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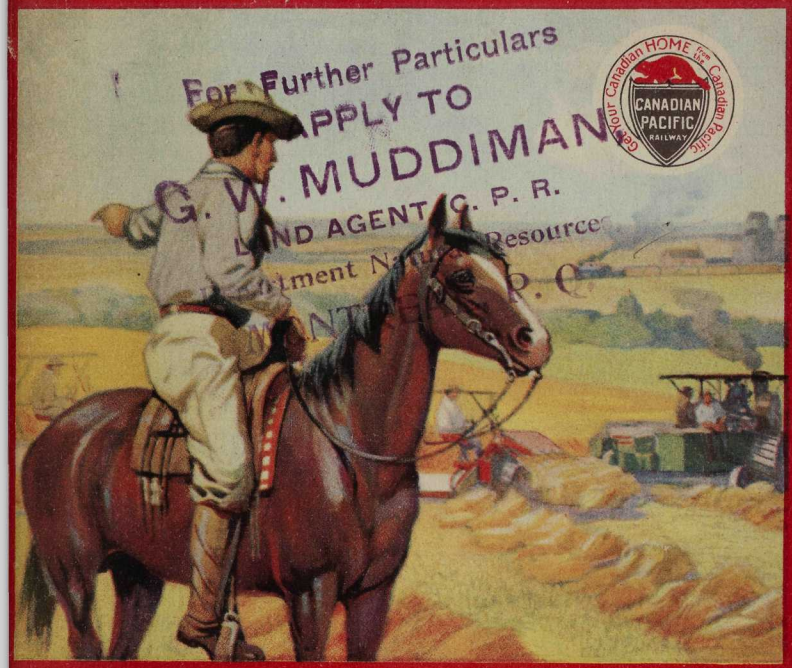

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APPLY TO
G. W. MUDDIMAN
LAND AGENT C. P. R.
Department Natural Resources
MONTREAL, P. Q.

The WESTERN PROVINCES OF CANADA

MANITOBA, SASKATCHEWAN, ALBERTA, BRITISH COLUMBIA.

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DEPARTMENT OF NATURAL RESOURCES

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The Western Provinces of Canada

Foreword

"The nineteenth century belonged to the United States—the twentieth belongs to Canada." Thus spoke one of the clearest thinkers in America several years ago. Canada is a country of great distances and immense possibilities. Extending from the Atlantic to the Pacific, it is more than equal in size to the United States, and, in fact, covers over 3,745,000 square miles, one-twelfth of the land surface of the earth.

The completion of the Canadian Pacific Railway from ocean to ocean, through Canadian territory, first disclosed the real capabilities of the Western plains, and the favorable nature of their climate. Time and the course of events have widened the scope of that disclosure, and opened a wheat field with a producti. e power equal to a world supply. This was a discovery of positive fact that compelled attention and dissipated doubt, and the stream of settlement immediately began to flow. Since then it has been demonstrated that Western Canada, with its tremendous dimensions and immense material wealth, presents to the homeseeker the greatest opportunity of the age.

The potential wealth in the rich soil of Western Canada has attracted from all quarters of the globe men and women tired of the impoverished surroundings which are the unfortunate complement of many of the populous centres of modern civilization, and anxious, while there is yet time, to secure to themselves and their families a share of the prosperity which the boundless West holds in store for those who seek it. And they have not come in vain, for to every willing worker Western Canada has given freely and abundantly. Notwithstanding, however, the rapidity of settlement, the West is but yet upon the fringe of greater things. According to Dominion Government report there were in the four Western Provinces in 1914 no less than 318,129,000 acres of land suitable for agriculture, of which less than 20,000,000 acres were under crop of any kind.

Western Canada is now far beyond the experimental stage. It is a country that has been tried by the most exacting test to which a new country can be put, and has come triumphantly through the ordeal. There can be no doubt now that the settlers who are so rapidly peopling the great West of Canada, and making their homes there, are destined to be the wheat producers for the British Empire.

Part I.

HISTORICAL

The history of the agricultural settlement of the territory now described as the Western Provinces of Canada dates from 1812, when Lord Selkirk, a young Scottish nobleman, established a small colony on the Red River. Previous to that time the vast expanse of practically unknown territory from the Great Lakes to the Pacific Coast had been exclusively a preserve of the fur traders. The Hudson's Bay Company dates its charter back to the days of King Charles II., in 1670, and for two hundred years it was the dominant factor in the civil and commercial management of the territory.

POLITICAL ORGANIZATION

In 1869 the Dominion of Canada acquired from the Hudson's Bay Company the whole of the area then administered by that concern, and a Lieutenant Governor and council were appointed by the Dominion Government. Previous to this, as far back as 1833, there had been a form of local government in the Red River settlement. In 1870 the Province of Manitoba was formed, and a government for that province was organized the following year. The area lying between the Rocky Mountains and Manitoba was organized into the three provincial districts of Assiniboia, Saskatchewan and Alberta. In 1905 the Provinces of Alberta and Saskatchewan were constituted out of this area and given responsible government.

West of the centre line of the Rocky Mountains is the Province of British Columbia, which had been a British colony up to the time of Canadian Confederation. In point of settlement, the only important part of this area was Vancouver Island, and in 1869 this island had been granted to the Hudson's Bay Company for ten years. In 1870 British Columbia, including Vancouver Island, joined the Dominion on the condition that a railway should be built within ten years to unite the territory with Eastern Canada. The railway was built and now forms the main portion of the Canadian Pacific Railway, the "All Red Route."

SOILS OF WESTERN CANADA

Scientists contend that the great prairies of the Canadian West are really extensions of the upper sections of the Valleys of the Mississippi and Missouri Rivers. The materials constituting the surface deposits of the prairie region vary in different districts, but may be generally described as consisting of a loam bed which may be anywhere from a few inches to several feet in thickness, and which, so far as studied, appears to be partly of a vegetable formation intermixed with fine sand and silt. Beneath this loam, which varies from a heavy black to a chocolate color according to location, is a clay subsoil of variable thickness almost everywhere on the plains. From this clay considerable quantities of common brick are manufactured, and in some localities it is found to be of pronounced value as the basis of ceramic industries.

There is probably no district on the North American continent which can boast of a soil as fertile and productive as that of Western Canada. This applies very generally, and is the result of tons of deposit by the great inland sea which once covered this part of North America, and of which the Great Lakes of the Northwest are the remaining links.

It is only of recent years that the abnormal fertility and lasting qualities of the soils of the great plains of America have been properly appreciated and understood. Soil chemists nowadays are accepting the theory that the principal cause of soil exhaustion is a heavy rainfall, which brings into suspended form the available plant food in the soil, and carries it away with the storm waters into the drainage channels.

It stands to reason that where the rainfall is not sufficient to create floods or heavy run-off, so characteristic of Eastern Canada and the Eastern and Central States, but remains, more or less, in the sub-soil, there is practically no loss by leaching whatever, and consequently the lasting qualities of the soil are correspondingly greater. While the Western Provinces over the greater part enjoy a rainfall entirely sufficient for agricultural purposes, they are very seldom subject to excessive rains. This is an important fact to take into consideration in connection with agriculture on prairie soils.

The general character of the soil of the three Prairie Provinces is very well described by Professor Shaw, one of the best known agronomists of the United States, who has made a careful and thorough study of them all:

"The first foot of soil in the three Provinces of Manitoba, Saskatchewan and Alberta, is their greatest natural heritage. It is worth more than all the mines in the mountains from Alaska to Mexico, and more than all the forests from the United States boundary to the Arctic Sea, vast as these are. And next in value to this heritage is the three feet of soil which lies underneath the first. The subsoil is only secondary in value to the soil, for unless the former be of good value, there is a proportionate neutralization of the latter. The worth of a soil and subsoil cannot be measured in acres. The measure of its value is the amount of nitrogen, phosphoric acid and potash which it contains; in other words, in its producing power. Viewed from this standpoint, these lands are a heritage of untold value. One acre of average soil in the Canadian West is worth more than twenty acres of average soil along the Atlantic seaboard. The man who tills the former can grow twenty successive crops without much diminution in the yields; whereas, the person who tills the latter, in order to grow a single remunerative crop, must pay the vendor of fertilizers half as much for materials to fertilize an acre as would buy the acre in the Canadian West."

The soils of the Province of British Columbia vary from the light but fertile soils of the inland plateaus to the deep, black loams of the coast districts. The former is specially adapted to fruit-growing, and where irrigation is available, to the production of fodder crops. The latter rank as the most productive soils in America, and grow phenomenal crops of nearly every kind.

CLIMATE OF WESTERN CANADA

It should be understood that, in such a vast extent of territory with so many varying local conditions, the climate cannot be expected to be uniform. Each portion of the country has its own peculiar advantages in the way of climate, and the settler can select for himself that portion for

his home where the conditions are likely to be most favorable to the particular line of farming which he wishes to follow. In dealing with the climate of Western Canada, we shall, for the purposes of convenience and clearness, divide our description into two parts:

(A) **The Prairie Provinces**, comprising Manitoba, Saskatchewan and Alberta, and

(B) **The Province of British Columbia.**

There are four questions which, in one form or other, the prospective settler is sure to ask, and which he must have satisfactorily answered, before finally making his choice.

1. Is the climate a healthy one ?
2. Is the winter severe ?
3. Is the summer hot ?
4. Are the climatic conditions prevailing during the summer favorable to agricultural operations ?

(A) **The Prairie Provinces.**

1. **Healthfulness.** The open nature of the country, clear, dry atmosphere and abundance of bright sunshine, its elevation (varying from 760 to 3,425 feet above the sea level), and the fresh breezes which blow across its plains, all tend to make it one of the healthiest countries in the world. There is an entire absence of malaria, and there is no disease peculiar to the country. The Western portions of the country have attained a considerable reputation as health resorts, particularly for persons of consumptive tendencies, and many who have found life a burden through delicacy of constitution in other countries have acquired complete health by a few months' residence in this beneficent climate.

2. **The Winter.** At times and at places the winter is somewhat severe. That is to say, between about the 15th of December and the 15th of March the thermometer frequently registers a temperature considerably below zero. At this period also storms, known locally as "blizzards," occasionally occur. During such, however, very low temperatures rarely prevail. Having stated this, the worst has been said. With the aid of comfortable houses and proper clothing the prairie settler defies the winter at its worst.

The average weather during the winter in Manitoba, Eastern Saskatchewan and Northern Alberta is clear, calm and cold, with intense bright sunshine. The snow, which rarely falls to more than a few inches in depth on the prairies, is dry and powdery. Under such circumstances life is enjoyable and healthful. The average settler is a cheery soul and fond of social gatherings and amusements for which the winter affords many opportunities. Low temperatures in winter in this dry climate cause no inconvenience unless accompanied by high winds, which is not often the case. The immigrant may prove this conclusively by watching the rosy-faced school children rolling each other in the dry powdery snow on a fine winter day when the thermometer perhaps stands several degrees below zero.

The winter in Southern Alberta and South-western Saskatchewan is a season of bright, cloudless days, infrequent and scanty snowfalls and frequent and prolonged breaks of warm weather, heralded by the chinook wind. Wagons are used during the entire year, and it is only in occasional seasons that sleighs are necessary for brief periods. In January and the early part of February there are sometimes short periods of cold, sharp weather. Heavy snowstorms have at times covered the prairie more than a foot deep, but this is very exceptional. The winter generally breaks up in February with a warm wind from the west, followed by a period of from one to three weeks of warm, bright weather, the beginning of Southern Alberta's spring. The earliest spring flowers appear in March. May is generally fine, warm and bright, June and the earlier part of July rainy, the remainder of July, August, September, October and generally November warm and dry. The summer, July to September, is characterized by warm days, relieved by a never-failing breeze, and cool nights, but the warm golden days of autumn, often lasting well into December, are the glory of the year. The grand characteristic of the climate as a whole, and the one on which the weather hinges, is the chinook wind, so called because it blows from the region formerly inhabited by the Chinook Indians, on the banks of the lower Columbia River. It is a warm, dry, balmy wind, blowing from the mountains across the plains, and its effect in winter may be described as little short of miraculous, in its clearing away of the snow, always scanty in amount, with amazing celerity.

3. **The Summer.** The dryness of the atmosphere also operates in the settler's favor in summer time, permitting a rapid radiation of the heat communicated to the land by the intensely powerful rays of the sun in our cloudless skies. It thus happens that, however warm the temperature may be during the day, the nights are always cool, allowing of perfect rest. Of course, extremely high temperatures are exceptional, but temperatures of over 90 in the shade are by no means uncommon. Here, again, the dryness of the atmosphere is individually helpful, by rendering the cooling action of perspiration—Nature's great safeguard—most effective. The writer is not aware that any case is on record of deaths in Western Canada directly attributive to excessive heat, while no fewer than 250 persons were reported to have perished in one day in the City of New York from that cause. The highest temperature recorded there at that time was 99.8°.

4. In replying to the question, "Are the climatic conditions prevailing during the summer favorable to agricultural operations?" the matter of rainfall is, of course, of first importance in non-irrigable sections. From the statement given elsewhere it will be seen that the normal precipitation in most parts of the Prairie Provinces is quite sufficient in volume to ensure satisfactory agricultural results. Indeed, the crop statistics of this area furnish the most complete and conclusive evidence on that point.

(B) **British Columbia.**

Varied climatic conditions prevail in British Columbia. The Japanese current and the moisture-laden winds from the Pacific exercise a moderating influence upon the climate of the coast and provide a copious rainfall.

The westerly winds are arrested in their passage east by the Coast Range, thus creating what is known as the "dry belt" east of those mountains, but the higher currents of air carry the moisture to the loftier peaks of the Selkirks, causing the heavy snowfall which distinguishes that range from its eastern neighbor, the Rockies. Thus a series of alternate moist and dry belts is formed.

The climate of British Columbia, as a whole, presents all the conditions which are met with in European countries lying within the temperate zone, the cradle of the greatest nations of the world, and is, therefore, a climate well adapted to the development of the human race under the most favorable conditions. As a consequence of the purity of its air, its freedom from malaria, and the almost total absence of extremes of heat and cold, British Columbia may be regarded as a vast sanitarium. People coming here from the East invariably improve in health. Insomnia and nervous affections find alleviation, the old and infirm are granted a renewed lease of life, and children thrive as in few other parts of the world.

In his first report on British Columbia, Professor Macoun, of the Geological Survey, stated as follows:

"It only remains for me to add that as years roll on, and our possessions become developed, the value of this second Britain will come so vividly before our people that men will ask with astonishment why such ignorance prevailed in the past. To-day there are 400 miles of coast line in our Western possessions clothed with a forest growth superior to anything else in the world at present; its shores indented with multitudes of harbors, bays and inlets, teeming with myriads of fish; its rocks and sands containing gold, iron, silver, coal and various other minerals. And, besides all this, a climate superior to England in every respect, both as regards heat and moisture; and yet men ask what is it all worth? I answer, worth more than Quebec and all the Maritime Provinces thrown in, and sceptics may rest assured that the day is not far distant when these words will be accepted as truth."

In the Kootenay district, which embraces the drainage area of the Columbia River, the high average altitude renders the air rarified and bracing. The rainfall ranges from 18 to 20 inches per annum, with a snowfall of from one to three feet. In summer the thermometer rises as high as 80 to 90 degrees in the shade, but the nights are compensatingly cool. At times in the winter there are cold spells, when the mercury falls below zero, but these are of short duration.

Throughout the great interior plateau a much drier climate is found, the total precipitation being from seven to twelve inches, according to locality. Luxuriant vegetation is confined to the borders of lakes and water courses, while the general landscape presents the usual round-topped hills and bunch grass of typical pasture or range land. In the many valleys thriving farms show the effects of careful cultivation, and wherever irrigation has been practised the result is seen in ample crops.

South of Shuswap and Kamloops Lakes the climate presents the mean between the dryness of the bunch grass country and the humidity of the coast. There is sufficient rainfall for all purposes, and the climate closely resembles that of Central Europe.

The many valleys cutting the Coast Range have distinct climatic peculiarities. Sheltered as they are by the surrounding hills from bleak north winds, the warm breezes from the coast are freely wafted through

them. The sun's rays are concentrated on the side-hills with almost tropical intensity, and even on the higher benches orchards and vineyards yield enormous crops.

As soon as the mountains are left behind and the Pacific littoral is reached, there is an astonishing change in conditions. Where vegetation has been left in its virgin state there is almost an impenetrable undergrowth, from which rise luxuriantly huge forests of fir, pine and spruce. This is accounted for by the heavy rainfall, which increases towards the north. But the winters are short and temperate, and emphasized more by a heavy rainfall than other climatic change. The high mountains of Vancouver Island break the force of the heavy storms sweeping eastward over the Pacific.

Probably the driest point on the coast is in the vicinity of Victoria. Harvest time is rarely unsettled, and there is seldom any difficulty incurred in reaping the crops. During many winters there is no perceptible frost, and delicate plants thrive throughout the year in the open air.

RAILWAY DEVELOPMENT

In accordance with its policy of affording, at the earliest possible moment, railway facilities to newly settled and rapidly developing districts, the Canadian Pacific Railway Company graded during the year 1914 (up to the time of going to press) 555 miles of lines west of the Great Lakes, the mileage of the Company in this territory, not including Vancouver and Lulu Island or Vancouver Island lines, being now 7,632 miles. The length of the Company's main line from Montreal to Vancouver is 2,903 miles; the total mileage of the Company's lines is over 12,000, and the mileage of allied lines is over 4,000. The demand for lots in the various townsites on the Company's lines furnishes substantial proof of the development which the West is experiencing. The double tracking of the main line from Fort William westward continues and during 1914 was completed between Kemnay and Virden, Whitewood and Grenfell and Indian Head and Regina. The Company has 500 miles of track under construction in Western Canada, not including double track, and extensions and improvements on a very large scale are being carried on.

WESTERN CANADA -- THE WORLD'S BREAD BASKET

Although Western Canada is rapidly becoming a great dairying and stock-raising country, its present greatest industry is undoubtedly the production of wheat, oats, barley and flax, and a few words bearing on the magnitude of this industry, and the systematic manner in which the wheat is marketed and handled, are in order.

The rapid increase in the population of the United States during the last fifty years has resulted in a scarcity of good farm land in that Republic and a steady increase in the price realized for farm products. These conditions have had a marvellous effect upon the price of farm lands, so

much so that land which was granted as free homesteads a very few decades ago is now valued at one hundred dollars per acre and upwards. Moreover, the farmer in recent years has been getting a fair net return for his labor, and this has the effect of placing productive lands in still greater demand. Nothing affects land values so quickly as "dollar wheat," once looked upon as something of a fabulous nature, but now an accepted fact.

This Company's wheat lands, capable of producing higher yields per acre than the lands of similar character in the United States, are sold at less than one-quarter the price per acre asked for the better class of winter wheat lands in the Pacific States. It is, therefore, evident that Western Canada wheat lands are sold vastly below their real value, and thus furnish an investment second to none.

OUR WHEAT LAND

The important feature in connection with the Company's wheat lands is that they rank as "hard" wheat producing. The demand for hard wheat is steadily increasing, while, on the other hand, the area of hard wheat land is comparatively limited. Hard wheat production is confined

BREAKING VIRGIN PRAIRIE IN WESTERN CANADA

to Western Canada and a very few of the grain-growing States. Hard wheat demands peculiar advantages of soil and climate, which are the very conditions found naturally in the Prairie Provinces. Western Canada is therefore in reality the "Last West" where land capable of producing hard wheat can be obtained.

Although speculation in wheat lands has in many instances been immensely profitable, it is now the Company's policy to dispose of its lands to actual settlers only. The actual settler gains by the increases in the value of his lands quite as much as does the speculator. Land values are dependent upon quality and settlement. There is no question as to

the producing abilities of our wheat lands, and as they are located in what ultimately will be one of the densest agricultural settlements in America, we are in a position to offer farmers an opportunity to purchase lands at a nominal figure that will, within a few years, rank among the most valuable agricultural areas on the continent.

QUALITY WHEAT

It is interesting to note that, at the big Land and Irrigation Show, held in Madison Square Gardens, New York, November 3rd to 12th, 1911, Canada demonstrated in no uncertain manner that she is "Mistress of Wheat." Canada, on this occasion, carried off the prize for the best sample of hard red spring or winter wheat grown on the two Americas. Out of sixteen entries, Canada's Prairie Provinces came one, two, three, with Seager Wheeler, of Rosthern, Saskatchewan, first; W. J. Glass, Macleod, Alberta, second; and Thomas Maynard, Deloraine, Manitoba, third. This historical event was won with wheat that weighed 6½ lbs. per bushel above the average, and that yielded from 70 1-5 to 80 2-3 bushels per acre.

At the International Dry Farming Congress in 1912 the $2500 tractor offered for the best bushel of hard wheat, competition open to the world, was awarded to Henry Holmes, of Raymond, Alberta. The prize for the best bushel of short white oats was won by J. Sanigan, Elfros, Saskatchewan; medium white oats, A. E. Barnes, Bow Island, Alberta; long white oats, S. C. Hagen, Winterburn, Sask.; black oats, W. S. Simpson, Glenbryan, Sask.; barley, N. Taitinger, Claresholm, Alberta; flax, H. Woolley, Dunmore, Alberta; Western rye grass, A. Perrey, Cardston, Alberta; alfalfa, H. H. Jenkins, Pincher Creek, Alberta; timothy, A. Perrey, Cardston, Alberta; potatoes, O. D. Matheson, Armstrong, British Columbia. At the 1913 International Dry Farming Congress, held at Tulsa, Oklahoma, U.S.A., Western Canada captured first prize for red spring wheat; first, second and third for red Fife wheat; first, second and third for Marquis wheat; first for white oats; first for black oats; first for oats any other variety; first for two-rowed barley; first for beardless barley; first, second and third for flax; first for field peas; first for rye grass seed; sweepstakes for hard wheat; sweepstakes for barley; sweepstakes for oats; sweepstakes for flax; also sweepstakes for oats, barley and flax in the straw. Again in 1914 at the International Dry Farming Congress, which this year was held at Wichita, Kansas. U.S.A., Western Canada made its usual showing, capturing first for red spring wheat, first for Marquis wheat, sweepstakes for all wheat; first for oats, and sweepstakes for all oats; first for barley, and sweepstakes for all barley; first for flax; first for rye grass, brome grass, oats and barley in the sheaf. These triumphs for Western Canada were achieved in open competition with the world. They tell their own story.

THE MARKET FOR GRAIN

But the productivity of our wheat lands, and modern transportation facilities, would be of little value if the farmer were not assured of a good price for his crop. The figures quoted below answer all questions on that

score. There is a considerable home market for wheat and other cereals, but the bulk of the wheat is exported, the business being transacted through the Grain Exchange at Winnipeg.

The following table shows the average price per bushel of No. 1 Northern wheat f.o.b. Fort William or Port Arthur during the last eleven years.

1904—$ .92	1908—$1.06	1912—$1.00⅞
1905— .91	1909— 1.10	1913— .89¼
1906— .77	1910— 1.00⅜	1914— .88⅞
1907— .90	1911— .94½	

No. 2 Northern wheat averages about three cents lower than No. 1, and No. 3 about three cents lower than No. 2.

Average prices per bushel of No. 2 oats for eight years:

1907—$ .42	1910—$ .35	1913—$ .35
1908— .43	1911— .34	1914— .37⅞
1909— .40¾	1912— .41⅞	

Average prices per bushel of No. 3 barley for six years:

1907—$ .50	1909—$ .50⅜	1911—$ .63
1908— .50	1910—....*	1912— .48¾

Average prices per bushel No. 1 flax for eight years:

1907—$1.22	1910—....*	1913—$1.21¾
1908— 1.15	1911—$2.28⅞	1914— 1.30⅜
1909— 1.42	1912— 1.93¼	

*Not quoted by Winnipeg Grain Exchange.

The tariff of freight charges on grain from stations in Saskatchewan to Fort William or Port Arthur is from 16 to 20 cents per hundred pounds, or from 9½ to 12 cents per bushel for wheat, from 5½ to 7 cents per bushel for oats, from 7¾ to 9¾ cents per bushel for barley, and from 9 to 11¼ cents per bushel for flax. The rate of transportation is somewhat lower from Manitoba points, and higher from points in Alberta.

THE GRAIN MARKETING SYSTEM

In Canada the practice is to sell all grain according to grades established by law. Inspectors, who are appointed by the Government, decide the grade of the grain passing out of the country. The Board of Grain Commissioners, whose headquarters is at Fort William, Ontario, have general charge of the grain business of the country. They are Government appointees, and in the performance of their duties must themselves comply with the rules governing the grain trade generally, and must see that the law is observed by all concerned in the grain business of the country.

Most of the grain of Manitoba, Saskatchewan and Alberta is handled through elevators located at railway stations in the grain-producing country. Some of these elevators are owned by farmers, some by farmers' organizations assisted by the Government, and some by grain dealers and milling companies. In addition to the ordinary elevators at country points are terminal elevators maintained at Fort William and Port Arthur,

and Government storage elevators located at Moose Jaw, Saskatoon, and Calgary. These Government elevators at Moose Jaw and Saskatoon are of 3,500,000 bushels capacity each, and the Calgary one is being built to accommodate 2,500,000 bushels. All grain dealers in the Province must be licensed and bonded, thus securing the farmer from loss either through dishonesty, unfairness, or financial embarrassment of the dealer. There are few stations in Western Canada at which there are not one or more elevators.

The farmer may deliver his wheat to the elevator and receive cash for it, or, if he thinks the market is likely to rise, he may store his wheat in the elevator and secure a storage ticket showing that he is entitled to a stated number of bushels of wheat of a certain grade. This enables him to sell his wheat when the market is most favorable. Or, if he prefers to load his grain into a car without dealing with the elevator, he may do so over the loading platforms which are provided at grain shipping points. The railways are compelled by law to erect these platforms at stations from which wheat in carload lots is shipped.

SOME WESTERN CANADA GRAIN FACTS

Area

Manitoba	161,172,480 acres
Saskatchewan	160,416,000 acres
Alberta	162,765,200 acres

Less than ten per cent. of the arable land was under crop in 1914.

Crop Statistics, Manitoba, Saskatchewan and Alberta

Year.	Bushels Wheat.	Bushels Oats.	Bushels Barley.	Bushels Flax.
1901	63,311,632	38,909,654	7,331,255	266,420
1902	67,034,117	45,139,455	12,718,839	722,625
1903	56,146,021	47,215,479	10,448,461	884,000
1904	54,390,678	44,620,520	10,920,850	535,543
1905	84,506,857	66,311,800	13,447,800	733,700
1906	94,201,984	94,244,000	16,888,000	1,023,510
1907	70,922,584	74,513,561	19,187,449	1,732,065
1908	96,863,689	108,987,855	24,050,645	3,165,320
1909	118,109,000	163,998,752	30,542,000	4,833,167
1910	101,236,413	108,301,090	16,993,170	4,038,950
1911	194,083,000	218,819,000	24,043,000	7,720,000
1912	183,367,000	221,857,000	26,671,000	21,534,000
1913	209,302,000	242,413,000	31,060,000	17,904,000

In addition to the above, these three Provinces produced in 1913, 569,000 bushels of rye, 31,500 bushels peas, 191,000 bushels mixed grains, 14,608,000 bushels potatoes, 5,550,000 bushels roots, 629,000 tons hay and clover, 102,000 tons fodder corn, 39,700 tons alfalfa, and 10,000 tons sugar beets.

Elevator and Flour Mill Capacity

The elevator storage capacity of Western Canada, including Port Arthur, Fort William and Kewatin, has increased from 21,298,000 bushels in 1902 to 124,915,000 bushels in 1914, or approximately 600 per cent. in 12 years. The wheat inspected at Winnipeg has increased from 51,833,000 bushels in 1902 to 158,013,450 in 1913. Flour milling daily capacity has increased from 41,530 bbls. in 1910 to 55,685 in 1914, and the daily capacity of oatmeal mills has increased from 1,425 bbls. in 1910 to 3,755 bbls. in 1914.

Part II.

HOW TO OBTAIN LANDS IN WESTERN CANADA

The largest owners of land in Western Canada are the Dominion Government, the Government of British Columbia and the Canadian Pacific Railway Company. The former disposes of its land by granting free homesteads, and, in a very limited way, by selling the same under the "pre-emption" regulations. The Railway Company sells its lands to settlers on very liberal terms, and at sufficiently low prices to ensure rapid settlement.

CHEAPER THAN HOMESTEADS

A great many farmers visiting Western Canada in search of new homes, come with the idea of taking up Government lands under the Homestead Regulations. While, on the surface, it might seem paradoxical to argue that lands which are practically granted free are in the end more expensive than those that are bought and paid for, it can readily be shown that, with the liberal terms offered by this Company, the average farmer will be better off by purchasing railroad land. In the first place, he does not have to acquire land thirty to forty miles from transportation facilities in the hope of railways being ultimately extended. He can obtain land within a few miles of the railway, and in close proximity to a shipping point.

It will be easily understood that with the great rush of people that has taken place into Western Canada during recent years, all homesteads of any great value, within close proximity to transportation facilities, have long ago passed out of the hands of the Government, and such being the case it is submitted that it will pay the practical farmer better to purchase land close to railroads than to accept as a free gift a homestead, lying remote from transportation facilities, and perform the conditions imposed by the Homestead Regulations.

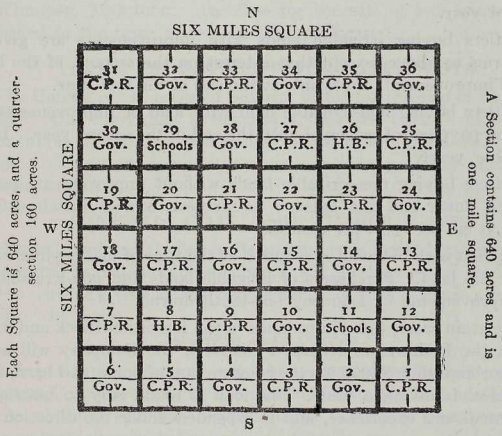
SYSTEM OF LAND SURVEY

Manitoba, Saskatchewan and Alberta.—The old system of survey, under which most of Manitoba is laid out, allows 99 feet for a road allowance around each section of land, which forms one mile

square. The new survey system gives 66 feet only for roads, round two sections, viz., 1 and 12, 2 and 11, etc. In Alberta and Saskatchewan the latter system prevails.

The lands are laid off in townships, practically square in form. The tiers of townships are numbered from one upwards, commencing at the International Boundary, and lie in ranges from east to west, numbered in regular order westward from certain standard lines called principal meridians. Each township is divided into 36 sections containing 640 acres, more or less, divided by road allowances 66 feet in width. Each section is in turn divided into four quarter-sections of 160 acres each, which are designated the south-east, the south-west, the north-east and the north-west quarters. The corners of each division are marked on the ground by suitable posts, rendering it an easy matter to locate any particular piece of land.

The following is a plan showing system of township survey. In every township, sections Nos. 11 and 29 are reserved by the Government for school purposes, and Nos. 8 and 26 by the Hudson's Bay Company.



CANADIAN PACIFIC RAILWAY LANDS IN MANITOBA, SASKATCHEWAN AND ALBERTA

In consideration of the construction of the transcontinental line, which was completed in the early '80's, the Canadian Pacific Railway Company received from the Dominion Government twenty-five million acres of land in the Western Provinces. Under the terms of its agreement,

the Railway Company had practically the privilege of selecting these lands from among the odd-numbered sections throughout Western Canada. It is the unsold portion of these lands in Western Canada that the Company now offers for sale.

The important point to bear in mind is, that all the Company's lands were selected in the early history of Western Canada, and the selection was made on the basis of a very thorough inspection. In other words, all the remaining land now owned by the Company is still the pick of an enormous area from which the Company had the privilege of selection.

GENERAL TERMS OF SALE

In order to encourage the settlement of experienced farmers on its lands in Western Canada, the Canadian Pacific Railway Company makes very liberal terms to settlers. The general period for the payment of land extends over twenty years, with interest at six per cent. on the amount unpaid.

Settlers buying irrigable lands without loan or improvements are charged no interest for the first year; they pay interest only at the end of the second year, and make second payment on principal at the end of the third year.

Settlers buying irrigable lands with improvements are given the same terms as above, except that interest on the amount of the loan or value of improvements is payable at the end of the first year.

Settlers buying non-irrigable land with loan or improvements make no second payment of principal until the end of the second year. Interest is payable yearly.

Settlers buying non-irrigable lands without improvements pay one-twentieth down and the balance in nineteen annual instalments with interest at six per cent. per annum.

The first cash payment is required at the time of making final application for the land. Purchasers of irrigable lands and non-irrigable lands with improvements or loan pay one-tenth down.

In certain cases, (limited to lands in the Irrigation Block and irrigable lands in the Lethbridge Irrigation District), the Company will advance a loan not exceeding $2000 for the construction of house and barn, fencing the land and sinking a well. This loan is made only to married men with agricultural experience, and is expended under the direction of the Company. Repayment of the loan is extended over twenty years, with interest at 6 per cent.

In order to assist settlers during the first years of their occupation of irrigable or improved lands, or lands on which the Company has advanced a loan, special terms of payment are made which will be fully explained upon request.

To purchasers of lands in the Irrigation Block, or irrigated lands in the Lethbridge Irrigation District, a loan of live stock not exceeding $1,000 in value will be made under certain conditions which also will be fully explained upon request.

Purchasers of irrigable lands will have free use of water for one year from date of contract. Water rental will commence and first payment become due one year from date of contract. Water rental in the Irrigation Block is payable half yearly in advance, on January 1st and July 1st; in the Lethbridge Irrigation District it is payable yearly in advance, on May 1st.

For information concerning the details of the above terms and the assistance given to settlers, write to Allan Cameron, General Superintendent of Lands, Department of Natural Resources, Canadian Pacific Railway, Calgary, Canada, or to any representative of the Department of Natural Resources, a list of whom will be found in the back pages of this booklet.

TOWNSITES

When a line of railway is definitely located and it is decided to build the same, the Company selects convenient townsites to serve the area affected by the railway. These townsites are subdivided and offered for sale to the public at a convenient place and at list prices. Lots undisposed of at this opening sale may be purchased through the Company's land offices in Calgary, Alberta; Lethbridge, Alberta; Saskatoon, Saskatchewan, and Winnipeg, Manitoba. An office for the sale of lots is also usually established in the town where the lots are located.

TERMS OF PAYMENT FOR TOWN LOTS

The Company has adopted uniform terms for the sale of its townsite property. One-third cash is demanded, and the balance in two equal instalments in six and twelve months from the date of purchase. The rate of interest charged on deferred payments on town property sales is 8 per cent. per annum.

MINERAL, COAL AND TIMBER LANDS

Mineral, coal and timber lands and quarries located on railway lands in Manitoba, Saskatchewan or Alberta, will be disposed of at reasonable terms to persons giving satisfactory evidence of their intention and ability to utilize the same.

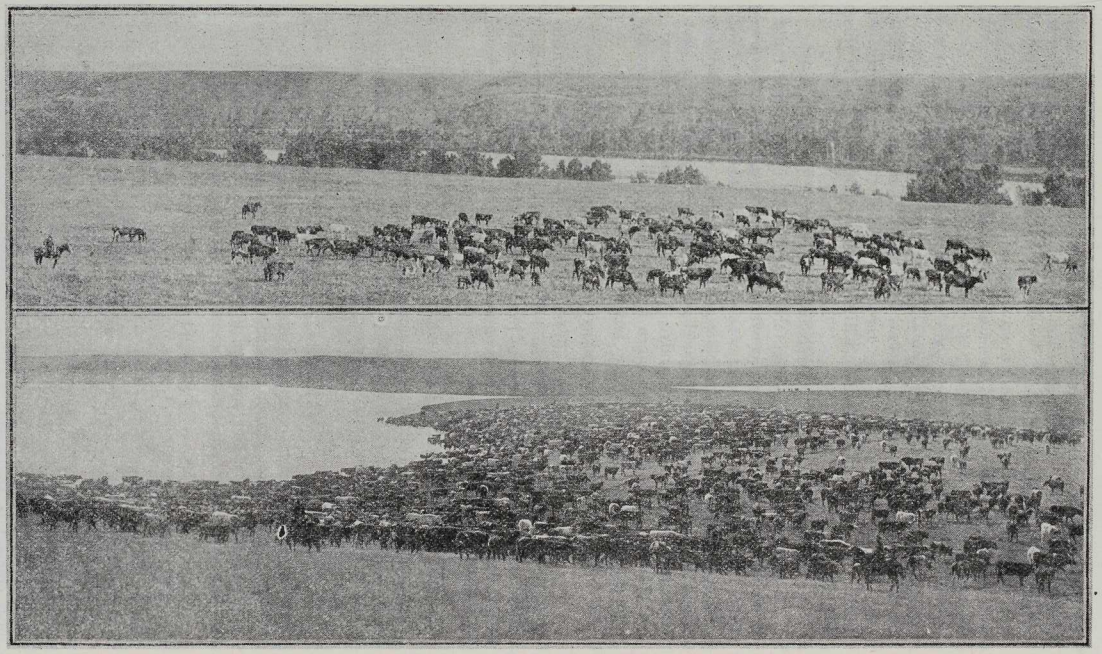
NATURALIZATION

It is not necessary for anyone purchasing or owning lands anywhere in Western Canada to become a British subject unless he so desires. The majority of those who have settled in the Canadian West from foreign countries have, however, become citizens.

TITLE

When you purchase land direct from the Canadian Pacific Railway you make your "Contract" direct with that Company, the deed to the land being made by them under the authority of what is known as the "Land Titles Act, 1894." The "Title" is perfect, and you are dealing with a corporation which has assets of hundreds of millions of dollars.

The Land Titles System of Western Canada was perfected and applied in the early stages of colonization, and is regarded as the simplest and most efficient in the world.



CATTLE FEED AND FATTEN IN THE OPEN ALL THE YEAR ROUND. UPPER SCENE, WINTER; LOWER SCENE, SUMMER.

BRITISH COLUMBIA LANDS

Full information regarding British Columbia lands may be obtained by addressing the General Superintendent of Lands, Department of Natural Resources, Canadian Pacific Railway Co., Calgary; from the Provincial Land Department, Victoria, British Columbia, or from any of the following persons:

East Kootenay (Central)—R. R. Bruce, Invermere, B.C.

East Kootenay (Southern)—A. H. Webster, Cranbrook, B.C., and J. Austin, Elko, B.C.

West Kootenay—H. & M. Bird, Nelson, B.C., and Thos. Abriel, Nakusp, B.C.

Yale District—J. A. McCallum, Grand Forks, B.C.

The Company is also interested in the following townsites, where, in many cases, local representatives may be consulted as to price of lots and obtaining of application forms:—Cranbrook, Revelstoke, Nelson, Nakusp, Fort Steele, Creston, Elko, Proctor, Grand Forks, Kitchener, Bull River, Yahk, Eholt, Midway, Greenwood, Castlegar, Cascade, Jaffray, Fort Steele Junction, Wasa, Kimberley, Arrowhead, Merritt, Kamloops and Vancouver.

ESQUIMALT AND NANAIMO RAILWAY LANDS

The Esquimalt and Nanaimo Railway Company owns nearly 1,200,000 acres of agricultural, timber and mineral lands on Vancouver Island, extending from Otter Point on the south-west coast to Crown Mountain in the Comox district, which include within their boundaries all the flourishing farming, mining, lumbering and fishing communities along the east coast and the line of the Esquimalt and Nanaimo Railway, a tract recognized to be the choicest portion of Vancouver Island. This large estate is being systematically explored and opened up by the Esquimalt and Nanaimo Railway Company,—a regular passenger and freight service is now maintained between the City of Victoria and Port Alberni, on the west coast of the Island, and by a branch of the Railway between Duncans and Cowichan Lake, giving ready access to the magnificent timber lands and large areas of lands eminently suitable for fruit and mixed farming.

The Esquimalt and Nanaimo Railway has been rapidly extended on the east coast from McBride Junction to Courtenay (Comox) district, and is now in operation. Extension of this railway system to the north end of the Island will follow in due course.

Fuller information regarding these lands and the Company's townsites may be had by application to **The Land Department, Esquimalt and Nanaimo Railway Company, Victoria, British Columbia.**

DOMINION GOVERNMENT LANDS IN MANITOBA, SASKATCHEWAN AND ALBERTA

FREE HOMESTEAD REGULATIONS

Any person who is the sole head of a family, or any male over eighteen years old, may homestead a quarter-section (160 acres, more or less) of available Dominion land in Manitoba, Saskatchewan or Alberta.

Entry.—The applicant must appear in person at the Dominion Land Agency or Sub-Agency for the district. Entry by proxy may be made at any Agency, on certain conditions (which may be ascertained from the Secretary of the Department of the Interior or any Dominion Lands Agent), by father, mother, son, daughter, brother, or sister of intending homesteader. A fee of $10 is payable with the application for homestead entry.

Homestead Duties.—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him, or by his father, mother, son, daughter, brother or sister.

Pre-emption.—In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, $3.00 per acre. Duties—Must reside six months in each of three years after earning homestead patent, and cultivate fifty acres extra. Upon earning homestead patent, the pre-emption patent may also be obtained, at once, upon paying for the land in full and showing that certain duties have been performed.

Purchased Homestead.—A homesteader who has exhausted his homestead right and cannot obtain a pre-emption, may take a purchased homestead in certain districts. Price, $3.00 per acre. Purchased homesteads may be acquired on any available lands on either odd or even numbered sections south of township 45, east of the Calgary and Edmonton Railway and the west line of range 26, and west of the third meridian and the "Soo" railway line. Duties—Must reside six months in each of three years, cultivate fifty acres, and erect a house worth $300.00. Live stock may be substituted for cultivation under certain conditions.

Patent.—After the expiration of the period fixed by the Dominion Lands Act and the fulfilment of the required duties application should be made for the issue of patent. Proof of such fulfilment must be made before the local Dominion Lands Agent or such other person as may be authorized by the Minister of the Interior. Failure on the part of an entrant for a homestead, or purchased homestead, to apply for patent within five years from date of entry shall render the entry liable to forfeiture. In the case of a pre-emption, failure to apply for patent within eight years from date of entry shall render it liable to forfeiture.

Coal and Mineral Rights.—Coal mining rights which are the property of the Crown may be leased for a term of 21 years, at an annual rental of $1.00 per acre. Not more than 2,560 acres shall be leased to one applicant, which in surveyed territory must be contiguous and must be described by Section, Township, and Range. A royalty at the rate of five cents per ton shall be collected on the merchantable coal mined.

All applications should be submitted to the Agent of Dominion Lands for the district in which the rights applied for are situated, and should be accompanied by a fee of $5.00 in each case. The lease shall include the coal mining rights only, but the lessee may be permitted to purchase a certain area of surface at $10.00 per acre.

Permits to mine coal for domestic purposes may be issued on application to the Agent of Dominion Lands for the district in which the lands are situated for an area not exceeding three acres, which area must previously have been staked out by planting a post at each corner. Rental, $5.00 per acre per annum, and royalty 20 cents per ton anthracite coal, 15 cents for bituminous coal and 10 cents for lignite coal.

PROVINCIAL GOVERNMENT LANDS IN BRITISH COLUMBIA

The Government of British Columbia does not grant free homesteads. The fact of a person having a homestead in another province or on Dominion Government lands in this province, is no bar to pre-empting Crown lands in British Columbia.

Lands owned by the Provincial Government are laid off and surveyed in quadrilateral townships containing thirty-six sections of one square mile each, whenever it is practicable to carry this survey through.

HOW TO SECURE PRE-EMPTION

Any British subject, a widow, or single woman over eighteen years of age, who is self-supporting, or an alien who declares his intention to become a British subject, may take up pre-emptions in British Columbia.

Pre-emptions are free.

To take up a pre-emption of unsurveyed land, having located the quarter-section he wishes to occupy, the pre-emptor proceeds there and stakes it, and then records it in the Land Recording Division in which it is located.

Place a post four inches or more square and four feet or more high above the ground—a tree-stump squared and of the proper height will do—at one angle or corner of the claim, and mark upon it his name and the corner or angle represented, thus: "A. B.'s land, N.E. corner post" (meaning north-east corner, or as the case may be), and shall post a written or printed notice on the post in the following form:—

"I, A.B., intend to apply for a pre-emption record of acres of land, bounded as follows: Commencing at this post; thence north chains; thence east chains; thence south chains; thence west chains (or as the case may be).

"Name (in full).

"Date."

After staking the land the applicant must make an application in writing to the Government Land Agent of the district in which the land lies, giving a full description of the land, and a sketch-plan of it; this description and plan to be in duplicate. The fee for recording is $2.

He shall also make a declaration, in duplicate, before a Justice of the Peace, Notary Public, Commissioner, or British Columbia Land Surveyor, in Form 2 of the "Land Act," and deposit same with his application. In the declaration he must declare that the land staked by him is unoccupied and unreserved Crown land, and not in an Indian settlement; that the application is made on his own behalf and for his own use for settlement and occupation, for agricultural purposes, and that he is duly qualified to take up and record the land.

Pre-emptions cannot be staked by an agent.

If the land is surveyed, the pre-emptor must make application to the Agent exactly as in the case of unsurveyed land, but it will not be necessary to plant posts, and the references regarding staking in the declaration will be omitted.

Every pre-emption shall be of a rectangular or square shape, and 160 acres shall measure either 40 chains by 40 chains (880 yards by 880 yards) or 20 chains by 80 chains (440 yards by 1,760 yards); 80 acres shall measure 20 chains by 40 chains; and 40 acres, 20 chains by 20 chains. All lines shall be run true north and south and true east and west.

When a pre-emption is bounded by a lake or river, or by another pre-emption or by surveyed land, such boundary may be adopted and used in describing the boundaries of the land.

Sixty days from the date of the pre-emption record the pre-emptor must enter into occupation of the land and proceed with improving same. Occupation means continuous **bona-fide** personal residence of the pre-emptor or his family, but he and his family may be absent for any one period not exceeding two months in any year. If the pre-emptor can show good reason for being absent from his claim for more than two months, the Government Land Agent may grant him additional leave of four months. A fee of $2 is charged for the permit. Absence without leave for more than two months will be looked upon as abandonment of all rights and the record may be cancelled.

No person can take up or hold more than one pre-emption.

The pre-emptor must have his claim surveyed, at his own expense, within five years from the date of record. Following upon the survey, if improvements to the value of $5 per acre have been made, five acres being cleared and brought under cultivation, the pre-emptor may procure a Crown grant in fee-simple, on payment of a fee of $10. The pre-emptor may secure the certificate of improvement and Crown grant after residence of three years.

Land recorded or pre-empted cannot be transferred or conveyed until after a Crown grant has been issued.

The fee on recording is $2, and for every record or certificate of improvement, $2.

Mineral, coal and petroleum, and natural gas which may be found under pre-emptions does not pass under grant of lands. Timber lands are not open to pre-emption; that is, lands which contain milling timber to the average extent of 8,000 feet per acre west of the Cascades (Coast Range), and 5,000 feet per acre east of the Cascades, to each 160 acres.

No Crown grant can be issued to an alien who may have pre-empted or recorded by virtue of his declaring his intention to become a British subject, unless he has become naturalized. Heirs or devisees of a settler are entitled to a Crown grant on his decease, providing application is made within a year and other requirements of the Act have been complied with.

THE PURCHASE OF CROWN LANDS

Crown lands may be purchased to the extent of 640 acres, and for this purpose are classified as first and second-class, according to the report of the surveyor. The minimum area that may be purchased shall be 40 acres measuring 20 chains by 20 chains, except in cases where such area cannot be obtained.

Purchased lands may be staked by an agent.

Lands which are suitable for agricultural purposes, or which are capable of being brought under cultivation profitably, or which are wild hay meadow lands, rank as and are considered to be first-class lands. All other lands, other than timber lands, shall rank and be classified as second-class lands. Timber lands (that is, lands which contain milling timber to the average extent of 8,000 feet per acre west of the Cascades—Coast Range—and 5,000 feet per acre east of the Cascades—Coast Range—to each 160 acres) are not open for sale.

The minimum price of first-class lands shall be $10 per acre, and that of second-class lands $5 per acre: Provided, however, that the Minister of Lands may for any reason increase the price of any land above the said prices.

No improvements are required on such lands unless a second purchase is contemplated. In such case the first purchase must be improved to the extent of $3 per acre before any steps can be taken to acquire the second.

When application to purchase unsurveyed land is filed the applicant shall deposit with the Minister of Lands a sum equal to 50 cents per acre on the acreage applied for. When the land is finally allotted the purchaser shall pay the balance of the purchase price. Surveyed land may be purchased by paying 25 per cent. of the purchase-money on application and the balance in three equal instalments, with interest at 6 per cent. per annum. This class of land it is not necessary to stake, nor is advertisement necessary.

The Government does not employ or authorize agents to sell land.

South African war scrip is not accepted in payment for Crown lands.

Timber lands are not open for sale or pre-emption, but particulars relative to permission in regard to cutting from off Government timber lands may be had by applying to any Provincial Government Agent.

B.C. GOVERNMENT LAND AGENTS.—The following is a list of Government Agents with whom pre-emptions may be filed. Lands in outlying districts in which there is no resident agent, are dealt with in the Land Department, Victoria, B.C., R. A. Renwick, Esq., Deputy Minister of Lands.

LIST OF GOVERNMENT AGENTS

John Kirkup	Alberni
F. C. Campbell	New Westminster
J. Mahoney	Vancouver
N. A. Wallinger	Cranbrook
G. F. Stalker	Fernie
Jno. Cartmel	Nelson
R. J. Stenson	Kaslo
R. Gordon	Revelstoke
A. Sampson	150-Mile House
H. W. Dodd	Telegraph Creek
J. A. Fraser	Atlin
J. H. McMullin	Prince Rupert
S. H. Hoskins	Hazelton
E. T. W. Pearse	Kamloops
L. Norris	Vernon
Jas. R. Brown	Fairview
E. C. Lunn	Clinton
H. P. Christie	Ashcroft
T. W. Herne	Fort George
J. E. Hooson	Fort Fraser
Geo. Thomson	Nanaimo
Geo. Milburn	Quesnel
H. C. Rayson	Golden
W. N. Rolfe	Nicola

DOMINION GOVERNMENT LANDS IN BRITISH COLUMBIA

All the undisposed of lands in British Columbia within twenty miles on each side of the Canadian Pacific Railway main line, called "The Railway Belt," are the property of the Dominion of Canada. This tract of land with its timber, hay, coal and stone is now administered by the Department of the Interior of Canada, Ottawa, Ontario, practically according to the same laws and regulations as are the public lands in Manitoba, Saskatchewan and Alberta and is open to any male over eighteen years of age or widow having a family dependent on her, who has not already acquired land under the Dominion Government homestead regulations. The water powers and minerals are administered by the Province under agreements entered into between the Provincial and Federal Governments. Government agencies are established at New Westminster, Kamloops and Revelstoke.

Part III.

MANITOBA

Manitoba commenced her separate existence with a population of some 12,000 people in 1870, and now is estimated to possess about 500,000 of a population, partly made up by immigration from the continent of Europe, as well as by settlement from the United States.

In 1878 the first railway entered this province, coming from St. Paul, Minnesota, to the little town of St. Boniface, from which transference was made to Winnipeg by ferry over the Red River. But the rising spirit of Canada, backed by the persistent outcry of Manitoba, demanded that a transcontinental railway should be built, which would connect Manitoba with the Eastern Provinces. This was finally accomplished, and the first through train from Montreal to Vancouver passed through Winnipeg on July 1st (Dominion Day), 1886.

BOUNDARIES AND AREA

The Province of Manitoba was created and became a sister of the Confederation of Canada under an Act passed in 1870. The area of the province as then created was 13,500 square miles. The boundaries of the province have, however, recently been considerably extended so as to give access to the Hudson's Bay. The area now covered by this province is 251,832 square miles, which makes Manitoba approximately the same size as Alberta or Saskatchewan.

The province is bounded on the west by Saskatchewan, on the east by Ontario, on the south by the International Boundary, and extends north to the Hudson's Bay.

CEREAL PRODUCTION

Although the Province of Manitoba is the oldest settled of the Prairie Provinces, it is well within the truth to state that farming is as yet in its infancy. The area now under cultivation is an amazingly small percentage of the total area available for the production of crops.

In order to convey a correct idea of the agricultural wealth and productiveness of the province, statistics of yields of the principal grain crops for a period of 31 years are quoted on page 24.

SUMMARY

The following summary of yields per acre of principal grain crops in Manitoba, shows the situation in a nutshell and will convince the most sceptical that this province is one of the richest districts on the American continent. There can be no dispute in regard to accurate records covering a continuous period of twenty-eight years.

Wheat, average for 28 years, 18.41 bushels per acre.
Oats, average for 28 years, 35.78 bushels per acre.
Barley, average for 28 years, 29.83 bushels per acre.
Flax, average for 21 years, 13.09 bushels per acre.

Statistics of Grain Production of the Province of Manitoba from 1883 to 1913

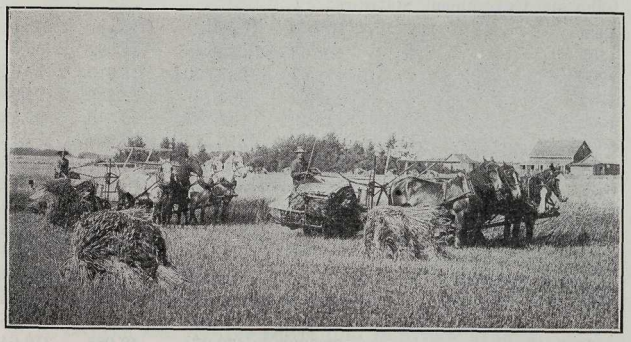
Year.	WHEAT Acreage.	WHEAT Yield per acre.	WHEAT Total yield bushels.	OATS Acreage.	OATS Yield per acre.	OATS Total yield bushels.	BARLEY Acreage.	BARLEY Yield per acre.	BARLEY Total yield bushels.	FLAX Acreage.	FLAX Yield per acre.	FLAX Total yield bushels.
1883..	260,842	21.80	5,686,355	215,431	44.	9,478,964	60,281	30.	1,898,430	.....	.....	.....
1884..	307,020	20.11	6,174,182	133,044	30.55	4,064,494	40,936	32.83	1,363,928	.....	.....	.....
1885..	357,013	20.80	7,429,440	157,026	40.53	6,364,263	51,189	29.	1,113,481	.....	.....	.....
1886..	384,441	15.33	5,893,480	161,030	25.15	4,049,904	69,565	57.70	1,300,365	.....	.....	.....
1887..	432,134	25.7	12,351,724	155,176	46.2	7,265,237	56,110	34.31	1,925,231	.....	.....	.....
1888..	No statistics prepared for 1888.			No statistics prepared for 1888.			No statistics prepared for 1888.			.....	.....	.....
1889..	632,245	12.4	7,201,519	218,744	16.8	3,415,104	80,238	31.1	1,051,551	.....	.....	.....
1890..	746,058	19.65	14,665,769	235,534	40.2	9,513,433	66,035	31.33	2,069,415	.....	.....	.....
1891..	916,664	25.3	23,191,599	305,644	48.29	14,762,605	39,828	35.6	3,197,876	1,718	16.5	.....
1892..	875,990	16.5	14,453,835	332,974	35.	11,654,090	97,644	29.	2,831,676	1,718	20.	34,360
1893..	1,003,640	15.56	15,615,923	388,529	25.28	9,823,935	114,762	22.11	2,547,653	9,737	11.	116,454
1894..	1,010,186	17.	17,172,883	413,686	28.8	11,907,854	119,528	25.87	2,981,716	23,504	15.55	366,000
1895..	1,040,276	27.86	31,775,038	482,658	46.73	22,555,733	153,839	36.69	5,654,036	82,668	15.5	1,282,354
1896..	999,598	14.33	14,371,800	442,445	28.25	12,502,318	127,885	14.8	3,171,747	20,325	12.75	259,143
1897..	1,290,882	14.14	18,261,950	468,441	22.7	10,629,513	153,266	20.77	3,183,602	20,653	12.	247,836
1898..	1,488,232	17.41	25,913,155	514,824	35.02	18,029,944	158,058	29.17	4,611,314	25,000	14.	350,000
1899..	1,629,995	17.13	27,922,230	575,136	38.30	22,318,378	132,912	29.40	5,379,156	21,780	14.	304,920
1900..	1,457,393	8.9	13,025,252	429,108	20.5	8,814,312	151,111	18.9	2,939,477	20,437	8.4	164,315
1901..	2,011,835	25.1	50,502,035	689,951	40.3	27,796,588	191,009	34.2	6,536,155	20,797	12.7	266,420
1902..	2,039,940	26.	53,077,267	725,060	47.5	34,478,160	329,790	35.9	11,848,422	41,200	13.7	564,440
1903..	2,442,873	16.52	40,116,878	855,431	38.62	33,035,774	326,537	26.66	8,707,252	55,900	10.5	586,950
1904..	2,412,235	16.32	39,162,458	943,574	38.8	36,289,979	361,004	30.54	11,177,970	35,428	13.1	164,106
1905..	2,643,588	21.07	53,761,416	1,031,293	42.6	45,484,024	432,298	32.5	14,064,175	24,770	13.2	326,964
1906..	3,141,537	19.49	61,250,413	1,155,961	43.85	50,692,977	474,242	36.96	17,532,553	18,790	14.6	274,330
1907..	2,789,553	14.22	39,688,266	1,213,596	34.8	42,140,744	649,570	25.7	16,752,724	25,915	12.25	317,347
1908..	2,850,640	17.23	49,252,539	1,216,632	36.8	44,686,643	658,441	27.54	18,135,757	50,187	11.18	502,206
1909..	2,642,111	17.33	45,774,707	1,373,683	37.1	50,983,056	601,008	27.31	16,416,634	20,635	12.29	253,636
1910..	2,962,187	13.47	39,916,391	1,486,436	28.7	42,647,766	624,644	20.75	12,960,038	41,002	9.97	410,928
1911..	2,979,734	20.22	60,190,000	1,260,736	45.92	57,893,000	433,067	33.36	14,447,000	77,789	14.44	1,123,000
1912..	2,839,000	22.20	63,017,000	1,348,000	42.40	57,154,000	481,000	32.92	15,826,000	100,000	12.49	1,252,000
1913..	2,804,000	19.02	53,531,000	1,398,000	40.60	56,759,000	496,000	28.84	14,305,000	54,000	11.70	632,000
1914..	Returns not available at time of compilation.											

COMPARATIVE STATISTICS

To those who have not studied the question with care, the foregoing figures lose much of their significance. It has, therefore, been thought well to establish a comparison between yields per acre of spring wheat in Manitoba and those of the principal wheat-producing States of the Union for a ten-year period:—

SPRING WHEAT PRODUCTION

	Average yield per acre, 1913	Ten years' Average
All Canada	21.41	19.33
United States	13.00	13.50
Manitoba	20.34	17.90
Minnesota	16.20	13.40
Iowa	17.00	14.70
North Dakota	10.50	11.80
South Dakota	9.00	12.00
Kansas	8.50	10.80
Nebraska	12.00	12.80
Wisconsin	18.60	16.30



FERTILITY AND PROSPERITY ON THE CANADIAN FARM

THE GRADUAL EVOLUTION

Manitoba is the oldest settled of the Canadian Prairie Provinces and the change from the "one crop" of early days to the "mixed farming" system, which is growing gradually all through the Canadian West, has naturally been more marked in that province than elsewhere. The following statistics show the expenditure incurred for farm buildings in the Province of Manitoba during recent years.

Year	Value	Year	Value	Year	Value	Year	Value
1900	$1,351,000	1903	$2,961,752	1906	$4,515,085	1909	$2,589,780
1901	1,434,880	1904	2,950,710	1907	1,735,825	1910	3,546,539
1902	2,228,875	1905	3,944,101	1908	2 054,490	1911	3,273,487
		1912	3,380,345	1913	2,296,125		

The above figures show the growth that has been made more clearly than words could tell. The Province of Manitoba is now dotted with magnificent farm-steadings including large and commodious barns, with every convenience for the care of the live stock.

LIVE STOCK IN MANITOBA

It is only natural that in a new prairie country the first years of settlement should be devoted mainly to grain-growing. The early settler may know quite well that there will ultimately be greater profits in raising stock, but for the first few years he perhaps has not the capital to start a herd or to provide the buildings necessary to house them. The shrewd settler, however, begins engaging in mixed farming as soon as he can, and continues to increase gradually his activities in that direction. Nowhere is this more clearly shown than in the history of Manitoba. The Government records showing the expenditure on farm buildings bear testimony to the fact that everywhere farmers are giving more and more attention to their stock. From 1900 to 1913 no less than $35,966,867 were spent by farmers in the erection of farm buildings, and the increase in the quantity of stock kept in the province during the same period is shown by the following Government statistics:

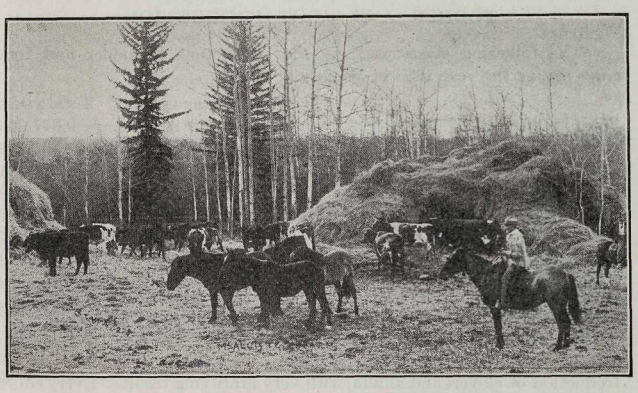
Year.	Horses.	Cattle.	Sheep.	Pigs.
1899	102,655	220,248	33,092	66,011
1900	118,629	237,560	25,816	77,912
1901	140,080	263,168	22,960	94,680
1902	146,591	282,343	20,518	95,598
1903	161,250	310,577	22,569	105,157
1904	143,386	306,943	18,228	118,986
1905	157,724	319,290	18,508	104,113
1906	164,444	363,202	16,606	120,838
1907	173,212	463,862	14,442	118,243
1908	169,905	409,785	16,924	120,364
1909	189,132	372,520	17,922	155,541
1910	232,725	397,261	32,223	176,212
1911	251,572	407,611	37,227	192,386
1912	273,395	429,274	42,085	216,640
1913	300,753	456,936	52,152	248,254

The climate, water, and fodders of Manitoba are adapted to the raising of beef cattle of exceptional excellence. This has been demonstrated by the fact that at the International Live Stock Show at Chicago —the greatest stock competition on the American continent—held in December, 1912, United States judges awarded the sweepstakes prize for the best beef steer in the world to Glencarnock Victor, a two-year-old steer raised at Brandon, Manitoba, by J. D. McGregor. Glencarnock Victor was raised on the prairie grass of Manitoba, supplemented by a ration of crushed oats and barley. The last three months before exhibition he was stabled, and a little ground linseed with turnips and native hay and oat sheaves added to his allowance. On this diet he was able to stand the journey to Chicago and defeat in open competition the

choicest corn-fed steers of the United States. But as though this were not sufficiently conclusive evidence of the superiority of the Manitoba diet over corn, the very next year, November, 1913, another Manitoba steer, Glencarnock Victor II., also raised by J. D. McGregor of Brandon, went down to the International Live Stock Show at Chicago and repeated the performance, again capturing the grand sweepstakes for the best beef steer from all the corn-fed animals. Glencarnock Victor II., like his namesake already referred to, had never eaten an ounce of corn. These sweeping victories two years in succession have established beyond question the superiority of Canadian grains and grasses over corn diet,

HORSES, SHEEP AND SWINE

It is not only in the raising of beef cattle that great opportunities lie before the Manitoba farmer. Horses, sheep and swine each offer their own peculiar advantages. A wonderful improvement in the general quality of horses in Manitoba has taken place in recent years, and the



CATTLE AND HORSES WINTERING IN STRAW STACKS AND NATURAL SHELTER

animals now to be seen even at the small fairs at the country towns might well stir the pride of the horse lover in any country anywhere. The rapid development of the Canadian West, the great influx of immigration, the immense amount of railway construction work, and other causes have all contributed to a keen demand for good horses, and the farmer who has a team or two to sell each season is always able to realize good figures.

The increase in sheep raising has not been as rapid as might be expected, but there are indications that a great deal of attention will shortly be turned to this industry. The chief drawback to sheep raising in the past has been that few farmers had proper fencing. This drawback is being gradually removed, and during the fall of 1913 sheep were being shipped in from the provinces further west and from the Western States. The fact that during the summer of 1913 Alberta wool successfully invaded

the English market, where it met with a very favorable reception, is turning the attention of farmers throughout the Prairie Provinces to the possibilities of this industry, and there is every reason to believe that sheep raising will soon become an important branch of Manitoba husbandry.

The fact that in the last fourteen years the number of swine kept in Manitoba increased by over 370 per cent., tells its own story of the growing importance of that industry. Everything that goes to make swine raising profitable is produced in abundance on the Manitoba farm. In former years many valuable by-products were allowed to go to waste, but as the farmer is more and more employing good business methods in his husbandry he is learning to turn everything to account. Hogs do well in Manitoba; the climate, the water, and the natural food products of the country agree with them, and the farmer who devotes part of his attention to this industry is assured of liberal returns for his labor and investment.

FODDER AND ROOT PRODUCTION

The following statistics show the production of fodder and root crops during the year 1913 in Manitoba:

	Acres.	Average yield.	Total yield.
Potatoes	55,743	180.0 bus.	9,977,263
Roots	16,275	257.8 "	4,196,612
Peas	4,115	20.9 "	86,024
Brome Grass	24,912	1.7 tons	43,432
Rye Grass	21,197	1.6 "	33,907
Timothy	118,812	1.5 "	181,407
Clover	5,328	1.8 "	9,732
Alfalfa	4,709	2.3 "	10,722
Fodder Corn	20,223	5.9 "	119,764

The high yields of fodder crops are worthy of special attention. An attempt is being made by the Provincial Government to promote the introduction of clovers and alfalfa, with very gratifying result. Every effort is made to induce the farmers to put in large areas of these crops, not alone in order to provide feed, but also to enrich the soil.

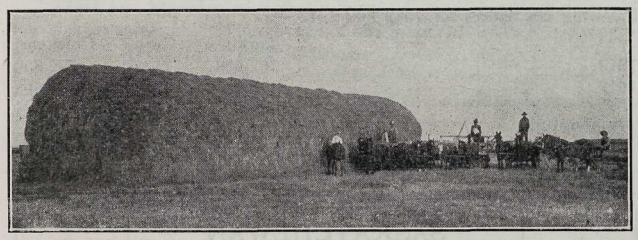
LIVE STOCK MARKETS

The chief live stock markets for Western Canada are located in the City of Winnipeg, Manitoba. Large union stock yards have been provided, and buyers are always present to take practically everything that is offered. All the export cattle from the West pass through the Winnipeg stock yards, and large shipments are generally sorted at that point. The farmer of Manitoba is in a very enviable position in regard to markets, as with the growth of the centres of population, the home requirements fully absorb the total live stock production of the province. There are also large abattoirs located in Winnipeg, which are continually being extended in sympathy with the increase of the local demands for animal products.

DAIRYING

The following statistics of the production of dairy products in the Province of Manitoba from the year 1900 to 1913 show a very satisfactory progress of that industry:—

	BUTTER.		CHEESE.	
Year.	Pounds.	Value.	Value.	Total Value.
1900	3,338,431	$ 541,661.04	$ 102,330.05	$ 643,991.09
1901	5,208,740	837,964.69	88,348.32	926,314.10
1902	3,915,875	636,160.69	111,443.24	747,603.93
1903	4,271,703	707,346.98	151,362.28	858,709.26
1904	3,948,594	660,620.42	107,836.96	768,457.38
1905	4,160,956	769,591.15	127,346.49	896,937.64
1906	6,451,694	1,182,502.33	195,244.51	1,377,746.84
1907	4,816,244	1,048,585.29	168,997.20	1,217,582.49
1908	5,786,942	1,216,975.65	183,294.01	1,400,269.66
1909	5,616,427	1,208,187.20	163,330.20	1,371,517.40
1910	6,905,759	1,537,613.28	99,250.23	1,636,863.51
1911	7,638,416	1,715,982.62	70,090.63	1,786,073.25
1912	7,285,043	1,834,876.78	69,760.34	1,904,637.12
1913	8,217,898	2,104,368.49	52,064.48	2,156,432.97



NATIVE HAY HARVESTED ON THE PRAIRIE

Manitoba has great advantages as a dairy country. The pasturage is rich and nutritious and contains an abundance of variously flavored grasses. The domestic water supply is excellent, and ample both for watering the stock and for use in the dairies, streams of pure running water being often available.

The Provincial Government established in 1896 a dairy school in Winnipeg, which proved a great success. Since the completion of the Agricultural College in Winnipeg, the staff in that institution has devoted special attention to the development of the dairy industry of the province, with considerable effect. The market prices for butter, cheese, cream and milk are as high as anywhere on the continent of America. At the present time enormous shipments of milk and cream are made from the States of Wisconsin and Minnesota to Winnipeg daily. Upon these shipments high duty is paid, which would leave an enormous profit for the

producers within the boundaries of the province. The tendency to exclusive grain farming has seriously retarded the dairy industry. There is, however, a notable change, and with the advent of a greater population, thus solving the labor difficulty, great things are expected from the dairy industry of Manitoba.

POULTRY

The following statement shows the number of poultry disposed of during the years 1912 and 1913 by the farmers of Manitoba. With prices of eggs soaring skywards and with dressed poultry, at times, almost impossible to obtain, there is little excuse for the Manitoba farmer tolerating the tremendous importation of eggs and dressed poultry that now takes place from various parts of America into the City of Winnipeg, and, for that matter, into other parts of Western Canada. The dry climate lends itself particularly well to poultry rearing, and the unlimited quantities of screenings and coarse grains available on every Manitoba farm, render enormous expansion in this profitable branch of live stock husbandry an easy matter. This is another instance where the prosperous grain grower is ignoring the side issues of the farm to his detriment.

The Provincial Poultry Association has carried on exceedingly useful work by lectures and demonstration, and the output of the province each year shows a large, though not altogether satisfactory, increase. The following are figures for 1912 and 1913:—

	Turkeys.	Geese.	Chickens.
1912	167,438	71,951	779,850
1913	176,964	79,940	777,808

Part IV.

SASKATCHEWAN

The remarkable progress of the Province of Saskatchewan, which, previous to September, 1905, was part of the North-west Territories of Canada, might easily lead the casual visitor to doubt that the present wonderful development is the result of such a comparatively short period.

The few survivors of the countless herds of buffalo that roamed these plains, are now confined to the national parks and forest reserves. The red man, who regarded the broad expanse of plain and the endless winding river valley as his by right of inheritance, has been retired to the Indian reserve. The plains on which the buffalo thrived before the advent of the white man now support large herds of cattle and horses. The domain of the Indian has become the home of farmers from all parts of the world; and the cosmopolitan population gathered here under the sheltering folds of the Union Jack has proved to the world that these broad and fertile acres are indeed the "Bread Basket of the British Empire."

BOUNDARIES AND AREA OF SASKATCHEWAN

This Province lies between the 49th and 60th parallels of north latitude, and between the meridians of 102 and 110 degrees west from Greenwich. The southern border is the International Boundary, the dividing line between Canada and the United States. South of Saskatchewan are the States of North Dakota and Montana; east of it is the Province of Manitoba; west of it is the Province of Alberta, and on the north it is bounded by the unorganized North-west Territories. Its greatest length is 760 miles; and its width on the south is 393 miles. At the middle it is 300 miles wide, and at the northern boundary it has a width of 277 miles. The area of this great quadrangle is 250,650 square miles, of which 8,318 square miles is water. The land surface contains 155,092,480 acres.

NATURAL DIVISIONS

The Plains.—In the south, and extending as far north as Saskatoon, with the exception of a considerable district north of the Qu'Appelle Valley comprising the Beaver Hills, Touchwood Hills, etc., the country consists of open rolling prairie, gently rolling plain, dotted here and there with placid lakes and clumps of trees with occasional stretches of open level prairie, where the plain as far as the eye can reach is unbroken by slope or declivity and the gaze is unobstructed by even a single tree.

There are, however, in different parts of these divisions ranges of low hills intersected by ravines, many of which are well wooded and supply considerable quantities of fuel. The most important are: The Coteau, including the Dirt Hills, which extends from the International Boundary west of Estevan to a point beyond the Elbow of the Saskatchewan River; Moose Mountain, north of Arcola; Last Mountain, Touchwood and Beaver Hills, north of the Qu'Appelle Valley.

The Park Country.—North of Saskatoon and extending to the southern edge of the great northern forest which, in Saskatchewan, is bounded on the south by a line passing from Saw River north-westerly through the vicinity of Prince Albert, the country is mixed prairie and woodland, and is splendidly adapted for mixed farming and for stock-raising. As a home-making proposition, this part of Saskatchewan stands unequalled. Portions of the more heavily wooded area in the park country have been reserved from settlement by the Government in order to provide timber and game preserves.

The Ranching Country.—That lying to the west is perhaps the most suitable part of the province for ranching. In the districts west of the Coteau and south of the South Saskatchewan River the stockmen have until recently been permitted to pasture their herds in peace and were but little interested in the invasion of the homesteader. The domain of "King Wheat" has, however, gradually been extended and the arable areas are being made to yield their generous tribute of golden grain. The Cypress Hills, Wood Mountain, the Coteau and the more hilly areas intervening will, however, always be the secure retreat of the rancher. There he may continue to produce some of the finest horses, sheep and beef-cattle in the world.

The Northern Forest.—North of the belt of mixed prairie and woodland, lies the great northern forest, the northern edge of which may be described by a line drawn from the northern part of Reindeer Lake to the southern part of Lake Athabasca. This timbered belt is covered with a forest of spruce, tamarack, jack pine, poplar and birch.

The remainder of this area is not thickly wooded, although black spruce, pine and poplar are found in the extreme northern parts of the province.

RAINFALL STATISTICS

This table is a compilation, averaged of all the available data respecting precipitation at all the meteorological stations in the province in each year since 1907. Snowfall is reduced to its "water equivalent," ten inches of snow being stated as one inch of rain.

Month	1913	1912	1911	1910	1909	1908	Average precipitation for 10 years by months
January	.69	.34	1.36	.38	.62	.29	.70
February	.57	.26	.44	.46	.36	1.14	.65
March	.65	.37	.35	.84	.53	.99	.99
April	.24	.52	.77	.55	.69	.84	.67
May	.98	2.92	2.73	2.07	2.46	1.13	1.99
June	2.92	2.37	4.06	2.63	2.64	4.84	3.43
July	3.18	3.63	2.68	1.50	5.36	1.27	2.37
August	2.80	2.36	2.55	2.12	1.41	2.06	2.45
September	.90	2.12	1.35	.97	.72	.62	1.54
October	.89	.42	1.04	.29	.61	1.31	.71
November	.35	.33	1.13	.71	.99	.54	.58
December	.04	.44	.50	.96	1.62	.45	.54
Total	14.21	16.08	18.96	13.48	18.01	15.43	16.72
April-September	11.17	13.92	14.68	9.84	13.28	10.76	12.54

AGRICULTURE IN SASKATCHEWAN

During the last few years, millions of acres of land in Saskatchewan, that previously were regarded as of very little value for agricultural purposes, have proved their capability of producing magnificent crops of cereals. In the earlier years, the famous Indian Head and Pheasant Plains districts were regarded as unrivalled for wheat production, and while the results achieved by them in grain growing have assisted in no small measure in making the Canadian North-west justly famous, it is now clearly demonstrated that extremely successful cereal production is not by any means confined to these areas. Similarly, future events may indicate that some of these tracts of land within the provincial boundaries, which are now believed by some to be better fitted for grazing than for agricultural purposes, are well suited to the growing and maturing of cereal crops.

KING WHEAT

It is a trite saying that "Wheat is the basis of all civilized existence." While there are more rice eaters than wheat eaters in the world, wheat is the chief grain food of the white man. There has been an almost universal increase in the individual consumption of wheat of late years. A few years ago the individual wheat consumer annually required six bushels of grain. The individual consumption to-day, however, is seven bushels per year. And while in 1871 the bread eaters of the world numbered three hundred and seventy-five millions, to-day they number over five hundred and seventeen millions. In spite of the ever-increasing crop area of wheat, the point is gradually being reached when the world's production of wheat will not more than keep pace with the demand. While the production in the United States has doubled during the past thirty years, the tendency at the present time is not towards any continued expansion. At the same time the population of the United States is increasing tremendously, and the point will soon be reached when that great country will become an importing instead of an exporting country. Less than a century ago, New York State was the chief wheat-producing area of the United States, a fact that enabled Rochester to acquire the name of the "Flour City." The latter distinction is now held by Minneapolis, located some 1,500 miles further west. The time will come when the great flour producing centre of America will be located in the Canadian West.

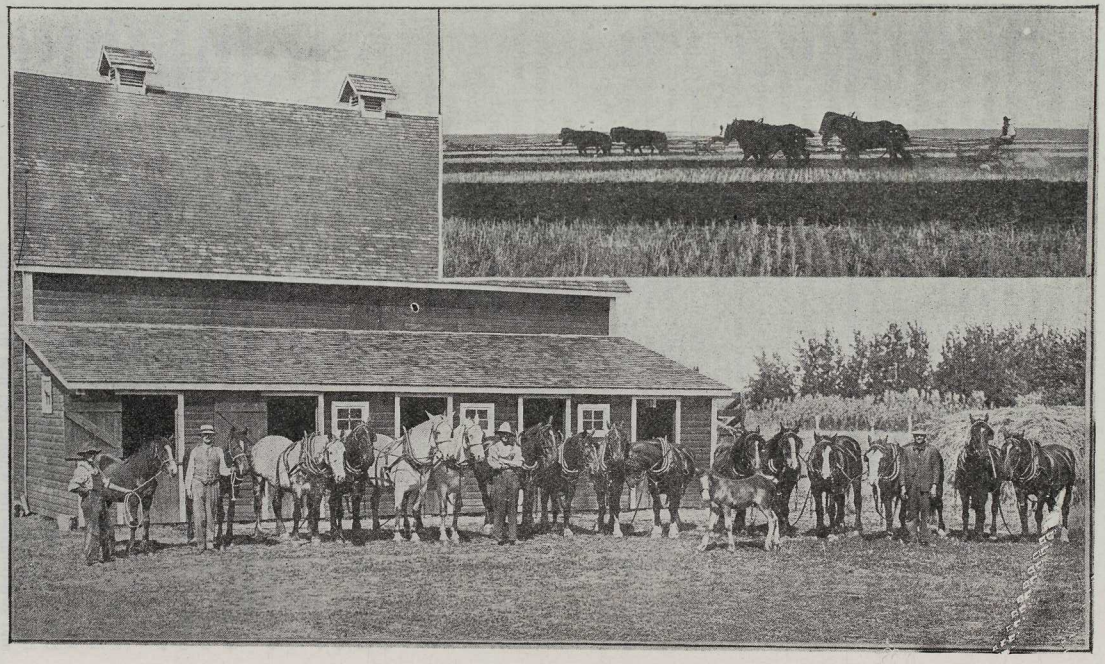
SASKATCHEWAN—THE WORLD'S CHAMPION

It is no mean accomplishment of a Canadian province to stand the admitted champion in high-quality wheat production for the continent of America, which is tantamount to the championship of the world.

This, however, is the honor Saskatchewan has gained. During the great Land and Irrigation Show, held in Madison Square Gardens, New York, in November, 1911, Mr. Seager Wheeler, of Rosthern, Saskatchewan, entered a sample of 100 pounds of Marquis wheat for competition for the one thousand dollar gold prize offered by Sir Thomas Shaughnessy for the best sample of wheat grown in America. Mr. Wheeler's wheat carried off the prize, and it is interesting to note that the second prize was won by Mr. W. J. Glass, of Macleod, Alberta, and the third prize by Mr. Thomas Maynard, of Deloraine, Manitoba. There were sixteen entries in all, three of which were from Canada.

It is worthy of note that Mr. Wheeler's wheat weighed six and one-half pounds per bushel above the average, that it had yielded the enormous quantity of 70⅝ bushels to the acre. Mr. Wheeler readily sold the balance of his seed at $8 per bushel, and the 100 pounds he entered for competition more than repaid him the original purchase price of his farm.

The first prize for wheat exhibited in competition with the world at the International Dry Farming Congress at Tulsa, Oklahoma, U.S.A., in 1913, was awarded to Paul Gerlach, of Allan, Saskatchewan. His wheat was of the Marquis variety, and weighed 71 pounds to the measured bushel. At the International Dry Farming Congress in 1914, which was held at Wichita, Kansas, U.S.A., Saskatchewan farmers captured first prize and sweepstakes for wheat, and first prize for flax.



PLOW TEAMS ON A PRAIRIE FARM

In oat production also Saskatchewan has established an enviable record. Messrs. J. C. Hill & Sons, of Lloydminster—a family of Englishmen who came to this country some eleven years ago with the Barr Colony —have achieved the distinction of winning three times in succession the $1500 trophy presented by the State of Colorado at the National Corn Exposition, which thus becomes their property. The oats with which Messrs. Hill & Sons captured this coveted trophy are of the variety known as "Abundance," and weighed 52 pounds to the measured bushel.

LIVE STOCK

Although the live stock industry in the Province of Saskatchewan was, until the last rush of settlement, the principal industry of the province, at the present moment grain growing occupies the most prominent place in the farmers' operations in every part of the province, excepting the south-west corner, a district comprising approximately 25,000 square miles, and in the Touchwood Hills country lying north-east of Last Mountain Lake. In those parts of Saskatchewan where grain growing has not yet become general and large herds of cattle and flocks of sheep remain on the open range the year round, ranching is still of prime importance. Throughout the remainder of the province, south of the 54th parallel of latitude, grain growing is now the principal business of the farmers; although mixed farming is more and more supplanting exclusive wheat raising. Even in what has for many years been exclusively range country, the homesteader is rapidly pushing his way forward and the rancher is retreating farther and farther into the rolling and broken lands of higher altitudes, known as the Cypress Hills.

Mixed farming is, however, making great strides in certain districts, especially adapted to the raising of live stock, and these, generally speaking, are included in the great "park belt" or semi-wooded area tributary to the Saskatchewan River and along the Sheho-Lanigan branch of the C.P.R., and the main lines of the C.N.R. and G.T.P. railways. Here the land is less easily broken up and the temptation to risk all in a wheat crop is thereby somewhat reduced. The area runs in a north-westerly direction across the province and varies in width from 75 to 150 miles.

The following statistics, showing the number of head of live stock in the hands of farmers and ranchers in Saskatchewan and the annual increase during recent years, are of special interest. It may be taken for granted that the increase is generally due to the advance of the mixed farming system.

Year.	Horses.	Milch Cows.	Other Cattle.	Sheep.	Swine.	Poultry.
1901.....	83,461	56,440	160,613	73,079	27,753	.....
1906.....	240,566	122,618	360,236	112,290	123,916	.....
1908.....	343,863	179,722	565,315	144,370	426,579	3,411,052
1909.....	428,776	233,548	594,632	152,601	352,385	4,343,643
1912.....	592,220	258,235	562,590	128,198	324,880	4,795,954
1913.....	609,500	322,790	524,460	141,000	406,180	5,000,000

COMPARATIVE WHEAT STATISTICS

It has been shown in the foregoing that the Province of Saskatchewan holds the premier place in regard to the quality of her wheat. The following statistics will prove conclusively that this province ranks equally high respecting yield per acre in comparison with the principal wheat producing states of the Union and exporting countries throughout the world.

Comparative statement of the average yield of wheat per acre, 1902-1913.

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Saskatchewan	**22.57**	**19.44**	**17.51**	**23.09**	**21.40**	**13.52**	**13.68**	**22.1**	**15.58**	**18.5**	**19.9**	**21.82**
Kansas	10.4	14.1	12.4	13.9	15.1	11.0	12.6	14.5	14.04	10.7	15.6	16.20
Minnesota	13.9	13.1	12.8	13.3	10.9	13.0	13.0	16.8	16.0	10.1	15.8	10.50
North Dakota	15.9	12.7	11.8	14.0	13.6	10.0	11.6	13.69	5.9	8.0	18.0	9.00
South Dakota	12.2	13.8	9.6	13.7	13.4	11.2	13.0	14.1	12.8	4.0	14.2	12.00
Nebraska	10.9	15.7	13.6	19.4	22.0	18.1	17.0	19.4	16.1	10.0	14.1	17.00
Iowa	12.7	12.4	11.6	14.2	15.7	13.4	17.2	14.69	21.0	13.8	17.0	12.05
Russia	11.1	10.6	11.5	10.2	7.7	....	....	12.07	10.93	6.	10.4	13.00
United States	14.5	12.9	12.5	14.5	15.5	14.0	14.1	15.8	14.1	9.4	17.2	8.50

STATISTICS OF GRAIN PRODUCTION IN THE PROVINCE OF SASKATCHEWAN FROM 1899 TO 1913

	WHEAT			OATS			BARLEY			FLAX		
Year	Total acreage	Total yield	Average yield	Total acreage	Total yield	Average yield	Total acreage	Total yield	Average yield	Total acreage	Total yield	Average yield
1914	Returns not	available at	time of	compilation.								
1913	5,720,000	121,559,000	21.35	2,755,000	114,112,000	41.42	292,000	10,421,000	31.39	1,386,000	15,579,000	11.24
1912	5,384,092	107,167,700	19.9	2,421,932	107,619,948	44.4	267,139	8,319,584	31.1	1,111,651	14,171,214	12.7
1911	5,232,248	96,796,588	18.5	2,192,806	98,676,270	45.0	244,993	6,859,804	28.0	932,406	10,377,701	11.3
1910	4,664,834	72,666,399	15.58	2,082,607	63,315,295	30.40	238,394	5,859,018	24.58	396,230	3,044,318	7.68
1909	4,085,000	90,215,000	22.1	2,240,000	105,465,000	47.1	244,000	8,833,000	32.1	319,100	4,448,700	13.9
1908	3,703,563	50,654,629	13.68	1,772,976	48,379,838	27.29	229,574	3,965,724	17.28	264,728	2,589,352	9.78
1907	2,047,724	27,691,601	13.52	801,810	23,324,903	29.09	79,339	1,350,265	17.02	128,528	1,364,716	10.62
1906	1,730,586	37,040,098	21.40	369,873	23,965,528	37.45	53,565	1,316,415	24.57	76,005	710,689	9.35
1905	1,130,084	26,107,286	23.09	449,936	19,213,055	42.70	32,946	893,396	27.11	25,315	398,399	15.73
1904	910,359	15,944,730	17.51	346,530	10,756,350	31.04	24,650	598,336	24.27	15,917	166,434	10.45
1903	777,822	15,121,015	19.44	280,096	9,164,007	32.71	27,679	665,593	24.94	31,644	285,697	9.02
1902	580,860	13,110,330	22.57	193,200	6,975,796	30.93	14,275	293,632	20.91	16,694	153,709	9.80
1901	469,953	11,956,069	25.41	123,251	5,517,866	44.76	11,267	354,703	31.48	.....	.....	.....
1900	382,540	3,443,671	9.00	96,177	1,604,561	16.68	8,303	150,822	18.16	.....	.....	.....
1899	328,459	6,083,508	18.49	83,465	2,518,248	30.17	7,656	160,604	20.97	.....	.....	.....

CATTLE.—The cattle stock of the province, including milch cows, is increasing rapidly, having exceeded a growth of 390 per cent. in the twelve years from 1901 to 1913. Cattle raising was one of the earliest agricultural industries of Saskatchewan, and has been the foundation of many fortunes in the earlier days. Large numbers of cattle are raised in the "park country" throughout Saskatchewan, but the greatest number of beef cattle are at present raised in the ranching country south of Maple Creek and in the Wood Mountain and Touchwood Hills districts.

The newcomer is generally struck with the high quality of Saskatchewan beef cattle. One reason for this is the encouragement that has for many years been given Saskatchewan cattle growers by the old Territorial and present Provincial Governments. The Provincial Cattle Breeders' Association, with headquarters at Regina, was formed a number of years ago and has devoted special attention to the sale and distribution of pure-bred bulls throughout the province. The Association works in close co-operation with the Provincial Department of Agriculture and receives considerable assistance from the latter as well as from the Dominion Government. The leading feature of the annual pure-bred cattle sale is the favorable transportation arrangements that are offered farmers who purchase individual animals or in lots smaller than full carloads. The Association undertakes the delivery of these pure-bred cattle to the purchaser's nearest railway station at a nominal charge. Besides this, the Department of Agriculture has for the past two years been conducting operations whereby farmers may obtain breeding animals of either sex, pure-bred or grade, at cost and on easy terms. Grade females are supplied on a cash, half-cash or quarter-cash basis with the balance payable in two equal annual payments, bearing interest at six per cent. A special feature of this work is the transferring of beef females of serviceable age from one portion of the province to another, and thus not only placing the animals where they are required, but also saving them from slaughter. Pure-bred males are supplied on a half cash basis under the same conditions.

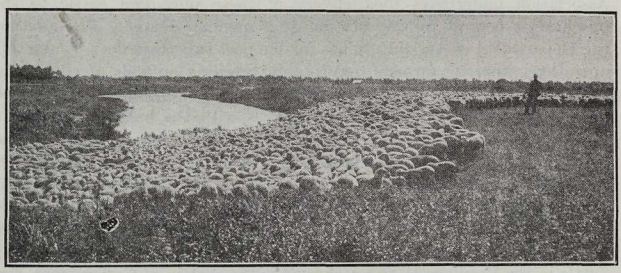
Another feature that has promoted the production of high-quality cattle in the Province of Saskatchewan is the system of Government supported agricultural fairs that are held annually throughout the province. Among these might be mentioned the Provincial Fair at Regina, also the Moose Jaw, Saskatoon, Yorkton, Prince Albert and many other smaller exhibitions.

The market for cattle in Saskatchewan is excellent. The beef is generally bought on the hoof by the agents of the large cattle exporting concerns. A feature of the industry is the fattening of the stock on the mixed farm for disposal in the spring of the year when the ranching stock is seldom in fit condition to kill. A considerable number of Saskatchewan cattle are exported to the Pacific Coast, but the bulk are probably consumed locally and sold on the Winnipeg market.

SHEEP.—The raising of sheep is largely confined to the south-western part of the province. Here large flocks, ranging from a hundred to many thousands, are run on the open range throughout the year. In 1901 there were 73,079 sheep in the province, and in 1913 the number was 141,000.

Of recent years, the work of increasing the number of sheep owned in the province has been energetically taken up by the Provincial Sheep Breeders' Association. Starting in 1910, a sale of pure-bred and grade sheep was held and this has since become an annual event. As in the case of the cattle sales, special transportation rates are granted on shipments of all pure-bred animals contributed to or purchased at the sales. Selected grade range ewes, from two to four years old, are also offered at a flat rate of $7.00 per head. By this means a large number of farm flocks have been started throughout the province and some 3,000 breeding ewes have been placed in the hands of farmers. The sale is held toward the latter end of October.

The marketing of wool has also received consideration at the hands of the Department of Agriculture. In 1914 an offer was made to market wool for sheep-owners in the province, provided the wool was shorn, tied and packed under certain stipulated conditions. Paper, twine, paper-lined bags and other accessories were supplied. The result was that the Co-operative Branch of the Department marketed some 80,000 pounds of wool at an average price of 17¾c. per lb. as compared with an average of 13c. for the previous year. This work will be continued.



SHEEP THRIVE ON THE SUCCULENT GRASSES

SWINE.—The swine industry has developed rapidly with the increase in settlement; and the number of hogs in the province increased from 27,753 in 1901 to 500,000 in 1914. Elevator screenings and low-grade grain furnish a cheap and satisfactory food for swine; and the wonderful development in grain growing will furnish a further impetus to this branch of the live stock industry. In 1913, in conjunction with the Sheep Breeders' Association, a sale of pure bred swine of both sexes was held. This was so successful that it was decided to make it an annual event. Special freight rates on contributed and purchased animals together with the large selection offered render this of great assistance to those interested in swine breeding.

From the above figures it will be seen that, while "wheat is king," the province produces a considerable amount of pork, of which large quantities are shipped east to Winnipeg annually. The future promises

a great development of this branch of agriculture. The impetus given to wheat growing in the last decade by continued heavy yields of No. 1 Hard has served for the time being to attract farmers from the more sure and rational methods of farming, such as stock raising and mixed farming. But the pendulum should soon swing the other way; and when it does Saskatchewan will be as well known for her swine industry as she is at present famed for her large yields of wheat. The farmer will have solved the question of transportation when he is able to market his wheat on "four legs."

HORSES.—At the present time the draft horse is one of the greatest assets of the Saskatchewan farmer. With thousands of settlers coming into the province annually, bringing few, or in many cases no horses, there has in recent years developed a great demand for farm power. Steam and gasoline engines aid the prairie farmer on all sides; but the time has not yet come for these to supersede the horse in agricultural operations in any very marked degree.

The prices paid for horses are high. Many carloads of work horses are imported annually from Eastern Canada, and some are being brought from the United States. The average price is about $375 per team; but teams of sound, well-trained horses, weighing about 3,000 to 3,200 pounds per team will bring from $400 to $450 at five or six years of age. The coming to the province of large numbers of new settlers annually, many of whom, as before noted, expect to buy horses here, has made a splendid market, which Saskatchewan farmers should be able to supply. The prices that are being paid for horses in the other provinces, and the general scarcity of them at any price indicate that this industry will be a profitable one.

The Department of Agriculture has fully appreciated the opportunity to establish in the province a foundation stock of draft horses that will in future years furnish efficient farm power. In 1903 a Stallion Enrolment Act was passed, and the following year 303 pure-bred and 249 grades were enrolled. This number had increased in 1912 to 1,299 pure-breds and grades.

In January, 1913, a new Horse Breeders' Act was passed which while embodying the best features of the old Enrolment Act, also provided for the formation of what is known as the "Licensed Stallion District." In such district only pure-bred stallions which have passed official inspection are allowed to stand or travel for public service. To date some 1200 horses have been submitted for inspection and 66 municipalities have chosen to be incorporated as units of the Licensed area—a voluntary step. Horses passing inspection are granted a three year license.

At the present time the Clydesdales of Saskatchewan are among the foremost in America. Several large breeders and importers have, at the head of their studs, stallions of great individual merit, which have stood at the top in many of the leading shows in Great Britain, the United States and Canada. An exhibit of Saskatchewan Clydesdales was sent to the 1913 Chicago International Exposition, and out of twenty exhibits some

twenty prizes were taken, including first in the male and second in the female futurity class. The climate and soil are favorable to live stock husbandry; this system of farming must eventually be recognized as most important; the large extent of her arable land and the skill and enterprise of her people give promise that Saskatchewan, in the not far distant future, will vie with her older sister provinces in supplying live stock to the markets of the world.

DAIRYING.—Interest in dairying is constantly increasing because of the changed conditions arising out of the growth and development throughout the province. Many new settlers are coming from dairy sections in other provinces and states and these naturally favor mixed farming. Localities adapted to dairying are being opened up and provided with railway facilities. The demand for good butter is increasing, while the price remains firm and satisfactory. In recent years the supply has not been sufficient to meet the demand.

The present activity in co-operative dairying presents a marked contrast to that of a few years ago when the dairying branch of the Provincial Department of Agriculture was inaugurated. Most of the creameries are under the direct supervision of the Department of Agriculture, Regina, and the Minister of Agriculture, through the Superintendent of Dairying, supervises all business transactions with the exception of arranging for cream delivery. This particular part of the work receives the attention of the local board of directors. Butter sales are effected by the department and the advances on cream are made direct to the patrons twice each month. These advances are based on the wholesale price of butter at the time of payment and are forwarded regularly, even if the butter is not sold. They constitute an advance payment only, and at the end of the summer and winter seasons, which terminate on November 1st and May 1st respectively, the season's business is closed and, after deducting the actual manufacturing cost, the balance, if any, is forwarded to the patrons.

To assist in placing dairying upon a permanent basis, legislation has been passed providing for a Government loan of not more than $1200 to any creamery company complying with certain regulations. The loan is repayable in five years and the rate of interest is three per cent. Among other things the Act requires all companies to submit their plans and specifications to the department for approval. The location and site are also subject to the same conditions. When at all possible, centralization of creamery work is advocated and encouraged. This appears to be the solution of successful creamery work under our present conditions. It has a tendency to reduce the manufacturing cost and correspondingly increase the net returns to the farmers. It has the additional effect of minimizing the expenditure on capital account and having a large make of butter under the direct supervision of a competent manager, thus making uniformity in quality less difficult.

Under the Live Stock Distribution Policy of the Department of Agriculture, some 1200 head of dairy cattle, consisting mostly of high-grade milch cows from three to seven years of age have been imported from Ontario and Quebec, and supplied to farmers in the province. These

animals are specially selected and purchased subject to the tuberculin test. Payment is made largely through the produce of the animals supplied, as contributed to the Government operated creameries. The various forms of assistance which the Government is extending are duly appreciated by the farmers throughout the province and there is every reason to believe that a live and enthusiastic interest is being developed with respect to this branch of farming. To an intelligent dairyman who will conduct his work according to modern methods, Saskatchewan affords opportunities almost unsurpassed.

Part V.

ALBERTA

With the Rocky Mountains to the west as a background and the International Boundary separating Canada from the United States to the south as a base, the Province of Alberta extends north and east, comprising an area greater than that of any country in Europe, save Russia, and more than twice the combined areas of Great Britain and Ireland. Its northern boundary, the 60th parallel of latitude, passes through the Shetland Islands and north of Petrograd; and its southerly boundary, the 49th parallel of latitude, passes south of the English Channel, through France a few miles north of Paris, through the southern portion of the German Empire, and through the middle of Austria Hungary. Thus the Province lies wholly within the north temperate zone, and the climate compares favorably with that of those European countries just mentioned.

AREA OF ALBERTA

Few people outside of the Province of Alberta have any adequate idea of its vast size. To grasp it, one must conceive of Canada with its 3,745,000 square miles of territory as larger than the continent of Europe, larger than the whole of the United States. One must regard the various provinces of Canada as budding young nations greater in size and richer in natural resources than many of the great nations of the Old World. Alberta is larger than any state of the Union, excepting Texas. It is as large as the combined areas of California, Oregon and Washington, or the combined areas of Montana, North Dakota and Minnesota. It is larger than Germany, France or Austria-Hungary, and contains a greater proportionate area of agricultural land than these countries.

The province embraces 162,765,200 acres. Of this 1,510,400 acres is the estimated area contained in rivers and lakes, leaving 161,254,800 acres of land. Allowing the odd sixty million acres for the rough land of the eastern slope of the Rocky Mountains, other mountains and hills, together with waste places that will not likely be suitable for cultivation, there still remains the enormous area of One Hundred Million acres available for settlement. Of this only about 4,000,000 acres were actually

in crop during 1914. In other words, only about four per cent. of the land available for cultivation in the province has as yet been brought under the plow.

NATURAL DIVISIONS

For the purposes of intelligent description, the Province of Alberta may be divided into the following sections, within each of which the system of agriculture is more or less universal:

1. **The Plains District.**—This area is bounded on the south by the International Boundary, and on the north by Township 32. It contains the famous Bow River Valley, and the Canadian Pacific Railway Irrigation Block. The plains district presents the usual features of the open prairie with tree growth along rivers and streams and throughout the foothills of the Rocky Mountains.

2. **The Park Country.**—This area is bounded on the south by Township 31, and reaches as far north as Township 62, about 50 miles north of the City of Edmonton. The country is dotted with groves of trees, interspersed with grass meadows. It is traversed from east to west by the North Saskatchewan and other rivers.

3. **The Forest Area.**—This is the great northern forest, and covers practically that portion of the province lying north of the park country. Here and there open prairie may be found in the vicinity of rivers, and in such places occasional settlement occurs. Otherwise, this area is entirely in virgin condition.

RAINFALL STATISTICS

The following statistics, showing rainfall in the Calgary district, compiled by the Alberta Government, cover a period of fifteen years:

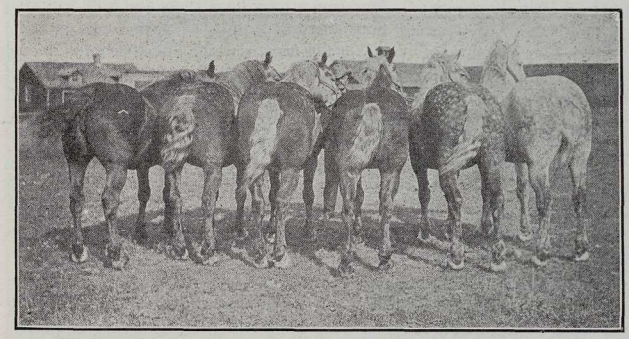
Year	Inches	Year	Inches
1899	14.94	1906	16.24
1900	26.15	1907	14.96
1901	17.57	1908	18.25
1902	22.31	1909	16.03
1903	34.57	1910	12.03
1904	22.77	1911	19.99
1905	14.84	1912	20.14
		1913	17.38

CEREAL CROPS IN ALBERTA

Winter Wheat.—Winter wheat, which is not grown to any great extent in Manitoba or Saskatchewan, is a crop of importance in certain sections of Southern Alberta, which seem particularly adapted to it. Winter wheat is sown on summer-fallowed land the previous year; it ripens earlier than spring wheat and will produce a good crop with less moisture. It is a heavy yielder; instances of over 60 bushels to the acre are on record, and from 40 to 50 bushels is quite common. In 1914, 221,-100 acres of fall wheat were grown in Alberta, an increase of 19,000 acres over the previous year.

Spring Wheat.—The prize wheat of the world at the Dry Farming Congress, 1912, came from Southern Alberta, and the wheat which won first place at the World's Columbian Exposition in 1893 was grown in the Peace River Valley, in Northern Alberta. When we consider that grain of such high quality can be grown at the extremities of the province, it speaks well for the possibilities of the crop throughout the whole land. It is grown successfully in all parts of the province, and each year sees a great increase in the area sown. The yields have been excellent, and when compared with those obtained in the neighboring States to the south of the line, have been uniformly higher.

Oats.—There is no section of the province where oats of the very highest quality cannot be produced successfully. The prize-winning sample of oats at the Paris Exposition was produced in Alberta. While the southern portion of the province has become famous as a section admirably adapted to growing a high quality of wheat, the central portion of the province has become equally well known as a district that grows large crops of a superior quality of oats. A yield of 100 bushels per acre is not uncommon, and from 50 to 60 is regularly obtained. While



ALBERTA IS A FAMOUS HORSE-RAISING PROVINCE

34 pounds is the standard weight for a bushel of oats, exhibits of oats at the Provincial Seed Fair, weighed by the Dominion Grain Inspector for the province, tipped the scale at 48 pounds. The same official stated that Alberta was prepared to advocate a standard grade of oats calling for a weight of 42 pounds to the bushel, and also made the statement under oath that 85 per cent. of the Alberta oats examined by him would weigh over 42 pounds to the bushel. It is this fact which has led to the establishment in the province of large oatmeal mills. It is not unusual to see a large field of oats standing over five feet high. There is a large market for oats in the Province of British Columbia and the Yukon territories, also in the Orient, Eastern Canada and Great Britain.

Barley.—There are two varieties of barley produced in the province; the six-rowed barley, principally used for feeding purposes, and the two-rowed barley, utilized entirely for malting. The six-rowed is the principal barley crop in Central Alberta at the present time, and probably preponderates also in Southern Alberta, although the production of a high-grade two-rowed barley in the latter district is rapidly coming to the front. Barley is a heavy yielder in Alberta. Instances are on record where crops have threshed out as high as 78 bushels to the acre. The first prize barley at the International Dry Farming Congress, 1912, was grown in Southern Alberta and was subsequently sold to a firm of maltsters in Great Britain.

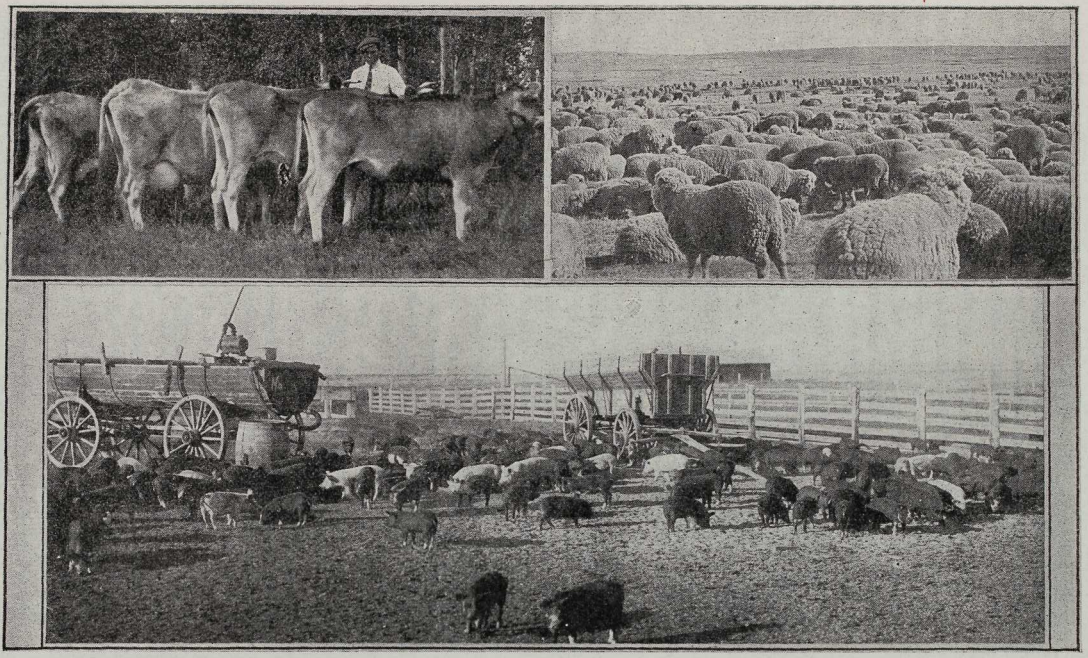
In 1913 the Dry Farming Congress was held at Tulsa, Oklahoma, U.S.A., but the first prize for barley was again awarded to Alberta, and again in 1914, although the Congress was held at Wichita, Kansas. U.S.A., Alberta barley was, for the third time in succession, awarded the highest prize.

LIVE STOCK IN ALBERTA

HORSES.—In breeding horses, Alberta occupies a somewhat similar position to Canada that Kentucky does to the United States. Owing to the high altitude, dry and invigorating atmosphere, short and mild winters, the nutritious grasses and inexhaustible supply of clear, cold water, Alberta is pre-eminently noted for her horses, which have become famous for their endurance, lung power, clean bone, and perfect freedom from hereditary, and other diseases. There are in Alberta several grades of horses, varying in point of quality from the hardy Indian pony (cayuse) to the beautiful, well-formed thoroughbred.

Heavy draft horses are now finding a ready sale at highly paying prices. Teams, weighing 3,000 lbs. and upwards, are worth $500 and more. Between 2,500 lbs. and 3,000 lbs., the average price would be $400, and the value of teams weighing between 2,000 lbs. and 2,400 lbs. is $250 and upward, according to quality.

CATTLE.—Southern and Central Alberta have long been the recognized home of beef cattle of exceptional quality. The peculiar nutrition of the prairie and foot-hill grasses, the pure water and moderate climate combine to favor the live stock industry. During recent years the converting of many large ranges into grain farms has broken up the big herds that formerly distinguished Alberta, but their places have been taken by thousands of cattle raised by farmers, and the importance of cattle raising is continually increasing. For some years back beef cattle have commanded high prices, and Alberta farmers engaged in this industry have reaped handsome rewards. Present high prices of all meat animals are not due to local conditions but to a world-wide shortage. According to authoritative figures the total number of all cattle in the United States in 1907 was 72,534,000; in 1913 this total had been reduced to 56,527,000, and during the same period the population of the United States increased by more than 9,000,000 people. In greater or less degree the same is true of the other meat-producing countries; population is increasing rapidly and beef production slowly or, as in the case of the United States, is actually



DAIRY COWS, SHEEP AND HOGS ARE THE BASIS OF MANY A FARMER'S BANK ACCOUNT

rapidly falling off. With the high prices to which the former grazing lands have risen in other countries there appears to be no prospect of beef production overtaking the demand. The situation is entirely encouraging to the meat producer in Western Canada.

It is an interesting fact that the City of Calgary is the home of the largest individual pure-bred cattle auction in the world. This takes place in the month of April of each year, and on that occasion stockmen gather from far and near to purchase their bulls, and to transact other business. Shorthorns, Herefords, Polled Angus, and Galloways are the chief beef breeds, while Holsteins and Ayrshires are produced for dairy purposes.

SHEEP.—In common with other stock, sheep thrive to great advantage on the rich native grasses of Alberta, although it is true that ranchers and farmers have not as yet given the same attention to sheep raising as they have to the cattle and hog industry. This is perhaps due, in part at least, to the fact that more expensive fencing is needed to confine sheep than is required for cattle. Sheep raising, however, is gradually growing in importance. Within the past year or two Alberta wool has found considerable favor on the English market, and is now also much sought after by woollen manufacturers of the United States. As mutton is always in good demand, and as the climate, with its total absence of winter rains, is very favorable to sheep raising, there are undoubtedly good profits ahead of those who apply themselves to this industry. According to Alberta Government figures there were in 1912 only 366,946 sheep in the province. This number has increased 25% since that date, as more interest is now taken in sheep raising, but the industry is still in its infancy and promises very great development in the early future.

HOGS.—As might be expected in a district where the dairy industry is growing so rapidly, hog raising, affording as it does the most economical method of realizing the largest returns from coarse grain, skimmed milk, and other dairy by-products, is a very important branch of farming in Southern and Central Alberta. The soil conditions and the climate, which are so eminently suited for dairying, are also productive of those crops which make the cheapest pork. Calgary, the live stock centre of Alberta, has an excellent pork-packing establishment, where top prices are paid. The production of an acre of barley costs just about one-half of what an acre of corn does, and will fatten one-third more hogs. The cost of production of an acre of peas is only about one-fifth of what it costs to cultivate an acre of corn, and a fourth more hogs can be fattened from the produce of the same amount of ground.

Alfalfa, universally recognized as a hog fodder of first importance, is grown with great success in the irrigated areas of Southern Alberta. During 1913 and 1914 a great impetus was given to the hog industry, as prices were high, both for export and for home consumption, and farmers were beginning to recognize the fact that by feeding their grain to hogs they would realize much more for it than by selling at market prices. Some idea of the export trade in hogs which has developed is gained from the fact that in seven months of 1914 a single United States firm bought

no less than 112,544 hogs at Calgary, for which they paid an average price of $7.81 per cwt., the highest price paid for any of their purchases being $8.27½ and the lowest $7.15 per cwt. Since that date hogs have reached a price as high as $9.15 on the Calgary market.

DAIRYING.—The Provincial Government maintains at Calgary the largest and most important "dairy station" and cold storage plant in the West. Creameries are subject to the control of the patrons, but are under Government direction. At the end of every month each patron gets credit for the equivalent of his cream in butter, a cash advance being paid him at once and the balance as the product is sold. Co-operation of creameries under Government direction has resulted in the production of butter of a high standard of quality, and has created an efficient and economical selling organization. The future of the dairy industry in Alberta is guaranteed by an abundance of the best fodder, consisting of native grasses supplemented by alfalfa and peas; fresh, pure water; efficient system of creameries under Government control manufacturing butter at cost, making cash advances to the farmer every month, and a home market already greatly in excess of the production, and constantly and rapidly expanding.

POULTRY.—There is a large field in Alberta for the industrious poultry raiser. A few acres and a hundred chickens will yield a good income. With eggs at 25c. to 60c. per dozen, and dressed poultry at from 15c. to 25c. per pound on the Calgary market, little need be said about the profits of this valuable feature of the Southern Alberta farm.

Turkey raising has come to be an industry of importance. Thousands of these birds are grown and fattened for markets in the Coast cities, and thousands of dollars are brought into the country every year through this business alone. Where large areas of wheat stubble may be utilized for forage ground, the expense of putting turkeys on the market is small indeed.

IRRIGATION IN ALBERTA

Irrigation has been proven an admirable adjunct to mixed farming in Southern Alberta, and as a consequence several extensive irrigation undertakings, covering some millions of acres of the most fertile lands in Canada, are now in course of completion.

THE BOW VALLEY "IRRIGATION BLOCK"

By an arrangement with the Dominion Government a large area of land lying along the main line of the C.P.R. east of Calgary was transferred to the Canadian Pacific Railway Company upon their undertaking to carry out a gigantic irrigation project on this land. Owing to its railway facilities, its delightful climate, and the fact that it immediately adjoins the thriving and rapidly-growing City of Calgary, this "Irrigation Block" comprises lands among the most desirable in America today. This irrigation project—the greatest on the American continent—is being

pushed rapidly to completion, and a considerable area has already been opened to settlement. The block has an average width of 40 miles and extends from Calgary eastward 150 miles, with an area of over 3,000,000 acres.

THE LETHBRIDGE IRRIGATION SYSTEM

This is the pioneer irrigation undertaking on a large scale in Western Canada. It was started in the year 1900, and was completed some years ago. This extensive irrigation system, which has been constructed at an expenditure of over $400,000, draws upon an inexhaustible water supply in the St. Mary River, where the head works are located. The length of the canal system is 115 miles. Water is provided in never-failing abundance for the conversion of the region into one of rich, productive agriculture. The area under irrigation is about 100,000 acres. These lands may be purchased on application to the Canadian Pacific Railway, Department of Natural Resources, Calgary.

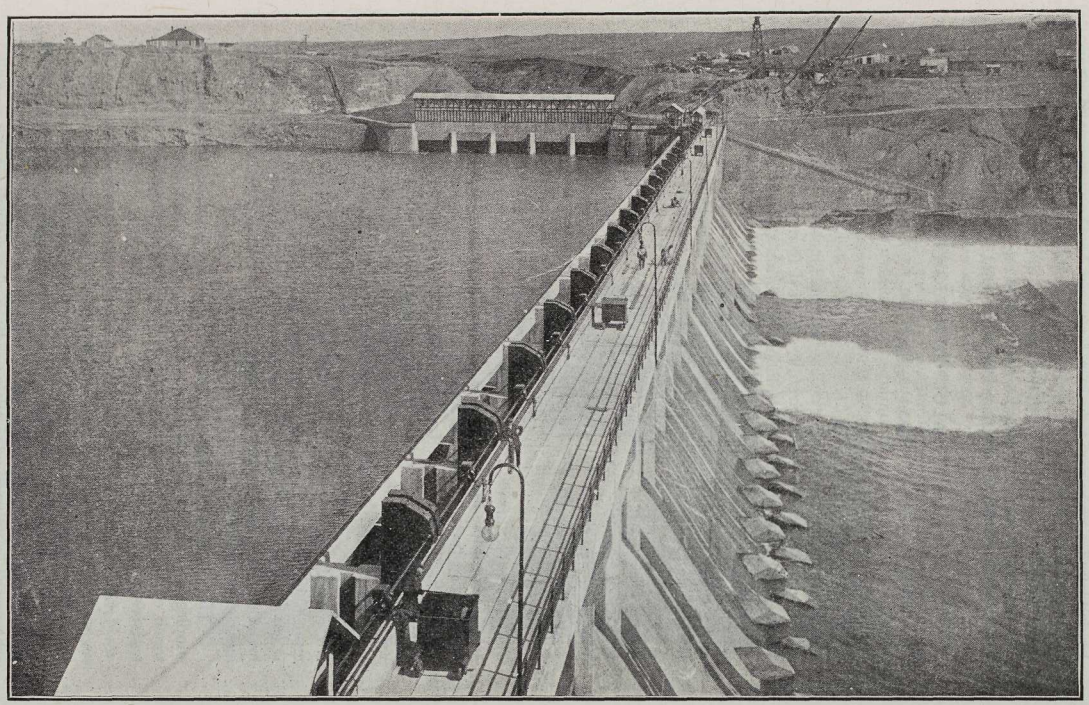
The Lethbridge irrigation system is admirably served with transportation facilities. One railway line connects Lethbridge with the International Boundary and other lines traverse the centre of the district and serve the more westerly portion.

THE COMBINATION FARM

It has long been recognized that the prairie soil of Southern Alberta is among the most fertile in the world, and it is now demonstrated that, with the aid of irrigation, maximum crops can be produced every year. Many farmers, however, will desire some cheaper land for cattle range and for the production of such crops as do not require much moisture, and for these a "combination farm"—part irrigated and part non-irrigated —affords an ideal arrangement.

Southern Alberta irrigated districts contain non-irrigable as well as irrigable areas, and offer to the settler an opportunity to engage in mixed farming under the most favorable conditions. Here can be secured, in the same quarter section, side by side, land above the canal system for grazing purposes and "dry farming" methods, and irrigable land which produces great yields of wheat, oats, barley, alfalfa, timothy, vegetables, etc. For farm purposes there is a never failing supply of good water, which not only insures much heavier crops than would otherwise be possible, but is also of the greatest value in the pasture for cattle, hogs, and other live stock. The irrigation farmer has no water problem on his hands.

Another feature of much importance is the fact that, although the irrigated area of Southern Alberta is naturally treeless, the introduction of water makes possible the growth of a number of varieties of trees which thrive wonderfully under irrigation conditions. Belts of these trees are of great value, not only for the beauty which they add to the landscape, but for affording shelter to stock and providing places where small fruits can be grown to the best advantage. The farmer who has a portion of



CANADIAN PACIFIC RAILWAY COMPANY'S IMMENSE IRRIGATION DAM ON THE BOW RIVER, NEAR BASSANO, ALBERTA

his land under irrigation may in a few years be the possessor of a very beautiful home, surrounded by trees, and producing the finest fruits and vegetables both for his own use and for sale.

Combination farms may be regarded as one of the best agricultural propositions on the North American continent.

THE VALUE OF IRRIGATION

Southern Alberta, owing, no doubt, to its varying altitude and the proximity of the Rocky Mountains, is a country with considerable differences of precipitation. For instance the average rainfall at Calgary over a period of seven years has been 16.44 inches and the average at Medicine Hat for the same period has been 9.82 inches. The areas brought under irrigation have been carefully selected from those districts where the average precipitation is insufficient to obtain the best results without irrigation. With the increase of population and prosperity there is a demand that the land should be made to produce to its full capacity, and this can be accomplished only by means of irrigation, and the general introduction of irrigation marks an epoch in the history of Southern Alberta. As a matter of fact, farmers now are not satisfied with returns more or less in accordance with the accident of rainfall, but are aiming at perfection in the development and maturity of their crops. It would, therefore, appear to be a sinful waste not to utilize the means which have been placed at the disposal of settlers in districts favored with an adequate water supply to supplement the efforts of Nature. Having water available in his ditch or reservoir, the irrigation farmer is able to distribute it on his crop at such season of the year and in such quantities as experience has taught him are the most propitious to favorable results. He is not at the mercy of the weather. The contention of the experienced irrigationist is, that those farmers cultivating without the aid of irrigation in any portion of the world where water supply by gravity can be economically secured, are playing an unskilful game of hazard in trusting solely to the bounty of Nature and omitting to take such precautions as have been placed at their command. The irrigation farmer, on the other hand, controls his water supply absolutely, and has, other things being equal, a crop assured beyond all peradventure. In Southern Alberta the farmer is able to insure his crop against drought, just as effectually as he insures his life. Both are designed to protect the prudent farmer and his family against losses from uncontrollable causes.

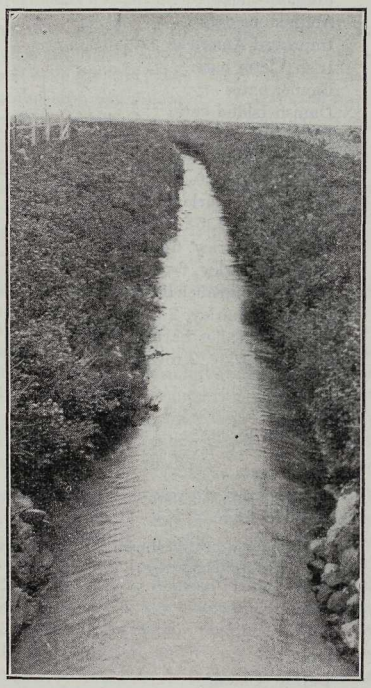
The sprinkling of a lawn, the watering of a plant, is irrigation in its simplest form. Without it the lawns and parks, which give to city life a touch of Nature's beauties, would be devoid of all that makes them attractive.

Irrigation is now recognized, not merely as a means of making arid regions productive, but in its wider and greater application as a science of increasing the productiveness of all agricultural lands. It is not simply a device to flood the fields in dry seasons, but a practical means of controlling moisture, supplying much to crops that require much, and to other crops in proportion to their needs.

To ascertain just what benefits were to be derived from irrigation in Southern Alberta, a series of experiments was undertaken by the Dominion Experimental Farm at Lethbridge. The farm is divided into a "dry" and "irrigated" section, and as it is the business of the manager to produce the best results possible on each section, the conclusions arrived at may be accepted as absolutely unbiased.

With this fact in mind the figures from the Farm Report furnish interesting and convincing reading. Comparing the results secured under natural rainfall conditions with results secured under irrigation, the following crops show, as the result of adopting the latter, the percentage of increase set opposite each:—

Potatoes	260%
Turnips	200%
Sugar Beets	184%
Carrots	141%
Corn..	128%
Mangolds	102%
Field Peas	73%
Barley (two-rowed)	69%
Barley (six-rowed)	45%
Spring Wheat. ..	33%



AN ALBERTA IRRIGATION DITCH

"The highest yielding wheat under irrigation, covering two years, results, went 43½ bushels per acre. The same wheat without irrigation yielded 33 bushels per acre during the same period. In six-rowed barley the figures were 61½ and 48¼ bushels respectively. Two-rowed barley under irrigation yielded 65 and without irrigation 49¼ bushels per acre. Potatoes made a remarkable showing under irrigation. The figures were 646½ bushels per acre as compared with 149½ without irrigation. Sugar beets yielded 24¼ tons per acre under irrigation, and 6¼ without. Mangolds, 25 tons per acre and 13½ without. Turnips about the same. Carrots 15 tons under water and 6½ tons under dry land culture. Fodder corn yielded 15½ tons under irrigation as compared with 6¼ tons without."

Further official evidence of the value of irrigation is found in the following return, also taken from the records of the Dominion Government

Experimental Farm at Lethbridge. The yields per acre of several different varieties of wheat, oats, barley are shown for the year 1913, under irrigation and without irrigation.

	Irrigated	Non-irrigated
Huron wheat	51 bushels	41 bushels
Red Fife wheat	45 "	31 "
Preston wheat	47 "	30 "
Stanley wheat	45 "	32 "
Marquis wheat	52 "	29 "
Prelude wheat	30 "	12 "
Abundance oats	116 "	55 "
Improved American oats	132 "	83 "
Irish Victor oats	131 "	84 "
Banner oats	115 "	73 "
Danish Island oats	123 "	73 "
Daubeney oats	102 "	63 "
Cole barley, 6-rowed	101 "	40 "
Claude barley, 6-rowed	94 "	40 "
Manchurian barley, 6-rowed	74 "	33 "
Odessa barley, 6-rowed	91 "	40 "
Mansfield barley, 6-rowed	84 "	35 "
Guymale barley, 6-rowed	68 "	29 "
Swedish Chevalier barley, 2-rowed	92 "	50 "
Invincible barley, 2-rowed	94 "	48 "
Early Chevalier barley, 2-rowed	69 "	39 "
Clifford barley, 2-rowed	66 "	35 "
Potatoes	433 "	231 "
Peas	43 "	30 "
Turnips	16 tons	8 tons
Carrots	15 "	8 "
Sugar beets	14 "	11 "

NOTE: Odd pounds are not considered; nearest even bushels or tons quoted.

The following table shows the average yield under irrigation and non-irrigation for six years, up to and including 1914:

	Irrigated 6-year average	Non-irrigated 6-year average
Wheat	46 bushels	26 bushels
Oats	101 "	59 "
Barley (Claude)	73 "	34 "
Potatoes	492 "	233 "

At Strathmore, in the Western Section of the Canadian Pacific Irrigation Block, the Dominion Government in the season of 1914 conducted experiments to ascertain what benefits might be derived from irrigation in that district. The land used had been summerfallowed the previous year, which made it favorable to showing good results from dry farming, but the yields demonstrated overwhelmingly the advantage of irrigation. The best yield of Red Fife wheat obtained without irrigation was 16

bushels per acre, while with irrigation 42.8 bushels per acre were secured. The result with Marquis wheat was even more striking. Without irrigation it yielded 16.8 bushels per acre, and with irrigation the yield was 50.1 bushels per acre—an advantage in favor of irrigation of 33.3 bushels per acre. One variety of peas yielded 12.5 bushels per acre more with irrigation than on dry-farmed summerfallowed land, and another variety showed an increase under irrigation of 13.3 bushels per acre. No comparison of the benefits of irrigation on oats and barley was secured during this, the first year of the Government's experiments at Strathmore.

The above figures demonstrate very clearly the benefits of irrigation for grain and vegetable crops in Southern Alberta, and for fodders such as alfalfa and timothy, its value is even greater. The fact is that irrigation assures the farmer of a maximum crop every season. It also does away with the necessity of summerfallow, which must be employed under "dry farming" practice. Thus irrigated land may cost more than non-irrigated land, and still be really cheaper, as it is not necessary to leave part of the irrigated land lying fallow each year. The irrigation farmer is able to crop every acre of his land every year, and, by rotating grain crops with alfalfa and roots, can not only maintain but increase the fertility of his soil.

IRRIGATED EXPERIMENTAL AND DEMONSTRATION FARMS

As a general rule, once a corporation that is in the land business has sold a new settler a farm, its interest in the transaction ceases. The Canadian Pacific Railway Company is in an entirely different position. When a parcel of land has been finally sold, that Company's interest in the transaction does not cease. In fact, it only commences. The Railway Company is vastly interested in the success of every individual purchaser, who at once becomes a valued patron of the road.

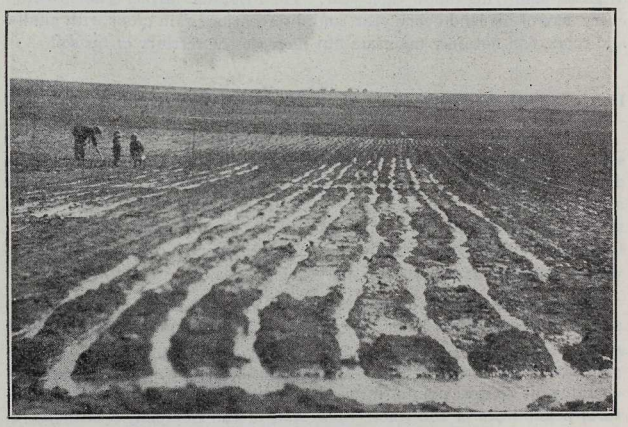
The Company realizes that the bulk of the settlers coming into occupation on its irrigated lands, will be more or less ignorant of the proper methods of handling and applying water for irrigation, and it, therefore, places at their disposal expert advice and assistance. The Company operates, at central points, farms devoted to demonstrating the agricultural possibilities of the tract. The staff of the Company's Demonstration Farms is always ready to assist new colonists. On some of the farms are maintained pure bred bulls and boars for the free use of the settlers. The maintenance of these demonstration farms is in line with the general policy of endeavouring to create prosperous agricultural communities in Western Canada. The Company realizes the difference between land-selling and colonization, and that a somewhat paternal administration accelerates the result the Company is striving for, namely, the greatest possible measure of development in the shortest possible time.

THE CANADIAN IRRIGATION LAW

It is of great importance that the laws under which irrigation is practised should be so framed as to avoid any litigation that might possibly

arise over water rights. In many of the States of the Union where irrigation is in vogue more money has been spent in litigation over water rights than upon actual irrigation development.

The Canadian irrigation laws and their administration are acknowledged by the leading irrigation experts of the continent to approach perfection as nearly as possible. The United States Department of Agriculture, in Bulletin 96 of that department, recommends the Canadian law to the consideration of those whose duty it will be to prepare irrigation laws in the future for use in those States where irrigation is practised or is likely to be practised. Under these laws, the waters of Alberta being recognized as the property of the Crown, the title given for a water right is equal to and as good as is the title given for land. It is not necessary to be a citizen of Canada in order to own land there.



APPLYING THE WATER TO THE FERTILE SOIL

ANIMAL HUSBANDRY

In studying the economic side of irrigation, the first fact that must be clearly grasped is that the backbone and foundation of any irrigation enterprise is not the production of either fruits, garden truck, or other expensive crops, but the feeding and finishing of live stock and the development of dairying in all its branches. This has been the history of irrigation expansion everywhere in the United States. The proof of this contention is that out of the total irrigated acreage in crops in the United States at the time of the last decennial census, sixty-four per cent. was in hay and forage crops.

SUMMARY OF THE ACREAGE AND YIELDS OF THE LEADING GRAINS IN ALBERTA DURING THE LAST 16 YEARS

	SPRING WHEAT (Average yield, 20.76)			WINTER WHEAT (Average yield, 21.69)			OATS (Average yield, 35.73)			BARLEY (Average yield, 26.79)		
Year	Crop area in acres	Total yield in bushels	Average yield per acre	Crop area in acres	Total yield in bushels	Average yield per acre	Crop area in acres	Total yield in bushels	Average yield per acre	Crop area in acres	Total yield in bushels	Average yield per acre
1914	1,150,000	23,219,000	20.19	221,100	4,252,000	19.23	1,502,000	54,523,000	36.30	178,000	4,681,000	26.30
1913	1,310,000	30,130,000	23.00	202,000	4,242,000	21.00	1,639,000	71,542,000	43.65	197,000	6,334,000	32.15
1912	1,256,200	27,059,000	21.64	161,000	3,515,000	21.83	1,359,300	62,936,000	46.30	174,900	5,780,000	32.87
1911	1,299,989	28,132,000	21.54	316,910	8,011,000	25.28	1,178,300	56,954,000	48.34	156,418	4,151,000	26.54
1910	450,493	5,697,956	12.65	142,467	2,206,564	15.48	492,589	12,158,530	24.68	90,901	1,889,509	20.79
1909	324,472	6,155,455	18.97	102,167	2,312,344	22.63	693,901	24,819,661	35.76	107,764	3,310,332	30.72
1908	212,677	4,001,504	18.81	104,956	3,093,422	29.47	431,145	15,922,974	36.93	77,876	1,949,164	25.03
1907	123,935	2,261,610	18.25	83,965	1,932,925	20.66	307,093	9,247,914	30.11	54,698	1,082,460	19.78
1906	115,502	2,664,661	23.07	61,625	1,301,359	21.11	335,728	13,136,913	39.12	73,588	2,157,957	29.32
1905	75,353	1,617,505	21.46	32,174	689,019	21.41	242,801	9,514,180	39.18	64,830	1,773,914	27.36
1904	47,411	786,075	16.58	8,296	152,125	18.33	180,698	5,609,496	31.04	61,549	1,608,241	26.12
1903	59,951	1,118,180	18.65	3,440	82,418	23.95	162,314	5,187,511	31.95	42,219	1,077,274	25.51
1902	45,064	850,122	18.86	.....	.....	.....	118,997	3,776,976	31.74	22,201	473,108	21.31
1901	34,890	857,714	24.58	.....	.....	.....	104,533	4,253,284	40.68	13,483	442,381	32.81
1900	30,361	583,806	19.22	.....	.....	.....	77,616	2,625,581	33.82	9,256	234,971	25.37
1899	35,090	833,123	23.74	.....	.....	.....	51,929	2,189,441	42.16	6,655	178,395	26.80

Part VI.

BRITISH COLUMBIA

The Pacific Maritime Province of Canada, as British Columbia is often called, is a great quadrangle of territory, 700 miles long, and averaging 400 in width, lying between the Rocky Mountains and the Pacific Ocean. Extending north from the 49th parallel of latitude, it has a coast line of 450 miles on the Pacific Ocean, the northern portion being cut off from the sea by a narrow strip of Alaskan Territory. The boundary on the north is the 60th parallel.

NATURAL DIVISIONS

The province may be divided roughly into three areas, each having its special characteristics, viz.:

1. **ISLANDS.**—The islands adjacent to the Coast, comprising Vancouver Island, the Queen Charlotte Group, and the innumerable islands of various sizes that dot the Coast line. Washed by the waters of the Japanese current, the climate is mild and moist, and the same may be said of the narrow strip of territory intervening between the Coast Range and the sea shore. This influence also affects to some extent the estuaries of the rivers flowing into the Pacific.

2. **INTERIOR PLATEAU.**—The great interior plateau, flanked by mountains on the east and west, and forming the southern half of the Mainland. This is elevated some 3,500 feet above sea level, and has been so deeply eroded by lake and river streams that in some parts it appears mountainous, but the absence of sharp edges to the hill tops and the innumerable rounded boulders point conclusively to the fact that at some remote period this immense area was the bed of a vast inland sea.

3. **THE NORTH COUNTRY.**—The northern half of the province is separated from the plateau by various cross mountain chains, from whence spring the head waters of the Peace River. Except in isolated patches, comparatively little is known of this area. The Coast Range of mountains forms a rocky frontier on the west, while the eastern boundary, following the 120th meridian of longitude, cuts the Rocky Mountains at the Peace River Pass, and continues north through a rolling prairie region that has never been thoroughly explored.

AREA

The area of British Columbia has been variously set down from 375,000 to 395,000 square miles. From careful surface measurements of the map the area is computed at 395,560 square miles, or 243,158,400 acres.

MARKETS

It is an axiom in trade that "there is no market like the home market," and in this respect British Columbia is singularly blessed, for there is no country in the world which offers such exceptional advantages in the way

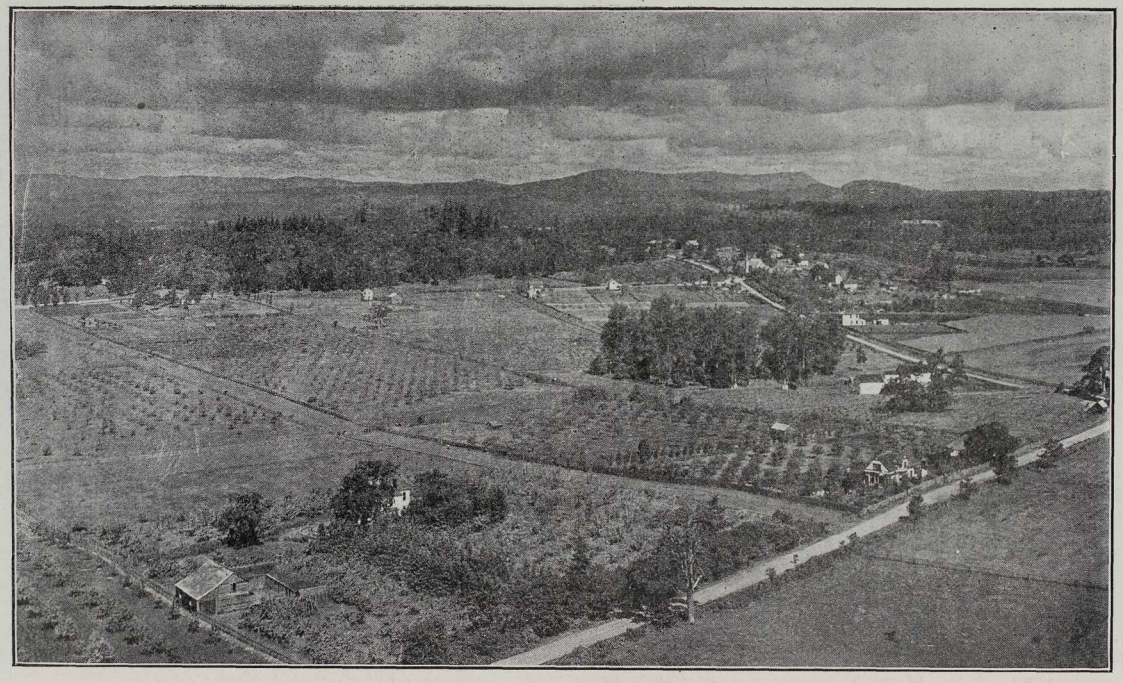
of markets for farm products. The mining and logging camps, with which the whole country is dotted, employing thousands of men; the numerous working mines and smelters with their large staffs of employees; the railways, operating and under construction, and the lake and river steamers are all liberal patrons of the farmer at prices unaffected by competition, for imported articles do not disturb local trade, and in every case home products are preferred to those from abroad. The established cities and towns and the new ones which are constantly springing up, with the opening of new mines and the establishment of new industries, afford splendid markets to the farmer, who deals directly with the customer or retailer for cash—the trading system in vogue in older countries being practically unknown. Fruits and early vegetables, not disposed of locally, find a large market east of the Rocky Mountains, and in the Coast cities of the province. Eggs, butter, milk and cream are always at a premium, the local production falling far short of supplying the demand. In many towns fresh milk is hard to get, and it is unknown in the mining, lumbering, and railway camps, where the imported condensed substitute is used. The importations of these articles into British Columbia for an average year throw light on the possibilities for dairying and poultry-raising in British Columbia. They are:—

Butter	$ 2,560,000.00
Condensed milk and cream	676,000.00
Eggs	1,616,879.00
Poultry	474,718.00

If cheese, which is not made in quantity in British Columbia, be added, $445,000.00, we have a total of over $5,700,000.00 sent out of the province annually for articles which can be profitably produced at home.

Again, in the matter of fresh meats and salt pork, ham, bacon, and lard, the yearly importations aggregate $4,118,000.00, as well as over $2,500,000.00 worth of beef cattle, sheep and swine, all of which should be raised by the farmers of the province.

Although British Columbia has begun to export fruits, the home market falls far short of being supplied, for we find that in an average year the province imported $930,000.00 worth of fruits and fruit products, viz.: apples, other fruits (not tropical), canned fruits, jams and jellies. The importation of apples may be partly accounted for by the demand in the early spring and summer months, when no home-grown stock is available, which has to be supplied from New Zealand and Australia. The "other fruits" represent the berries and early fruits grown in California and brought in before the local fruits have matured. The jams, jellies, and canned fruit, however, should and will be produced in the province as the fruit industry develops, and in good time all the other products of the ranch, farm, dairy, and orchard, of which the province now imports such large quantities annually, will be won from the fertile valleys and hill-sides of British Columbia. There is no fear of over-production in any branch of agriculture, for in the future, as in the past, the farmers will not be able to supply the ever-increasing demand created by the march of industry.



A FERTILE VALLEY IN BRITISH COLUMBIA

FRUIT GROWING

His Excellency Earl Grey, former Governor-General of Canada, on a visit to British Columbia, was greatly impressed with the future possibilities of the fruit industry. In his reply to the address of the Royal Agricultural Society, on the occasion of the opening of the New Westminster Exhibition, His Excellency said:—

"Fruit-growing in your province has acquired the distinction of being a beautiful art as well as a most profitable industry. After a maximum wait of five years, I understand, the settler may look forward with reasonable certainty to a net income of from $100 to $150 per acre, after all expenses of cultivation have been paid.

"Gentlemen, here is a state of things which appears to offer the opportunity of living under such ideal conditions as struggling humanity has only succeeded in reaching in one or two of the most favored spots upon the earth. There are thousands of families living in England to-day, families of refinement, culture and distinction, families such as you would welcome among you with both arms, who would be only too glad to come out and occupy a log hut on five acres of a pear or apple orchard in full bearing, if they could do so at a reasonable cost."

A few years ago the man who would have ventured to describe the Kootenays as fruit-growing districts would have been looked upon as a visionary or an imbecile; to-day Southern British Columbia is acknowledged to be one of the best fruit sections on the continent. Not only will it produce fruit in abundance, but the quality of its fruit is superior to that grown in any other part of America. Certain varieties of fruit attain perfection in certain localities—for instance, the Fameuse apple develops its best qualities on the Island of Montreal—but taking a collection of British Columbia fruit, it is larger, better colored, and better flavored than any similar miscellaneous lot, the product of any other country. Proof of this is not far to seek.

Exhibits of British Columbia fruit in Great Britain have won the highest awards, year after year. In 1905, 14 medals were awarded at various exhibitions; then in 1906, 9 medals; in 1907, 13 medals; in 1908, 19 medals; in 1909, 10 medals; in 1910, 14 medals; in 1912, 12 medals; in 1913, 15 medals.

British Columbia fruit has been awarded the gold medal of the Royal Horticultural Society of England every year it has been exhibited at the Royal Horticultural Show, since 1904.

British Columbia fruit won gold medals at the National Exhibition at Toronto, in 1909, 1910, 1912, 1913 and 1914.

At the Spokane National Apple Show in recent years, B.C. apples won 13 first prizes out of 14 entries, and over $4,000.00 in cash, and in 1914 carried off 25 prizes out of 34 entries, in competition with the best apple-growing districts in the United States.

WHOLESALE PRICES OF FRUIT

The following table indicates general average prices of packed fruit in British Columbia:—

	High.	Low.	Average
Apples, 40 pound box	$2.00	$0.60	$1.10
Crab-apples, 40 pound box	1.50	.75	1.00
Pears, 40 pound box	2.00	.60	1.45
Plums, 20 pound box	1.00	.50	.70
Prunes, 20 pound box	1.00	.50	.60
Peaches, 20 pound box	1.25	.40	.60
Apricots, 20 pound crate	1.50	.50	.75
Strawberries, 24 pound crate	2.85	1.75	2.00
Raspberries, 14 pound crate	2.00	1.40	1.60
Loganberries, 14 pound crate	2.40	1.50	1.75
Blackberries, 14 pound crate	2.40	1.30	1.50
Gooseberries, per pound	.10	.05½	.06¾
Cherries, per pound	.15	.03½	.07
Currants, per pound	.08	.04	.06

AN EXPANDING INDUSTRY

Figures furnished by railway and express companies show that fruit shipments have increased about 100 per cent. in five years, although these shipments are far from representing the whole crop, much of which is consumed locally or shipped by water routes, of which no record is available. The increase in fruit acreage has also been great in recent years; in 1891 it was 6,431 acres, and in 1901 it had only increased to 7,430 acres, but from 1901 to 1913 the increase was no less than to 38,600 acres. The approximate value of the fruit crop of 1902 was $391,000, which by 1913 had grown to $1,033,000.00.

The quality of the peaches and grapes grown in Southern British Columbia can scarcely be excelled, the crisp, dry air and bright sunshine combining to impart a lusciousness and flavor lacking in the fruit of hot countries. Almonds, walnuts, chestnuts, nectarines, apricots, and some even tenderer fruits are being successfully grown.

THE CAPITAL INVESTMENT

A few figures bearing on the cost of making the orchard, that is, bringing it to the point where it is revenue-producing, will not be out of place.

IRRIGATED LAND

20 acres irrigated at $250 per acre	$ 5,000.00
Fencing	250.00
Preparing land, plowing and harrowing	150.00
Trees (yearlings), 80 per acre at 15c.	240.00
Setting out trees (1,600 at 8c. each)	128.00
	$ 5,768.00

MAINTENANCE FOR FIVE YEARS

Average cost of irrigation at $3.50 per acre	$ 350.00
Cost of cultivation, pruning, spraying, etc., at $30 per acre per year	3,000.00
	$ 3,350.00
Making the total cost of the orchard at the end of the fifth year, when it should be beginning to give commercial returns	$ 9,118.00

NON-IRRIGATED LAND

In the case of unirrigated land, the cost would be approximately:—

20 acres at $200 per acre	$ 4,000.00
Fencing	250.00
Preparing land, plowing and harrowing	150.00
Trees (yearlings), 80 per acre at 15c. each	240.00
Setting out trees (1,600 at 8c. each)	128.00
	$ 4,768.00

MAINTENANCE FOR FIVE YEARS

Cultivating, pruning, spraying, etc., at $30 per acre per year	$ 3,000.00
Making the total cost of the orchard at the end of the fifth year, when it should be beginning to give commercial returns	$ 7,768.00

Root crops and small fruits planted between the trees for the first three or four years should more than pay for the upkeep of the orchard.

The actual experience of many fruit-growers is highly satisfactory to them, and a temptation to every man who desires to make money pleasantly to set up in the business. In Okanagan there are instances of $500 to $600 gross profit per acre. At Kelowna 9 tons of pears and 10 tons of prunes per acre are not uncommon. Near Nelson, 14 acres produced 1,000 cases of strawberries and 94 tons of roots, netting the owner $100 per acre. This land was formerly a cedar swamp. At Lytton, Tokay grapes, averaging four pounds to the bunch, were grown in the open. On the Coldstream Ranch, near Vernon, 20 acres produced $10,000 worth of Northern Spy apples. Tomatoes to the value of $1,500 per acre were grown on Okanagan Lake. A cherry tree at Penticton produced 800 pounds of fruit; another, at Agassiz, 1,000 pounds.

In the suburbs of Victoria the following results are authenticated: Four acres of strawberries produced 28,126 pounds of fruit, which sold for $2,598 net, or $650 per acre; half an acre produced 2,826 pounds, giving a net return of $301; another grower raised 12,556 pounds of berries on 1½ acres, which sold for $1,228.60 net, or over $800 per acre. Rockside

Orchard, Victoria, produced marketable plums and cherries from ten-year-old trees as follows: Plums—35 trees Grand Duke, 442 crates, averaging 22 pounds; 18 Hungarian prunes, 216 crates; 27 Engelbert, 290 crates; 10 Tragedy, 142 crates—1,070 crates, a total of 20,416 pounds from 90 trees. Cherries—Twenty-five Olivet trees yielded 230 crates of 24 pounds, or a total of 5,520 pounds.

Such returns are, however, exceptional, and no criterion of average production or returns, which vary much with conditions.

FRUIT GROWING AREAS IN BRITISH COLUMBIA

With such diversity in soil and climate it is unavoidable that British Columbia should be divided into a number of areas, each of which has its individual peculiarities, and so suited particularly to certain classes of fruit.

The main recognized fruit districts of the province are as follows:

1. Vancouver Island and adjacent Islands. Because of the moist and equable climate, this district has so far been more successful in small fruits than in large fruits. Peaches, grapes, apricots and other tender fruits are successfully cultivated in a small way in very favorable locations. Sweet cherries, plums and prunes do well, except when a moist season brings injurious fungous diseases. Sour cherries have proven very profitable. Winter apples do not mature well except in most favorable locations, but all kinds of pears and several varieties of early apples are very successful. Strawberries and raspberries are usually successful and the fruit of a high quality.

2. The Lower Mainland is a district west of the Coast Mountains and adjacent to the Fraser River. Here the climate is mild and damp with a precipitation of from 50 to 70 inches per year. Fungous diseases are very prevalent in consequence of the damp climate, and the cost of fighting them is a large item of expense. The small fruits, such as strawberries and raspberries, do particularly well, however, and, because of the natural early season of the district, early apples, pears and plums usually yield good returns.

3. The district of the Upper Fraser up to the 52nd parallel and including the main Thompson River and Nicola Valleys is in the Dry Belt. Irrigation is essential, but fungous diseases are almost unknown. This district is proving more or less valuable for a wide range of fruits, but generally speaking, the growing of the hardier winter apples is the industry of greatest promise.

4. The country surrounding Shuswap and Adams Lakes, the Valley of the Spallumcheen River and the Armstrong district, has a total precipitation of from 18 inches to 25 inches, which, with its generally excellent soil, makes irrigation unnecessary for large fruits. The quality of the fruit is particularly high. The general climatic conditions are similar to those of Ontario, more so than in any other district in the province. The timber is not very heavy, and land clearing runs from $50 to $125 per acre. Winter apples have proven most remunerative. On suitable soils, celery, potatoes, etc., have made Armstrong famous.

5. The Okanagan Valley is the largest shipping district for fruit and vegetables in the province at the present time. Here all northern fruits are successfully grown, winter apples especially so, all under irrigation, the rainfall running from 12 inches to 15 inches. This district is the largest fruit producer in the province.

6. The Valley of the Similkameen and contiguous valleys are all in the Dry Belt. In this district the semi-tropical climate reaches up into British Columbia, and here European varieties of grapes and similar fruits are successfully grown. This is a large district, and has some very fine land ready for irrigation, but hitherto insufficient transportation facilities have hindered its general development.

7. The Boundary country is that of the Kettle River and its tributaries, and lies directly east of Similkameen. This also is in the Dry Belt, and is a fruit-growing area of good size. The industry is becoming well established and the Grand Forks prunes and winter apples are well known in the prairie markets.

8. West Kootenay. This is a very large district most of which lies along the Arrow Lakes, Kootenay Lake, Slocan Lake and the south Columbia River. The rainfall is from 18 inches to 40 inches, and has resulted in a heavy growth of timber, the clearing of which is proceeding readily. The large mining camps in this district have so far consumed the great bulk of the fruit produced, but high quality winter apples will in a short time be produced in sufficient quantities to reach the markets of the prairies and Great Britain. Irrigation is necessary in this district only in the driest seasons and for small fruits.

The above are all fruit districts which have been more or less proven by actual experience, and each markets its own special varieties. The following are other districts of which not so much is known:

9. East Kootenay. Lying directly east of West Kootenay from which it is separated by the Selkirk Mountains. This district includes particularly the upper reaches of the Kootenay and Columbia Rivers, including Windermere Lake. At present the district is largely devoted to cattle ranching. While the winter temperature will prevent the growth of the more tender fruits, the hardier apples have done well and more planting is being done each year.

10. The Northern Coast. Another immense section which has certain possibilities but in which little has been done is the big territory lying west of the Coast Mountains, all along the coast and including the Queen Charlotte Islands. The Department of Agriculture is undertaking the planting of a number of trees at various parts in the territory for experimental purposes, from which more will be known in a few years.

11. The Northern Interior. This vast territory, including the Valleys of the Skeena, Bulkley, Nechaco, Naas, etc., has aroused considerable interest because of the building of the Grand Trunk Pacific through it. Excellent fruit has been produced in the Kitsumkalem Valley and Lakelse Lake districts, and settlers are taking in with them thousands of fruit trees at the present time.

While it is doubtful whether the northern interior will be good for the production of the more tender varieties of fruit, there will undoubtedly be considerable success with the hardiest kinds of pears and apples.

JAFFRAY FARM PLOTS

Adjoining the townsite of Jaffray, British Columbia, which is situated on the B.C.S. Railway, about 30 miles south-east of Cranbrook, and in the centre of a thriving lumbering and rich farming district, the Company has for sale some 10-acre plots at prices varying from $1100.00 to $1350.00 per plot. These plots are sold on deferred payments, one-tenth down, the balance in nineteen equal yearly instalments with interest at 6 per cent. per annum. Two acres in each plot have been stumped and ploughed, and the balance cleared of all under-brush and timber. The land is free of rock, the soil good and eminently suitable for fruit and vegetable growing. There is a ready market for all kinds of farming produce in the immediate neighborhood.

MORRISON COLONY FARMS

The Canadian Pacific Railway have established twelve farms which are known as the Morrison Colony farms, the areas varying from 11½ acres up to 27 acres. All the land has been stumped and ploughed, and each farm fenced with five strand woven wire with necessary gates. A bungalow containing three rooms, and a barn capable of housing seven head of stock have also been erected on each farm.

The Colony lies in the Columbia-Kootenay Valley, and is bounded on the north by the Kootenay River, and on the south by the British Columbia Southern Railway (the Crow's Nest Branch of the C.P.R.). It has been laid out so as to give each settler a portion of bench land on which he can grow apples and small fruits, the balance being bottom land with a frontage on the Kootenay River, being suitable for mixed farming or truck gardening.

The towns in the district are as follows:—

Cranbrook, situated about 17 miles west on the British Columbia Southern, is the commercial centre and distributing point for the district. Its development is assured by the many industries tributary; for example, that of lumber, comprising some 25 saw mills. The continuance of this industry is assured for many decades by the great wealth of the forests. The city has two good newspapers, printing plants, numerous well-appointed stores, sash and door factories, brick yards, steam laundry and foundry. It has an excellent electric light system which is in a position to furnish electricity for power. It has a municipally-owned gravity water system, and a sewage system in course of construction. The telephone system for the district centres here and furnishes remarkably cheap communication between all points in the district, and its trunk line connects with the Western States on the one side and the Prairie Provinces on the other. At Cranbrook also is the divisional point of the Canadian Pacific Railway and the headquarters of the Superintendent and Resident Engineer. From this point is operated the North Star branch, the C. & E. Railway, Macleod to Calgary.

Fort Steele, on the Kootenay Central, about 12 miles north-west of the Colony, is a mining town doing a small but steadily increasing business, its prosperity being assured by the mining and gradual settlement of the surrounding country.

Wardner, located about five miles east of the Colony on the British Columbia Southern, is the centre of a large lumbering industry.

There are numerous other towns both east and west of the Colony, all busy centres of lumbering and mining industries.

Mayook is the nearest station on the British Columbia Southern, being only 1¼ miles distant, thus giving easy access to the western towns, and also the prairie markets, and coal mining centres of the Crow's Nest Pass to the east.

The scenery all through the Valley is very beautiful, game of all kinds is plentiful, all through the district, and excellent fishing is to be had in the river. In the fall of the year, too, boating may be indulged in.

The climate is healthful, and enjoyable at all seasons. Blizzards and cyclones are unknown, and bright sunny weather, winter and summer, is the rule. The summers are dry, with occasional hot days, but the heat, being dry, is not oppressive. It is modified by light winds passing over the glaciers and snow-caps of the mountains, and the nights are always cool. The winters are dry, crisp and bracing, clear skies, and bright, sunshiny days and calm starry nights prevailing.

WESTERN CANADA IS FAMOUS FOR THE SIZE AND QUALITY OF ITS VEGETABLES

READY-MADE FARMS AT EDELWEISS, NEAR GOLDEN AND PARSON

The Canadian Pacific Railway Company has laid out some ready-made farms, on similar lines to those at Morrison Colony, at Edelweiss, near Golden, on the Company's main line of railway. These farms adjoin the Swiss Village, where the Company's Swiss Guides are located. The areas vary from 10 to 23 acres each.

The farms at Parson, Harrogate and Spillimachene are located on the Kootenay Central Railway south of Golden. The areas of these vary from 11 to 16 acres.

Full information as to prices, terms, etc., may be had upon application to the General Superintendent of Lands, Department of Natural Resources, Calgary, Alberta.

DAIRYING

Dairying in British Columbia should be one of the leading agricultural industries. A large proportion of the now settled portions of the province are richly endowed by Nature with the necessary soil and climatic conditions for the development of this industry. The market is scarcely excelled by any country in the world, and, as a consequence, prices for dairy produce run high. Along with this high price of the product we find that the price of concentrated food stuffs and labor are high. But to offset this very large quantities of hay and grain can be grown per acre. The winter season is not long, for scarcely a day passes that cattle cannot go out, and for a large portion of the year can obtain some food. The buildings for housing cows do not need to be built so warm and the question of ventilation is a minor one. Labor on a dairy farm is easier to hold because it can be engaged for, and very profitably employed, the entire year.

As the land increases in value more intensive methods of cultivation are being used, and this adds greatly to the dairy industry, by giving a larger production of the product in a smaller area, thus decreasing very much the cost of manufacture and delivery of the product to private and co-operative concerns, as well as the individual.

The great increase in the population of the province, and of the cities in particular, has to some extent changed the character of the dairy business, especially that of the manufacture of butter and cheese. The country surrounding the towns and cities is being opened up by suburban lines, both electric and steam, and as the cities are calling for more and better milk a great many patrons of creameries have now placed at their doors open markets for milk and sweet cream. This has been taken advantage of by many during the last year, and as a result the manufacture of butter does not appear to be as great as in former years. Most of the creameries outside of this influence have reported this year an increase in production, and considering the greater number of people that are using milk and cream we must conclude that the industry is still growing and must of necessity grow much larger.

The British Columbia Dairymen's Association, by its increased membership this year, shows to a certain extent the advance movements in this industry. The Association is now on a more prosperous basis than ever before and is effectually attacking many of the problems and aiding financially and otherwise many of the difficulties that confront the dairymen. To a certain extent it is assisting in the educational work and in promoting the interests of the dairymen in general.

According to figures secured by the British Columbia Department of Agriculture the creameries of that province in 1912 produced 1,280,000 pounds of butter for which an average price of 38 cents per pound was received.

LIVE STOCK

A new era in agricultural development in the Province of British Columbia has begun and conditions pertaining to the live stock industry are rapidly improving. An increased interest in stock raising is being exhibited on every hand. Particularly is this to be seen in the breeding of dairy cattle and poultry.

As a comparatively new province, British Columbia is developing rapidly. With the enormous increase in the population of the larger cities and the development of the lumbering, mining, and fishing industries, there has been a constant and increasing demand for all food products. The greatest increase in consumption of food products during 1913 has been in butter, cheese, pork, mutton, eggs and dressed poultry. The value of dairy produce (exclusive of milk) importations amounted to $4,176,982, and the value of dressed poultry and egg importations amounted to $2,091,597. The home production of dairy produce (exclusive of milk) amounted in value to $542,260, which was approximately only one-sixth of the market demand. Also the demand for dressed poultry and eggs was nearly $2,000,000 in excess of the home supply. These conditions have tended towards an increased interest in the dairy and poultry industries. The rapid growth of city population has resulted in an increased demand for milk, which naturally affected the quantity of butter manufactured. The increase in the demand for pork and mutton has not been met with a corresponding development of the swine and sheep industries, although an increased production has taken place. The raising of swine is a complement to the dairy industry, and with the recent impetus given to the latter it is to be expected that in future more pork will be produced for home markets. Considering the adaptability of the province for the raising of sheep, it is surprising that importations last year should have amounted in value to $945,480.

Prices for all classes of live stock are somewhat variable, prices at present being exceptionally good. So long as the agricultural districts of the province are being opened up and devoted to agriculture, and so long as our urban population increases at the rate which it has been for the past while back, average prices for all classes of live stock and food products will be good.

HORSES.—The breeding of draft horses has received considerable impetus recently, owing to the demand for good sound horses for city use, and in many districts, especially along the Lower Mainland and on Vancouver Island, the quality of the horses has been improving rapidly during the last few years, so that to-day British Columbia has many horses which will compare favorably with those in other parts of Canada.

The lumber business is at present in a flourishing condition and the development of this industry has demanded horses of good breeding, suitable for lumbering purposes. Horses of this class are produced at good profits in many parts of the province and the great need is for more horses being kept and bred in these districts. In the Upper Country comparatively little attention has been given to the breeding of horses except under range conditions. The range, however, is not supplying the class of

horse that is most needed, and greater consideration should be given to the class of stallions used. Draft horses sell from $400.00 to $500.00 per team, while for extra choice specimens much higher prices have been realized. Clydesdales are by far the most numerous among draft breeds in the province. Good specimens of harness or saddle horses are in keen demand despite the prevalence of the motor car.

The Horse Breeders' Lien Act has been in operation for six years, and has done much to improve the quality of stallions throughout the province.

CATTLE.—In the districts surrounding the larger cities of the Coast, in the Fraser Valley, and on Vancouver Island, the dairy industry has been making rapid strides. With the increase in the dairy industry, there has also been a noticeable increase in the quality of dairy stock bred. Dairymen are coming to realize the importance of a pure-bred sire and are also breeding many valuable cows.

In those districts in the immediate vicinity of Victoria and Vancouver, Holsteins predominate, while on the Islands and in other districts where creameries have been established, Jerseys and Ayrshires are more largely kept. With the establishment of the creamery system, the quality of the butter has been greatly improved, and the quantity placed on the market increased as well.

Extra choice Holstein, Jersey, Guernsey and Ayrshire bulls, for breeding purposes, command exceptionally good prices. Many of these have been brought in recently and long prices have been paid for them. Prices for heavy-producing pure-bred cows are also good, ranging from $200.00 to $500.00. Grade cows sell from $60.00 to $150.00, according to the quality. The principal grades being bred are Jersey and Holstein.

Very little dairying is carried on in the Upper Country and until farmers use some system of irrigation for the growing crops, it is evident that dairying cannot develop very materially in these parts. There is, however, considerable interest being taken in the dual-purpose cow. There are several breeders of Red Polls and this class of cattle seems to be gaining favor where exclusive dairying cannot be carried on. There is also room for the breeding of milking Shorthorns, and in the Dry Belt where the rainfall is very light, if the proper system of irrigation were established so that fodder crops would be produced, the number of dual-purpose cattle could be materially increased. Dual-purpose cattle are, however, hard to obtain, owing to the policy of breeding for beef which has been carried on so long among what are called the dual-purpose breeds. Creameries could be established and butter, as well as beef, could be supplied to the market. The northern portion of the province provides good opportunities for the development of the dairy industry along these lines. At present, practically all the beef produced for our markets is grown under range conditions,—Hereford and Shorthorn grades being almost exclusively used. Practically all of the imported beef comes from Alberta, while prices for native beef are very good, ranging from 4c. to 8c. at shipping point. The quality of the stock is improving slowly, through the use of imported pure-bred Shorthorn and Hereford bulls.

SWINE.—As a complement to the dairy industry, the raising of swine proves very profitable and they may be kept in nearly every district of the province. At the same time the supply is not nearly equal to the demand. With our comparatively mild winters, where there is very little snowfall, and where abundance of green food may be produced, hogs may be raised cheaply. In many parts of the province clover and alfalfa do very well, and in the Fraser Valley, along the Lower Mainland and on Vancouver Island,—the chief centre of the dairy industry,—hogs are being kept in great numbers. The chief breeds are Yorkshire, Tamworth and Berkshire, with crosses of Yorkshire-Berkshire and Tamworth-Berkshire. There is strong sentiment in favor of the bacon type of hog, yet it is not advisable to breed the extreme bacon type as produced in Ontario for the English market. Prices for live hogs average from 7c. to 10c., and breeding stock of all kinds sells well.

SHEEP.—British Columbia is annually importing thousands of mutton carcasses from Australia, as well as from other parts, and at present comparatively little is produced at home.

In many parts of the province there are few other industries which could be made more profitable than the growing of sheep. The production of mutton is a more important factor than the production of wool, consequently the short and medium wool breeds predominate. Also the climatic and soil conditions have something to do with the breeds kept. Shropshires, Southdowns and Oxfords are most numerous, while a few Lincolns, Leicesters and other breeds are in favor in some parts. There are comparatively few flocks maintained under range conditions, but small flocks, kept under range conditions, are very profitable. One serious difficulty in the maintaining of large flocks is the prevalence of coyotes and panthers which sometimes destroy a large number of the flock. A small flock kept on the average farm where mixed farming is carried on, and properly looked after and winter fed, to a certain extent, will give the owner a handsome profit. Mutton always commands a good figure, and spring lambs sell quite high. Breeding rams and ewes also command good figures.

GOATS.—A comparatively new industry is being developed in many parts of the province. In such districts as the East and West Kootenays, where, because of the nature and contour of the land and the fact that most of it is not cleared, dairying cannot be developed, the milch goat is being bred.

Interest in the goat industry has increased very rapidly of late and many small farm owners are anxious to keep a goat or two, and naturally they desire one of good milking qualities. Many goats are being imported at from $25.00 upwards, and, because of the economy in milk production and the ease with which the goat may be raised, it is believed that the goat industry will soon become an important one in British Columbia.

Live Stock Organization.—The Stock Breeders' Association of British Columbia has been in existence for some seven years and has done a great deal towards improving the live stock industry of the province. Its chief work is educational, but, at the same time, it does much in a practical way to assist stockbreeders. It encourages the importation of

pure-bred live stock and provides for special prizes at the leading exhibitions of the province. It also endeavors to interest the young men of our farms in live stock, and in this connection it provides for prizes in stock judging competitions at the fall fairs. It endeavors to promote the welfare of the live stock industry in general.

POULTRY

Splendid markets for all kinds of poultry products await the producers in British Columbia. For years to come, the supply of eggs and fowls produced in the province cannot overtake the enormous demand. At the present time, supplies are drawn from all parts of the North American continent. Eggs are shipped from Kansas, California, Washington, Oregon, and other States; from the Provinces of Alberta, Saskatchewan, Manitoba and Ontario, and from China. Live poultry is brought in by the carload from the mid-western states and provinces, and fattened before consumption in the province. It is calculated that one city alone imports 150,000 dozen eggs weekly, and it is estimated that the eggs produced adjacent to the above mentioned city, and which help to supply the demand, do not exceed in numbers more than 35,000 dozen weekly. Such a condition is undesirable when we consider the advantages, both of climate and nearness to markets, that the province enjoys.

Although there are not a few ranches in the province where the sole form of occupation is poultry raising, and the owners are getting good returns for their investment, at the same time it must not be forgotten that excellent profits are possible on farms of mixed husbandry. The returns from the flock should add materially to the income of the fruit-grower, the dairyman, or even the man who is merely in the process of clearing his land. The orchard makes an admirable run for poultry, especially growing stock. In the orchard many insect pests will be destroyed and the manure from the fowls will greatly enrich the soil. By-products in the orchard and in the fields are converted into profit. Fowls are economizers, and when a poultry department is carried on with other branches of farming a system of rotation could be adopted very profitably.

In 1909 the average price paid per dozen for eggs was 30c.
In 1910 the average price was 34c.
In 1911 the average price was 37c.
In 1912 the average price was 40c.
In 1913 the average price was 50c.

During 1913 the price per dozen ranged from $1.00 down to 25c.

In some parts of the province, especially on Vancouver Island, the greater majority of fowls kept are of the lighter or egg-laying breeds, such as Leghorns, Minorcas, etc. On some of the large poultry plants distributed throughout the province, can be found up-to-date methods in vogue that can compare favorably with the larger and older established poultry plants of the East.

Quite recently, several co-operative egg circles, or stations, have been formed in the province, and these have helped the members to market their product more profitably, and also assisted the members to procure their grain and other feed supplies more economically.

All branches of poultry culture can be engaged in, and next to hens or common poultry, the breeding of water fowl, ducks especially, can be successfully carried on in almost all sections of the province. The Chinese population here are good customers and consume the majority of water fowl offered on the market.

The British Columbia Poultry Association, organized with a membership of over five hundred, is doing splendid work in assisting poultrymen generally throughout the province. The Association, besides assisting and helping local poultry associations, also provides utility classes for market poultry, in live and dressed fowls and eggs, at its annual show, and is also assisting in helping to procure grain and feed at a reduced cost. The Association receives financial aid from the Provincial Government, and has been a great boon in many ways and has justified its existence.

In connection with poultry keeping, not a few of the more enterprising poultrymen have launched out into the selling of day-old chicks, and have found it a very profitable part of the business. There seems to be a considerable demand for them, and prices realized give a substantial margin for profit. In the vicinity of Victoria, there is also a considerable demand for day-old ducklings, for which good prices are paid.

Crate fattening establishments have been opened, and these centres offer first-class prices for all the surplus cockerels that the poultrymen can produce. As a matter of fact, so great is the demand, that cockerels are shipped in from the East and South by the carload to help out the inadequate local production. Retail prices for fattened table fowl, dressed, during the past year never went below 25c. per pound and ranged as high as 40c.

Quite a large number of turkeys are marketed during the year, but, as in all other poultry products, the supply is away below the demand. There are splendid opportunities offered for the breeding of turkeys, especially in the sparsely settled districts, where plenty of free range can be secured. This is very essential to successful turkey raising, as is also fresh or virgin ground. Turkeys will not flourish if allowed to mingle with other varieties of fowls. Owing to the plenteous supply of insect life, wild berries and seeds, turkeys can be raised very cheaply. In fact, turkeys have been marketed that had secured all their food from this source, except during the first two weeks of their life. Tip-top prices are realized for this class of flesh, the retail prices ranging from 25c. to 45c. per pound.

Bulletins relating to poultry keeping may be had by application to the Department of Agriculture, Victoria, B.C.

CEREALS AND MIXED FARMING

To the man of small capital mixed farming affords the most promising means of making a comfortable livelihood in British Columbia. To engage exclusively in fruit-growing, one is obliged to provide for the period from the setting-out of the trees till they come into bearing, thus requiring an income from other sources, while in mixed farming returns may be counted on from the start. A few acres planted in small fruits, early vegetables, potatoes, carrots, onions, cabbages, etc., with fowls, some cows and pigs, will give a man an assured income the first season, and will not interfere

with his planting a variety of fruit trees, which will become profitable later. Another advantage of mixed farming is the fact that a man and his family can attend to the work, which occupies them pleasantly the year round, while the special farmer, with but one crop to depend upon, has to cultivate a larger area and hire help during the short periods of seeding and harvest, and has nothing to occupy his time the remainder of the year. Large farms and specialties in agriculture, should only be attempted by men of sufficient means to tide over long periods of unproductive idleness.

GRAIN GROWING.—Wheat is grown principally in the Fraser Valley, Okanagan, Spallumcheen, and in the country around Kamloops in the Thompson River Valley. Until the northern interior of the province is brought under cultivation through the construction of railways, the wheat area will not be greatly increased. Wheat is only grown on the Mainland Coast and Vancouver Island for fodder and poultry-feeding.

Barley of excellent quality is grown in many parts of the province.

Oats are the principal grain crop, the quality and yield being good, and the demand beyond the quantity grown. Rye is grown to a limited extent, and is used for fodder.

The average yield of grain and prices are as follows:—

Wheat, bushels per acre.....25.62; price per ton $38.00
Oats, bushels per acre.....45.00; price per ton 35.00
Barley, bushels per acre.....33.33; price per ton 35.00

These averages are very much exceeded in many cases, according to nature of soil and local conditions. In the matter of oats, as high as 100 bushels to the acre is not an uncommon yield.

ROOT CROPS.—Potatoes, turnips, beets, mangolds, and all other roots grow in profusion wherever their cultivation has been attempted. Sixty-eight tons of roots to a measured acre is recorded at Chilliwack, and near Kelowna, on Okanagan Lake, 20 acres produced 403 tons of potatoes, which sold at $20 per ton. The Dominion census places the average yield of potatoes at 162.78 bushels to the acre. The average price of potatoes is $20 per ton, while carrots, turnips, parsnips, and beets sell at an average of about 60 cents per bushel.

HOP CULTURE.—The Okanagan, Agassiz, and Chilliwack districts are well suited to hop growing, and produce large quantities, unexcelled in quality. British Columbia hops command good prices in the British market, and most of the crop is sent there, though now Eastern Canada and Australia are buying increasing quantities. The yield of hops averages 1,500 pounds to the acre, and the average price is 25 cents per pound.

FODDER CROPS.—Besides the nutritious bunch grass which affords good grazing to cattle, horses, and sheep on the benches and hillsides, all the cultivated grasses grow in profusion wherever sown. Red clover, alfalfa, sainfoin, alsike, timothy, and brome grass yield large returns—three crops in the season in some districts and under favorable circumstances. Hay averages about 1½ tons to the acre, and the price from $17 to $25.

SPECIAL PRODUCTS.—Tobacco growing has proved successful in several districts, notably in Okanagan, where a leaf of superior quality is produced. Tobacco of commercial value will grow in almost any part of Southern British Columbia, and there is no reason why the farmers of the province should not cultivate it in a small way for their own use, as is the custom in many parts of Quebec and Ontario, and thus gain the experience necessary to undertake its production on a large scale. F. Charlan, Chief of the Tobacco Division of the Department of Agriculture, Ottawa, says of the development of tobacco culture in Okanagan Valley: "The progress made by the industry in such a short time is really surprising. I was much pleased also with the quality of the product. The aroma is very fine, very agreeable, much like that of some Havanas. This tobacco would make excellent fillers. The seed is imported from Cuba and renewed every four years."

Experiments have proved that the soil and climate in and about Victoria are admirably adapted to the production of flowering bulbs, and quite a large business has been established. There is a good market for all the bulbs that can be grown, as the bulk of those used in North America are imported from Europe, and the Pacific Coast alone uses fifty million annually. The profit to be derived from bulb-growing is estimated at over $2,000 per acre.

The importance of apiculture is beginning to be recognized, and a considerable quantity of delicious honey of home production is found in the local markets. As the area of cultivation extends, bee-keeping should become a profitable adjunct of general farming.

The Coast districts and many of the lowlands of the interior are well suited to cranberry-culture, which is being tried in a small way, and with success, by settlers on the west coast of Vancouver Island.

Celery, another vegetable luxury, is grown in considerable quantities, and the soil and climate warrant its cultivation on a more general scale. Celery properly grown and packed commands good prices and an excellent market.

The interior dry-belt districts produce large quantities of tomatoes, on a commercial scale, for which, both fresh and canned, there is a large market in all Western Canada.

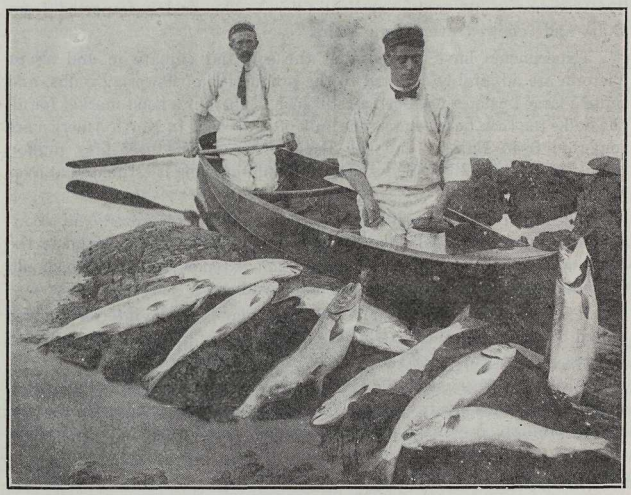
Christmas Holly grows to perfection in the Victoria district, and is handled in quantity commercially, to supply Western Canada.

Sugar beets grow to perfection in several localities, but their cultivation on a large scale has not been attempted.

IRRIGATION

The introduction of irrigation is working great changes in agricultural methods. Lands seemingly worthless are, by means of irrigation, made to produce up to four times as much as the choicest soil under the old method. Irrigation renders mixed farming particularly profitable, and men are quick to appreciate advantages which make them independent of the elements in their farm work.

Under the "Water Act, 1909," unrecorded water may be diverted from any natural source for irrigation or agricultural purposes generally. The scale of fees is fixed by the Lieutenant-Governor-in-Council, the rates being very reasonable for water recorded and actually used for agricultural purposes. Generally speaking, there is abundant water within reach, but there are sections where the height of the land above the water-level or distance from the source of supply stands in the way of individual attempts at irrigation, but the work may be accomplished by co-operation and with the expenditure of capital. In Okanagan, Similkameen, and



BRITISH COLUMBIA IS THE SPORTSMAN'S PARADISE

Kamloops districts, companies have purchased large tracts of land, formerly used as cattle ranges, which they are sub-dividing into small holdings of 10 acres and upwards, and constructing reservoirs and ditches, which will provide an unfailing supply of water. These companies are already reaping the reward of their enterprise, as the land is being rapidly sold to actual settlers, who are planting orchards and engaging in mixed farming.

The Provincial Government, impressed with the importance of irrigation, has appointed a commission of experts to study the hydrographic conditions existing in the "dry belt," and to formulate a comprehensive plan for the reclamation of many hundreds of thousands of acres of bench lands from pasturage to flourishing orchards and farms, the homes of thousands of prosperous settlers.

DRY FARMING

There are large areas of good land in British Columbia which, on account of limited rainfall, have been considered of little value except as pasture. These lands in many instances are so located that it is not possible to bring them under irrigation by any means now known to engineers. But of recent years attention has been directed to "dry farming"—a method of agriculture which has been found to be successful with an annual rainfall of as little as twelve inches. The principles of dry farming are:

First, to keep the surface of the land under cultivation loose and finely pulverized. This forms a soil mulch that permits the rains and melting snow to percolate readily through to the compact soil beneath, and at the same time prevents the moisture stored in the ground from being brought to the surface by capillary attraction, to be absorbed by the hot, dry air. The second is to keep the subsoil finely pulverized and firmly compacted, increasing its water-holding capacity and its capillary attraction, and placing it in the best possible physical condition for the germination of the seed and development of plant roots. The "dry farmer" thus stores water not in dams and artificial reservoirs, but right where it can be reached by the roots of growing crops.

There are instances in British Columbia in which crops are being successfully grown on land which had been considered worthless for agricultural purposes on account of its altitude and the impossibility of getting water to it. With improved methods of agriculture and machinery adapted to this special purpose there is no doubt that these rich but semi-arid districts will eventually support a large agricultural population.

Part VII.

INDUSTRIES IN WESTERN CANADA

It goes without saying, that the marvellous development that has taken place in Western Canada, particularly during the last decade, has had the effect of building up a number of the most progressive and handsome cities in the world. Western Canada will, within a comparatively short period, be the home of teeming millions whose comforts and necessities must be provided for. To cater to this increasing population will require a vast amount of capital and labor. Industrial centres are now springing up all over Western Canada, and openings exist for the profitable employment of capital and business experience in a multitude of directions.

THE LOCAL MARKET

The construction of the Canadian Pacific Railway across Western Canada opened up a territory rich in raw material, destined for the development of every kind of commercial enterprise. The enormous increase year by year in land settlement demands a proportionate increase

in industrial development. The market for the manufactured article is within the territory of its manufacture, and merely awaits the further investigation on the part of the capitalist.

Each year new towns come into existence; each year the demand for supplies grows greater; each year the importation of merchandise that could be manufactured in the country steadily increases.

The Canadian Pacific Railway, with its 1,400 cities, towns and villages in the West, opens up a tremendous field for commercial development The retailer is demanded at every point; the wholesaler at strategic corners, where he is able to cover a large expanse of settled country; the manufacturer in the cities where the wholesale man takes the larger part of the output. For the manufacturer, the waterpowers of the Western rivers, the coal deposits of British Columbia, Alberta, and Saskatchewan, and the natural gas fields of Alberta, constitute a means by which the raw material may be turned into the finished product with economic success and in competition with the products of any country in the world.

INDUSTRIAL OPENINGS

The best illustration of the demand for factories in Western Canada may perhaps be found in the list of imports shown in the annual summary, issued by the Dominion Government, and for which Canada is at the present moment sending millions of dollars out of the country.

The total imports for the year ending March, 1914, amounted to $633,564,179, of which $618,328,874 represent merchandise, and $15,235,305 coin and bullion.

Among the articles imported, in the composition of which the raw material lies right at our door, are the following:

Brick, tiles, clay and manufactures of	$ 3,268,147
Carriages, carts, wagons, etc	20,097,861
Cordage, rope and twine	4,446,990
Earthenware, china and graniteware	3,131,305
Flax, hemp, jute and manufactures of	8,963,057
Glass	5,074,520
Gloves and mitts	2,722,130
Leather and manufactures of	8,454,176
Brass and manufactures of	4,415,202
Copper and manufactures of	6,518,485
Iron and steel and manufactures of	119,221,241
Paper and manufactures of	8,043,368
Soap	1,323,010
Sugar, molasses, etc	17,949,396
Wood and manufactures of	24,675,869
Bread stuffs	9,425,512

CLAY AND CEMENT PRODUCTS

The Dominion Government has been for the last few years and still is engaged on a survey of the clay and shale deposits in the West, and from a summary report already issued, it would appear evident that every kind of

clay product can be manufactured. The demand for building material outstrips the supply by many thousands of dollars annually, and thus there is a great field open for the manufacture of all clay products, and cement and its products, the huge deposits of lime rock in Alberta and British Columbia being eminently suitable to this industry.

CREAMERIES AND BEET SUGAR FACTORIES

The Provinces of Alberta, Saskatchewan and Manitoba, during the year 1913, produced 13,683,422 pounds of butter, valued at $3,599,843; cheese to the value of approximately $62,000; potatoes over $5,500,000; turnips and other roots valued at $3,249,000; hay and clover valued at $4,693,000, and alfalfa, $331,000. The sugar beet as grown in Alberta is manifestly successful and produced sugar valued at approximately $83,000 last year, but there is a much larger scope for this and other industries at the present time, with an exceedingly profitable future. Not nearly sufficient is being produced to take care of the home market, in addition to which there is a large outside market to provide for, with products which should, and can, be grown to perfection in the West.

WESTERN CANADA WATER POWERS

Enormous water powers can be and are being developed in Western Canada. In Western Ontario, east of the boundary of Manitoba, the water powers are estimated to produce 237,347 h.-p., and have so far been developed at Kakabeka Falls and Kenora. In the Province of Manitoba the estimated water power amounts to 6,916,000 h.-p., of which 78,000 h.-p. has been developed, principally for the City of Winnipeg.

The water powers of the Province of Saskatchewan are estimated to produce 470,200 h.-p., but are at the present time practically undeveloped.

The Province of Alberta has huge water powers within its boundaries. It is estimated that there is available 1,137,000 h.-p., of which only about 7,300 h.-p. has been utilized up to date.

The water powers of the Province of British Columbia are estimated to produce 2,045,945 h.-p., and at the present moment 137,000 h.-p. has been developed.

NATURAL RESOURCES OF WESTERN CANADA

In Western Ontario the products of the iron ranges which are tributary to the lake ports are being developed, and the iron ore used at the blast furnaces at Port Arthur. The gold mining claims south of Dryden, and at Kenora, are being exploited. The cities of Port Arthur and Fort William during the season of navigation handle the huge grain crop of the West, which is shipped out over the lakes, and the freighters bring back a large tonnage of coal and merchandise. The paper pulp industry is being developed at Dryden.

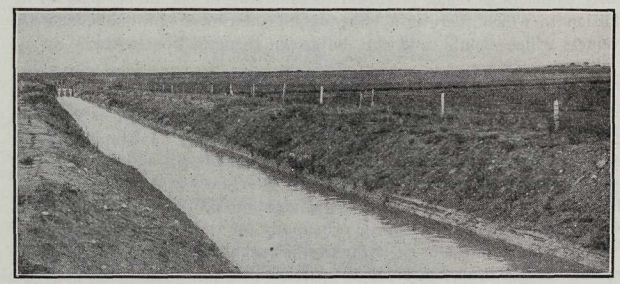
In the newly added territory to the Province of Manitoba there are enormous natural resources, which have not as yet been sufficiently explored to form any adequate estimate of their value. There are, however, large stretches of timber and big coal deposits as well as other minerals.

The lakes of Manitoba—Winnipeg, Winnipegosis and Manitoba—are famous for their whitefish. Rich deposits of gypsum, clay, shale, limestone, gravel and sand exist.

The Province of Saskatchewan also possesses valuable coal, shale, gravel and sand deposits, and, in the north, valuable timber limits.

The Province of Alberta is the home of the natural gas field, and has coal beds underlying a large part of the province. Vast deposits of clay, gravel, sand and limestone are found, and, in some cases, extensively utilized. Iron ore and copper are also reputed to be found on the east slope of the Rocky Mountains.

A strike of oil running 90 per cent. pure gasoline was made about 40 miles south-west of Calgary in 1914. Over 40 wells are now drilling, and while oil has not yet been struck in commercial quantities, traces of the crude product are found in several wells. Strong hopes are entertained that this will develop into an important oil field.



AN IRRIGATION CANAL—CANADIAN PACIFIC RAILWAY COMPANY'S IRRIGATION BLOCK, ALBERTA

The principal products of the Province of British Columbia are coal, gold, silver, copper, lead, zinc, timber, furs, fish, oil, hops, fruit, vegetables, wheat, oats, barley, hay and cultivated grasses, marble, granite, limestone, gypsum, clay, shale, gravel, sand, etc.

Vancouver Island, with its ports at Victoria, Nanaimo and Alberni, is building up an immense shipping trade to all parts of the world. The Island is tremendously rich in timber and minerals.

LUMBERING

Lumbering on a large scale is an important industry in the northerly portion of the Prairie Provinces, and in the foothills of Alberta and the east slope of the Rocky Mountains.

In British Columbia the lumbering industry is next in importance to that of mining. The vast forest of large trees west of the Coast Range were for many years the supply market for the world in the way of spars and masts, and at the present day much of the larger timber used throughout Canada for works of importance necessitating the use of large pieces

of timber, is brought by rail or boat from the Western slopes. The province may now be said to possess the greatest compact area of merchantable timber on the North American continent, this being roughly estimated at 182,750,000 acres. It is only of comparatively recent years that the lumbering industry of the interior has risen to importance, but since the opportunities have developed, the mountain mills have become one of the chief sources of supply for the immense demand that has opened throughout the Prairie Provinces. The red cedar shingles obtain a ready market as far east as the Province of Ontario, while the beautiful grains of the British Columbia fir have opened a way for the using of it for finishing purposes throughout the whole of Canada and in the north-western States of America. The Western species of hemlock is much superior to that of the East and is as serviceable in many ways as the highly prized fir. The overseas trade is steadily growing, and with the opening of the Panama Canal the Coast trade will expand very rapidly.

At the close of 1912 there were 207 large and small sawmills in the province, with an annual daily capacity of 4,500,000 feet, or an average capacity of approximately 21,500 feet. In addition to this number there were 49 shingle mills with an aggregate daily capacity of 3,395,000 shingles. The cutting throughout the province for 1912, being approximately 1,262,000,000 feet, shows a marked increase over eight years previously—1904—when the cut was but 325,271,500 feet. Of the 1912 production 902,000,000 feet came from the Coast mills and the balance was cut in the interior.

MINING

Manitoba, Saskatchewan and Alberta.—From the fourth meridian west to the boundary of the Provinces of Alberta and British Columbia vast areas are underlaid with rich deposits of lignite, bituminous and anthracite coals. The coal mines at present in operation have increased their output to supply the market fairly well, but much yet requires to be done. The lignite coals on the eastern boundary of the coal belt are being mined at Cypress Hills, Medicine Hat, Red Deer, Edmonton Sturgeon River and Morinville districts. The cost at the mouth of the pit ranges from $1.50 to $2.50 per ton. A class of coal superior to this (geologically called lignitic) is mined principally at Lethbridge and Taber where over $3,000,000 has been invested.

The true bituminous or steam coal is mined south-west of Pincher Creek, Alberta, a number of mines in the Frank-Blairmore district and at Canmore on the main line of the Canadian Pacific Railway.

The most important anthracite deposit is near Banff where the Bankhead Mines, Limited, have an output capacity of 2,000 tons per day. The anthracite dust is made into briquettes, which have received a ready sale in the domestic market. This is the only anthracite mine being operated in Canada, and this class of coal will supply the market from Winnipeg to Vancouver with a hard coal equal to that shipped from Pennsylvania.

For years past placer gold in paying quantities has been found on the banks and bars of the North and South Saskatchewan, also on the Pembina, Smoky, McLeod and Athabasca Rivers. In the main range of the Rocky Mountains mineralized veins of copper, with a small percentage of gold and galena veins carrying a fairly large percentage of silver, have been located. Prospecting work has been done on a number of the leads, but up to the present not enough to prove them at depth.

British Columbia justifies her title as the mineral province of Canada, inasmuch that in one year she produced two-thirds as much in the following metals and coal products as all the other Canadian provinces combined, and that, too, in spite of the fact that her iron and zinc deposits are still undeveloped, and mica, gypsum and other minerals which she has in abundance not yet drawn upon.

The mineral production of the province for the year 1913 is estimated to be $32,606,000. The values were as follows:

Gold	$ 6,049,526
Silver	2,027,557
Lead	2,130,280
Copper	7,021,463
Zinc	340,800
Coal	7,478,429
Coke	1,710,738
Building materials	3,400,000

The tonnage of coal mined in the province in 1913 amounted to 2,577,000 long tons and 440,000 long tons of coke, a total of 3,017,000 long tons, valued at $10,859,000. Expanding industries, railway extension and increasing population demand an ever-increasing production of coal. The total mineral production recorded for the province to end of 1912 was $460,000,000.

The steady increase in production is shown in the following table:

1890	$ 2,608,803	1908	$ 23,851,277
1895	5,643,042	1909	24,443,025
1900	16,344,751	1910	24,478,572
1905	22,461,325	1911	23,499,072
1906	24,980,546	1912	32,440,800
1907	25,882,560	1913 (estimated)	30,158,793

Practically all the mining which has been done to date is confined to within a comparatively few miles from the railways, and hardly 20 per cent. of British Columbia can be said to be really known. It is calculated that there are yet untouched some 300,000 square miles known to be richly mineralized, a field for the prospector such as exists nowhere else in the world.

FISHERIES

Extensive fisheries are carried on in the vast inland waters of Manitoba, Saskatchewan, Alberta and Western Ontario. In the Lake of the Woods, caviar of the highest quality is obtained. The famous whitefish of the Prairie Lakes is shipped to the Eastern States in great quantities.

In British Columbia during the year 1913 the value of all fish landed in a green state, and of all fish marketed, whether fresh, dried, pickled, canned, etc., amounted to $14,455,488, of which the market value of salmon was $9,566,368; cod, $209,607; herring, $1,040,007; halibut, $2,463,-216.

The principal food fishes of the North Pacific are salmon, herring, sturgeon, bass, oolachans, smelts, perch, trout, skill, sardines, anchovies, shad, oysters, clams, crabs, shrimps, and prawns. Whales are very plentiful along the coast of Behring Sea. Dog fish are valuable for their oil and in the manufacture of guano. Sealing, at one time a leading source of profit, has fallen off of late owing to restrictions imposed by the Behring Sea award and the decreasing number of these mammals.

IRRIGATING SUGAR BEETS, SOUTHERN ALBERTA

Apart from the commercial aspects of British Columbia's deep sea fisheries, the lakes and streams offer exceptionally good sport to the amateur fisherman and angler. All the numerous rivers, creeks, and lakes, as well as the sea, teem with fish, so that the gentle art may be enjoyed at all seasons and in every part of the province.

The streams and lakes of Vancouver Island are in this respect particularly famous in the west, while the "Outlet" on the West Arm of the Kootenay River at Proctor, "The Pool" at Slocan Junction, the Creston district, and the waters of southern Yale are amongst the best known fishing resorts on the mainland. Non-residents of the province desirous of angling must first obtain a licence, which costs five dollars.

BUSINESS OPPORTUNITIES

It would be safe to estimate that a new town is being started in Western Canada at least once a week with the tremendous expansion in railway construction and the opening up of new territory for settlement. It is, of course, evident that the great agricultural development of the Western Provinces creates business opportunities to an equally great extent. In the newly established towns, general stores, blacksmith shops and all other enterprises peculiar to centres of development are required, and those who avail themselves of these opportunities to enter business in the early history of the new towns in Western Canada scarcely ever have occasion to regret that step.

PROFESSIONAL OPENINGS

Equally great opportunities exist for certain classes of professional men in the towns of Western Canada. Doctors, lawyers, veterinary surgeons, pharmacists and others are in many cases urgently needed in these new communities.

Information as to the requirements which will enable professional men to practise in the various Western Provinces of Canada may be obtained by application to The Provincial Secretary, Winnipeg, Manitoba; Regina, Saskatchewan; Edmonton, Alberta; or Victoria, B.C.

MONTHLY PUBLICATION

The Canadian Pacific Railway Company, realizing the need that exists for directing those seeking industrial, business or professional openings in Western Canada, has compiled a statement, which is corrected monthly, of openings in these directions in towns along its system in Western Canada. This will be mailed free of charge to anyone applying to the address given below.

INDUSTRIAL BUREAU

The Canadian Pacific Railway maintains a bureau whose mission it is to carefully investigate and report upon the legitimate manufacturing and business requirements of the various cities and towns in Western Canada, and to place reliable information on this subject before interested parties. Anyone who desires to investigate the possibilities of Western Canada in a manufacturing or business way should direct his inquiry to

The Industrial Branch,
Department of Natural Resources,
Canadian Pacific Railway,
Calgary, Canada

Part VIII.

GENERAL INFORMATION OF INTEREST TO SETTLERS

PUBLIC WORSHIP

The utmost religious liberty prevails in Canada. There is no State Church. Christian churches of various beliefs are found in the country towns as well as in the cities. The number of specified denominations of religious thought in the Dominion, according to the last census, was 168. No place is the Sabbath more respected than in the Canadian West.

SOCIAL CONDITIONS

It is an interesting fact that the population of Western Canada, widely scattered and composed of many nationalities, is singularly peaceful and law-abiding. Life and property are better protected, and individual rights more respected, even in the isolated mining camps and remote agricultural settlements, than in some of the great centres of civilization in older countries. The country, though new, enjoys all the necessities and many of the luxuries and conveniences of modern life. There are few towns which are not provided with waterworks, electric lights, and telephones. The hotels are usually clean and comfortable, and the stores well stocked with every possible requirement. There is little individual poverty. A general prosperity is the prevailing condition throughout Western Canada, for no one need be idle or penniless who is able and willing to work. The larger towns are well supplied with libraries and reading rooms, and some of the provinces have a system of travelling libraries, by which the rural districts are furnished free with literature of the best description.

All the cities and larger towns have well equipped hospitals, supported by Government grants and private subscriptions and many of the smaller towns are supplied with cottage hospitals.

The blind, deaf and dumb and other unfortunates are well cared for in well appointed institutions, maintained by the various Provincial Governments and under the management of experts.

Daily newspapers and periodicals of a high character are published in all the cities in Western Canada, and even in the remote and sparsely settled districts, a weekly paper is generally a feature of the market town.

EDUCATIONAL SYSTEM OF WESTERN CANADA

One-eighteenth part of the whole prairie section of Western Canada, or two sections in every township, is set aside as a school grant for the maintaining of schools. This provides a very large school fund, which will assure the maintenance of an adequate and advanced school system. The schools are non-sectarian and national in character.

MANITOBA.—The public school system established in the Province of Manitoba is well abreast of the times. Its management is vested in one of the Ministers of the Government assisted by an Advisory Board consisting of 12 members. The cost of maintaining schools is moderate, owing to the liberal assistance given by the Government. Each teacher employed must have a certificate of a recognized standard of education issued by the province, and, in addition, must present evidence of having received Normal training. A thorough system of inspection has been naugurated, each school being usually visited twice during the year. The inspectors are not elected, but are appointed by the Government on account of their special aptitude for the duties they have to perform. In the schools of the larger towns the higher branches of study are taught and pupils are prepared for university matriculation and teachers' certificates. Uniform provincial examinations for teachers' certificates are held annually at convenient points. The people of the province take a keen interest in their schools, with the result that a system has been established which leading authorities admit provides as practical an education as can be obtained in the older provinces of Canada or the United States.

Summed up, the leading features of the Manitoba system are:

1. Government control, freed from political interference.
2. Liberal Government assistance.
3. Comparatively light taxation.
4. A very practical course of studies.
5. Thorough supervision by competent inspectors.
6. Trained teachers and uniform State examinations.
7. Free text books for pupils.

SASKATCHEWAN.—School districts are established in the Province of Saskatchewan by the Government, but are controlled, maintained and managed by the resident ratepayers of the district. The maximum size of rural districts is limited to 25 square miles, but the majority of districts at present being formed comprise an area of from 16 to 20 square miles. In order that a district be established, it must have four persons actually resident therein, who, on the erection of the district, would be liable to assessment, and at least twelve children between the ages of five and sixteen years inclusive. The schools are sustained by provincial aid, and also by local rates.

Some idea of the rapid spread of educational facilities in Saskatchewan may be gathered from the statement that no less than 340 school districts were created in 1913. In 1905, the province had 887 districts; on September 20th, 1914, the number had risen to 3,537. In 1909, a university, supported and controlled by the province, was established in Saskatoon. A large number of college buildings have been erected, and a full course of instruction in all branches is given. Smaller colleges are also located in Regina and Moose Jaw.

The province also maintains, at Saskatoon, an agricultural college with a complete staff made up of recognized authorities in their branches of the work. The college farm, with experimental plots, contains over

1,000 acres, and the farm buildings include class halls, dormitory, a laboratory for agricultural engineering, a stock-judging pavilion, a power-house, stock barns and pens, etc. The College of Agriculture is closely allied with the College of Arts and Sciences. At various times in the winter, short courses are given at the college, and extension work carries lectures and demonstrations to all parts of the province.

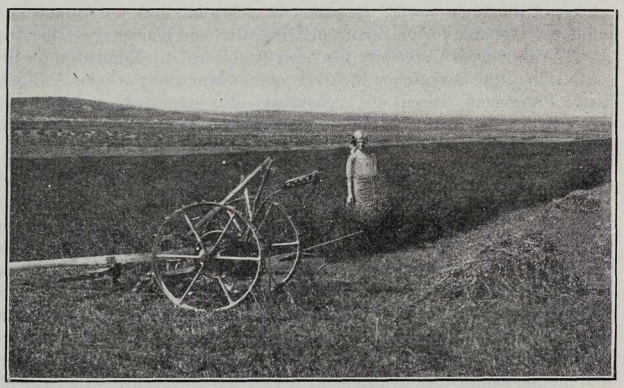
ALBERTA.—The school system of the Province of Alberta is acknowledged to be equal, if not superior, to any on the continent. Its management is vested in one of the Ministers of the Government. The organization of school districts is optional with the settlers. Districts formed cannot exceed five miles in length or breadth, and must contain at least four actual residents liable to assessment, and eight children between the ages of five and sixteen inclusive. The cost to the taxpayer of maintaining a school is small, owing to the liberal assistance given by the Government; the public grants paid to each rural school are from $250 to $300 per year. Each teacher employed must have a certificate of a recognized standard of education, and a thorough system of inspection is inaugurated, each school being visited twice during the year. In the schools of the larger towns, the higher branches of study are taught, and pupils are prepared for university matriculation and teachers' certificates.

The Provincial University has been established at Edmonton on the south side of the Saskatchewan River, overlooking the Parliament Buildings. Prominent citizens of Calgary have also promoted a university in that city in which institution more than 200 students were enrolled in 1913, and the enrolment for 1914 will probably exceed that number.

BRITISH COLUMBIA.—The facilities for education in this province are equal to any part of the Dominion of Canada, and will bear comparison with the standard elementary schools of Great Britain. Attendance in public schools is compulsory, but the system is free and non-sectarian. The Provincial Government builds a school house, and pays a certified teacher in every rural district where twenty children between the ages of six and sixteen can be gathered together, placing the management in the hands of the local trustees, and sending inspectors and examiners periodically to look over the work. For outlying districts and mining camps this arrangement is very advantageous. High schools are also established in cities where classics and higher mathematics are taught. There are also Normal schools for the training of teachers. The minimum salary paid to teachers in rural districts is $50.00 per month, and reaches as high as $175.00 in city and high schools. The Legislature recently passed an Act for the establishment of the University of British Columbia, for the endowment of which two million acres of public lands have been set apart. The Educational Department is presided over by a Minister of the Crown. Under him are a Superintendent of Education and fourteen inspectors. There are boards of trustees in charge of all schools in every district. High schools are maintained by the Government in all the more important cities and towns. There are Provincial Normal Schools at Vancouver and Victoria, and colleges at Vancouver and Victoria, besides many excellent private colleges and boarding schools.

AGRICULTURAL ORGANIZATION

Forming part of the educational system of Western Canada, an admirable system of agricultural instruction and demonstration has been developed through the efforts of the Dominion Government, the various Provincial Departments of Agriculture, and the Canadian Pacific Railway Company. The Company was among the first to recognize the fact that if the prosperity of Western Canada was to be placed on a solid basis, it could be done only by the settlement of the land with practical farmers and the adoption of the most advanced agricultural methods. During the first few years of settlement in Western Canada, it was perhaps natural that farmers should devote themselves largely to grain growing, but as the country becomes older and the settlement more permanent, the greatest energies must be directed to diversified farming rather than to straight grain growing. The older agricultural districts both in Canada and the United States offer proof that continual cropping to grain results in such depletion of the soil that the earth becomes non-productive, and the whole community suffers as a result.



AN ALFALFA FIELD IN THE IRRIGATION BLOCK, SOUTHERN ALBERTA

Having these facts in mind, the Department of Natural Resources of the Canadian Pacific Railway Company has established Demonstration Farms on which the most approved system of mixed farming is practised with the idea of giving Western farmers absolute proof that this is the best paying system, and the only manner of farming that ensures permanent agricultural development. Each of these farms is in charge of an expert agriculturist whose duty it is to show by example that in any series of years, mixed farming produces more satisfactory results than straight grain growing. At these farms, advice is given without charge to farmers, and every effort is made to advance the interest of the agricultural community in which they are located. The dairy cow is the backbone of the

industry of Western Canada farmers, and in addition to dairy herds, beef cattle, hogs, sheep and chickens are kept, and areas given over to cropping of various grains, grasses and roots. Three of these farms are already in operation in Manitoba, four in Saskatchewan and six in Alberta.

At Strathmore, in the Canadian Pacific Irrigation Block east of Calgary, the railway company operates a well equipped Demonstration Farm with a competent staff, the members of which are ready to give disinterested advice to newcomers and to assist them in many other ways. A number of other farms in the Eastern portion of the Irrigation Block are now being operated by the Company in preparation for their development on lines similar to that at Strathmore.

Each of the four Western Provinces maintains a thoroughly up-to-date and well equipped Department of Agriculture, paying special attention to the dissemination of useful information on agricultural subjects among farmers, and particularly among the new settlers who are unacquainted with agricultural conditions in Western Canada. In Manitoba and Saskatchewan, well equipped agricultural colleges are maintained at Winnipeg and Saskatoon respectively and to each of these is attached an extensive Demonstration Farm. In Alberta, there are no less than three farm schools, situated at Claresholm, Olds and Vermilion, in addition to which the Provincial Government conducts Demonstration Farms at Medicine Hat and Sedgewick. The Province of British Columbia is arranging for the establishment of a modern agricultural college in connection with the University now being organized at Vancouver. The College Farm maintained at Coquitlam by the Provincial Government of British Columbia is rapidly becoming a noted centre for the distribution of good stock, principally dairy cattle and draft horses.

The Dominion Government has for many years maintained a chain of well-conducted Experimental Farms in Western Canada. One of these, specializing in dairying and fruit production, is located at Agassiz, B.C., while similar farms are also in course of organization at Sydney on Vancouver Island and at Invermere in the Columbia Valley. Two of these farms are located in Alberta, one at Lacombe in Central Alberta and the other at Lethbridge, in the southern part of the province. Both are devoted to mixed farming, although that at Lethbridge is operated partly as an irrigated farm and partly under the dry farming system. In Saskatchewan, one of the oldest and most favorably, as well as most widely-known farms of the system is located at Indian Head, while at Rosthern in Central Saskatchewan and at Scott, further north, there are also Experimental Stations. In Manitoba, the Brandon Farm has long been noted for its thorough experimental work and has been of the greatest possible value to the farmers in that province.

The Agricultural Society and the Farmers' Institute are flourishing institutions in Western Canada, being subsidized by the various Provincial Governments, which provide for their organization and assist them in every possible way. These bodies are of the greatest possible assistance to farmers through the whole country. Expert judges are supplied for local fairs and for the stock judging classes which form a prominent feature

at the Institute meetings. Speakers, well qualified to discuss agricultural topics, are also furnished for these meetings by both the Provincial and Dominion authorities. The membership fees are in all cases nominal, the work being carried on almost entirely at the expense of the local Governments, with liberal assistance from the Dominion.

In conjunction with the local Governments, the Canadian Pacific Railway Company furnishes, at suitable seasons, Demonstration Trains manned by experts in various lines of agricultural work to address meetings of farmers at many points, in conformity with an itinerary previously arranged and widely advertised. These trains carry specimens of various kinds of farm stock to be used for illustration purposes at the meetings and in the judging classes at the various stopping places en route.

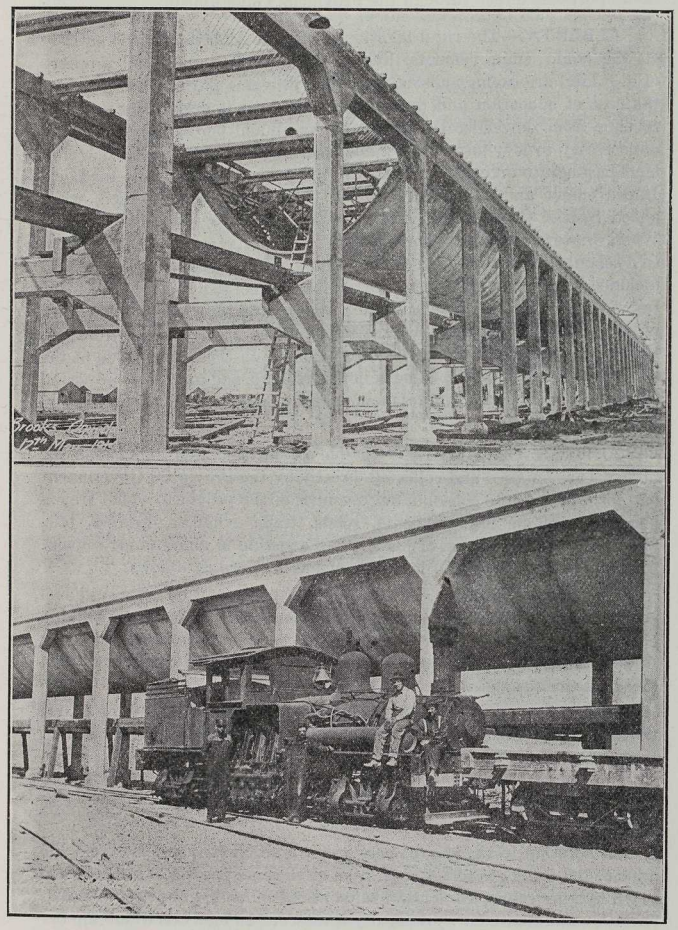
In the Department of Natural Resources of the Canadian Pacific Railway Company, one of the most important Branches is that devoted to agriculture and animal industry. Connected with this branch are a number of trained agriculturists and experts in almost every line of agricultural work. These men are ready at all times to advise new settlers and to assist them in acquiring knowledge of local conditions and of the agricultural methods and the varieties of stock most suitable for the district in which they are located.

TAXATION IN WESTERN CANADA

Owing to the liberal grants made by the Dominion Government to the various provinces, taxation in Western Canada is extremely low. The revenue of the Dominion is raised entirely through a low tariff on imports and excise duties, and no direct tax of any sort is levied. The Prairie Provinces have practically adopted the "single tax" system for the creation of provincial revenue.

MANITOBA.—Under the Municipal Assessment Act, all buildings, improvements, equipment, live stock, etc., are exempt from taxation in rural districts if held and cultivated by farmers. This brings farm property down to a straight "single tax" basis, the land only being assessable and only on the same valuation as adjoining unimproved lands of the same class. In other respects the burden of taxation is, as far as possible, removed from the shoulders of the farmer.

SASKATCHEWAN.—The only tax collected by the Provincial Government is that for educational purposes and is levied at a flat rate of one cent per acre. It is called "The Supplementary Revenue Rate" and after collection by municipal authorities is forwarded to the Provincial Government by whom it is disbursed in the following manner: To rural school districts, 80 per cent.; to High Schools, 10 per cent.; to the Provincial University, 5 per cent.; to the Agricultural College, 5 per cent. The municipal laws and assessments form a strong inducement to the intending settler. Excepting in outlying regions, he is accorded local self government and spends his own municipal taxes through councillors elected annually. The municipal taxes are low for by law the rate cannot exceed ten mills on the dollar. In frontier



GREAT CANADIAN PACIFIC RAILWAY IRRIGATION AQUEDUCT NEAR BROOKS, ALBERTA: 2 MILES LONG. UPPER VIEW, SECTION UNDER CONSTRUCTION; LOWER VIEW, COMPLETED SECTION

communities, where local self government is impossible, the taxation is only 1¼ cents per acre, levied for the purposes of building roads and bridges. School assessments are not high, grants being made for educational purposes direct through the Provincial Government.

ALBERTA.—The rural taxation system of Alberta is based entirely on the land. Improvements, live stock, chattels or personal property of any kind are exempt absolutely. The province pays a large share of the cost of education and public works, and, as it derives its principal revenue from the Federal Government by annual per capita grant, it is unnecessary to levy any considerable local taxes. As soon as a parcel of land passes into individual ownership, the same becomes liable for Local Improvement and General Provincial Educational taxes, which, when levied by the Government vary from 2½ cents to 4⅜ cents an acre. When, however, lands are included in a school district they are subject to a school tax not exceeding twelve cents per acre, and when land is also included in a local improvement district it is subject to a local improvement tax not exceeding 7½ cents per acre. Where land is included with a rural municipality, both municipal and school taxes are levied according to the value of the land. Such taxation is based on the actual value of the land without regard to the value of improvements, and there is no provision for any tax being levied in rural municipalities on improvements or personal property.

BRITISH COLUMBIA.—Outside of incorporated municipalities, all taxes are imposed and collected directly by the Provincial Government and form part of the consolidated revenues of the province, which are expended in public improvements, roads, trails, wharves, bridges, etc., and in the administration of justice, and assisting in maintaining schools. The rates imposed by the last Assessment Act are as follows:

On personal property, one-half of one per cent.; on improved real estate, one-half of one per cent.; on wild land, four per cent.; on working coal mines (known as class "A"), one per cent.; on unworked coal mines (known as class "B"), two per cent.; on timberland, two per cent.; all being on the basis of assessed values.

All incomes up to $1,000 are exempt. On taxable incomes of $2,000 the assessment is one per cent., and this increases by small percentages up to incomes of $7,000. Over the latter the rate is 2½ per cent. These rates are lower than those levied in former years. A discount of 10 per cent. is allowed on all taxes (except school taxes in rural school districts) if the amount is paid by the 30th June.

In addition to the above there is a tax on all coal shipped from the mine of ten cents per ton, and on coke of 15 cents per ton. Minerals are taxed two per cent. on the gross value at the mine, less the cost of transportation and treatment. A royalty is reserved on minerals where the tax is not exigible. Unworked Crown granted mineral claims are taxed at the rate of 25 cents per acre. The following exemptions are allowed:

On mortgages as personal property; on the unpaid purchase money of land as personal property; on household furniture and effects in dwelling

houses; on homesteads under the Dominion Land Act, and on pre-emptions under the Provincial Land Act for two years from date of entry and to the extent of $500, for four years thereafter; on farm produce and on live stock and machinery on the farm up to the value of $1,000, and on all income from the farm.

EXEMPTION LAWS

While the law contemplates that anyone shall pay his just debts, Manitoba, Saskatchewan and Alberta provide a very liberal exemption law to cover cases where, through misfortune of any sort, the farmer is unable to meet his liabilities, that is, the law protects from seizure for debt, where no mortgage exists, a certain number of horses, cattle, swine, and poultry, some household effects and a year's provisions, so that if a settler who has not mortgaged his property is overtaken by misfortune, he cannot be turned out of his house and home.

In British Columbia, also, the farm and buildings, when registered, cannot be taken for debt incurred after registration, and are free from seizure up to a value not greater than $500 (£100 English). Cattle "farmed on shares" are also protected by an Exemption Act.

VOTING REGULATIONS

Canadian naturalization laws are very liberal, much more so than those of the United States. Those who are not British subjects, but now are located in Canada, may transact business and own real estate here as much or as long as they choose without becoming naturalized. They are also allowed to vote (providing they own property) on all but national issues, and upon becoming naturalized the privilege of voting upon national issues is extended to them.

TELEPHONES

In the three Prairie Provinces one of the advantages awaiting the coming of the settler is the telephone. The Provincial Governments provide telephone lines in these provinces, and are continually extending their system into the rural districts as settlement demands it. This system provides a most economical, complete and up-to-date rural service.

In British Columbia the telephone service is still in the hands of a large company, but extensions in rural districts are made to cope with the advance of settlement.

DOMESTIC WATER SUPPLY

An abundance of good well water is readily obtained almost anywhere in Western Canada by digging, driving or drilling. The cost ranges from $2.00 to $3.00 per foot completed. In many sections springs abound, and reports are continually being received from well drillers and others to the effect that they have, during the course of their operations, secured heavy flows of artesian well water. Western Canada enjoys the reputation of an excellent domestic water supply.

WORK AND WAGES

The current wages paid in and about the mines of British Columbia are as follows: Miners, $3 to $4 per day (12 shillings to 16 shillings); ore shovellers, $3 (12 shillings); laborers, $2.50 per day (10 shillings); blacksmiths and mechanics, $4 to $5 per day (16 shillings to 20 shillings). Board is usually less than $7 (28 shillings) per week at mining camps.

Generally speaking, there is little demand for laborers other than farm hands and domestic help outside of the cities and larger towns. In these there is during the spring, summer and fall months an active demand for artisans and mechanics of the building trades, particularly carpenters and bricklayers at high wages. There is also a good deal of railway construction work that utilizes large numbers of men. Homesteaders with teams are often employed to do work of this nature and are able thus to supplement the revenue from their agricultural operations. It should be remembered, however, that settlers near the route of the new railway lines can best take advantage of such opportunities.

The regular market in Western Canada for labor is, however, on the farm. Men are employed in many cases for the whole year, but some farmers who have not work for men throughout the whole twelve months engage them for only the crop season or from April to October. During these months the crops are grown, harvested and threshed, and many farmers are able before November to market the greater part of their grain. When men are employed for a twelve months' term they are paid from $18 to $30 per month with board and lodgings. These are extremes, however, and an average would probably be $25 per month for good men. When employed for only eight months, the wages are higher, and other things being equal would average from $25 to $40 per month. For only harvesting and threshing, men are paid from $35 to $50 per month, or $2.00 to $3.00 per day.

The wages paid to domestic servants range from $15 to $35 per month, according to qualifications. There is at all times a scarcity of domestic help in Western Canada.

Skilled mechanics receive from four to six dollars per day, payment being made on the basis of hours of work.

There is absolutely no opening for clerks and office help. The supply is always much greater than the demand. Of course, any young man, who is strong and willing to work, may generally obtain work on a farm during the season, no matter what his previous occupation may have been.

SHOOTING AND FISHING

All through Manitoba and Saskatchewan prairie chickens (grouse) are generally plentiful. North of Qu'Appelle big game may be found. At Yellow Grass, on the "Soo" branch line from Pasqua, ducks, geese and plover are found in myriads during most seasons. In the Dirt Hills, about 20 miles south of Regina, deer and antelope, besides wild fowl, are fairly plentiful; and in the district about Regina there are innumerable opportunities for bags of duck and chickens, and nearly all the species of plover.

The "Mecca" of goose shooting is on the south side of Buffalo Lake, about 20 miles north of Moose Jaw, and also on Lakes Winnipeg and Manitoba. Wild geese in countless thousands come down from their feeding grounds in the Arctic circle in the months of September and October, and remain there until they take their departure for the south when ice begins to form on the lakes. Proper hides dug in the stubble fields in the line of flight of the geese, and decoys set out, will afford the finest goose shooting the keenest sportsman can desire.

On the branch railway from Regina to Prince Albert sportsmen should get good bags of chicken and ducks, while in the illimitable pine forest beyond Prince Albert, which is reached by line from Regina, game of nearly every description abounds, Montreal and Red Deer Lakes being especially good spots. Complete outfits can be procured at Prince Albert.

Rush Lake, a few miles from the station, on the main line of the Canadian Pacific Railway, is one of the finest points for geese, duck and other water fowl, where large bags can surely be made. Farther west, again, is the antelope country, Swift Current, Maple Creek and Medicine Hat being among the best outfitting points for a trip after these, the most beautiful animal of the plains. At Calgary, in sight of the "Rockies," superb sport may be enjoyed with the grouse among the brushy foothills of the giant range. Good shooting will be found within easy driving distance of the town, and glorious mountain trout fishing on the Bow River and its tributaries, to say nothing of the delights of visiting the ranches.

Edmonton is the gateway to the wild, half-known country to the north, a huge territory most abundantly stocked with game. In the Smoky River District, which is several hundred miles north of Edmonton, there are yet a few good buffalo, the best authorities say about seventy-five head in all. These the Mounted Police are striving strenuously to protect, but their extinction is much to be feared. Moose exist in large numbers in the forest-covered country between the North Saskatchewan and Lake Athabasca, and are to be found in the extension of the same belt to the north-west of it, even into Alaska. To the northward of the Great Slave Lake, that vast solitude known as the "barren lands" extends to the very shores of the frozen sea. It is the home of the musk ox, the barren ground caribou, the wolf, the glutton, and the Arctic fox. Along the shores that bound it the polar bear may frequently be shot. It is a region full of interest to the naturalist and to the explorer.

In Southern Alberta, reached by the Macleod branch from Calgary, or by the Crow's Nest Pass Railway from near Medicine Hat, especially in that portion lying between Macleod and the mountains, there is the same wonderful variety of game, with the addition of blue grouse (cock of the mountains), as the foothills are approached. There is good chicken, goose and duck shooting between Macleod and the International Boundary. Swans are also bagged occasionally. Trout are plentiful in the three branches of the Old Man River, and its numerable tributaries west of Macleod, and the most enticing bait for a big one is a mouse. There is also good fishing in the St. Mary's and Waterton (also called the Kootenay)

and in all their branches, and capital sport with either gun or line can be obtained in the chain of Kootenay Lakes on the eastern slope of the Rocky Mountains. Salmon trout weighing from 15 lbs. to 40 lbs. are among the catches in Eastern Kootenay. In the mountains back of these lakes, grizzly, cinnamon, silver tip and black bear, mountain sheep and goat are fairly plentiful. Guides are necessary, and the tourist will find good men in any of the settlements and stations along the line of the Crow's Nest Pass Railway. This new line has brought a great, undisturbed game country within easy reach of the sportsman.

British Columbia is truly the sportsman's paradise. Pheasants, grouse, quail, duck, geese—in fact, almost every known game bird—may be found in the vicinity of the coast, while in the interior bear, deer, moose, mountain goat and sheep are plentiful. Trout are readily obtained in the mountain lakes and streams; the salmon fishing is superb, and every variety of fish, from the herring to the whale, is available along the coast.

The lover of golf will find at Qualicum Beach a very excellent course of 18 holes, with good hotel accommodation and a magnificent sand beach as an added attraction. Qualicum Beach is on the line of the Esquimalt and Nanaimo Railway.

SETTLERS' EFFECTS

Freight Regulations for their Carriage on the C.P.R.

1. Carloads of settlers' effects may be made up of the following described property for the benefit of actual settlers, viz.: Live stock, any number up to but not exceeding ten (10) head, all told, viz.: Cattle, calves, sheep, hogs, mules or horses; household goods and personal property (second hand); wagons, or other vehicles for personal use (second hand) except as noted in paragraph 4, farm machinery, implements and tools (all second hand); softwood lumber (pine, hemlock, basswood or spruce—only), and shingles which must not exceed 2,500 feet in all, or the equivalent thereof; or in lieu of (not in addition to) the lumber and shingles, a portable house may be shipped; seed grain, small quantity of trees or shrubbery; small lot live weights or pet animals; and sufficient feed for the live stock while on the journey. The amount of seed grain must not exceed the following: Wheat, 4,500 lbs.; oats, 3,400 lbs.; barley, 4,800 lbs.; flax seed, 1,400 lbs.

2. While the Canadian Pacific Railway is desirous of continuing to give liberal encouragement to settlers, both as to the variety of the effects which may be loaded in cars, and the low rates thereon, it is also the duty of the Company to protect the merchants of the West by preventing as far as possible the loading of merchandise of a general character in cars with personal effects.

3. **Settlers' Effects rates will not apply** on shipments of second-hand wagons, buggies, farm machinery, implements, tools, musical instruments, bicycles or sewing machines, unless accompanied by household goods.

4. **Merchandise**, such as groceries, provisions, hardware, etc., also implements, machinery, vehicles, etc., if new, and ambulances, automobiles, barouches, breaks, broughams, cabriolets, coaches, carrettes, coupes, depot wagons (passenger), hacks, hansoms, hearses, herdicks (four-wheeled), landaulets, landaus, motor-cycles, omnibuses, rockaways, stage coaches, victorias or wagonettes, **will not be regarded as settlers' effects**, and if shipped will be charged the regular classified tariff rates.

5. **Passes.**—One man will be passed free in charge of full carloads of settlers' effects when containing live stock, to feed, water and care for them in transit.

6. **Settlers' Effects**, to be entitled to carload rates, must consist of a carload from one point of shipment to one point of destination. Carload shipments will not be stopped in transit for completion or partial unloading.

7. **The minimum carload weight** of 24,000 lbs. is applicable only to cars not exceeding 36 feet in length. If the actual weight of the carload exceeds 24,000 lbs. the additional weight will be charged for at the carload rate.

8. **The Minimum Charge** for less than carload shipments will be 100 lbs. at regular first-class rates.

9. **Should a Settler Wish to Ship More than Ten Head** of live stock, the additional animals will be charged for at proportionate rates over and above the carload rate for the settlers' effects.

10. **Less than Carload Shipments** will be understood to mean only household goods (second hand) wagons, or other vehicles for personal use (second hand), and second hand farm machinery, implements and tools. Settlers' effects rates, however, will not apply on shipments of second hand wagons, buggies, farm machinery, implements or tools, unless accompanied by household goods.

11. **Shipments of Settlers' Effects from Connecting Lines** will be charged from the Canadian Pacific junction point the settlers' effects rates from that point.

12. **Top loads** will not be permitted. This manner of loading is dangerous and absolutely forbidden.

13. **Car Rental and Storage of Freight in Cars.**—When freight is to be loaded by consignor, or unloaded by consignee, one dollar ($1.00) per car per day or fraction thereof, for delay beyond 48 hours in loading or unloading, will be added to the rates named herein, and constitute a part of the total charges to be collected by the carriers on the property.

Consignees are allowed twenty-four hours after notice of arrival of shipments in which to give orders for placing or delivery of cars before the forty-eight hours' free time mentioned herein begins.

All shipments must be accompanied by properly filled-in Export manifest blanks, which can be obtained from agent at point of shipment.

CUSTOMS REGULATIONS

The Canadian Customs tariff provides for free entry of certain household and settlers' effects, as follows:

Wearing apparel, books, usual and reasonable household furniture and other household effects, instruments and tools of trade, occupation or employment, guns, musical instruments, domestic sewing machines, typewriters, bicycles, carts, wagons and other highway vehicles, agricultural implements and live stock for the farm, not to include live stock or articles for sale or for use as a contractor's outfit, nor vehicles nor implements moved by mechanical power, nor machinery for use in any manufacturing establishment; all the foregoing if actually owned by the settler for at least six months before his removal to Canada, and subject to regulations prescribed by the Minister of Customs, provided that any dutiable articles as settlers' effects may not be entered unless brought by the settler on his first arrival, and shall not be sold or otherwise disposed of without payment of duty until after twelve months' actual use in Canada.

A settler may bring into Canada, free of duty, live stock for the farm as follows, if he has actually owned such live stock abroad for at least six months before his removal to Canada, and has brought them into Canada within one year after his first arrival, viz.: If horses only are brought, 16 allowed; if cattle only are brought, 16 allowed; if sheep only are brought, 160 allowed; if swine only are brought, 160 allowed. The settler is allowed sixteen head of stock, that is to say, he could bring into Canada ten horses and six cows or in any way he wishes making sixteen head of stock.

Household Goods.—In connection with the shipping of household goods and personal effects into Canada no particular form of invoice is necessary: Shipments should be forwarded in the ordinary way and they will be looked after by the Canadian Customs Officer at the frontier port, or nearest Customs Office to destination. Customs entry must be made and sworn to by the owner or agent of the goods before delivery can be obtained.

Automobiles, Traction Engines, Gasoline Engines, and all implements or vehicles moved by mechanical power are not allowed free entry into Canada as settlers' effects, but are dutiable.

Dutiable Articles, being brought into Canada by a settler of which it is impossible to procure invoices, the same will be appraised by a Customs Officer at the frontier port, or nearest Customs Office to destination, for duty purposes.

Settlers bringing settlers' effects to Canada from any point in other countries should take note that these effects must be passed on by Customs Officials in Canada, whether free of duty or not. Effects will be examined by the Customs Officers at the port of entry or sub-port nearest the point of destination. Lists of such ports or sub-ports can be had from any representative of the Canadian Pacific Railway, or direct from the Department of Natural Resources, Canadian Pacific Railway, Calgary, Alberta.

QUARANTINE REGULATIONS

Cattle, horses and sheep wili be passed only upon a certificate of a quarantine inspection officer, Swine are subject to quarantine and should not be brought into Canada.

Any intending settler who contemplates bringing domestic animals into Canada should, some time before shipment takes place, communicate with "The Collector of Customs" at Winnipeg, Man., Regina, Sask., Lethbridge, Alta., or Sumas, B.C., to ascertain the exact condition upon which such animals may be admitted into Canada, and to procure and fill out whatever forms are required by the Canadian Government Quarantine Officers.

COST OF LIVING

To the farmer with limited resources it is important to know how far his capital will go and how it should be expended. The cost of living is also a vital feature entering into his calculations. The Company is anxious that every settler shall become prosperous and satisfied, and it is, therefore, important that they should labor under no misapprehension in regard to the conditions prevailing in Western Canada, so that they may not over-estimate their resources or fail to lay out their capital to the best advantage.

The following are the retail prices of certain commodities prevailing at Calgary, Alberta, on the 1st of August, 1914.

This point has been selected as it is located in about the centre of Western Canada, and the prices there will, therefore, represent a fair average. East of Calgary, prices may generally be expected to be somewhat lower on most commodities, and at points west of Calgary probably a shade higher.

Farm Implements (Canadian)

2-furrow 12-inch gang	$65.00
16-disc 16-inch disc harrow	44.00
Three-section spike tooth harrow	17.00
Single disc 10-ft. drill	133.00
Mower, 5-ft. cut	61.50
Horse rake, 10 feet	36.50
Binder, complete, 8 feet	170.00
Farm wagon, complete	95.00

arness and Saddlery

Good average work harness, per set	$48.00
Collars, hand-made, each	4.00
Single buggy harness	$15.00 and up
Halters	85c. to $2.00
Saddles	$7.00 and up

Furniture

Wood seat chairs	$ 0.55	upwards
Leather seated chairs	1.50	"
Common kitchen tables	3.35	"
Dining tables	7.00	"
Sideboards	13.50	"
Bureaus	8.45	"
Washstands	3.85	"
Kitchen cupboards	15.00	"

Furniture—continued

Iron beds	3.25	"
Wire springs	2.50	"
Mattresses	3.50	"
Wire camp cots	2.55	"
Canvas camp cots	2.00	"
Pillows, 3-lbs. each	.90	"
Couches	6.35	"
Window shades	.35	"
Sheeting, plain or twill, per yard	.30	"
Sheets, per pair	1.50	"
Blankets, white, per pair	3.50	"
Blankets, gray, per pair	2.10	"
Carpets, union	35-50c.	"
Carpet squares, wool	7.50	"
Carpet square, union	4.50	"
Toilet sets	2.25	"

Dry Goods and Clothing

Staple and fancy woollen goods average somewhat cheaper than United States and dearer than Great Britain. The same applies to silks.

Cotton goods, and boots and shoes, average somewhat dearer than United States and about the same as Great Britain.

Meats

	Per lb.
Steaks, round	18c. to 20c.
Steaks, Porterhouse	25c.
Roast, rib	20c.
Roast	12½c. to 20c.
Corned beef	18c.
Mutton, side	12½c.
Mutton, chops	15c. to 18c.
Mutton, fore-quarter	12½c.
Pork	14c. to 17c.
Sausage	12½c. to 15c.
Dressed chicken	18c to 22c.
Lard, bulk	12½c.
Salmon, steaks	15c.
Turkeys	25c. to 30c.

Groceries

Potatoes	90c. to $1.20 per bushel
Butter	22c. to 35c. per lb.
Eggs	30c. to 40c. per doz.
Gran. sugar	8¾c. per lb.
Brown sugar	8½c. per lb.
Rolled oats	4c. per lb.
Best flour	$3.85 per 100 lbs.
Ham	22c. per lb.
Bacon	24c. per lb.
Tomatoes	12½c. per tin.
Corn	2 tins for 25c.

Groceries—continued

Evap. apples	2 lbs. for 25c.
Evap. peaches	10c. per lb.
Evap. prunes	10c. to 12½c. per lb.
Oranges	20c. per doz. and up
Lemons	30c. to 40c. doz.
Apples	$1.65 per box
Salt, per bbl.	$3.25
Soda biscuits	10c. per lb.
Tea	25c. per lb. up
Coffee	25c. per lb. up
Rice	6c. per lb. up
Beans	7½c. per lb.
Onions	3c. to 5c. per lb.
Tinned Salmon	15c. to 25c.
Jams, pure	5 lbs. for 90c.
Table and cooking syrup	75c. per gal.
Cheese	20c. per lb.
Baking powder	25c. per lb.
Kerosene oil	40c. per gal.
Gasoline	40c. per gal.
Vinegar	60c. per gal.
Starch	10c. per lb.
Turnips	1c. per lb.
Tinned beef	35c.
Condensed milk	15c.—2 for 25c.
Codfish	15c.—2 for 25c.
Spices	Same as St. Paul
Crockery	Same as St. Paul

Good board and room may be had in most Western towns at from $5 to $8 per week.

Part IX.

LEADING CITIES OF WESTERN CANADA

Those contemplating emigrating to Canada will be interested in a very brief description of the leading cities of the West, to one of which the immigrant will doubtless purchase his ticket, unless he has a specific destination in view elsewhere.

MANITOBA

WINNIPEG.—Forty years ago Winnipeg's population was less than 1,000. That city is now the railroad and business centre of the Canadian Middle West, and has a population estimated at 230,000. Twenty-seven railway lines radiate from it, and it is the chief central point of the three transcontinental railways traversing Western Canada. Winnipeg has 22 chartered banks with 20 branches in the city, 400 manufacturing establishments employing 18,500 hands, 192 churches and missions, 40 public schools, several colleges, a university and provincial agricultural college. Its magnificent buildings and parks make it one of the finest cities in Western America.

BRANDON.—The City of Brandon is situated on the Assiniboine River, 134 miles west of Winnipeg, and is a growing distributing centre. In 1901 the population was 5,340, and by the census of 1911 it was 9,620, while at the present time it numbers over 17,000. Brandon is also a centre of education, has several flourishing industries, 10 banks, 17 churches and has four railway systems entering its limits. A large and beautiful Government Experimental Farm adjoins the city. Among other leading centres of settlement in Manitoba may be mentioned Portage la Prairie with a population of 7,500; St. Boniface, population, 10,000; Selkirk, 3,400; Virden, 2,300.

SASKATCHEWAN

REGINA.—This is the capital of the province and also the largest city in Saskatchewan. It is an important distributing and financial centre. The population is 45,000. Regina has 41 manufacturing concerns, several wholesale houses, colleges, 12 public schools, churches of all denominations, and is credited with being the largest distributing centre for agricultural implements in the world.

SASKATOON.—This city claims the distinction of having grown more rapidly into prominence than any other city in Canada. In 1903 there were 113 inhabitants, while the present population is 27,000. Saskatoon is the location of the Provincial University and Agricultural College. The city has spent over $2,000,000 on its public schools, which are thoroughly well equipped. Saskatoon is located on three great railway systems and is a wholesale distributing centre of considerable importance. There are 13 branches of chartered banks.

MOOSE JAW.—This is a divisional point on the main line of the Canadian Pacific Railway, with a population of about 25,000, and serves an important grain-growing district. Moose Jaw has, in addition to other factories, a large milling industry, and is well equipped with educational facilities, including residential colleges for boys and girls.

PRINCE ALBERT.—This city is picturesquely situated on the North Saskatchewan River, and is one of the oldest centres of settlement in the Province of Saskatchewan. The present population of Prince Albert is 13,500. Large lumbering concerns are located near this city, employing 5,000 men the year round. The city has nine banks.

ALBERTA

CALGARY.—This is the largest city in Alberta, with a population of 85,000. Calgary has some 460 retail stores, 190 wholesale establishments, 92 manufacturing concerns, 27 banks, and is the chief divisional centre of the Canadian Pacific Railway in Alberta. Here also is located the head offices of the Department of Natural Resources of that Company. The extensive Western car shops of the Canadian Pacific Railway are located here and will eventually employ nearly 5,000 men. The city has many splendid business blocks, ranging in cost from $100,000 to half a million dollars. The Palliser, one of the magnificent hotels of the Canadian Pacific Railway Company, is located here. There are 36 public schools,

representing an investment of over $3,000,000. The city owns, operates and controls all its public utilities, including street railways, electric light and gravity water-works. Natural gas is used as fuel. Calgary is one of the most up-to-date and beautiful cities in Canada.

EDMONTON.—This is the capital city of Alberta, and has a population of 72,500, with 26 branches of chartered banks. There are 90 wholesale houses and 150 industrial enterprises of various kinds. The city is the centre of a rich agricultural district, has an important lignite coal industry, and is the base of supplies for the north country. The Provincial University has been established on the south side of the Saskatchewan River, overlooking the Parliament Buildings. The city also contains ample educational facilities and operates all public utilities. Edmonton's location on the Saskatchewan River is most picturesque and much admired.

LETHBRIDGE is situated in Southern Alberta on the Crow's Nest branch of the C.P.R. and is also a growing manufacturing and distributing centre, with a population of 15,000. Lethbridge owns its electric light and power plant, has wide streets and ample educational facilities, nine branches of chartered banks, and the mines operating in the vicinity have a pay roll of over $215,000 a month.

MEDICINE HAT contains some 14,000 inhabitants. This city is located near the easterly boundary of Alberta on the main line of the Canadian Pacific Railway. Medicine Hat is famous for its inexhaustible supply of natural gas, and also has an important coal mine. A number of manufacturing establishments utilizing natural gas for fuel and power have located there. The entire gas supply is owned by the municipality, there being 20 wells with an open daily flow of 50,000,000 cubic feet.

BRITISH COLUMBIA

VANCOUVER.—Vancouver is the commercial metropolis of the Province of British Columbia, and is the terminus of the Canadian Pacific Railway. This city now has a population of 140,000. It is the most important Canadian shipping centre on the Pacific Coast, and its harbor is one of the finest in the world, land-locked, sheltered, roomy and deep enough for the largest fleet of vessels. Vancouver has a great many prosperous industrial concerns, and is a wholesale and distributing centre of large magnitude. It is well supplied with high-class public schools, colleges and other educational institutions, and promises to become one of the largest cities on the entire Pacific Coast.

VICTORIA.—This is the capital of the Province of British Columbia, and is the oldest centre of settlement in that province. Victoria is a city of 67,000, and is a tourist centre of considerable importance. It is also springing into prominence as a wholesale centre, and a number of industries are located there. The gardens and parks of the city are famed throughout the world, and it bears the reputation of being the most desirable residential point in Canada on account of its climate and situation.

NEW WESTMINSTER.—New Westminster is situated on the Fraser River, about 16 miles from its mouth, and 12 miles south of Vancouver. It is the centre of the salmon canning industry, and also enjoys a large share of the coast lumber trade. This was the capital of the old Crown colony of British Columbia. Several state institutions are maintained here, and the city owns and operates its own electric light plant. It is also the centre of an exceedingly rich agricultural district. The present population of New Westminster is about 18,000. It is the only Canadian fresh water port on the Pacific Coast.

NANAIMO.—This is referred to as the "coal city" of British Columbia, and is located 73 miles northeast of Victoria, and has a fine harbor on the east coast of Vancouver Island. Its chief industry is coal mining, but latterly this city has become important as a centre of the herring fisheries. Nanaimo coal is shipped to the United States and Oriental points, and it is the coaling station for all ocean going steamships. The population is about 10,000.

NELSON.—The principal city of the interior of British Columbia, is beautifully situated on the West arm of Kootenay Lake, and has a population of about 8,000. Nelson is a railway centre of some importance. It owns and operates all its public utilities, including gas, street railway, electric light and power. It is the centre of a district producing large quantities of lumber, minerals, and fruit.

CRANBROOK—See page 64.

PRINCE RUPERT.—This is the terminus of the Grand Trunk Pacific Railway and the commercial port of Northern British Columbia. It is a port of call for all Coast steamship lines between Victoria and Vancouver and Alaska. The fishing interests of the tributary district are of great importance. The city owns its public utilities and has a population of 6,200.

Part X.

ROUTES, RAILWAY SERVICE AND INFORMATION BUREAU

Although an attempt has been made to incorporate in this handbook as much reliable information as possible regarding Western Canada, it is not to be supposed that the entire subject could be completely dealt with in this manner. Doubtless, many points will occur to the intending settler upon which he desires fuller knowledge and advice. Such being the case it has been considered advisable to append complete lists of Canadian Pacific Railway and Dominion Government Officers to whom the intending immigrant may, with the utmost confidence, apply for disinterested information and advice.

ROUTES TO THE CANADIAN WEST.—Colonists arriving in Canada at Quebec or Montreal in summer, or Halifax, or St. John, N.B., in winter (Halifax to St. John via Intercolonial Railway), travel to their new homes in Ontario, Manitoba, Saskatchewan and Alberta or British Columbia by the Canadian Pacific Railway direct. Settlers from the Eastern States travel via Montreal, Prescott or Brockville, and thence by the Canadian Pacific; but if from Southern and Western New York and Pennsylvania via Buffalo, Niagara Falls, Hamilton, Toronto, thence Canadian Pacific Railway; those from the Middle States either by Toronto, or by Chicago, St. Paul and Emerson, Man., or by St. Paul and Portal, from the Middle Western Coast States by Portal (or, if for Manitoba, by Emerson, Man.), from the Pacific Coast States by Vancouver, or Sumas, or through the West Kootenay mining regions via Kingsgate and Canadian Pacific from Rossland and Nelson.

ATTENTION AND CIVILITY of the employees of the Company are spoken of by every traveller on the line. The cleanliness of cars and stations is also noticed. These two points together with the safety of the passengers are most carefully watched by the management.

EQUIPMENT.—This line operates the finest Passenger, Sleeping, Parlor and Compartment Observation Cars in the world. The wheels and axles are of finest tested steel. The car bodies are strongly framed to meet any contingency, and are wider and higher than those of most other railways. Both first and second-class cars are designed to secure uniform temperature, combined with perfect ventilation and freedom from dust and with the maximum of strength, elegance and comfort.

LIGHT.—The Company's cars are brilliantly illuminated by modern lighting systems.

COMPARTMENT OBSERVATION CARS, finished in the most luxurious style, and fitted with every convenience, are run on transcontinental trains Nos. 1 and 2 between Montreal and Vancouver and on Nos. 3 and 4 between Toronto and Vancouver; Nos. 51 and 52 between Winnipeg and Edmonton; on Nos. 19 and 20 between Montreal and Chicago, and on Nos. 21 and 22 between Windsor and Montreal. These cars are known as the "Glen" Series ("Glenannan," "Glen Atha," etc.) and the "Mount" Series ("Mount Abbott," "Mount Begbie," etc.) and are the very latest that skill and experience can suggest. The "Glen" Series contains besides one drawing-room (similar to the drawing-room in a standard sleeper) one compartment (containing one lower and one upper berth and toilet facilities), a buffet, capable of serving light refreshments, a well-selected library, a writing desk, a large smoking-room, a large observation room, fitted with easy chairs, and an observation platform at the rear end; they are lighted by electricity. The "Mount" Series differ from the "Glen" in that they have a drawing-room and three compartments and no smoking-room.

The "Lake" Series operated on night express trains between Montreal and North Toronto and Ottawa and Toronto are a new class of compartment cars. Each car contains seven compartments, a drawing-room, an

observation smoking-room and an observation platform. Each compartment contains upper and lower berths and all toilet requisites. The cars are lighted by electricity and are provided with electric fans for use in warm weather.

SLEEPING AND PARLOR CARS are owned and operated by the Company, and no expense has been spared to make them perfect. They are finished outside with polished mahogany, and their interior, with their beautiful fittings, is beyond comparison. The berths are wider higher and longer than in other Sleeping Cars. The curtains, blankets and linen, made expressly for the Company, are of the finest quality. Writing paper and envelopes are furnished free to Sleeping Car passengers on transcontinental trains on application to the porter; and to keep travellers informed on current events, a summary of the news of the world is daily bulletined in the Sleeping Cars and at the Company's hotels in the mountains.

TOURIST SLEEPING CARS, fitted with mattresses, curtains, blankets, pillows, linen, etc., and in charge of porters, are run daily between Montreal and Vancouver, Toronto and Vancouver, Montreal and Winnipeg, Winnipeg and Edmonton (twice weekly), St. Paul, Minn., and Seattle, Wash., Boston and Montreal (Wednesday). The Tourist Sleeping Car is designed after the pattern of the Company's Standard Sleeping Car and neatly upholstered in leather. There is a small kitchen and cooking range provided in car where passengers may prepare their own meals if supplies have been taken along. Passengers who do not wish to prepare their own meals may, when on trains that carry a dining car, have their meals on dining car a la carte. The berth rate in the tourist is about one-half that of the Standard Sleeper.

SECOND-CLASS OR COLONIST SLEEPING CARS are well built, bright and pleasant, and the sleeping accommodation is excellent. **No extra charge is made in these cars** to holders of Second-Class or Colonist Tickets travelling on regularly scheduled transcontinental trains. They are unupholstered, but bedding, etc., can be purchased if not otherwise provided at Halifax, St. John, Quebec, Montreal, Ottawa (Broad St.), North Bay, Toronto (Union), Sudbury, Fort William, Winnipeg, Calgary, and Vancouver, at following rates: Mattresses, $1.00 each; blankets, $1.00 each; pillows, 35 cents each; straps, 20 cents each; curtains, $1.00 per pair.

DINING CAR SERVICE.—The Company operates Dining Cars on all important trains. The service is a la carte; the passenger thus pays for what he orders only. This service is well up to the standard of the first-class restaurant, and the prices charged are as reasonable as a high-class service permits of.

DINING HALLS are located at convenient stations, at which ample time is allowed for meals. Dining halls and luncheon counters are marked thus ‖ on the time table.

Special attention is called to the excellent dining facilities at McAdam Junction, N.B., Windsor Station, Montreal, Broad St. Station, Ottawa, North Bay Station, Winnipeg Station, Field, B.C., Glacier, B.C., Revelstoke, B.C., Sicamous, B.C., and Vancouver Station.

SAFETY.—Every appliance of proved value calculated to secure safety has been adopted on this line. These are too numerous to mention, but they include an elaborate guard system at all bridges. Special care has been taken to make the heating apparatus on trains safe.

STOP-OVERS.—Intending settlers holding through tickets to points on the Canadian Pacific Railway west of Winnipeg are given the privilege of stopping over at stations where they wish to inspect the land. If stop-over is desired, application should be made to the Immigration Office of the Company at Winnipeg, in case the settler's ticket does not specifically provide for stop-over privileges.

All trains are met upon arrival at Winnipeg, or before reaching that city, by the agents of the Government and Canadian Pacific Railway Company, who give colonists all the information and advice they require in regard to their new homes.

Hotel System—Canadian Pacific Railway

THE CHATEAU FRONTENAC, QUEBEC.—In the quaintest and historically the most interesting city in America. One of the finest hotels on the continent. It occupies a commanding position overlooking the St. Lawrence, its site being unrivalled.

Rates, $5.00 per day and upward. One mile from C.P.R. Station, transfer charge: Bus, 25 cents. American plan.

THE PLACE VIGER, MONTREAL, is a handsome structure immediately opposite Viger Square, at Place Viger Station, 1½ miles from Windsor Street Station, and a convenient distance from Ocean Line docks, most tastefully furnished, the style and elegance characterizing the Chateau Frontenac at Quebec being also found here.

Rates, $4.00 per day and upward. American plan.

THE INN, ST. ANDREWS, N.B. (open May to September 1st). Nicely located near the water. Boating, bathing and fishing. Best natural golf links in Canada.

Rates, $2.50 per day. American plan.

THE ALGONQUIN, ST. ANDREWS, N.B.—Reconstructed fireproof hotel; ready for season of 1915.

McADAM STATION HOTEL, McADAM JUNC., N.B., is especially convenient for travellers, owing to its location at the junction with the main line of the Company's branch lines intersecting New Brunswick.

Rates, $3.00 per day and upward. American plan.

CALEDONIA SPRINGS HOTEL, CALEDONIA SPRINGS, ONT. (open from May to October), is situated at the famous Caledonia Springs, about 300 yards from the C.P.R. Station. The Springs are now well known all over the American Continent.

Rates, $3.00 per day and $20.00 per week and upward.

A GLIMPSE OF THE CANADIAN ROCKIES

THE ROYAL ALEXANDRA, WINNIPEG, MAN.—The Royal Alexandra is one of the most palatial hotels of the Canadian Pacific hotel system and is centrally located, adjoining the station, in the progressive City of Winnipeg, almost midway between the Atlantic and the Pacific Oceans. It is operated on the European plan and has 460 rooms, 251 of which have private baths, and all are fitted with the most modern and luxurious furnishings. Rates are, according to the location of the room or suite, from $2.00 per day upwards (European plan), and the prevailing prices are lower than in many of the first-class hotels in the Eastern cities. A big addition has now been built to this hotel.

HOTEL PALLISER, CALGARY, ALTA.—This magnificent hotel is in the heart of Calgary's business district, yet with its beautifully arranged sun parlors, roof gardens and lounging rooms the travelling public get the full advantage of the bracing air of the foothills of the Rocky Mountains.

Rates, $4.00 per day and upward. American plan.

BANFF SPRINGS HOTEL, BANFF, ALTA.—**(open from May 15th to October 15th)**, in the Canadian National Park, on the eastern slope of the Rocky Mountains, is 4,500 feet above sea level, and is the chief tourist resort in the Rockies. Golf links. Sulphur swimming pools. Distance from C.P.R. Station is about 1½ miles and transfer charge is 25 cents.

Rates, $4.00 per day and upward. American plan.

CHATEAU LAKE LOUISE, LAKE LOUISE, ALTA.—**(open from June 10th to October 15th)**, is a quiet resting place in the mountains, situated by Lake Louise, from which there is a good carriage drive. A convenient base from which to explore the Lakes in the Clouds. The Chateau is situated about 4 miles from Lake Louise Station, and transfer charge is 50 cents.

Rates, $4.00 per day and upward. American plan.

MOUNT STEPHEN HOUSE, FIELD STATION, B.C., a chalet hotel fifty miles west of Banff, at the base of Mount Stephen, which towers 8,000 feet above. This is a favorite place for tourists, mountain climbers and artists. The wonderful Yoho Valley, in which the C.P.R. maintains summer camps, is reached by way of Field.

Rates, $4.00 per day and upward. American plan.

EMERALD LAKE CHALET, EMERALD LAKE, B.C.—**(open from June 15th to September 30th)**, a most romantically situated Swiss chalet hotel with accommodation for forty guests. The gateway to Yoho Valley. Seven miles from Field Station. Transfer charge, $1.00 each.

Rates, $3.50 per day and upward. American plan.

GLACIER HOUSE, GLACIER, B.C., in the heart of the Selkirks, within forty-five minutes' walk of the Great Glacier, which covers an area of about thirty-eight square miles.

Rates, $4.00 per day and upward. American plan.

HOTEL REVELSTOKE, REVELSTOKE, B.C., situated between the Selkirks and Gold Ranges, at the portal of the West Kootenay gold fields and the Arrow Lakes.

Rates, $3.00 per day and upward. American plan. A. J. MacDonell, Lessee.

KOOTENAY LAKE HOTEL, BALFOUR, B.C.—(open from June 1st to September 30th).—A new, first-class tourist hotel at Balfour, B.C., near the junction of the Kootenay River and Kootenay Lake. An ideal resort for sportsmen. Excellent tennis courts.

Rates, $3.50 per day and upward. American plan.

HOTEL SICAMOUS, SICAMOUS, B.C., built on the shores of the Shuswap Lakes where the Okanagan branch of the C.P.R. begins.

Rates, $3.50 per day and upward. American plan.

HOTEL INCOLA, PENTICTON, B.C.—A new first-class tourist hotel at the foot of navigation on Okanagan Lake reached by the C.P.R. Steamers. An ideal resort for any time of the year, owing to the sunny, dry climate of the Okanagan Valley.

Rates, $3.00 per day and upward. American plan. Managed by H. Vince, for the Kettle Valley Railway.

HOTEL VANCOUVER, VANCOUVER, B.C., the Pacific Coast terminus of the Railway, is a hotel recently very much enlarged to serve the commercial business of the city as well as the tourists who find it profitable and interesting to remain a day or longer. Situated half mile from C.P.R. Station; transfer charge, 25 cents. European plan.

EMPRESS HOTEL, VICTORIA, B.C.—A short distance from boat landing. One of the most beautiful hotels on the American Continent. European plan.

CAMERON LAKE CHALET, CAMERON LAKE, B.C.—(open May to September 30th)—The chalet at Cameron Lake on Vancouver Island, E. & N. Ry. is an attractive place for a hoilday.

Rates, $3.50 per day. American plan.

HAYTER REED, Manager-in-Chief, Hotel Department,
Canadian Pacific Railway, **Montreal.**

CANADIAN GOVERNMENT IMMIGRATION AGENTS

Intending settlers will receive full information regarding any part of Canada from any of the Canadian Government Immigration Agencies a list of which is added:

AGENTS IN THE BRITISH ISLES AND ON THE CONTINENT

England—

Mr. J. Obed Smith, Superintendent of Emigration, 11–12 Charing Cross, London, S.W.
Mr. Fred Campbell, 139 Corporation St., Birmingham.
Mr. E. MacLeod, Canadian Government Agent, 54 Castle St., Carlisle.
Mr. John Cardale, 81 Queen St., Exeter.
Mr. A. F. Jury, 48 Lord St., Liverpool.
Mr. F. O. Chapman, Peterborough.
Mr. L. Burnett, 16 Parliament St., York.
Mr. S. W. Pugh, Inspector of Emigration Agencies, Adrian Court, Usk, Monmouthshire (Wales).

Scotland—

Mr. G. G. Archibald, 116 Union St., Aberdeen.
Mr. J. K. Millar, 107 Hope St., Glasgow.

Ireland—

Mr. John Webster, 17–19 Victoria St., Belfast.
Mr. Ed. O'Kelly, 44 Dawson St., Dublin.

France—

M. Paul Wiallard, Can. Bureau of Information, 3 Rue de L'Isly, Paris.

Belgium—

M. J. Henry Stanford, Place de la Gare, 23, Antwerp.

UNITED STATES AGENTS

Biddeford, Me.—L. M. Asselin, 107 Main Street.
Boston, Mass.—Max A. Bowlby, 73 Tremont St.
Chicago, Ill.—C. J. Broughton, Room 412, 112 W. Adams St.
Des Moines, Ia.—Frank Hewitt.
Detroit, Mich.—M. V. McInnes, 176 Jefferson Ave.
Grand Forks, N.D.—W. E. Black.
Great Falls, Mont.—Benj. Davies, Room 6, Dunn Block.
Indianapolis, Ind.—G. W. Aird, 215 Traction-Terminal Bldg.
Harrisburg, Pa.—F. A. Harrison, 210 North 3rd St.
Kansas City, Mo.—George Cook, 125 W. 9th St.
Marquette, Mich.—C. A. Laurier.
Milwaukee, Wis.—Geo. A. Hall, 123 Second Street.
Manchester, N.H.—J. A. Laferriere, 1039 Elm St.
Omaha, Neb.—W. V. Bennett, 220 17th St., Room 4, Bee Bldg.
Providence, R.I.—J. E. Laforce, 29 Weybosset St.
Saginaw, Mich.—R. Laurier, 222 Hoyt St.
Syracuse, N.Y.—J. S. Crawford, 301 E. Genesee St.
St. Paul, Minn.—R. A. Garrett, 315 Jackson St.
Spokane, Wash.—J. N. Grieve, Cor. 1st & Post Sts.
Toledo, Ohio—W. S. Nethery, 413 Gardner Bldg.
Watertown, S.D.—J. M. MacLachlan, Box 197.
Philadelphia, Pa.—J. P. Jaffray, 1337 Walnut St.

REPRESENTATIVES OF CANADIAN PROVINCES IN GREAT BRITAIN AND IRELAND

Alberta—John A. Reid, 1 Charing Cross, London, S.W., England.
British Columbia—Hon. J. H. Turner, Salisbury House, Finsbury Circus, London, E.C.
Manitoba—John Coghlan,, 33 Foyle Street, Londonderry, Ireland.
New Brunswick Government Offices, 37 Southampton Street, Strand, London, W.C.
Nova Scotia—John Howard, 57A Pall Mall, London.
Ontario—Richard Reid, 163 Strand, London.
Prince Edward Island—Harrison Watson, 73 Basinghall St., London, E.C.
Quebec—Dr. P. Pelletier, 36 Kingsway, London.

CANADIAN PACIFIC RAILWAY AGENCIES

Antwerp, BELGIUM—W. D. Grosset, Agent .....25 Quai Jordaens

Banff ..... ALTA.—A. L. Powell, District Passenger Agent.
Belfast ... IRELAND —Wm. McCalla, Agent.....41 Victoria St.
Bellingham, WASH.—W. H. Gordon, Freight and Passenger Agent..113 West Holly St.
Birmingham, ENG.—W. T. Treadway, Agent ..... 4 Victoria Sq.
Boston .....MASS.—F. R. Perry, G.A.P.D., E. G. Ranney, C.P.A., 332 Washington St.
Brandon .... MAN.—J. A. McDonald, District Passenger Agent.
Bristol ..... ENG.—A. S. Ray, Agent.....18 St. Augustine's Parade
Brockville ... ONT.—G. E. McGlade, City Ticket Agent, Cor. King St. and Court House Ave.
Buffalo ..... N.Y.—G. H. Griffin, C.P.A.; C. S. Richardson, D.F.A. ....302 Main St.

Calgary ..... ALTA.—Robt. Dawson, District Passenger Agent, 113 Can. Pac. Sta. Bldg.
Chicago ..... ILL.—Geo. A. Walton, Genl. Agt. Pass'r. Dept.....224 So. Clark St.
W. A. Kittermaster, Gen'l Agent, Frt. Dept., 230 So. La Salle St.
Cincinnati .. OHIO—M. E. Malone, Genl. Agt., Pass'r Dept.....436 Walnut St.
B. R. White, District Freight Agent, 2408 Union Central Bldg.
Cleveland ... OHIO—Geo. A. Clifford, Gen. Agt., Pass'r Dept.....213 Euclid Avenue

Detroit ..... MICH.—A. E. Edmonds, G.A.P.D.....7 Fort St. W.
E. Olson, D.F.A..... 506 Dime Bank Bldg.
Duluth .... MINN.—Jas. Maney, Gen. Pass'r Agt., D.S.S. & A. Ry.....Fidelity Bldg.

Edmonton .. ALTA.—Chas. F. Fyfe, City Ticket Agent.....145 Jasper Ave. East
Everett .....WASH.—A. B. Winter, Ticket Agent.....1519 Hewitt Ave.

Genoa .....ITALY—H. Coe & Clerici, Agents.....Piazza San Matteo, 15
Glasgow, SCOTLAND—Thos. Russell, Agent.....120 St. Vincent St.

Halifax ..... N.S.—J. D. Chipman, City Passenger and Frt. Agt.....37 George St.
Hamilton ... ONT.—W. McIlroy, C.P.A.; W. J. Grant, D.F.A., Cor. King & James Sts.
Hong Kong.....—D. W. Craddock, General Traffic Agent.
Honolulu .... H.I.—Theo. H. Davies & Co., Agents.

Kansas City .. MO.—K. A. Cook, T.P.A.; L. C. Jack, Frt. Agt., 441 Sheidley Bldg.
Kingston .... ONT.—F. J. Conway, City Freight and Passenger Agent.

Liverpool .... ENG.—Thomas McNeil, Agent.....Royal Liver Bldg., Pier Head

London ..... ENG.—H. S. Carmichael, Gen'l Pass'r Agt., 62–65 Charing Cross, S.W.
T. J. Smith, Genl. Freight Agent, and 67–68 King William St., E.C.
London .....ONT.—W. Fulton, City Passenger Agent.....161 Dundas St.
Los Angeles .. CAL.—A. A. Polhamus, Genl. Agt., Pass'r Dept., 708 South Spring St.

Manchester .. ENG.—D. H. M. Park, Freight and Passenger Agent.....1 Mount St.
Melbourne .. AUS.—Union S. S. Co. of New Zealand (Ltd.), Thos. Cook & Son.
Milwaukee .. WIS.— F. T. Sansom, P.A., 100 Wisconsin St., A. G. G. Lauder, D.F.A., 913 Majestic Building
Minneapolis, MINN.—W. R. Callaway, G.P.A., Soo Line; T. J. Wall, G.A.P.D., 402 Nicollet Ave.

Montreal .... QUE.—E. J. Herbert, 1st Asst. Gen. Pass'r Agt....Windsor St. Station
A. E. Lalande, City Passenger Agent....141–145 St. James St.
Moscow ... RUSSIA—The Nordiske Reisebureau ..... Hotel Metropole

CANADIAN PACIFIC RAILWAY AGENCIES—Continued

Nagasaki ...JAPAN—Holme, Ringer & Co., Agents.
Naples .....ITALY—H. Coe & Clerici, Agents..... Via Agostino Depretis, 22
Nelson ..... B.C.—J. S. Carter, District Passenger Agent.

New York ... N.Y.—W. H. Snell, G.A.P.D..... 458 Broadway
International Sleeping Car Co. .....281 Fifth Ave.
Niagara Falls, N.Y.—D. Isaacs ..... Prospect House

Omaha ..... NEB.—Ed. Eden, D. F. Agent.....409 First National Bank Bldg.
Ottawa ..... ONT.—George Duncan, City Passenger Agent.....42 Sparks St.

Paris ..... FRANCE—Aug. Catoni, Agent.....1 Rue Scribe
Petrograd ..RUSSIA—The Nordiske Reisebureau.....29 Bolshaja Konjushenaja
Philadelphia .. PA.—R. C. Clayton, City Passenger Agent,....629-631 Chestnut St.
Pittsburg ..... PA.—C. L. Williams, Genl. Agt. Pass'r Dept.,.....340 Sixth Ave.
Portland .....ME.—Leon W. Merritt, Ticket Agt., Maine Cent. Rd.....Union Depot
Portland .....ORE.—J. V. Murphy, G.A.P.D., ...55 Third St.

Quebec ..... QUE.—G. J. P. Moore, City Pass'r Agt., 30 St. John St., Cor. Palace Hill

Rotterdam ...HOL.—John Otten & Zoon, Agents.....Noodblaak 15

Sault Ste.Marie, MICH.—W. J. Atchison, C.P.A., 224 Ashmun St.; W. C. Sutherland, Depot T. A.
Sault Ste.Marie. ONT.H. J. Moorehouse, G.P.A.; J. B. Way, Depot Ticket Agent.
St. John .....N.B.—W. B. Howard, D.P.A., 8 King St.; W. H. C. Mackay, C.T.A., 49 King St.
St. Louis .....MO.—A. J. Blaisdell, G.A.P.D., 725 Olive St.; W. J. Pentland, C.P.A., 725 Olive St.
St. Paul .... MINN.—B. F. Smeed, C.P.A., Soo Line.....379 Roberts St.
San Francisco. CAL.—G. M. Jackson, G.A.P.D.; W. W. Smith, D.F. Agt., 645 Market St.

Saskatoon .. SASK.—W. E. Lovelock, City Ticket Agent.....102 Second Ave.
Seattle .... WASH.—E. E. Penn, G.A.P.D.; J. W. Draper, D.F.A. ...713 Second Ave.
Sherbrooke .. QUE.—E. H. Sewell, City Passenger Agent.....74 Wellington St.
Spokane ... WASH.—W. H. Deacon, C.P.A. .....603 Sprague Ave.
Sydney ..... AUS.—Union S. S. Co. of New Zealand (Ltd.)

Tacoma .... WASH.—H. M. Beyers, C.P.A.; N. Fleming, D.F.A., .. 1113 Pacific Ave.
Toronto ..... ONT.—M. G. Murphy, District Passenger Agent.....1 King St. E
Vancouver ... B.C.—J. Moe, C.P.A., 434 Hastings St., Chas. Millard, Depot Tic. Agt. J. J. Forster, G.A.P.D.
Victoria ..... B.C.—L. D. Chetham, City Passenger Agent.....1102 Government St.

Washington ..D.C.—G. J. Weidman, City Pass'r Agent.....1419 New York Ave.
Winnipeg ....MAN.—A. G. Richardson, City Passenger Agent, Cor. Main St. and Portage Ave.
Yokohama ..JAPAN—W. T. Payne, Manager Trans-Pacific Line; H. T. Wilgress, Agt. 14 Bund.

H. W. BRODIE, General Passenger Agent, Vancouver, B.C.

A. C. SHAW, General Passenger Agent, Winnipeg, Man.

WM. STITT, General Passenger Agent, Montreal, Que.

J. S. DENNIS, Assistant to the President, Calgary, Alta., Canada.

W. R. MCINNIS, Freight Traffic Manager, Montreal, Que., Canada.

C. E. E. USSHER, Passenger Traffic Manager, Montreal, Que., Canada.

CANADIAN PACIFIC RAILWAY, DEPARTMENT OF NATURAL RESOURCES, DISTRICT REPRESENTATIVES IN UNITED STATES AND CANADA

M. E. Thornton, Colonization Agent, Room 1012, 112 West Adams St., Chicago, Ill.
J. E. MacDougall, District Representative, Broadway and 30th St., New York, N. Y.
C. W. Droegemeyer, District Representative, 205 Woodmen of the World Bldg., 14th and Farnum St., Omaha, Neb.
H. H. Piel, District Representative, 176 East Third St., St. Paul, Minn.
W. A. Smith, District Representative, 934 17th St., Denver, Colo.
R. C. Bosworth, District Representative, 705 Sprague Ave., Spokane, Wash.
L. P. Thornton, District Representative, Multnomah Hotel Bldg., 271 Pine St., Portland, Oregon.
W. J. Gerow, Dept. of Natural Resources, C. P. R., Saskatoon, Saskatchewan.
F. W. Russell, Dept. of Natural Resources, C. P. R., Winnipeg, Manitoba.

Any of the above Representatives of the Canadian Pacific Railway, Department of Natural Resources, will be glad to furnish full information concerning the Company's lands in Western Canada upon application.

PUBLICATIONS OF THE CANADIAN PACIFIC RAILWAY DEPARTMENT OF NATURAL RESOURCES

In addition to this booklet, "The Western Provinces of Canada," which is furnished free on request, the following publications may be obtained, postage prepaid, on application to the Company at Calgary, Alberta, Canada:—

HANDBOOK OF ALBERTA, SASKATCHEWAN AND MANITOBA: A handbook concerning these great grain and stock Provinces, giving information as to area, soil, climate, rainfall, temperature, average yields of principal crops over a period of years, C.P.R. Irrigation farms, "Ready-made" farms, terms of sale to settlers, loans to settlers, market prices of products, cost of making a start, educational facilities, social conditions, etc. Well illustrated from photographs.....**FREE.**

IRRIGATION FARMING: Diversified farming and stock raising is the foundation upon which all irrigation projects rest. This book gives the business aspect of the industry in the Irrigation Block, and shows that upon its rich alfalfa meadows live-stock feeding and dairying lead to certain success. Every up-to-date farmer nowadays is a stockman, and this book will appeal to that class.....**FREE.**

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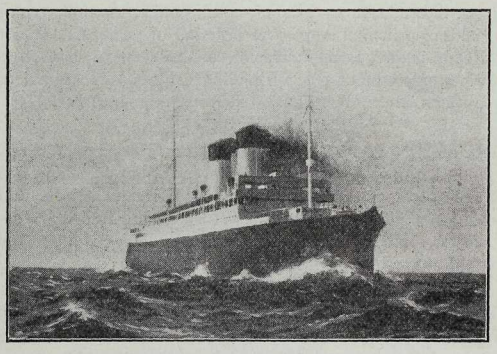

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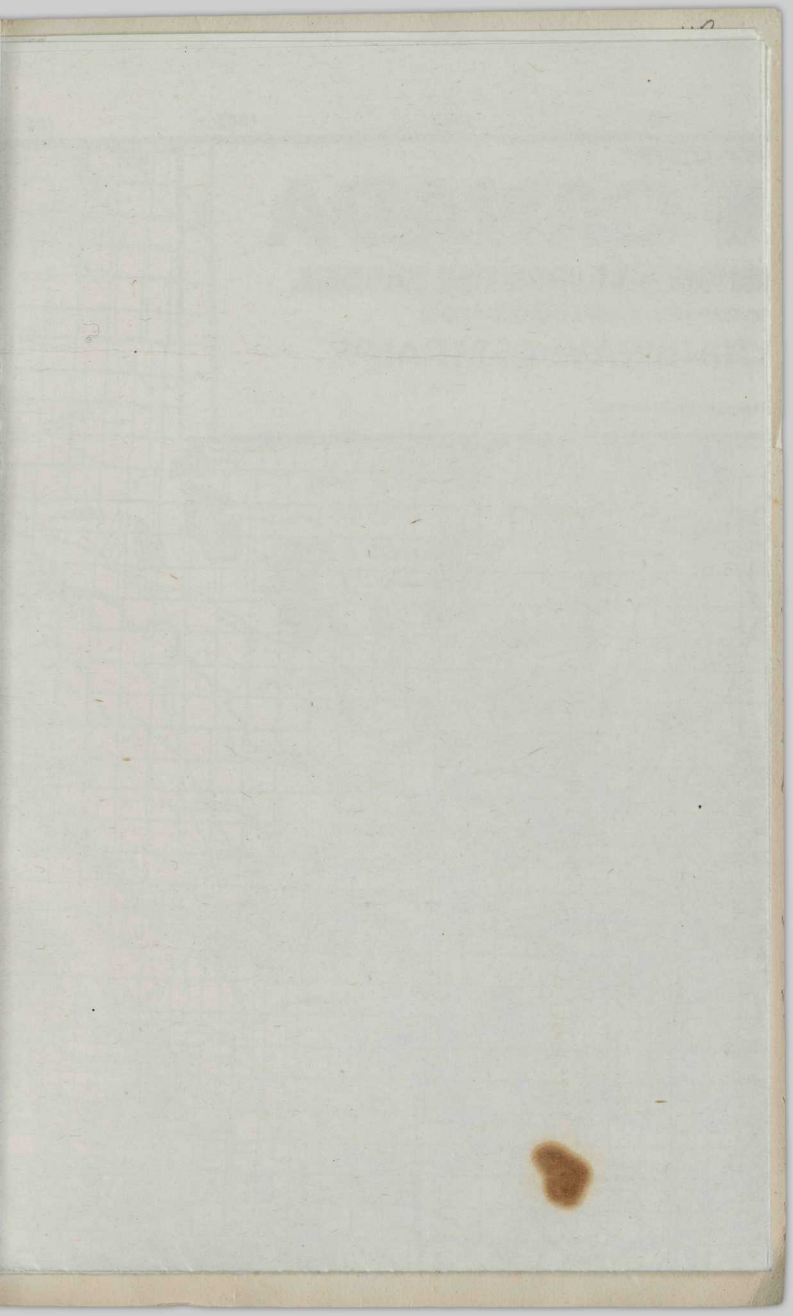

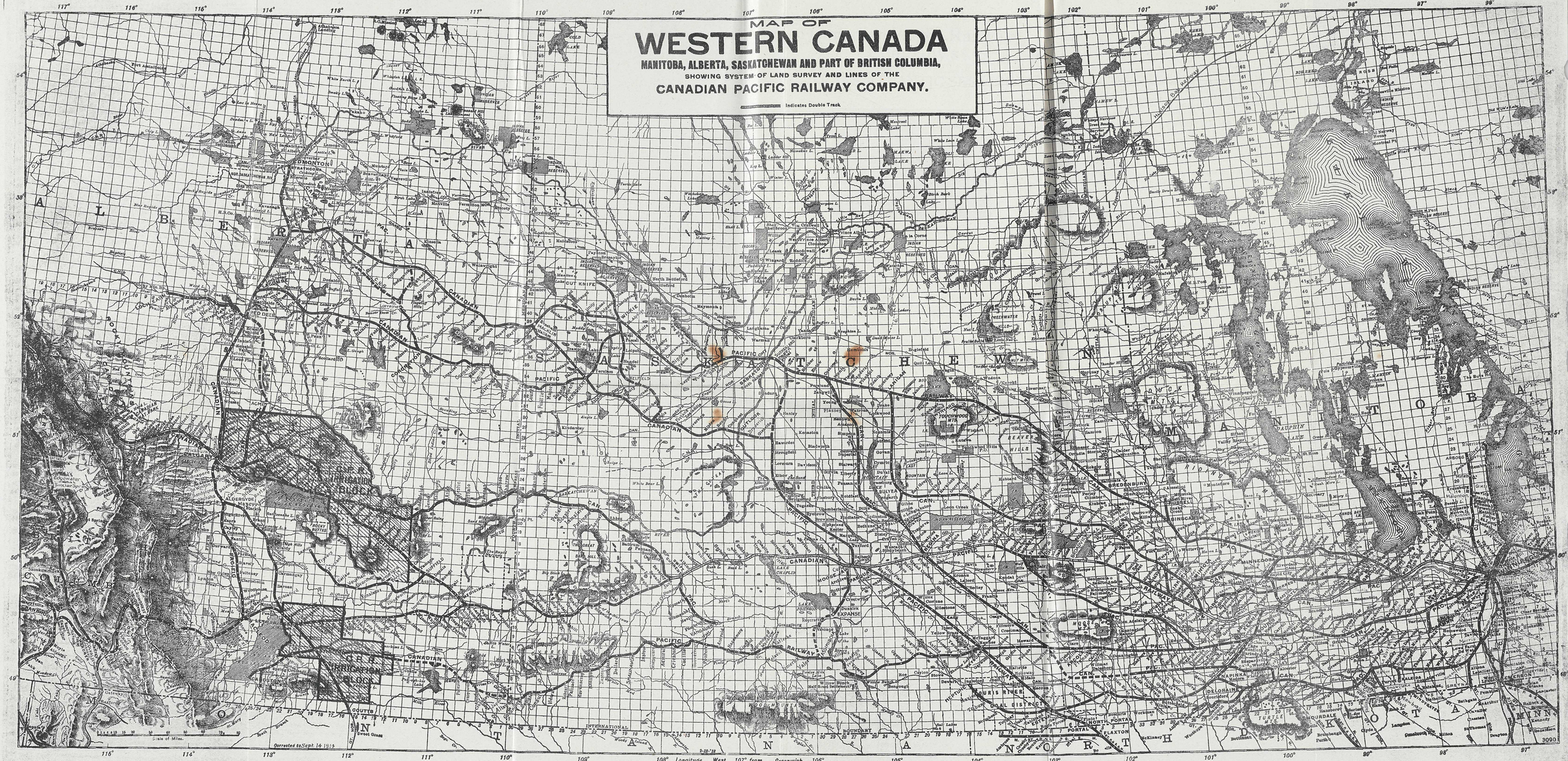
MAP OF
WESTERN CANADA
MANITOBA, ALBERTA, SASKATCHEWAN AND PART OF BRITISH COLUMBIA,
SHOWING SYSTEM OF LAND SURVEY AND LINES OF THE
CANADIAN PACIFIC RAILWAY COMPANY.
Indicates Double Track
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
MINNESOTA
MONTANA
NORTH DAKOTA
EDMONTON
CALGARY
RED DEER
MOOSE JAW
REGINA
WINNIPEG
C.P.R. IRRIGATION BLOCK
G.P.R. IRRIGATION BLOCK
ALDERSYDE
ROCKY MOUNTAINS
CANADIAN PACIFIC RAILWAY
INTERNATIONAL BOUNDARY
Longitude West 107° from Greenwich
Scale of Miles
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Irrigation in Western Canada is no longer an experiment. In Southern Alberta, where the rainfall is somewhat limited, and where there is very little snow, irrigation overcomes the lack of natural moisture and affords the greatest opportunity for successful agriculture now to be found on this continent. Under irrigation all crops thrive remarkably, and the bright sunshine and absence of wet weather contribute to the quality of the crops and to efficient farming operations. Alfalfa, timothy and other fodder crops are grown with greatest success and afford the basis of a very profitable live stock, mixed farming and dairying industry. Magnificent climate, fertile soil, low taxation, unexcelled transportation facilities, ample markets, the advantages of close settlement—all these contribute to make the irrigated lands in Alberta particularly desirable to the intending settler.

TWENTY YEARS TO PAY

Irrigated lands are sold at prices ranging from $35 to $75 per acre, one-twentieth cash and the balance in 19 equal annual instalments with interest at 6 per cent per annum. On irrigated lands no principal payment is required at the end of the first or second years, the interest only being payable at that time, and no water rental payment is required for the first year.

To practical farmers settling on lands in the Irrigation Block the Company will advance a loan to the value of $2,000, to be used in erecting a house and barn, fencing the land and sinking a well. The loan is repayable in 20 years.

The Company has also prepared a number of farms which have houses and barns, fences, wells and an area under cultivation all ready for occupation. These "ready made farms" are also sold on twenty years' time.

LIVE STOCK LOAN TO SETTLERS

Under certain conditions the Company will advance to practical farmers settling on lands in the Irrigation Block a loan of live stock to the value of $1,000. This advance is made on the settler's lien note with interest at 8 per cent.

NON-IRRIGATED LANDS
$11 TO $30 PER ACRE.

The Company has large areas of non-irrigated lands located in Alberta, Saskatchewan and Manitoba, which are sold at prices ranging from $11 to $30 per acre. Terms one-twentieth cash, the balance in 19 equal annual instalments with interest at 6 per cent per annum.

If you are hampered by lack of capital—if you are wasting your energies on worn out lands—if you desire to share in the prosperity of the Canadian West, write for free illustrated literature and full information.

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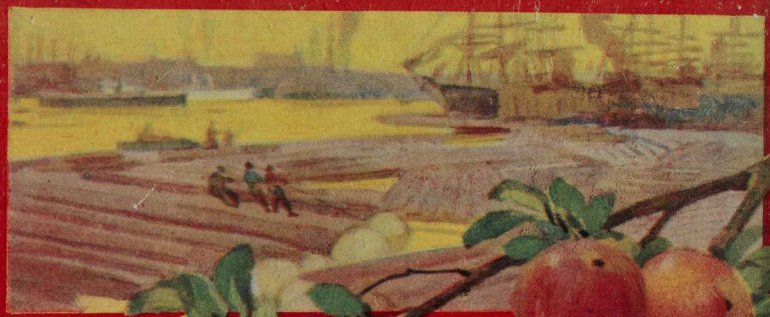
J. S. DENNIS, Assistant to the President