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A FACT A DAY ABOUT CANADA

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CONTENTS

No. 1 - Fibre Flax

Production of fibre flax on a commercial scale has been carried on for a number of years, but it was not until after the outbreak of war that a real interest was shown in this crop. At the request of the United Kingdom authorities, Canada undertook to expand the industry to provide much needed flax for defence purposes.

In 1940, the 20,300 acres harvested was almost double the acreage of the previous season. The acreage continued to expand for the next two years and in 1942, 47,000 acres were harvested. Due to the lack of experience on the part of growers, returns were not so great as anticipated and interest in producing flax began to lag the following year. The acreage dropped sharply in 1943 to 35,300 acres and by 1945 the area harvested amounted to only 22,000 acres.

Area devoted to fibre flax production showed a further sharp reduction in 1946 at 15,762 acres. While fibre flax production was much heavier than in 1945, both scutched flax and scutched tow showed a sharp reduction.

Due to the nature of the crop, yields vary widely. From the 1946 crop, 750 tons of graded scutched fibre and 950 tons of graded scutched tow were marketed, having a value of $525,000 and $296,000, respectively, according to figures released by the Dominion Bureau of Statistics.

No. 2. - Factors in Growth of Cities

Cities emerge to meet an economic demand or demands. On the Prairies it may be distribution, on the Coast shipping, shipbuilding or fish processing, etc., while elsewhere manufacturing and mining may provide the chief demand. Growth in one or more such occupations necessitates or attracts many other occupations to meet the needs of those who come in response to the primary industry. Among the subsidiary ones are construction, trade and finance, clerical service, professional and personal service, etc.

Rate of growth of cities is dependent both on long-term factors and short-time abnormal demands. Steady demands have comparatively little effect on a city after it is once established. However, most Canadian cities are still growing in response to an expanding economy. For the most part, this growth is fairly consistent and the percentage distribution of the gainfully occupied is fairly constant from decade to decade. On the other hand, certain insistent demands arising out of war situations, discovery of ore fields, production of water power, etc., may result in what is almost a mushroom growth of a city. Similarly, when ore seams run out and war demands end, etc., there is the possibility of certain industries ending and cities shrinking.

Census data available at the Dominion Bureau of Statistics, with reference to occupations in the larger cities of Canada, afford some interesting comparisons. These are briefly discussed in the following "Fact".

No. 3. - Gainfully Occupied in Larger Cities

Primary occupations could not be expected to employ a large personnel in the cities. None the less, 31.6 per cent of the males in Sudbury were so occupied in 1941.

Vancouver, Victoria and Edmonton followed, while Verdun and Outremont had the least with 0.4 per cent so occupied.

Percentage in manufacturing varied greatly, slightly more than 40 per cent being so occupied in Hamilton, Windsor, St. Catharines and Kitchener and less than 17 per cent in Regina, Victoria, Saskatoon, Halifax. Percentages in construction were lower in all cities, Montreal, Quebec, Verdun and Victoria ranging between 10 and 11 per cent. Percentage in transportation varied from 21.5 per cent in Saint John to 4.8 per cent in Outremont. More than one-third, 33.5 per cent, in Outremont were in trade and finance, but only about 8.5 per cent in Fort William. Service ranked highest in Ottawa and lowest in Fort William. Clerical occupations were highest in Ottawa where 21.4 per cent were so occupied and lowest in Sudbury -- 4.6 per cent.

Percentage of gainfully employed females also varied considerably from occupation to occupation for the same cities. Less than 0.2 per cent of workers were found in the primary or construction groups in any city, while the labouring group was not above 4.1 per cent in any city and accounted for less than 0.1 per cent in Saskatoon.

More than one-third of the gainfully employed females in Kitchener and Sherbrooke were in manufacturing and between one-quarter and one-third in Brantford, Hull, Montreal, St. Catharines, Three Rivers and Verdun. Percentage in transportation was highest in Vancouver but at that, only 3.6. In trade and finance the highest percentage was in Saint John, 16.9, followed by Vancouver, Windsor, Halifax and Sudbury. Percentages in clerical occupations were highest at Ottawa, 46.7 per cent, and lowest in Three Rivers, 9.45 per cent.

No. 4. - Canada's Leading Markets

Aggregate value of Canada's merchandise export trade in the first six months of 1947 was $1,328,500,000, 25 per cent above the first half of 1946 and more than three and one-half times as high as in the first six months of 1938. Expansion was virtually world-wide in extent, shipments to most of the 121 countries listed in the returns being at a higher level.

Exports to countries of the British Empire were valued at $552,317,000, showing a sharp rise of 38 per cent over the similar period of 1946, while the aggregate to foreign countries was $776,142,000 compared with $663,377,000, an increase of 17 per cent. Six-months' exports to the United States totalled $482,006,000 compared with $396,442,000 in the first half of last year, while shipments to the United Kingdom, showing an almost identical gain, totalled $352,639,000 compared with $266,080,000.

Besides the United States and the United Kingdom, which together purchased somewhat over three-fifths of Canada's exports in both the 1946 and 1947 periods, Canada sold commodities to the value of $10,000,000 or more to fourteen countries in the first six months of this year as compared with twelve countries last year. Aggregate purchases by these fourteen countries was $306,018,000, or approximately 23 per cent of the half-year total.

Third among all countries and first among the fourteen was the Union of South Africa, which advanced from sixth among all last year, with purchases from Canada totalling $40,157,000 as compared with $25,753,000. France was next, down from third in 1946, with a drop to $35,233,000 from $38,462,000, while the Netherlands moved up to fifth from seventh last year with purchases sharply higher at $31,816,000 compared with $19,176,000. Australia was close behind in sixth place as against ninth a year

ago, with a still sharper rise from $14,428,000 to $30,200,000, followed by Belgium which slipped from fourth in 1946 with a decline from $36,650,000 to $22,925,000. Newfoundland stood eighth, one notch higher than last year and only a shade below Belgium, with a substantial increase from $15,138,000 to $22,506,000.

Italy was ninth against twelfth last year with a rise of $19,604,000 compared with $11,371,000, followed by China with $18,956,000 (eleventh with $13,301,000 in 1946), and India, down from fifth a year ago, with a drop to $17,362,000 from $31,520,000. Appearing for the first time in this group, Argentina was twelfth at $16,766,000 compared with $7,866,000; Trinidad and Tobago thirteenth at $14,364,000 against $7,866,000; New Zealand fourteenth at $14,138,000 ($6,282,000); and Brazil fifteenth at $11,450,000 ($9,529,000). Last was Norway, in the same position as last year, with $10,065,000 compared with $10,285,000.

Two countries -- the Soviet Union and Poland -- were among the $10,000,000 and over markets for Canadian goods in the first half of last year, the former being also sixth among all countries and the latter thirteenth. This year both are below that level, exports to Poland having fallen from $10,522,000 to $9,253,000 and those to the Soviet Union from $15,633,000 to $4,325,000.

No. 5. - Peat Moss

Canada has very extensive resources of peat moss and there are large deposits in every province, many of which are within easy reach of transportation facilities. Prior to World War II, however, production was insignificant. The Canadian demand alone was much too small to warrant a large-scale development of the deposits, and for years the United States had been obtaining practically all of its requirements of peat moss, surplus to its own production, from Europe. In the main, Canadian and American users received good service from these European producers from the viewpoint of quality and cost of product, adherence to specifications, and regularity and promptness of shipments. Thus, it would have been difficult under the circumstances to have undertaken the development of the Canadian deposits on a large scale. Shortly after the commencement of war, however, all imports of peat moss from Europe ceased, and this gave rise to the active development of Canadian deposits. Since then, Canada has been supplying its own needs and the greater part of the requirements of the United States that were formerly imported from Europe.

Peat occurs in nature in two distinct forms, unhumified and humified, which differ markedly in physical properties and in chemical composition. Unhumified peat is the dead moss of sphagnum mosses, only slightly humified. It is fibrous, elastic, of light greyish green, or yellowish to light brown colour, becoming somewhat darker on drying. It has an absorptive value of up to twenty-five times its own weight, is light in weight and porous. Humified peat in its natural state is dark brown to black, colloidal, plastic, homogeneous, and somewhat elastic. It dries into a hard solid mass of a specific gravity higher than water. It has almost no absorptive value. Unhumified peat left in its natural state will humify in course of time and all fibrous matter eventually disappears.

Peat moss production rose rapidly during the war years, according to figures compiled by the Dominion Bureau of Statistics. In the five years, 1941 to 1945, there was a six-fold gain, or from 14,345 short tons in the former to 83,964 in the latter. Value increased from $390,509 in 1941 to $2,011,159 in 1946.

No. 6. - Ground Talc

Ground talc has a wide variety of uses, but much the greater part of the output is employed in the paint, roofing, paper, rubber and ceramic industries. It is used, also, in foundry facings, bleaching, fillers for textiles, cosmetics and pharmaceuticals, soaps and cleaners, insecticides, polishes, plastics and for rice polishing.

Canada is self-sufficient in respect to most of the grades of ground talc needed for its industrial requirements, and there is a considerable surplus for export. It also produces most of the sawn dimension soapstone and talc crayons used, but is dependent on imports, obtained mainly from the United States for certain special qualities of ground talc demanded by the ceramic, paint and cosmetic trades.

Production of talc in Canada in 1945 was recorded at 13,000 tons valued at $141,000 compared with 14,000 tons valued at $153,000 in the preceding year, and 12,000 tons valued at $131,000 in 1943, according to figures compiled by the Dominion Bureau of Statistics.

No. 7. - Soapstone

Soapstone, a soft greenish rock, containing a high percentage of talc, is used extensively in the form of sawn blocks and bricks for lining the alkali recovery of furnaces and kilns of kraft pulp and paper mills. It is also used for brick and slab liners for fireboxes, stoves and ovens, and for switch-board panels, laboratory benches, etc. Considerable quantities of soapstone quarry and sawing waste are ground and marketed as low-grade talc to the rubber, roofing, foundry and other trades.

Soapstone is easily carved and when polished takes a soft marble-streaked appearance, and has been used in the manufacture of such objects as tobacco jars, candlesticks, clock cases and book-holders. In the ground form it is used in axle grease and toilet powder.

The value of soapstone produced in Canada in 1945 was $154,000, compared with $204,000 in 1944, and $135,000 in 1943, according to figures released by the Dominion Bureau of Statistics.

No. 8. - Public Hospitals of Canada

A total of 1,351,855 patients received medical care in public hospitals for acute diseases in 1945, an increase of 6.5 per cent over the preceding year, according to figures received by the Dominion Bureau of Statistics from 587 of these institutions. The total of patient-days during the year was 15,706,159, or an average stay of 11.6 days for all patients.

There were 35,916 patients in residence in these institutions at the beginning of 1945. Adults and children admitted during the year numbered 1,143,554, while live births in hospitals numbered 171,397, making a total of 1,314,951 admissions, an increase of 6.5 per cent over 1944. Separations — discharges and deaths — totalled 1,312,259, or 97.1 per cent of the total under care. There were 39,806 deaths in hospitals in 1945.

The 587 hospitals which provided returns for 1945 had a capacity of 51,670 beds and cribs, and 7,654 bassinets for newborn. General hospitals had 45,022 or 87.1

per cent of the total number of beds and cribs, and 6,933 or 90.5 per cent of the bassinets. Based on the total population of Canada, the number of beds and cribs per thousand was as follows by provinces: Prince Edward Island, 2.8; Nova Scotia, 4.1; New Brunswick, 3.4; Quebec, 3.8; Ontario, 3.9; Manitoba, 4.7; Saskatchewan, 4.6; Alberta, 6.1; British Columbia, 5.5; Yukon and Northwest Territories, 4.6; and Canada, 4.2.

There were 267 hospitals, one less than in 1944, which had organized medical staffs. These hospitals had 8,759 staff doctors, an increase of 283 from the preceding year. The remaining 320 hospitals, which did not have organized staffs, reported a total of 1,347 doctors who attended patients during the year. Of the 267 hospitals having organized staffs, 187 reported organized services or departments. There were 492 hospitals having X-ray facilities, 178 of these being organized; 302 hospitals had clinical laboratories 147 of which were organized, while 266 had physiotherapy departments, 130 of which were organized.

No. 9. - Cerium

Before the invention of matches, flints were widely used for fire-making, the flint being struck repeatedly against a piece of steel, from which it detached small particles that were rendered red-hot by the friction. These were caused to fall into a mass of very dry and highly inflammable matter, known as "tinder", which took fire from them. Our cigarette lighters make use of this principle, but instead of the dry tinder there is a wick soaked in inflammable lighter fluid.

It seems safe to hazard a guess that most cigarette or pipe smokers, when buying sparking elements for their automatic lighters from the local tobacconist, really believe they are purchasing flints. However, such is not the case. What is actually purchased, will quite probably, be an alloy of one of several of the "rare" earths, such as cerium, Auer, and Misch metal.

For the purpose of this item, let us take one of these metals for further discussion -- cerium. The chief source of cerium is monazite sand from Brazil, India and the Carolinas. There are a few occurrences of monazite in Nova Scotia, Quebec, and British Columbia, none of which is of commercial interest. It is usually found as small crystals in granites and pegmatites in the Canadian Shield and small quantities occur in association with the black sands of the Quesnel River, British Columbia.

Flint, by the way is a variety of quartz, usually a grey or smoky-brown colour, darker in the interior than on the surface. In England and France it occurs chiefly in the chalk formations. Flint was used for many ages in the manufacture of stone implements, a use for which it is well adapted by its hardness.

No. 10. - Hardwood Distillation

First thoughts prompted in the adult mind by the word "distillation" are, quite possibly, its association with one John Barleycorn, but to the school student fathoming the mysterious depths of chemistry, it has quite a different meaning. A word, however, about one of Canada's oldest industries -- the hardwood distillation industry -- which produces methyl alcohol, grey acetate of lime acetone, and charcoal as its main products.

Most of the Canadian hardwoods are suitable for the purpose, but birch, maple and beech are used to the greatest extent. The wood is treated in specially designed kilns by a process known as destructive distillation. Charcoal is the main product of the industry, alcohol, the acetates and their derivatives being by-products. Twenty-five years ago the reverse was true, charcoal at that time being the by-product.

A quarter of a century ago the value of products turned out by the hardwood distillation industry was in the neighborhood of $5,000,000 in a year. In more recent years, however, the gross has been at a somewhat lower level, amounting in 1945 to $1,407,000.

No. 11. - New Housing Completed in 1946

It is estimated that there were approximately 62,700 new dwelling units completed in Canada in 1946, an increase of 14,100 or 29 per cent over the total for 1945, when 48,600 new dwelling units were completed, according to figures released by the Dominion Bureau of Statistics. The new total for 1946 is a revision of the preliminary estimate of 58,000 released at an earlier date, due to the receipt of additional reports from municipalities and other areas included in the survey.

The 1946 total comprised 57,900 dwelling units (92.4 per cent) resulting from new construction, and 4,800 dwelling units (7.6 per cent) from conversions, as compared with 42,600 dwelling units (87.7 per cent) by new construction, and 6,000 dwelling units (12.3 per cent) by conversions, in 1945. Thus for new housing construction alone, the number of dwelling units completed in 1946 increased by 36 per cent as compared with the preceding year.

Single dwelling houses constructed in 1946 exceeded the number built in 1945, and increased to 91.6 per cent of the total for 1946 as compared with 90.3 per cent of the 1945 total. Commercial buildings, such as stores or other business premises which contain apartments or flats, rank second in number for 1946 completions, accounting for three per cent of the total, as against 1.9 per cent of the total for 1945, when this type of building ranked fourth. Duplex buildings, on the other hand, ranked fourth in 1946 and accounted for 1.6 per cent of the total, as compared with 2.6 per cent of the 1945 total, when they ranked second.

No. 12. - Tourist Expenditures

The year 1946 definitely established a new record for tourist expenditures in Canada, as well as a new maximum for Canadians travelling abroad, mainly to the United States, according to figures released by the Dominion Bureau of Statistics. Revised preliminary expenditures of travellers to Canada from the United States are placed at a new high of $214,000,000, while tourists from overseas countries and Newfoundland are estimated to have spent about $7,000,000 during their visits to Canadian soil.

The aggregate expenditure of $221,000,000 for all travel to Canada represents an increase of 33 per cent or $55,000,000 over the revised total of $166,300,000 for 1945 and is over two and one-half times the wartime low of $82,000,000 in 1942. The 1946 record compares with a previous high of $198,000,000 for all travel in 1929 when touring costs were on a somewhat similar plane and overseas visitors were much more numerous. Pre-war levels of $166,000,000 in 1937 and $149,000,000 in 1938 and 1939 have been well surpassed.

Expenditures by United States tourists in 1946, now estimated at $214,000,000 compare with a revised total of $163,300,000 in 1945, an increase of nearly $51,000,000 or 31 per cent. This new record reflects favourably from the previous high of $184,000,000 in 1929 and the pre-war figure of $149,000,000 in 1937 and $137,000,000 in 1939 for United States visitors to Canada. Canadians are estimated to have expended a new record of $135,000,000 on travel beyond our borders, with $131,000,000 on United States account, an increase of $81,000,000 or 61 per cent over the 1945 figure. As a result, despite the record expenditures of United States travellers' Canada's credit balance on travel account increased only from $82,000,000 in 1945 to $83,000,000.

Estimate of United States tourist expenditures during 1946 by provinces of entry, while subject to certain reservations, indicates that the province of Ontario secured roughly $109,000,000 or 51 per cent of the total United States expenditure in Canada compared with nearly $96,000,000 in 1945. Quebec garnered an estimated $45,000,000 or 21 per cent of the national total of $214,000,000. British Columbia is estimated to have acquired $34,000,000, or 16 per cent, while tourist entries into the Maritimes, principally through New Brunswick ports, represented an expenditure of $13,500,000 or 6.3 per cent of the total. Tourist travel into the Prairie Provinces accounted for a total of $12,400,000, or 5.8 per cent.

No. 13. - Canada's Population Up Seven Per Cent

Canada's population increased 188,000 last year, rising to 12,307,000 from 12,119,000 in 1945, according to the annual estimate by the Dominion Bureau of Statistics. Gain in the population since the last Dominion-wide census was taken in 1941 was 800,000, or more than seven per cent.

Population of Ontario, Quebec, and British Columbia made the largest absolute gains between 1941 and 1946. Ontario's population rose 319,000 in the period, that of Quebec 298,000, and British Columbia 185,000. In the same interval the population of Nova Scotia increased 34,000, New Brunswick 23,000, Alberta 4,000, Northwest Territories 4,000, and the Yukon 3,000. Saskatchewan's population fell 66,000, Manitoba's 3,000, and Prince Edward Island's by 1,000.

Estimated population in 1946 by provinces was as follows, totals of 1941 census being in brackets: Prince Edward Island, 94,000 (95,000); Nova Scotia, 612,000 (578,000); New Brunswick, 480,000 (457,000); Quebec, 3,630,000 (3,332,000); Ontario, 4,107,000 (3,788,000); Manitoba, 727,000 (730,000); Saskatchewan, 830,000 (896,000); Alberta, 800,000 (796,000); British Columbia, 1,003,000 (818,000); Yukon, 8,000 (5,000); Northwest Territories, 16,000 (12,000).

No. 14. - Population of Saskatchewan

Population of Saskatchewan on June 1, 1946 was 832,688, a drop of 63,304 or seven per cent from 1941, according to final figures of last year's census of the Prairie Provinces released by the Dominion Bureau of Statistics. Males and females contributed to this decline by almost equivalent amounts, the male population dropping from 477,563 in 1941 to 442,167 in 1946, and the female population from 418,429 to 390,521.

Despite the decline in the total population of the province from 1941 to 1946, the urban population showed an increase of 21,614 over the five-year period. The

population of all urban localities (i.e., incorporated cities, towns and villages) advanced from 295,146 to 316,760. The rural population, on the other hand, dropped from 600,846 to 515,928.

Population increases were general for all urban centres of 5,000 and over in Saskatchewan. Their population in 1946, with 1941 figures in brackets, were as follows: Moose Jaw, 23,069 (20,753); North Battleford, 5,717 (4,745); Prince Albert, 14,532 (12,508); Regina, 60,246 (58,245); Saskatoon, 46,028 (45,027); Swift Current, 6,379 (5,594); Weyburn, 7,003 (6,179); Yorkton, 5,714 (5,577).

No. 15. - Gainfully Occupied in Saskatchewan

Number of gainfully occupied persons, 14 years of age and over, in the population of Saskatchewan at June 1, 1946, was 311,760 compared with 339,899 in 1941 — including persons on Active Service on June 2 — a decline of 8.3 per cent, according to figures released by the Dominion Bureau of Statistics. Total population in this age group was 608,114 compared with 647,219 in 1941.

The male population in this age group fell from 351,187 in 1941 to 327,644 in 1946, or by 6.7 per cent. Of the 1946 total, 269,707 were in civilian employment, compared with 273,122 in 1941, a decrease of 1.3 per cent. Male wage-earners in this age category increased eight per cent, or from 94,026 in 1941 to 101,573, whereas employers and own accounts fell 3.2 per cent or from 142,550 to 137,934. Males working for no pay at 30,200 in 1946 were 17.4 per cent fewer in number.

Of the male population 14 years of age and over, those not in gainful occupations increased from 54,058 in 1941 to 55,277 in 1946, or by 2.2 per cent. Male students in this age group rose from 29,818 to 30,750, and the number of retired males from 14,802 to 20,266.

The number of males between the ages of 14 and 25 who had never been gainfully occupied and were not attending school but were seeking employment at the census date totalled 896, a decline of 72 per cent, while the number not seeking employment in this age group at 1,131, declined 34 per cent.

Number of gainfully occupied females, 14 years of age and over, was 42,053, showing a decline of 1.6 per cent since 1941. Total female population of the province in this age sector was 280,470 compared with 296,132 in 1941, a decrease of 5.3 per cent. Wage-earners accounted for 35,199 of the gainfully occupied females in 1946 compared with 34,553 in 1941.

Of the female population, 14 years of age and over, those not in gainful occupations numbered 215,656 compared with 253,252 in 1941, a drop of 14.8 per cent. Largest group was that of homemakers, of whom there were 182,277 in 1946 compared with 184,785.

Females, 14 to 25 years of age, seeking their first job, as in the case of males in this age group, declined 70.3 per cent, while those not seeking employment decreased 33.7 per cent in the same period. Female students over 14 years of age numbered 30,033 compared with 31,981, a decrease of 6.1 per cent.

No. 16. - Saskatchewan's Live Stock

Further sharp decrease in the number of horses on Saskatchewan farms between 1941 and 1946 is revealed in preliminary figures of the 1946 Prairie Census released by the Dominion Bureau of Statistics, which place the total at 570,439 as compared with 800,693, a decline of 28.8 per cent. In 1936, there were 893,323, the ten-year decrease being 36.5 per cent. Value of Saskatchewan's farm horses on June 1 last year was $22,423,984, compared with $39,811,869 in 1941, and $59,089,427 in 1936.

Saskatchewan's cattle population on June 1, 1946 was 1,498,983 compared with 1,281,145 in 1941, and 1,554,201 ten years earlier. Value of cattle, however, showed a large increase, totalling $87,695,413 compared with $43,761,751 in 1941, and $26,477,606 in 1936.

Sheep numbers in 1946 were placed at 334,636, showing an increase of 1.4 per cent over 1941, but a decrease of 2.2 per cent from 1936. Preliminary figures on swine place the number at 323,281, a decrease of 44.6 per cent and 21.5 per cent from 1941 and 1936, respectively.

Poultry population in 1946 was 4.1 per cent above 1941 and 17.6 per cent higher than in 1936, chiefly due to marked increases in hens and chickens, which totalled 10,599,228 compared with 9,751,068 in 1941, and 8,862,526 in 1936. There has been a sharp reduction of 39.8 per cent in the number of turkeys when compared with 1941, but the number was still 1.6 per cent more than in 1936. Actual totals were 596,978 in 1946, and 991,731 in 1941, and 587,391 in 1936.

No. 17. - Dwellings and Households in Manitoba

There were 175,587 occupied dwellings in Manitoba at date of the 1946 Census of the Prairie Provinces, as compared with 164,985 in 1941, according to figures released by the Dominion Bureau of Statistics. This represents an increase of 6.4 per cent for the five-year interval. The increase has taken place chiefly in the urban centres which reported 83,287 occupied dwellings in 1946 as against 72,924 in 1941, an increase of 14.2 per cent. The rural areas remained practically unchanged, increasing from 92,061 occupied dwellings in 1941 to 92,300 in 1946.

A shift in tenure since the 1941 Census is revealed by the 1946 figures which show that on June 1, 1946, there were 119,007 owner-occupied dwellings in Manitoba as against 55,749 tenant-occupied dwellings, whereas at the 1941 Census the owner-occupied dwellings numbered 101,856 and the tenant-occupied dwellings, 61,819. This represents an increase of almost 18 per cent in the number of owner-occupied homes and a decrease of about eight per cent in the number of those occupied by tenants. In urban centres the number of owner-occupied homes increased by 33 per cent while the number of dwellings occupied by tenants fell by about two per cent during the five-year period since the 1941 Census.

Of the 36,450 tenant-occupied dwellings in urban centres at the 1946 Census, 11,764 or nearly one-third of the households reported that they paid less than $20 rent per month. Households paying between $20 and $29 rent per month numbered 9,113 or about one-fourth of the total, while another 8,014 or also nearly one-fourth paid between $30 and $39. Only 4,441 households or about one-eighth paid between $40 and $49, and 2,754 or 7.6 per cent paid a rental of $50 or more per month.

The Bureau's release further shows that 17,134 or 9.8 per cent of the dwelling units in Manitoba as a whole were built between 1941 and 1946, 11,529 or 6.6 per cent between 1936 and 1941, 14,314 or 8.2 per cent between 1931 and 1936, and 128,687 or 73.3 per cent prior to 1931. It should be mentioned that 5,613 or 32.8 per cent of the dwelling units built between 1941 and 1946 were located in urban centres as against 2,299 or 19.9 per cent, and 3,212 or 22.4 per cent built during the other two five-year intervals, respectively.

There were 42,793 owner-occupied single homes in urban centres throughout Manitoba at the 1946 Census, of which 14,943 or 34.9 per cent were valued by their owners at less than $3,000, 12,164 or 28.4 per cent at between $3,000 and $5,000, 12,932 or 30.2 per cent at between $5,000 and $10,000, and 2,064 or 4.8 per cent over $10,000.

On the average, just about four persons per dwelling were reported in the urban centres of Manitoba in 1946. Of the 83,287 occupied dwellings in urban centres, 41,953 or 50.4 per cent were occupied by households consisting of less than three persons, 32,639 or 39.2 per cent by households of four to six persons, and 8,695 or 10.4 per cent by seven or more persons to the household.

No. 18. - Manitoba's Population by Birthplace and Citizenship

The curtailment in immigration during the war years is reflected in population figures by birthplace and citizenship released by the Dominion Bureau of Statistics for the Province of Manitoba on the basis of the 1946 Census of the Prairie Provinces.

Of the 726,923 population residing in Manitoba on June 1, 1946, 471,639 or 65 per cent were born in Manitoba; 87,034, or 12 per cent were born in other provinces of Canada; 71,975 or 10 per cent were born in the British Isles, and other British countries; and 96,275 or 13 per cent were born in foreign countries. A decade ago, at the 1936 Census, the proportions born in the above provinces or countries were as follows: Manitoba, 59 per cent; other provinces of Canada, 12 per cent; the British Isles and other British countries, 13 per cent; and foreign countries, 16 per cent.

The population of Manitoba in 1946 reporting allegiance to Canada or other British countries numbered 716,762. With the exception of a small number of British subjects who had not acquired Canadian domicile, this figure represents the population having Canadian citizenship under the terms of the Canadian Citizenship Act assented to June 27, 1946.

The number owing allegiance to foreign countries in the 1946 Census was only 10,090, as compared with 31,121 in 1936. Figures for individual foreign countries in 1946, with 1936 figures in brackets, were as follows: United States 2,839 (4,803); Germany 400, (1,306); Poland 2,128, (11,563); Russia 1,548 (4,192); Scandinavian countries 461 (2,308); China 523, (979).

No. 19. - Chemical Industry -- 1.

The story of chemical manufacturing in Canada closely parallels the story of the industry as a whole. Prior to the war of 1914-18, Canada was mainly an agricultural country, but in the years which have since elapsed, she has become a nation

in which manufacturing has assumed the major role in its economic life, and she has come to occupy a prominent place in the world markets for manufactured goods.

As is well known, there have been periods of serious decline in business operations, but over the quarter of a century there has been an upward trend that has been remarkable. In 1915, the gross value of manufactures in Canada was $1½ billion; in 1940, when the country was again in the first year of war, the total was $4½ billion, a threefold advance in the twenty-five years, and this latter figure was swelled by war-time activity to $9 billion in 1944. The mining industry experienced a similar expansion in which aggregate mineral production rose from $189 million in 1917 to $564 million in 1942 and $499 million in 1945.

As a result of this growth in manufacturing and mining, there arose a highly diversified demand for chemicals and chemical products, offering opportunities which were quickly exploited by a well-founded chemical industry. As volume developed, the manufacture of new items, many of which were previously imported, was undertaken, new plants were built and existing facilities were expanded.

From about $28 million in 1920, when detailed records first became available, the output of heavy and fine chemicals of all kinds rose to about $110 million in 1945, according to figures compiled by the Dominion Bureau of Statistics.

No. 20. - Chemical Industry -- 2.

Information regarding the beginning of the manufacture of chemicals in Canada is very sketchy. The Census of 1890 showed the output of chemical plants at slightly more than $2 million, but it seems certain that this total included some allied products as well as basic chemicals. At any rate, the industry at that time was very small -- a sulphuric acid plant had begun operations a few years previously, the manufacture of methyl alcohol by the destructive distillation of wood had been started, some nitro-glycerine was being made for use in explosives, and some ethyl alcohol was being produced.

The next decade saw the start of the electro-chemical industry with the building of a carbide plant at Niagara Falls, Ontario, and a phosphorus works at Buckingham, Quebec. From the turn of the century to the outbreak of the first great war, there was continued expansion featuring the opening of large works to make carbide at Shawinigan Falls, Quebec, cyanamide at Niagara Falls, Ontario, and electrolytic caustic soda at Windsor, Ontario. With the war of 1914-18, there came heavy responsibilities to manufacture special chemicals for munitions purposes and quite a number of new plants and extensions were erected.

Some of these developments were essentially for war needs, but others were of a fundamental nature and remained as part of the permanent industry. Outstanding among the latter was the synthetic acetic acid and acetone plant at Shawinigan Falls, Quebec.

The period between the wars was characterized by a steady advance in both volume and diversity of products, including such outstanding developments as the manufacture of soda ash at Amherstburg, Ontario, and at Trail, British Columbia. In this period, too, there was consolidation within the industry through the merger of smaller units. There was remarkable progress also in technical skill, in research, and in the training of personnel. When the war broke upon the world in 1939, the industry was well fitted in these essentials to undertake the tremendous responsibilities that were to be placed upon it.

No. 21. -- Chemical Industry -- 3.

In the transformation of Canadian industry for war production, probably no aspect was more important or more spectacular than the explosives and chemicals program. Before the outbreak of hostilities, the explosives industry in this country was occupied almost entirely on ordinary commercial requirements and consequently the chemical industry lacked facilities to feed a large scale munitions output.

In October 1939, under the Defence Purchasing Board, an organization, later to be the Chemicals and Explosives Branch of the Department of Munitions and Supply, was set up to expand explosives production and to place the chemical industry on a parallel course of development. Soon great plants mushroomed up in every part of the country as three score separate projects involving expenditures of more than $160 million were undertaken, some being only extensions and others entirely new works -- some for explosives, some for shell filling, some for grenades, fuse powders and pyrotechnics, but about half for special chemicals requirements in the over-all program.

It is estimated that the production of chemicals in Canada expanded three-fold during the war to reach a total value in 1945 of about $110 million. With the end of hostilities, some of these works were closed or dismantled, but quite a number have been taken over by private concerns and have become a part of the post-war industry.

Today, the industry stands as one of the nation's leading activities. It supplies about 70 per cent of the country's chemical needs, and in addition makes a substantial contribution to export trade. It has buildings and equipment valued at $120 million, employs 10,000 people, and annually distributes $18 million for salaries and wages, and $40 million for materials, fuel and power. It includes some of the largest industrial establishments in the Dominion.

No. 22. - Chemical Industry -- 4 -- Alkalies.

The alkalies division of the Canadian chemical industry is based upon the vast salt deposits which underlie the Windsor-Sarnia district in southwestern Ontario. The salt is brought to the surface as brine, of which about half is evaporated to produce ordinary salt for commercial and table use, while a half is used for chemical purposes.

At Windsor, Ontario, the Canadian Industries Limited treats brine electrolytically to produce caustic soda and liquid chlorine. Built in 1912 and operated continuously since that date, this works added in 1930 an extention to utilize the hydrogen which formerly went to waste, in the manufacture of ammonia, this being the first synthetic unit in Canada. Other lines have been added from time to time, including hydrochloric acid, chloride of lime, ferric chloride, sulphur monochloride, sulphur dichloride and sodium hypochlorite.

To meet the demand of the expanding pulp, rayon and cellophane industries of Eastern Canada, the Canadian Industries Limited erected, in 1934, a new caustic-chlorine plant at Cornwall, Ontario, and in 1938 opened another unit at Shawinigan Falls, Quebec. For these projects most of the salt is brought from Windsor, the raw material in this instance being transported to the source of cheap power and to the principal markets for the finished products.

Another important plant which uses salt as its chief material is operated by Brunner, Mond Canada, Limited, at Amherstburg, Ontario. Built in 1919, it is the

country's only producer of soda ash and also, since 1934, of calcium chloride which is recovered as a secondary product in the Solvay process.

No. 23. - Chemical Industry — 5 — Acids

In the acids division of the industry, Canada has long been self-sufficient in regard to inorganic acids, but has been very largely dependent on foreign sources for her supply of organic acids. The manufacture of sulphuric acid was started at London, Ontario, in 1867, and the next commercial unit was built at Capelton, Quebec, at which location there was a considerable supply of pyrites from nearby mines. Built in 1885, this latter plant operated steadily until 1925 when it was dismantled. The first unit using the contact process was built in 1908 at Sulphide, Ontario, with pyrites as the chief source of sulphur, and the first plant to utilize smelter gases was put up at Coniston, Ontario in 1925. Three new plants were built during the war to make ten producers in all. Output of sulphuric acid in 1945 totalled 703,000 tons compared with the highest pre-war tonnage of 282,716 in 1937.

The successful recovery of sulphuric acid from smelter gases has been one of the outstanding developments of the industry. Previously the raw materials for its manufacture were either sulphur or sulphur-bearing ores and with the exhaustion of the latter, more dependence was placed on elemental sulphur imported chiefly from Texas. In search of a cheaper source of sulphur, attention was turned to the sulphur gases which belched from the stacks of Canada's huge metal smelters. In 1925 a trial plant was built by Canadian Industries Limited at Coniston, Ontario, in connection with the nickel smelter at that point, and it proved highly successful. In 1929 this company established a larger permanent unit at the smelter of the International Nickel Company, Limited at Copper Cliff, Ontario.

Even more striking were the developments at Trail, British Columbia, arising out of the utilization of the gases from the lead-zinc smelter of the Consolidated Mining and Smelting Company of Canada, Limited. It was decided to use the waste gases to make sulphuric acid, which in turn could be used to make ammonium sulphate for fertilizer purposes. Here, there is now, the largest sulphuric acid plant in the country, a huge synthetic ammonia plant, a phosphoric acid plant and an ammonium phosphate plant.

The final products are the nitrogen bearing fertilizers — ammonium sulphate, ammonium phosphate, and ammonium nitrate — which are chiefly for export. In 1934 a process was developed to produce elemental sulphur, this being Canada's only source of pure sulphur.

No. 24. - Chemical Industry — 6 — Calcium

The first Canadian works to make calcium carbide was erected at Merritton, Ontario, in 1897, the electricity being obtained from power stations on the nearby Welland Canal. Later, a plant was erected at Ottawa, and in 1903 the Shawinigan Carbide Company completed its furnaces at Shawinigan Falls, Quebec, to utilize the newly developed power at that point. About 1912 these three companies joined to form the Canada Carbide Company, and the units at Merritton and Ottawa were later dismantled. In 1927 the Canada Carbide Company and the Canadian Electro Products Company, Limited were consolidated into the Shawinigan Chemicals, Limited. The capacity of this works was expanded considerably during the late war.

Another carbide plant is operated at Welland, Ontario, by the Electro-Metallurgical Company of Canada, Limited. This company and the Shawinigan Chemicals, Limited are the only concerns which make carbide for sale.

At Niagara Falls, Ontario, the North American Cyanamid Limited operates a huge cyanamide works, probably the largest of its kind in the world. Started in 1909 with an initial capacity of 5,000 tons annually, the subsequent additions and improvements had brought the pre-war capacity to 355,000 tons. This tremendous tonnage was secured through the operation of what was at that time the largest lime-burning plant in the world, the largest carbide furnaces and the largest liquid air plant for the preparation of pure nitrogen.

The calcium cyanamide, which is made by absorbing nitrogen in calcium carbide at white heat, is used as a fertilizer and a large part of the production is exported. Quite a large proportion of the output, however, is used by the company to make cyanide for use by the Canadian mining industry or for export, and also as a material for certain war chemicals. Sodium silicate has also been produced in this works since 1932.

No. 25. - Chemical Industry -- 7 -- Ammonia.

Ammonia and its compounds were in heavy demand for military uses and facilities for increased capacity involved large expenditures in the war years. At the outbreak of war synthetic ammonia was being made at Trail, British Columbia, for use in nitrogen fertilizers, and at Windsor, Ontario, for use mainly for the manufacture of blasting explosives, and aqua ammonia and anhydrous ammonia were recovered from gas liquor by Canadian Industries Limited in a plant at Toronto, Ontario.

War requirements brought expansion to the original Trail facilities as well as a new government-owned unit at that point, also a new plant at Calgary, Alberta, operated by Alberta Nitrogen Products Limited on behalf of the government, and a new works near Welland, Ontario, also built for the government but operated by the Welland Chemicals, Limited. The Calgary works is unique in that it uses natural gas as its primary material; at Welland, the coke process is used. All of these works made anhydrous ammonia and ammonium nitrate.

In 1943, when war demands slackened and a shortage of fertilizer developed in United States and Canada, steps were taken to utilize the excess ammonium nitrate capacity to provide a material suitable for fertilizer use. This was made possible by a research program which resulted in the making of a prilled or pebbled form of ammonium nitrate properly conditioned to render it free-flowing when used. Practically all of the output is now marketed in this form, chiefly for export to the United States. Output of ammonium nitrate fertilizer compound amounted to 237,000 tons in 1945.

No. 26. - Dairying in Canada -- 1

The first efforts in connection with dairy production were exceedingly primitive. Cheese and butter were made on farms to provide food for the occupants, and limited quantities were sold to others in nearby towns and villages. Improvements in technique were developed, however, which improved the quality and gave the producers a wider sale for the product; although the lack of transportation and inadequate storage facilities continued to limit its distribution.

Since cheese made on farms could be more conveniently stored, the production of this commodity was rapidly extended. In 1764, six tons of cheese were exported from Nova Scotia and the Census records of 1861 show a production of 3,000,000 lb. in Upper Canada. In 1865, farm-produced cheese from the section of the British colony won a silver medal at the world exhibition in Paris. The first cheese factory was built in Oxford county in 1864 and by 1867, 235 factories were manufacturing cheddar cheese, a product which was destined to give the Canadian dairying industry an important place in world commerce. By 1891, the Census reported 1,565 cheese factories in operation in the Dominion, 893 of which were located in Ontario and 617 in Quebec. According to the Census of 1901 this number had increased during the intervening years to 2,389, and in addition there were 558 making both butter and cheese. The production for the previous year was estimated at 220,000,000 lb.

Butter production owes its development to the invention of the cream separator (1880), the Babcock system of testing cream (1890) and the introduction of pasteurization at the beginning of the present century. The fact that the cream-gathering system permitted skim milk to be kept at home for live-stock feeding gave it immediate favour among farmers; for at a time when the western expansion was at its height, the demand for meat products could not be overlooked by farmers in the older sections of the Dominion. The Census of 1911 showed the effect of creamery competition. Indeed, judging from the export movement which reached its peak (234,000,000 lb.) during the fiscal year ended March 31, 1904, it would appear that this must be regarded as the turning point in cheese production. During the period 1910 to 1920 this transitory movement from cheese to butter was definitely in evidence, and with the exception of the war years of 1916 to 1918, when there was an increased demand for cheese in Britain, the trend in cheese manufacture was continually downward.

No. 27. - Dairying in Canada — 2.

The dairy industry of Canada made its greatest development after the close of the World War I, when the demand for food products following the cessation of hostilities in Europe gave birth to new outlets for dairy products. From 1920 to 1925 the number of cows kept mainly for milking purposes advanced from 2,986,000 to 3,273,000. Likewise, the production of milk moved up from 10,976,000,000 lb. A continuous decline in the dairy-cow population was shown during the next five years, although milk production did not reach its peak until 1926. An interesting fact revealed by these statistics is that the upward trend in dairying took place during a time when other lines of farming were suffering reverses. This was particularly evident after the fall in grain and live-stock prices late in 1920. When abundant grain crops were harvested in subsequent years (1926 to 1928), a slump in dairy production occurred. This downward trend continued from 1926 to 1929, when the depression years produced another change in the economic situation. Although dairying was at a low ebb, because of unemployment and small payrolls, it became a more important factor in relation to total farm production. After 1932 the milk output began to increase, moving from less than 14,000,000,000 lb. to approximately 15,800,000,000 lb. in 1939.

The development of dairying enterprises which commenced at the beginning of the War reached a peak in 1945. Milk production on farms was stimulated by producer subsidies during the entire war period, while the payment of consumer subsidies tended to increase the sales of fluid milk for direct consumption. During the six-year period 1939 to 1945, milk production increased approximately 1,800,000,000 lb. and the industry as a whole made an immense contribution to the food supplies of both Canada and the United Kingdom. After the collapse of Germany in May, 1945, production suffered from a reactionary development which became more pronounced after the final

cessation of hostilities in August. The retreat from dairying in the Prairie Provinces following the bountiful harvest of 1944 with higher prices paid for grain and live stock, and the cumulative effects of the labour shortage, all played a part in halting the upward swing in dairying production in the Western domain. On the other hand, dairying continued to expand in Eastern Canada, so that no decline was shown in the total output for Canada until 1946.

No. 28. - Dairying in Canada — 3

A notable feature of the dairy situation is the shift in production which has given Western Canada a larger share of the expansion in dairying enterprises. In 1920, Ontario and Quebec contributed approximately 67 per cent of the total milk production of the Dominion; the Prairie Provinces produced 22 per cent, while the Maritimes and British Columbia shared to the extent of 9 per cent and 2 per cent, respectively. In 1925 increases were recorded in Western Canada, the Prairie Provinces contributing 26 per cent and British Columbia 3 per cent, whereas the production of Ontario and Quebec fell to 63 per cent and the Maritimes to 8 per cent. A further shift in favour of the Prairie Provinces was recorded in 1932, and by 1945 (the peak year), Ontario and Quebec were supplying only 62 per cent of the milk production while the Prairie Provinces produced 28 per cent, the remaining 10 per cent being divided between the Maritimes and British Columbia in the ratio of approximately 6 to 4.

With the growth of urban centres the proportion of milk used for fluid sales has moved to a higher level, while the proportion used in factories has decreased. Between 1920 and 1925 the percentage of the total milk supply used for the production of factory dairy products increased from 42 to 64 per cent, while the quantities employed for manufacture on farms fell from 22 per cent to less than 19 per cent. By 1935 factory production took 48 per cent and fluid sales, which had taken only 14 per cent in 1920, stepped up to 19 per cent. These increases were reflected in farm manufacturing the milk for this purpose having fallen to less than 16 per cent. There was very little change until the outbreak of the War in 1939; the increased demand for fluid milk boosted sales in 1945 to 23 per cent, and advanced factory requirements to 56 per cent. The latter reflected a competitive factor which had been introduced by the payment of Government subsidies on creamery butter-fat, commencing with July, 1942.

Thus, while there was a gain in the creamery make, farm manufacturing suffered a sharp decline, and in 1945 only 7 per cent was used for this purpose. In the Maritime Provinces factory requirements in 1920 advanced from 15 per cent of the total supply to 29 per cent in 1945, and the Prairie Provinces which had used 6 per cent, moved up to 15 per cent in the course of twenty-five years. In the Central Provinces a more stabilized position was maintained, but here again the relationship to the total changed from 34 to 37 per cent. All sections of the country have been using increased quantities of fluid milk, particularly during the war years, but the proportion of fluid sales to the total available was most evident in the Prairie Provinces and in Ontario and Quebec.

No. 29. - Dairying in Canada — 4 — Butter and Cheese

Competition with the butter industry has placed cheese making in a subordinate position since 1925. In that year 177,000,000 lb. of factory cheese were produced in comparison with 169,000,000 lb. of creamery butter; this occurred in spite of an increase of 27,000,000 lb. over that of the previous year. Sharp declines occurred

in 1927 and in 1929 and there was a further reduction in 1931. By 1934 the production had fallen to 99,000,000 lb. With some improvement in prices in subsequent years, the output moved to higher levels and in 1937 the industry had recovered a little of its former strength, piling up a production of 151,000,000 lb. A recession developed during the next two years which may be attributed to the increased demand for creamery butter, but following the improvement in employment in the first war year (1940) 145,000,000 lb. of cheese were produced in Canadian factories. A sharp movement took place in the year 1940 when the production increased approximately 20,000,000 lb. in one year; and with a new price arrangement in 1942, the quantity manufactured was stepped up to 207,000,000 lb., the largest production since 1904. The 1946 output was 147,000,000 lb., a decrease of approximately 41,000,000 lb.,as compared with that of the previous year.

The production of farm-made cheese is comparatively small compared with the factory product, seldom exceeding 1,000,000 lb. since the establishment of the factory system in the early 1880's. During the past twenty-six years the greatest amount made was during the period 1934 to 1937. Since that time there has been a considerable decline, and in the Census of 1941, it was found that the production had declined to approximately 800,000 lb. The 1946 production was 740,000 lb.

During recent years a wider range of cheese products has been manufactured in Canada, Roquefort and Cheshire types of cheese are now being produced in small quantities. Oka and Trappist cheese have been made in the Trappist monasteries for a number of years, and limited quantities of Limberger and lesser known varieties are also being produced to meet the needs of a special trade. Processed cheese, a secondary product with cheddar cheese representing about 18 per cent of the poundage, is another industry which has developed considerably in the past few years. In 1946, 26,000,000 lb. was manufactured in comparison with 12,000,000 lb. ten years ago. Then, too, greater use is being made of by-products from cheese. The production of lactose is a comparatively new development in Canada; the amount imported is still considerably in excess of the domestic output. This product is made from milk sugar crystals obtained from whey by a process of evaporation. Lactose is being used for many purposes but it has gained special importance as a media for the growth of the mould from which penicillin is obtained.

No. 30. - Consumption of Dairy Products

Twenty-six years ago the daily per capita consumption of milk (including cream expressed as milk) was estimated at 0.74 pints. Since that time the movement has been more or less in an upward direction. In 1925 it reached 0.86 pints per capita, and although a decline developed for a few years it returned again to the former figure. In 1939 it advanced to 0.87 pints per capita and between 1942 and 1945 the consumption moved from 0.91 pints to 0.98 pints. The 1946 figures reveal a per capita consumption of 1.01 pints, exceeding a pint per person for the first time in history. The relationship between the amount used by non-producers and by milk suppliers was fairly constant, the former being approximately two-thirds of the total. Between provinces some variations were indicated, depending principally on the make-up of the population and, to a limited extent, on the quantities of milk shipped across the provincial borders.

The domestic disappearance of total butter, which had been estimated at 35.12 lb. in 1942, suffered a reduction of nearly 5 lb. per capita the following year as the result of butter rationing. In subsequent years, the statistics have been fairly

constant, advancing about one pound per capita between 1943 and 1944 followed by a recession to the previous limit in the subsequent year. In 1946, the estimated disappearance was 25.64 lb. per capita. Cheese, on the other hand, showed a continued increase from 1942 to 1945. In the latter year the per capita disappearance had reached 5.06 lb., but in 1946 it fell to 4.15 lb., the lowest point in four years. During the past six years the disappearance of concentrated whole milk products advanced from less than 11 lb. per capita to over 13 lb. in 1946. All whole milk products, expressed in terms of milk showed a decrease of 55 lb. per capita between 1941 and 1946, but the latter, amounting to 1,173.54 lb. per capita, represented a decrease of 89 lb. per capita in the last three years.