of Canadian born in British Columbia was the lowest among the provinces, being 62.7 per cent of the population of that province at the 1941 Census. On the other hand, the percentage of population of this province born in the British Isles was somewhat greater than shown for other provinces. Just over 20 per cent of the population of British Columbia in 1941 was born in the British Isles.

Just over half of the Canadian born population in 1941 resided in urban areas. Similar rural-urban ratios were found for the United States and European born people in Canada at the 1941 Census. The British Isles born showed a higher proportion of urban dwellers among their number, roughly two-thirds residing in urban centres on the Census date. Among the population born in Europe it is interesting to note that about 80 per cent of those born in Italy were resident in urban areas at the date of the Census, while, by contrast, about two-thirds of the people born in Scandinavian countries resided in rural parts of Canada on June 2, 1941.

No. 255. -- Sprinkle It On.

The recent world food conference in Virginia, United States, to which Canada sent a delegate, was a formal recognition of the important place nutrition must have in the scheme of things today if reconstruction and rehabilitation plans are to achieve even the smallest measure of the success hoped for in the postwar world of tomorrow.

Suddenly food conscious, our attention is focussed on gardens. Victory Gardens spring up all over the country. Every back yard big enough to turn around in is dug up and seeding operations get under way with a maximum of fresh enthusiasm characteristic of the amateur.

Where there's a garden there must be fertilizer, so the next step is to get some and sprinkle it judiciously over our little "pride and joy". Then, just when we've become aware of the advantages to be gained by using fertilizer, a point agriculturists have been trying to drive home for decades, rationing is introduced. Rumours about there being a definite shortage, unfair distribution and sky high prices are rampant. Panicky, we wonder what's to become of our precious Victory Gardens. But the worst rumours are usually the least justified and at last we learn the facts of the fertilizer picture.

When war began, almost four long years ago now, farmers were encouraged, yes, entreated, to exploit their ground to its greatest capacity. This was to enable Canada to take care of her export demands, which have increased nearly fourfold since 1939. More yield called for more fertilizer. Manufacturers did their best to keep pace. Then it was simply a matter of taking the raw materials, treating, blending and distributing them throughout rural areas.

Things went along without a hitch until sources of raw materials were cut off. In some cases the ingredients came from far-off countries. Shipping was hazardous to say the least. In other cases labour shortages, congested transportation and storage problems huddled to form another stumbling block to manufacturers. In still other cases constituents which previously went into fertilizer were being assigned to military purposes. Sodium nitrate and sulphuric acid are but two examples.

The Government stepped in to relieve the situation. Eastern Canada was divided into zones and assigned to certain fertilizer companies, so farmers were assured of equitable distribution. The number of fertilizer formulas on the market was reduced which helped the labour situation to a great extent. Furthermore, despite rising costs of labour and materials, Canada this year will have the lowest priced fertilizer in any of the Allied Nations. Although rationing at the moment applies only to certain special types further restrictions may become necessary.

During the year ended July 1, 1942, about 702,000 short tons of fertilizer were produced in Canada. This does not take calcium cyanamide into consideration but those figures are not available for publication. During the same time we imported over 387,000 tons of fertilizer and exported around 181,000. Sales in that year were up in all provinces except Prince Edward Island, Nova Scotia and Saskatchewan.

Fertilizers are a weapon upon which we of the United Nations are going to rely with ever increasing trust and hope in the lean years anticipated following this war. So consider your neighbour and avoid wasting this precious ally.

No. 236 -- Women in the War Effort.

The war effort of Canadian women has been magnificent. Their work in industry, in business, in the armed services, in their homes and by voluntary effort has played a tremendously important part in placing Canada in the position of being the fourth largest producer of war supplies among the United Nations. Here are a few facts that indicate their activities.

During the seven months to the end of April about 95,000 women were newly employed directly or indirectly in war industry, bringing the total to 247,000 by May 1. About 15,000 have enlisted in the armed services during the same seven-month period.

The Women's Royal Canadian Naval Service, organized in June last year, had attested 2,185 and called up 1,703 by May 1. About 110 are being called each week for rating's training at Galt and Preston, Ontario. Officers are trained in Ottawa. The W.R.C.N.S. hopes to enlist 5,000 by the end of 1943.

Established in July, 1941, the R.C.A.F. (Women's Division) had enlisted more than 11,000 by May 1, and hopes to have 20,000 by the end of 1943. The Canadian Women's Army Corps had enlisted more than 10,500 by May 1, and hopes to enlist 25,000 by the end of 1943.

More than 2,275 nurses are wearing Canadian war uniforms. The Royal Canadian Army Medical Corps has enlisted 1,586 nursing sisters and has 91 dietitians and physio-therapy aides and six home sisters. About 280 are serving with the South Africa Military Nursing Service. The R.C.A.F. Nursing Service has 257 nurses on duty, and the Royal Canadian Navy has 152 nurses serving temporarily under the R.C.N. medical directorate.

Women have successfully co-ordinated voluntary support of the many national programs such as nutrition, salvage, housing conservation, rationing, policing prices of consumer goods, encouraging increased war savings, staffing Wartime Day Nurseries, etc. Local programs arranged through W.V.S. centres are mainly recreational, providing canteens, recreational centres, hospitality in homes, entertainment and comforts for the armed services.

No. 237. -- Air Raid Precaution Workers.

Canadian coastal areas and certain industrial regions of Ontario and Quebec have been designated by Army, Navy and Air Force Chiefs of Staff as being of primary importance to defence. Air Raid Precaution organizations have been set up by 622 communities in these areas, with 226,000 A.R.P. workers, 45,000 of them being women.

Canadian civilian defence is patterned after that of the United Kingdom, modified to meet Canadian conditions. Through the office of the Director of Civil Air Raid Precautions in Ottawa, the federal government has established committees in each of the nine Canadian provinces.

As in England, a policy of decentralization has been followed. Provincial committees have full jurisdiction over all local A.R.P. groups, and may plan their provincial organization to meet peculiar provincial needs. Federal aid in the form of financial assistance, equipment, supplies and instructional literature is extended to municipalities upon the recommendation of the provincial committees.

Only where varying provincial regulations would be impractical, as in the case of railways, are national A.R.P. rules laid down. Under a national A.R.P. code, transcontinental railways will be able to operate through various provinces during a blackout without tie-ups or confusion in transportation.

Compensation for members of authorized A.R.P. organizations injured or killed in the performance of duty has been arranged by the federal government.

No. 238. -- Immigration and Citizenship.

The immigrant population in Canada at the 1941 Census was 2,175,514 as compared with 2,317,497 in 1931. The figure for 1941 included 157,612 Canadian born persons who had returned to Canada after residence abroad for a period of a year or more. The immigrant population constituted approximately one-fifth of the total population at the 1941 Census. Only 188,040 immigrants, or 8.6 per cent of all immigrants in Canada in 1941, arrived in this country over the ten year period, 1931 to 1941, as compared with 651,861 or 30 per cent of the total, between 1921 and 1931.

The percentage distribution by provinces of the immigrants arriving in Canada between 1931 and 1941, with the percentages of total immigrants by provinces in brackets is as follows: Maritimes, 11.7 per cent (4.5 per cent); Quebec, 18.3 (12.5); Ontario, 41.3 (36.0); Prairie Provinces, 17.1 (32.5); and British Columbia 11.6 (14.5). A relatively larger proportion of these recent immigrants, as compared with total immigrants, were found in the Eastern Provinces at the 1941 Census, and, conversely, a smaller proportion in the West.

At the Census date June 2, 1941, there were 660,884 persons reported as naturalized Canadians. Of this total 208,094, or 31.5 per cent were naturalized between 1931 and 1941. The total number of British subjects, including naturalized persons, in Canada at the 1941 Census was 11,231,825 as compared with 9,847,647 in 1931. The population of alien nationality declined from 529,139 in 1931 to 274,340 in 1941, or by 48.2 per cent.

The countries with 10,000 or more nationals resident in Canada at the 1941 Census were: United States, 72,016; Poland, 41,884; China, 25,961; Russia (Soviet Union), 20,799; Finland, 11,860; Czechoslovakia, 11,696; and Hungary, 10,299.

No. 239. -- Your Deal.

A recent decision handed down at the Court of Criminal Appeal in London, England, seems to have settled for a time at least the dog-eared question of whether poker is a game demanding precise and practised skill or just the luck of the Irish.

For a while the ancient game of poker appeared destined to bear the stigma of being classed as a game of fortune, and likely to be banned by law from even the most elite London clubs -- a severe blow indeed to the morale of their members. The court case waxed hot and heavy for weeks, during which time packs of experts were called in to express their learned opinions. Even the merits of "Snap" came up for discussion. However, poker retained its status as a game of dexterous skill and ingenuity and the worthy club members took up where they left off.

Playing cards are generally conceded to have been introduced into Europe from Asia about the middle of the 14th century. The symbols, hearts, diamonds, clubs and spades are familiar to us because we have adopted the British method, but in mediaeval Germany and Switzerland they were hearts, bells, leaves and acorns.

As a pastime card playing is general in Canada. Since the war the practice has increased for it is one of the favourite forms of amusement among members of the armed forces. Wherever soldiers gather, at camp, on trains or in barracks there is usually at least one pack of cards in evidence.

Cards are manufactured in Canada to some extent, but we also import thousands of packs annually mostly from the United Kingdom and United States. In the normal years before the war some also came from such countries as Hungary, Belgium and Japan. In 1939 our total imports of playing cards ran around 172,000 packs.

No. 240. -- Wartime Controls.

Modern warfare requires the full and effective mobilization of the nation's economic resources to equip and supply the fighting forces and to maintain the civil population, while as much as possible of the national effort is devoted to the prosecution of the war. For Canada this implies not only the provision of men and materials for the fighting forces but the furnishing of food, materials, munitions and equipment to Britain and the other Allied Nations.

Wartime controls in Canada include the direct governmental supervision and direction of the supply and allocation of materials essential for war needs, price control and consumer rationing, allocation of manpower to the armed forces, agriculture and essential war industry, wage control, control of finance, and other controls deemed necessary for the efficient prosecution of the war. These controls are administered chiefly by the departments listed in the following paragraphs, each represented by a minister of the government, who is responsible to the people of Canada through Parliament.

The Wartime Prices and Trade Board, Department of Finance, has supreme authority in the field of price control and consumer rationing. The Wartime Industries Control Board, Department of Munitions and Supply, is responsible for the supply and allocation of all materials essential for war needs. The Foreign Exchange Control Board, Department of Finance, has control over all financial transactions between residents of Canada and other countries.

National Selective Service, Department of Labour, is responsible for the allocation of manpower to the armed forces, agriculture and essential war industry. The National War Labour Board administers government regulations on wages control and also regulations on the cost-of-living bonus. The Wartime Industries Control Board regulates industry so that a maximum of raw materials is available for war production.

The Wartime Industries Control Board and the Wartime Prices and Trade Board work in close co-ordination. The chairman of each board is a permanent member of the other, and all controllers are administrators under the Wartime Prices and Trade Board.

No. 241. --These Winnipeg Schools.

How about a little confession? To grope for something new every day over a nine-year period and to be able to provide some statistical data for that something-new is no small chore. Thanks to many wonderful letters we have received in that time, chiefly from school teachers in the Western Provinces, the task has been lightened quite a bit.

Here is an example. This morning, May 28, a letter arrived from L.D. Rankin, Commissioner of Supplies of the Winnipeg School Board. It contained a list of twenty-nine schools in the Manitoba city which use the Fact a Day about Canada regularly. This list inspires the thought that the people of Winnipeg know their history and like it.

It is not difficult to imagine that Victoria the Good will never be forgotten in at least one of these institutions for it is named Victoria and Albert. Another is King Edward VII, who was a sone of the great Queen. Her grandson George V gives his name to a third.

Not all the premiers of Manitoba have been honoured in this way by the scholastic institutions, but there are some that stand out. Lots of people must remember the Hon. John Norquay, and more still will have known the Hon. Thomas Greenway, who later sat in the Ottawa parliament. Then who did not know, or does not know of, Hugh John Macdonald, son of the great Sir John A.?

Some governors-general have not been forgotten and will not be for one is named Aberdeen, not after the Scottish city from which the popular stories about Scots' parsimony used to emanate mainly, but after the kindly and benevolent Earl of Aberdeen who with his lady once held sway at Rideau Hall. Earl Grey was the other governor after whom a school was named.

But Winnipeg is evidently very scientifically minded, for there are schools named after Michael Faraday, Lord Kelvin and Sir Isaac Newton. The city is also grateful to those who fought, to wit, Lord Nelson, Lord Roberts, Sir Isaac Brock and Wolfe. The Earl of Selkirk, of course, was not overlooked, nor were Laura Secord, Archbishop Machray and Cecil Rhodes. What a galaxy of great names that is!

At lunch today this interesting letter was referred to and a gentleman who was schooled in Vancouver said in that city also there were schools named after practically all of the same heroic figures. A lady who got her education in Calcary voiced the same thing about the Alberta city.

By the way, the only school named after a saint in the Winnipeg list was St. John's High School.

In 1941 there were 33,678 pupils in the 29 schools operated by the Winnipeg Public School Board.

No. 242. -- Manpower.

As was stated in a previous "Fact" the responsibility for mobilizing and allocating all manpower in Canada rests with National Selective Service, under the Department of Labour. All departments concerned, such as the Department of Munitions and Supply, Agriculture and the armed forces, are co-operating. The National Selective Service Advisory Board advises the Director of National Selective Service with reference to the utilization of manpower in the prosecution of the war and the administration and enforcement of the regulations.

Labour priorities, in which industries as a whole and selected firms are classified as having very high, high, low or no labour priority, give National Selective offices a yardstick by which to gauge the importance of labour requirements. All employment advertising is controlled. To prevent labour hoarding, employers must notify the employment service of any surplus workers in their employ.

A recent order empowered the Minister of Labour to compel employers in specified industries to discontinue employing persons in age classes designated for military training after a specified date unless a special permit was obtained. Those affected by the new order must register at the nearest Employment and Selective Service office. This ensures that those men who have been called for national service and are not acceptable to the Army will be engaged in essential work, such as farming, lumbering, coal mining, fishing and munitions work.

Any person between 16 and 65 years of age must register for work with the local office of National Selective Service if not gainfully occupied for seven consecutive days (full time students, housewives and clergy are not included). Men of military call-up age applying for permits to obtain employment must furnish proof that they have not contravened mobilization regulations. No Canadian employer or employee may make any employment arrangement without first obtaining authority of the local office of National Selective Service, unless the parties involved are specially excepted under the regulations.

National Selective Service is also responsible for the call-up of men for compulsory military training. Under National Selective Service Mobilization regulations, men, single or childless widowers at July 15, 1940, from the ages of 19 to 45 inclusive, and medically fit, are liable for military service. So far only men born between 1902 and 1924 inclusive (who have reached the age of 19) are being called. On December 15, 1942, it was announced that married men between the ages of 19 and 25 would be called up.

No. 243. -- Alive, Alive O!

No, we're not barking up the wrong tree when we say dogs, cats, wolves and even leopards are being caught off Canada's Atlantic coast. They're not four-legged animals, but real live fish with fins.

Only the dog fish and catfish are of any importance commercially but all four varieties inhabit Canadian waters. The first named is edible but eaten mainly in different European countries. We use it only as a raw material for meal and oil plants. The Catfish is landed mainly off Nova Scotia. It is dark greenish-blue with a number of distinctive cross bands along its sides. Although the average weight is around 10 pounds or so it has been known to go as high as 25 pounds or more. The flesh is firm and white and makes excellent eating. The catch runs around 600,000 or 700,000 pounds a year and is marketed fresh or frozen, mostly in filleted form.

The leopard fish gets its name from the colour scheme of its ensemble -- yellowish ground with dark sports. In Canada this fish is not marketed as a separate species but goes in with the production of catfish. Cat, dog and leopard fish are all members of the family known as Anarhichadidae -- which doesn't mean a thing to most of us.

We knew there were various kinds of wolves roaming the country but it was the first time we had ever heard of a wolf-fish on Canadian grounds. It is an inferior fish, edible but soft and flabby and not found in very great numbers. Fishermen usually don't even bother to bring it ashore.

The fish mentioned are only four of some sixty different kinds of food fish and edible shellfish to be found in Canadian fresh and salt waters. The difficulty at the present time, of course, is the acute labour situation. The increased demand for fish and fish products has come hot on the top of a drastic shortage of manpower, attributable to wartime factors. Fish is counted one of the best foods from the standpoint of nutritive value and healthfulness, so housewives should try a substitute variety when their favourite kind cannot be procured. Remember, ladies, many of our fishermen at this very minute are out on the briny stalking the biggest and most important catch of all catches.

No. 244. -- Convoy Duty.

It has been stated officially that Canada is the fourth largest producer of war supplies among the United Nations. These supplies are being used on all the Allied battlefronts throughout the world and are contributing immeasurably to the ultimate crushing of the Axis war lords. Transporting these vital war supplies is a bridge of ships across the seas to the lands where freedom reigns.

Canada and Great Britain are now responsible for the safe conduct of all the convoys which travel the North Atlantic route, while the United States will retain strategic responsibility for the Western Atlantic, including escort operations not related to British trade convoys and local Canadian traffic. Complete charge of trade convoys from North-western Atlantic ports to the United Kingdom has been assumed by Canada and Great Britain.

United States escort vessels will continue to assist Canadian and British forces and the United States Army Air Force will continue to furnish certain material and crews. United States military and naval aircraft stationed at Newfoundland and employed in anti-submarine work will be under the direct operational control of the Eastern Air Command of the R.C.A.F.

New long-range Canadian and United States bombers will patrol the convoy routes to "somewhere in mid-Atlantic", when British bombers will take over, providing a trans-Atlantic umbrella over every mile of the route from North America to Europe. Naval authorities will outline the work to be done, and Air Force authorities will work out the details and carry out the air operations.

Both the Royal Canadian Navy and the Royal Canadian Air Force have been constantly engaged in the fight against submarines and have gained much battle experience. In the last 18 months, R.C.A.F. aircraft have made about 50 attacks on enemy submarines. The R.C.N., in addition to other operations, has been providing nearly half the convoy protection in the North Atlantic. The experience of all concerned, combined and co-ordinated under one control assures a concentrated attack on the undersea menace, which is expected to reach a pitch of peak intensity in the coming summer.

Mr. Chruchill has stated that 30 German U-boats were known to have been destroyed in May. He called it a massacre.
