

CANADA AS A WHEAT PRODUCER AND EXPORTER WITH  
SPECIAL REFERENCE TO THE FUTURE

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## INTRODUCTION

In order to give wheat production and export a proper setting it has been necessary to trace the development of the Canadian West. An attempt has been made to indicate why Canada is well suited to produce wheat physically.

Physical advantages alone not being sufficient, the part played by the bulk handling system of the transportation routes and the marketing organizations has been surveyed with reference to the part each has played in the development of Western Canada as a wheat producer and exporter.

As Canada's production of wheat greatly exceeds her domestic requirements there is of necessity a large proportion available for export. It is this export portion that has been treated especially; the effect it has had upon Western Canadian agriculture; the destination of the exports; the importance of wheat in Canada's export trade, etc.

Directly following the question of exports there is the question of future production - its possible increase, the possibility of diversification in Western Canada, price influences, potential acreage changes and potential yield per acre changes. These have been dealt with with a view to determining the future of Canada as a wheat producer and exporter.

Problems which confront Canadian, and all other producers of wheat for the export market, have been dealt with with a view to determining their effect upon the future course of

Canada's wheat exports and, as a consequence, her wheat production.

Any solution is at best dependent upon a great many variable factors, mainly upon the course that the nationalistic tendencies in evidence today in Europe eventually take. For this reason, no very precise picture of the future of Canada as a wheat producer and exporter can be given.

CANADA AS A WHEAT PRODUCER AND EXPORTER WITH  
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I. PHYSICAL BASIS OF WESTERN CANADA

(a) Relief

The grain growing districts of Western Canada lie in what is known as the interior Continental Plain, extending from the western border of the Laurentian Plateau near the eastern boundary of Manitoba, somewhere between the Red River and the western boundary of Ontario, to the Rocky Mountains, a width along the international boundary line, the 49th parallel, of about eight hundred miles. Roughly the district or great plain may be compared to an isosoles triangle, the two equal sides being the boundary line and the Rocky Mountains, the base line running from south-east of Winnipeg through to Great Bear Lake at latitude 65.

There are three main divisions of the plain; the Red River Valley forming the most easterly part, as well as the lowest. Taken generally the valley is very level, though there is a slope to the northward sufficient to provide drainage into the lake system and eventually into Hudson's Bay. There is also a slight slope from east and west to drain a considerable area of 55,000 square miles in Canada into the river that gives the valley its name. The valley has an average elevation of about 800 feet above sea level.

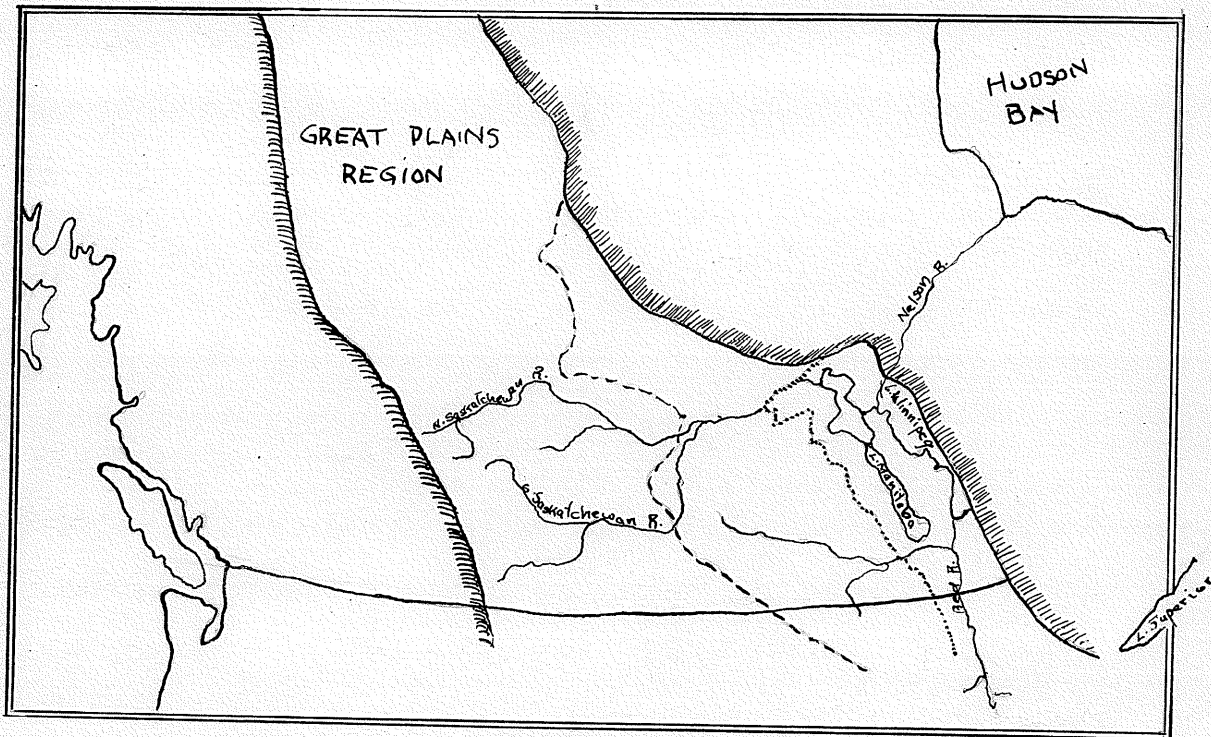
The western limit of the valley is marked by the Manitoba escarpment, made up of the Pembina Mountains, and the Duck, Riding

Porcupine and Pasquia Hills, through which the main river valleys have all cut courses. The escarpment extends some 300 miles north-west from the International boundary and marks the first Prairie steppe.

The second of the three steppes extends from the Manitoba escarpment westward to the Missouri Coteau and comprises an area of about 105,000 square miles, with an elevation of roughly 1,600 feet. In contrast with the first very flat steppe, this one is undulating, with low series of hills and ridges rising some few feet above the general level in no very regular manner, and with deep and widely trenched river valleys - e.g. the Saskatchewan River. This Coteau angles north-west, ending about Moose Jaw and Lloydminster and has a fairly steep rise of from 300 to 500 feet.

The third level of the plains region extends from the Missouri Coteau to the Rocky Mountains, rising from 2,000 feet on its eastern borders to about 4,000 feet along the base of the Rockies. Here the topography changes again, getting further and further away from the monotony of the Red River levels, into typical rolling plains cut and marked by ravines and coulees, many of which begin nowhere and end just about the same place. Prominences like the Cypress Hills and Wood Mountain rising from 1,000 to 2,000 feet above the surrounding district form tablelands, remnants of an older plain. This level works right into the Rockies in what are the foothill districts.

MAP SHOWING  
WHEAT PRODUCING AREAS  
OF  
WESTERN CANADA



LEGEND

- ..... Beginning of Second Steppe
- Beginning of Third Steppe

After "Wheat Studies" Vol. 1. page 220



The Canadian section of the Great Plain is largely drained north-easterly into the Hudson Bay. The Nelson basin of 367,000 square miles, extends from the Rocky Mountains to the Hudson Bay, into which the River drains; and from the International Boundary to the 54th parallel as far east as The Pas; from there north-east to the Bay. The Red River tributary to the Nelson extends south of the International Boundary to the head-water of the Mississippi. It will readily be seen by consulting the accompanying map, that the Great Plains region is very well drained by a great river system and many tributaries, in some years even too well-drained for its own good.

#### (b) Soils

The continental plain, or that part of it which is located in Canada, is almost wholly arable and is wonderfully fertile, both of which statements are subject to various qualifications. Qualifications are necessary in that the variety of conditions of soil, moisture, etc. are so varied that any statement made must be tied down to a particular locality or district, one statement cannot be generally applied to the West.

The soils found in the Red River Valley are clays and silts deposited in the bed of a lake of earlier times, and are wonderfully suited to wheat production, among other things. While suited to wheat, the soils of Manitoba, under which heading a good part of the first steppe can be included, are very

productive of other grains and field products. Their richness, combined with a more plentiful supply of moisture, gives rise to the production of oats, the cereal of the park belt, and also to much barley, the feeders' grain. Growing production of barley is perhaps indicative of a definite move into a broader development of agriculture upon the first steppe. Truck gardening can be pursued and dairying is advancing, both advances are attributable to the general character of the rich loamy soil. In general it can be said that the first steppe, by reason of its soil types and moisture and climate is well suited to mixed farming - in fact better suited to mixed farming than to the production of wheat as a specialty.

The soils of the second steppe are largely glacial in origin but are well suited to agriculture generally. They are well suited to agriculture generally but more especially to wheat. The moisture in the region in question is rather scant for general mixed farming to become prevalent. Wheat will in all probability remain the staple crop. This steppe may be said to be the most typical of the plains region; it has good soil for wheat growing, it is rather dry but it can generally be counted on for a crop.

The third steppe is far drier, the soils are in many places alkaline, and so rather unfit for most agricultural purposes. Where the soils are not alkaline, given sufficient moisture, good crops can be raised, as is now being proven by

the success in the various irrigation projects of southern Alberta. The technique of dry farming is being applied with certain types of grain and an ample measure of success is being met with. However, the district or steppe is so dry in parts that ranching will be the staple industry for years to come, as some of the land that has been broken should never have been taken out of pasture. In general it may be said of this third steppe that soil and climate are suited for wheat, but moisture is wanting for any general advance to mixed farming. The steppe will continue to be a great wheat growing region and ranching country for years to come.

Because of the nature of Western Canadian soils, and the very limited quantities of moisture arriving annually, certain types of cultivation have had to be introduced to conserve the moisture as much as is possible. Rotation, summer fallow, and various other methods are but part of the general endeavour as dictated by soil types and annual rainfall.

#### (c) Climate

The salient features of the climate of the continental plain are the clear bracing atmosphere, cold winters, warm summers (that are sometimes a little delayed in arriving) and the small precipitation. Because of the tremendous distances in the west and as rainfall is nearly always local in extent, the average of any one district cannot be applied for the whole.

But the general trend of rainfall throughout the entire area covered by the three prairie provinces is approximately uniform. Either the season inclines to be wet, or it inclines to be dry all over with sections here and there which receive more or less than the average rainfall. The small precipitation, most of which comes in the season April to August, exercises a very strict control over the crop yields as does the length of the growing season. The following chart of the average annual precipitation and length of growing season based upon figures for 35 years ending 1917, will serve as illustration of the rainfall and growing season at typical points in Western Canada.<sup>1</sup>

Precipitation and Growing Season at Points in  
Manitoba, Saskatchewan and Alberta

Place	Eleva- tion	April to August (inches)				Annual Aver- age	Growing Season
		First Quant- ile	Median	Third Quant- ile			
Winnipeg	766 ft.	10.60	12.34	14.76	21.07	145 Days	
Minnedosa	1,675 "	8.06	10.69	12.29	16.92	128 "	
Prince Albert	1,414 "	7.38	9.71	11.90	15.72	114 "	
Qu'Appelle	2,132	10.14	11.74	14.57	18.35	130 "	
Edmonton	2,183	9.59	10.53	15.16	17.42	140 "	
Calgary	3,437	7.68	10.47	13.83	16.12	141 "	

<sup>1</sup>The Stanford Wheat Studies; Volume 1, 1924-25, page 221

Various characteristics of Western Canadian climate have been mentioned, but it cannot be stressed too much the importance it has on wheat production. Most attention might even be directed to rainfall, since it is rather low for agriculture, as it exerts a strong control over the size of crops, and its variations from time to time, and place to place are of great economic importance.<sup>2</sup>

## 2. RAILROAD DEVELOPMENT

Having viewed hurriedly the type of country that we are to deal with, we will look for a space at the manner in which the West came to occupy her present position. The rapid rise of the West was due to several factors, including the physical advantages of the country, the important applications of agricultural research, a generous land policy and an extensive development of transportation and marketing facilities.

Until Confederation the problem of trying to find sufficient people to fill Canada up was not given much mature consideration, largely because Upper and Lower Canada were themselves but little removed from the frontier stages. There were land schemes however, that were successful in varying degrees. The East did not escape land booms and the picture of different localities trying to outdo one another in attempts to get railroad connections would appear rather optimistic to us now.

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<sup>2</sup> Wheat Studies, Volume 1, No. 8, July 1925, page 221.

With Confederation new life was given to the various schemes for attracting settlers to Canada. It was seen that Canada must look lively if she wanted to hold her own against the flood of immigration that was flowing to the United States. To do this it became apparent that Canada would have to adopt a land policy at least as liberal as that of the United States.

In the East large tracts of land were set aside for colonization in both Quebec and Ontario; and in 1871 the authorities even went so far as to provide ready made clearings and set up some buildings to attract settlers. But the river valleys opened for colonization in this manner were in large part barren, difficult of access and difficult to clear. The scattered fertile areas were little more than adequate to take care of the expansion of the native born.

The land scarcity in the East was met in part by the land acquired from the Hudson's Bay Company at the time of Confederation. To attracting Europeans in large numbers, not a great deal of thought was given; to attracting people from other parts of Canada, the Dominion opened up its land, newly acquired from the Hudson's Bay Company, to sale at one dollar per acre, or homesteading with a limit of 160 acres to a man, which land had to be proved up in three years.

Because of the inaccessibility of the West, settlers having to come either by the Dawson Route or through the United States, only a very few ever reached Winnipeg and beyond.

No rush could take place until the completion of rail connections with the outside world either through Canada or the United States, which would cut the time taken to make the journey in quarter, and increase the price of wheat.

A story of the development of the West, the production of wheat, and agriculture generally, is of necessity in good part one of transportation. Farming centred around Fort Garry but it was not pursued on any extensive scale, the range of production was limited by home consumption, as Manitoba was not yet in a position to get bulky agricultural products away to the markets of the world. It soon became apparent that transportation facilities would have to be provided if it was hoped to fill the West up.

#### (a) Land Policy In Regard To Railways

It was from the first planned that the sale of land in Western Canada should pay for the cost of railway construction. With this general scheme in mind, various proposals were made for setting aside sufficient land for the purpose suggested. All the proposals collapsed until after the government had completed negotiations with the Canadian Pacific Railway, and had reserved all the odd-numbered sections throughout the west for railway purposes. After this date all the even-numbered sections were thrown open for homesteading, with the exception of numbers 8 and 26, which had been reserved for the Hudson's Bay Company at the time of the transfer of title to the Dominion.

It may be truly said that railroads were largely instrumental in making modern Canada, and this general sentiment may be best summed up in the words of Joseph Howe, uttered in 1854:-

"Overspread the colonies with railways, the people of British North America will then be united, and will soon assert the position which they will feel their capacity to maintain."

True to the words of Howe, the railway has played a very prominent part in the development of the Dominion of Canada, so much so indeed that one of the conditions under which British Columbia came into the scheme of Confederation was that:

"the government of the Dominion undertake to secure the commencement simultaneously, within two years from the date of the Union, the construction of a railway from the Pacific towards the Rocky Mountains and from such point as may be selected East of the Rocky Mountains toward the Pacific, to connect the seaboard at British Columbia with the railway system of Canada; and further to secure the completion of such railway within ten years of the date of the Union."

#### (b) Direct Government Interest

Rail development did not take place in the West as early as it did in the East for very good and obvious reasons. There were several attempts made to interest financial syndicates in the possibility of joining the East with the West by rail before the advent of the Canadian Pacific. Indeed the issue was forced when British Columbia entered Confederation in 1870 under the stipulation that it did.



Sir John A. MacDonaid determined that the road should be constructed by a private company, aided by cash grants and large subsidies in land. Corruption marked the enterprise from the beginning and finally caused the defeat of the government. Government construction did not prove feasible, and MacDonaid was returned to power to complete the road. Accordingly, in 1881, the venture was transferred to a private company, the partners of which were able railway promoters, attracted by a money subsidy of \$25,000,000., the grant of 25,000,000 acres of good agricultural in the West and the title to seven hundred and ten miles of line either completed or under construction. In addition they were promised exemptions from import duties on construction materials, from taxes, on land for twenty years after the patents were issued, and on stock and property forever and exemption from regulation of rates until ten per cent per annum was earned on the capital. Certain districts were reserved for the monopoly of the Company, ten years were given for the completion of the road to the Pacific, and some other incidentals.<sup>1</sup>

Under such favourable circumstances it is no wonder that the Canadian Pacific was built in such a hurry, Perhaps the promoters realised just how generous the government had been and being afraid that they would realise their own generosity, might cancel the charters. Having completed its main line, the Company was in no hurry to construct branch lines.

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<sup>1</sup> O. D. Skelton - Railway Builders.

The monopoly and the generally high rates gave rise to a great deal of grumbling and finally in 1897 the western agitation was rewarded by the Crow's Nest Pass agreement, by which the Company received a Dominion subsidy on some new construction in the West and undertook to lower its rates on eastward grain and grain products by 3 cents a hundred pounds and on westward commodities of importance to the settler by 10 per cent.

The encouragement given to the endeavours of MacKenzie and Mann, two railway contractors, by the government of Manitoba resulted in the eventual construction of another transcontinental, the Canadian Northern. The monopoly clause in the Canadian Pacific charter was constantly protested against by the people in the west, as it enabled the Company to charge far too high rates because they had no fear of competition. The result was that the monopoly clause was dropped and the West witnessed some new construction by people other than the Canadian Pacific.

Several hundred miles of line were constructed in Manitoba by the Northern Pacific, they were soon in the receiver's hands. The Manitoba government acquired them on long lease, and in turn leased them to the new Canadian Northern, which had rail connections to the lakehead. This last mentioned system had high ambitions of rivalling the Canadian Pacific and by 1905 had opened a line to Edmonton, constructed by means of Dominion and Provincial guaranteed bond issues, and further aided by large land grants.

Evidently it did not occur to the Dominion that they were already financing two transcontinental railroads, because they entered into close working arrangements with the Grand Trunk for the construction of a third, largely at direct government expense.

It soon became apparent that the newer roads could not carry on profitably even at rates that the older rival was able to. The Board of Railway Commissioners, created by an amendment to the Railway Act of 1903, set the rates for the whole Dominion. What had happened was that the thing had been overdone, the West was not able to support three transcontinental systems. So bad did things become that the Dominion finally stepped in and took over the Canadian Northern and the Grand Trunk. In this manner a new system, the Canadian National was created between 1917 and 1922, a system which from the first was loaded down with debt and overlapping of lines. The natural result has been that year after year Canada has had to pay dearly for her railroads.

From a careful study of Table No. I it will be seen that the railway mileage in Western Canada has increased at a truly remarkable rate from 3,244 miles in 1895 to 18,543 miles in 1931. Until now we are blessed with the smallest population per mile of railway, or the greatest mileage per head of population.

Just as the number of railway miles has increased at a tremendous pace, so has the total cost of the whole to the country.

Table No. 2 shows very clearly the total cost of railways to the Dominion until March 31st, 1932. The figures given are representative of actual cash, in addition there were granted millions of acres of land.

It can be seen then that Canadian railways have been built rapidly, yes, but at what a cost to the country, a cost which we are only beginning to realize.

From this hurried sketch it will be apparent that the railways we have in Canada have been fairly costly. It now remains to look at the increase in population, the increase in production and in amount of land occupied to see whether or not the expenditure has been justified in view of the tremendous land grants made to the railways. In this connection it must be remembered, however, that whatever the cost to Canada, the wheat exporting possibilities of the Canadian West were incapable of being realized until a rail connection was provided. The question then is whether or not the burden was worth piling up or if the connection could have been procured in some other way.

### 5. PROGRESS OF SETTLEMENT

The development of Canada may have been made possible by the physical advantages of the country, but they were not alone sufficient. The development of the transportation system has been traced, it is now necessary to examine the growth of settlement, later looking to that of wheat production, and attempt to see in what manner people were induced to come to the West.

(a) Historical

Confederation, or thereabouts, saw great changes in the type of agriculture practiced in Ontario, grain growing having become less and less profitable. Exhausted lands and growing competition gave warning against reliance upon wheat; and were strong enough to encourage remarkable expansion of the mixed and fruit farming avenues. Agriculture was entering upon a period of rapidly declining prices, caused in part by the millions of acres that had just recently been brought under cultivation in the United States, Argentine, Australia, Russia, etc. Costs of production fell somewhat as did foodstuffs, and farmers who could read the signs of the times secured a measure of relief in the development of specialized farming industries.

There were those, however, who were unable to adapt themselves to the new set of conditions; then, as the time was ripe for a change, they began to look farther afield for new places in which to establish themselves. Canada's West had not yet been developed very far; land was cheap and every day the problem of transportation was becoming less and less difficult. The natural result was that thousands of people came from the Maritimes and Ontario and settled upon the millions of acres that were being sold in such a wholesale manner by the railroads that had received them as bonuses. Land was offered by the C.P.R. at \$2.50 per acre, with a rebate of \$1.25 for each acre brought under cultivation.

Till the time of the better transportation facilities the number of homesteaders in the West was not at all spectacular, as a study of the entries in Table No. 5 will show. The rail connection brought with it a problem; as the road had acres of land to get rid of, and it wanted people in the West to provide it with the freight that, coupled with the ever-present government grants, should keep the lines running, how should it go about securing the desired end. The early 'eighties saw the first land boom in Manitoba, which served as an answer to the problem. Hoppers, drought, frost and a variety of other causes resulted in the boom being nipped before it had gone far. Then too, the trouble with Riel in the West did not encourage settlement, but it did one thing - it showed the West to thousands of those who came from the East to do battle with the half-breeds. This was also very good advertising for the West and it was not long until its results became apparent.

The world depression of the early 'nineties resulted in depressed wheat prices and held back development for some years. Immigration fell to small proportions and many settlers abandoned their farms. New entrants were few, land purchases were but small and capital was difficult to procure. But the foundations for future expansion had been laid and basic agricultural practices had been established. A wheat of high quality, fairly well adapted to the conditions of Western Canada, was widely cultivated, and had made a name for itself on the English market.

Wheat prices recovered somewhat after short crops in 1896 and 1897. This, coupled with the reduced rates secured by the Crow's Nest agreement in 1897 and the general improvement in transportation costs for export, brought a revival of confidence to the West. From this time on, all things combined to make the rush of settlers from the East, the United States and Europe most spectacular.

(b) Immigration Policy; its Fruits

The Liberal party, upon assuming power in 1896, at once re-organized the old Immigration Department and sent agents abroad to sell Canada to the poor, unsuspecting Europeans. The movements from overseas were due, not merely to the wide publicity given Canada's free land by the government and railways, but also to the strenuous competition of ocean shipping companies for the immigrant traffic.

Looking back today at the various methods used by a variety of agencies to bring people to Canada, it is peculiar to notice the variety of ways state action was made use of to draw to Canada the apparently needed men. The Immigration Department was made over into a publicity and propaganda bureau and large funds were placed at its disposal. The United States in 1897, was the first field explored, advertisements were placed in newspapers; excursions were carried on, free of charge; bonuses were given agencies for immigrants dispatched, etc.

All of which methods were applied elsewhere; that they all bore fruit is seen from the numbers arriving, reaching a peak of over 400,000 in 1913, as indicated in Table No. 4

By no means all of those arriving settled upon the land. Many of them knew little or nothing of agricultural practices, not even all those who took up homesteads retained them, as is apparent from the number of cancellations. Railway construction and operation required large forces of laborers, and at the same time provided a local market for farm produce. Cities were built up in rapid and speculative style.

By 1909 the bulk of the best agricultural land with easy access to the railroads had been taken up. High prices were asked for lands available by purchase, and later comers had to seek more remote or less favourable lands. Much of the settlement of the dry lands of the third steppe took place after 1909. The decline in wheat prices after 1909 caused many homesteads to be given up, the large proportion shows the difficulties the homesteaders were meeting in trying to maintain themselves.

The War naturally put a stop to a large proportion of the immigration but it did result in farmers getting a good price for the crops they were able to grow. Since the War, the tide of immigration has not reached its old Pre-War level, even although huge sums have been spent, particularly in Europe.



(c) Railways as a Factor in Settlement

It has been mentioned that the railroads received huge bonus grants in return for the construction of lines, a study of Table No. 5 will give some indication of the lavishness which marked the handing out of public domain to the Companies. It will be readily seen that it was to the best interests of the Canadian Pacific, etc. to bring many prospective settlers out from England, in that the Company itself was holder of tremendous tracts of land. Besides holding the land, the Company could open up just about any section it wanted to by building a line into it.

It is now time for Canada to pause, to begin to count up, to see if it has paid to bring in Continental Europeans and others by the thousands, to try to figure out whether it was worth contracting the huge public debt that may be accounted for by the railroads - all for the sake of filling in the West. Free land was in large measure responsible for the very rapid growth of the West, growth that has been exceeded by no other country, and to a considerable extent it was responsible for the growth in wheat production. Now that the era of free land, that is capable of growing wheat cheaply enough to be sold on the world markets, is gone, what will be the movement of immigration to the West?

That the movement to Canada has not been regular is at once apparent. It has changed with world conditions. Perhaps this gives weight to the conclusions arrived at by A.R.M. Lower.

as expressed in the Queen's Quarterly, Summer 1930:-

"..... in the future as in the past, the growth in population of the western provinces will depend upon the success they have in marketing their products and no amount of immigration will affect that growth in the slightest degree ..... as the world demands our products, our population will grow and nature will add the cubit to our national stature which we by taking thought cannot acquire."

An interesting comparison can be made by comparing the ratios given in the following table of the Rural and Urban populations of the three Prairie Provinces:-

Province	1891		1901		1911	
	Rural	Urban	Rural	Urban	Rural	Urban
Manitoba.....	73.11	26.69	72.40	27.60	56.57	43.43
Saskatchewan...	-----	-----	84.57	15.63	73.52	26.68
Alberta.....	-----	-----	74.62	25.38	65.22	36.78

	1921		1931	
	Rural	Urban	Rural	Urban
Manitoba .....	57.12	42.88	54.87	45.13
Saskatchewan...	71.10	28.90	68.44	31.56
Alberta .....	62.12	37.88	61.95	38.07

Source - Canada Year Book, 1933, page 132.

It can then be seen that there has been a steady trend toward urbanization, but that the same trend has not been very marked. The large proportion of rural population has remained in spite of the advanced use of machinery.

The conclusion that the population of the Prairie Provinces has increased very rapidly and that the main basis of the Western expansion has been agricultural, would seem to be justified. It may also be concluded that free land was the basis of the expansion, supplemented by the network of rails that were financed

by huge land grants and direct public subsidies. The major crops of the West being produced far in excess of local demand and in part at least being exported (to be shown later) it is reasonable to conclude that the hordes that poured into the West maintained themselves in the main by growing wheat for export.

#### 4. MARKETING ORGANIZATION

Closely parallel to the development of transportation and the growth of population in Western Canada has been that of the perfecting of a marketing organization and facilities for getting the wheat of the West to the consumer in the best possible manner.

##### (a) Beginnings

It did not take the railroads long to realize that they were each year going to have a very large problem on their hands in trying to rush the crop to the markets of the world. The solution of the problem was sought in the development of the line elevator systems. This method of handling required numerous small elevators at country points, big elevators at lake and ocean ports, and facilities all the way through for taking care of wheat and other grains in bulk. It was only natural that there should grow up certain trade practices. These, in many cases, did not work out to the best advantage of the farmer.

The grading of wheat in Canada began at an early date, and was performed by qualified inspectors, appointed by commercial bodies with a view to securing impartiality. In 1889, a Western Standards Board was established, to authorize statutory grades for Western wheat.

A record crop in 1887 led to a tie up in regard to railway cars. The delay resulted in the Company stating that wherever elevators of an approved standard were available, it would receive grain for shipment only from such elevators, provided they gave proper service in storing and shipping. Soon there were heard accusations of discrimination in the distribution of cars; that the elevators got all the cars they wanted before the farmers were given any to load from warehouse or loading platform. This was but one cause of complaint. It was generally contended that the elevator companies were able to hold down the purchase price of wheat and to defeat the farmer on questions of grade, weight and dockage.

The many complaints finally led to the appointment of a Royal Commission to investigate the alleged abuses. Many of the charges made were found to be sufficiently valid to result in the passage of the Manitoba Grain Act in 1900. It established the office of Warehouse Commissioner, with wide powers of regulation over the grain trade in the West, and gave many safeguards to the farmers upon weights, grades, dockage and loading.

(b) Cooperation

It was the abuses that the farmers were handed that led to the formation of the Territorial Grain Grower's Association in December, 1901. The organization was fortunate in possessing such strong men as W. R. Motherwell, John Millar, Peter Dayman, and others who were able to set the new body upon its feet and win the first point in the conflict. Their first victory lay in the passage of an amendment to the Manitoba Act - that grain cars should be distributed in rotation.

Having accomplished something material in regard to railway car allotment, attention was turned to the Grain Exchange and the elevator systems. The farmer's enemies in ascending order of greatness were seen to be the line elevators, exporters and millers.<sup>1</sup> To protect their own interests they proposed to organize a company of their own to trade on the Grain Exchange. This company was formed in 1906 under a Manitoba charter, with the name of the Grain Grower's Grain Company, with a seat on the Winnipeg Grain Exchange for dealing in that year's crop. There followed two years of defensive and offensive conflict with the Grain Exchange and its members, until the questions at issue were settled by the authoritative intervention of the Manitoba government.

Constant agitation resulted in a governmental excursion into the ownership of elevators. As has been the case with so many other governmental enterprises, too high prices were paid

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<sup>1</sup> MacIntosh - Agricultural Cooperation in Western Canada.

for obsolete elevators, which was responsible for large financial outlay. Another cause for failure was that the whole elevator system was restricted to the storage of grain, while all the competitors of the system were also engaged in buying grain. After prolonged criticism on the manner in which the elevators were run they were leased to the Grain Grower's Grain Company in 1912, at a rental of six per cent of the book value of the properties, taxes and repairs being met by the government. The grain company just mentioned has been financially successful from the first; and any extensions have all been financed out of earnings.

The object of cooperation in the grain trade has been to increase the producer's price, to be brought about by the paring down of the margin absorbed by marketing agencies, and in seeking this object the farmer companies benefit every grain producer in the country whether he ships grain to the companies or not. They benefit large and small producer alike.

"A co-operative organization, in the farmer's sense, is an association of farmers who unite in an effort to handle their common interests through an agency which is controlled by them on the principles of an industrial democracy, and exclusively for their benefit." 2

(c) Bulk Handling

Through the discussion of marketing so far the items of grades and bulk handling should stand forth. The grades are regulated by the Board of Grain Commissioners, the bulk handling has developed through time into a very convenient agency. It is almost impossible to imagine what the situation would be in Western Canada if there were no country elevators. It is inconceivable that the wheat should all be loaded by hand; for one thing there would be insufficient men to perform the operation, in addition to those needed for harvesting and threshing in normal times.

Bulk handling of the crop saves cents per bushel at every turn. Beginning right on the farm, the fact that the grain can be run right into the wagon or truck saves the cost of bagging, in itself no mean item. Both the country elevator and the large box cars used result in savings because of the large bulk of wheat they can handle. Even greater saving occurs after the grain reaches the public terminal elevators and is moved in so much larger units. The shipping in bulk by boat, both on the Great Lakes and on the ocean, shows the greatest saving of all. However, the fullest benefits of bulk handling may be lost if too many grain classifications are maintained.

The economic saving in the elevator system goes directly to the farmer. This is apparent in the price received for the grain.

The United States and Canada are the only two countries where the elevator system is in extensive use and where grain is therefore handled in bulk. In both of these countries, the farmers receive a much higher price for their grains, based upon its ultimate value for consumption, than they do in any other country.<sup>3</sup>

The large terminal elevators located at strategically important points are allowed to do only a warehousing business for the public. Every step in the handling of grain by a public terminal elevator is supervised by government officials. Terminal elevators located at ports have been supplemented by several interior terminals. They provide a certain storage reservoir, but are not located in the proper places to be of most benefit in the handling of bulk cargoes, in that they have to ship all their stores out in box cars, not ships as do other terminal elevators.

To round out the bulk handling there is the Winnipeg Grain Exchange. There are many advantages to disposing of grain through a well organized market. One of which is the fact that an economic market for grain can occur only where there is a sufficient volume to attract a large number of buyers and sellers, rather than a lot of private small sellers, selling is concentrated where all buyers and sellers can count on their wants and demands being met at a price.

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<sup>3</sup> C. B. Piper - Principles of the Grain Trade in Western Canada.



There must be storehouses in a commercial centre and facilities for making delivery upon contracts. There must be standards of quality and weight so that total value and price may be determined. Not until these conditions are fulfilled can grain have commercial value. There must be a market in which the differences between cash and future prices can be calculated, and validity and sufficient weight given to contracts to make them binding.

The crop of Western Canada is made up of many small units, to bring these units together, and provide a suitable piece of mechanism by which the bulk handling of the crop can be operated the Exchange exists. The organized market provides facilities for the commercial purchase and sale of wheat, and the efficiency of its services increase to a large extent with the size of the units dealt in. It is the economy resulting from centralization and concentration of these small and widely distributed units which justifies and necessitates the middle-man and as a consequence the Winnipeg Grain Exchange.<sup>4</sup>

Place utilities are created by carrying commodities from one place to another. The wheat of the Canadian Northwest would be of little value if it could not be transported from the area of surplus production to the great centres of consumption.

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<sup>4</sup> C. B. Piper - Principles of the Grain Trade in Western Canada.

Place utility is given to Canadian wheat by the latest and most scientific equipment for handling, cleaning, storing and transportation of the crop from the local elevator to the ocean vessel.

The number of independent units required to give the crop of Western Canada place utility in 1932-33 is interesting. In the table below are indicated the number of elevators of one sort and another that were licenced by the Board of Grain Commissioners for the year 1932-33, and in addition the track buyers, commission merchants and grain dealers.

Public Country Elevators .....	5,661
Private Country Elevators .....	9
Public Terminal Elevators .....	9
Semi-public Terminal Elevators.....	39
Private Terminal Elevators .....	38
Eastern Elevators .....	29
Mill Elevators .....	22
Track Buyers .....	64
Commission Merchants .....	65
Grain Dealers .....	15
<hr/>	
Total Number Issued .....	5,949

Source: Annual Report of Board of Grain Commissioners for Canada for 1933 - page 12.

## 5. PRODUCTION

### (a) Acreage Development

The production of wheat in Western Canada has increased at a phenomenal rate. From the production of but a few million bushels in the early 'eighties, it has grown in a decade to about fifteen million bushels. During this period wheat prices were inclined to be very low, so that large production was not encouraged by the prospect of quick riches. Not only were general economic conditions very bad but the settlers were not in possession of varieties of wheat and the knowledge of cultivation that we have today. They lost their crops by plagues of grasshoppers, early frosts, and a host of other factors. The introduction of Red Fife wheat in 1882 and 1883 helped very materially to reduce the effect of some of nature's less favourable gifts. It was a wheat far better suited to production in cold climates and as it had been tested in Minnesota previously, its introduction into Manitoba was not in the nature of an experiment.

The introduction of Red Fife was but one of many beneficial experiments that were to be attempted in an attempt to improve the agricultural production of Canada as a whole and more especially the West. The number of agricultural difficulties run into led to the establishment in 1886 of the first of the Dominion Experimental Farms.

The results and investigations were at once proven valuable, particularly in regard to farm practice and such things as summer fallow. It was some considerable time, however, before the results of the experiments could spread enough through the West to make their benefits apparent.

While no spectacular advances were made during the period a steady development took place. Production grew as a result of the increased number of acres under cultivation and the larger number of people. The arrival of the railroad did much to act as an incentive, but development was well underway when the rail connection was eventually provided. About this period it may be said that there was a steady and determined advance in acreage under the cultivation of wheat.

General improvement in the 'nineties did not cause the advance to halt. The progress made in bringing land under cultivation and the yield from the newly planted land maintained a steady line of advance, seemingly almost regardless of general conditions. From 1900 to 1901 there was brought under cultivation some 700,000 acres, a record amount in one year to that time. That fact, combined with a total yield of 25.2 bushels to the acre, resulted in a record crop of something over 65 million bushels. The result was that the railroads were seriously congested and Canada presented herself to the world, for the first time, as a factor to be considered in the world's wheat markets.

Tables No. 6, 6a illustrate very well the rapid advance made after this date, particularly in the next few years. The introduction of Marquis, first grown commercially in 1906, was made about 1911 and it gradually replaced Red Fife. The shorter growing season of the Marquis variety, the result of long research on the part of Dr. Saunders, enabled the extension of wheat cultivation into new areas where Red Fife had not been able to be grown, to be made. The fact that it required the shorter growing season, taken with the excellent yields and high milling qualities it had, at once made it a popular wheat and its growing spread rapidly.

The general success that even those ignorant of farming practices met with, led to rapid expansion and also to a concentration upon wheat production. This was to the detriment of general mixed farming and proved unfortunate in some cases when wheat prices declined to low levels. The large measure of success also caused less suited land to be brought into use, and land that was inaccessible to the railroad. The land of the third steppe, where dry farming must be practiced, was broken for the first time.

Even during the war, when men were none too plentiful, advances were made in acreage under cultivation of wheat. Of course, there was the incentive to very large production because of higher prices.

This sometimes resulted in the sacrifice of best farming methods in order to press as much land into service as possible. Summer fallowing was, of course, reduced and wheat sown in poorly prepared ground. Once again mixed farming was pushed back and pioneer farming methods came to the fore. 1915's crop was unequalled in size even by high pressure methods, but prices continued to climb and so farmers were somewhat repaid.

A succession of poor crops from 1916 on, after the end of the war, did not give any cause for a rush to the land immediately after the armistice. But the price of \$2.63 that the Canadian Wheat Board secured for the last of the 1919 crop was a strong enough bait for the farmers to plant greatly increased acreages - (this was made possible also by the plentiful labour supply of returned men). The final operation of the Board took place at the peak of prices, but from then on prices fell somewhat, much to the regret of the farmer, who for long refused to believe that the fall was in any way permanent.

The price collapse did prove permanent, at least for a few years. The loss in price per bushel was, however, somewhat made up for by a larger number of bushels to be sold at the smaller price. The post war depression caused acreage expansion to cease, even a small decline from the high point of 22 millions was recorded.

With the relapse apparently over, and a short crop in Canada in 1924, that led in part to a world shortage, prices

climbed to such an extent that the 262 million bushels of 1924 had a slightly higher farm value than the year before, when the crop was 474 million bushels.

From this time till 1928, there were steady advances in both acreage and production until the bumper crop of that year saw well over a half billion bushels raised in Canada. All the while wheat prices declined steadily.

From 1928 to the present, acreage on a steady increase in the West, the maximum reached in 1932 was 26 millions. The production has not responded in the same manner, however, and in the same year over 400 million bushels was produced.

#### (b) Rate of Increase

Table No. 6 shows clearly that acreage in Manitoba devoted to wheat, has long since been passed by both Alberta and Saskatchewan. Production has advanced steadily in both Saskatchewan and Alberta while in Manitoba it has fallen behind somewhat.

In crop production, because of the greatly increased acreage, crop production per acre has come to play an increasingly important part in yields. The crops of 1916-20, which were small in light of the pre-war trend, were small mainly because yield per acre, not acreage, was reduced. Another fact is that strikingly large crops, trend considered, have resulted sometimes from a large yield per acre, far above the trend, sometimes from exceptional yield and exceptional acreage,

but never from exceptional acreage alone. Wheat crops vary over long periods somewhat with yield per acre, though more with acreage, and over short periods, somewhat with acreage, but more with yield per acre.

The production has increased in the Canadian West, that is a fact beyond the shadow of a doubt, a possible probable shadow of doubt - as Gilbert and Sullivan were wont to say. Just how this tremendous production was brought about is another question. True, the population of the West has increased remarkably fast in the same period as has the acreage. Perhaps in large part the question can be answered by the suggestion that the increase is largely due to the application of more mechanical processes to crop production.

The mechanization of prairie agriculture is primarily the product of low wage competition from abroad, and to a slightly smaller extent, high wages within Canadian industry. Wheat growers in the West solved the problem of marginal-lands and high cost of production quickly and easily. The solution lay in mechanical power - one way disk plows, wide drills, and other devices.

Mechanization, however, cannot claim all the laurels. Dr. D. A. MacGibbon claims that the explanation of the great increase in production that has taken place since 1910 is to be found in the success that has crowned the work of the plant breeders.



The development of Marquis wheat and other early maturing varieties opened up a vast area in Western Canada which up to that time was closed to the production of wheat because it would not mature before the early frosts. Today, somewhat the same expansion is being attempted with regard to drought resistant wheats.

From Table No. 3 it is evident that, with the exception of the 1882 peak, the trend of homestead entries was low until 1897, from that date it took a decided upward swing. From table No. 6 it is again clear that the great upward swing in wheat production occurred in 1898, resulting from a good yield and increasing acreage.

#### (c) Elements Determining Production

Homestead entries reached an all time peak in 1914, with 44,479 entries. Wheat production did not stop with that point. It has increased steadily ever since. This would be the natural result of more acreage being improved.

That price of product has not been the sole factor determining expansion is evident. Although prices have at times undoubtedly had the effect of encouraging or discouraging production. Farming is not a short time occupation. Decisions as to curtailment or expansion must be made many months in advance of the marketing of products, so there is a large element of gambling present.

The gamble element is seen in the case where it may not be cheaper for a farmer to curtail his output. The factor determining curtailment is rather a comparison of anticipated price to those costs which could be reduced by reduction of operations, than the relation of total cost to the probable price at market time. This fact is amply proven when it is realized that in recent years wheat acreage has not in the least decreased although its production has been temporarily unprofitable. The same holds true of other depressions that Western Canada has gone through in the past quarter century or more.

It is frequently more profitable to stay and get as much as possible out of an investment than to let it lie idle. There are a number of factors whose effect has been to expand agricultural production, regardless. Such factors are: government land policy, e.g. the Homestead Act; the building of railroads or their indirect financing, the "Go West Young Man" tradition; the liberal immigration policy; the colonization activities of the railroads; irrigation and reclamation projects; state aided immigration; and the improvement of agricultural machinery.<sup>1</sup>

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<sup>1</sup> R. C. Engbery - Industrial Prosperity and the Farmer.

## 6. EXPORTS

In considering exports we are unable to isolate Western Canada as Canada must be taken as a unit in dealing with such matters as trade etc. The part played by Eastern Canada is today not anywhere nearly as important as it was prior to 1892. Till that date Eastern wheat constituted by far the major portion of the wheat exported from Canada. The wheat production of the West cannot be traced into export channels without introducing that raised in the East, For this reason the figures and facts available are applicable to Canada as a whole, but more especially to the West which provides by far the largest proportion for export.

### (a) Domestic Requirements

Before dealing with the quantities actually exported in various years and the trends in exports, it is necessary to make a rough estimation of the quantities taken up by domestic requirements. Figures for the period 1921-1935 have been set out in Table No. 7. It is clear that in the period covered something over 40 million bushels have been milled for domestic consumption; seed requirements have taken care of nearly the same amount, about 40 million bushels. Unmerchantable wheat is presumably fed to livestock and this, taken with loss in cleaning, would run in the neighbourhood of 30 million bushels a year. These quantities that are to be set aside for domestic consumption before any thought is given to export would average between 110 and 120 millions of bushels annually.

(b) Increase in Exports

As has been indicated previously, Canada did not make any startling advances upon the world market until the record crop of 1910. In the intervening years, however, the exports grew steadily, averaging 10 million from 1882-1887. From 1897 on the export trade grew very rapidly, suffering occasional set-backs, it is true, but in the main advancing in a truly remarkable fashion.

An examination of Table No. 8 is revealing in showing the rate at which exports grew year by year from the 10 million in 1882 to the 400 million odd exported in 1929. The trend is a remarkable one that is not likely to be continued.

The expansion which has been noted in acreage, production and export, has only been made possible by buyers abroad wanting Canadian wheat. The commercial value of wheat depends almost entirely upon its milling and baking qualities. Millers desire good quality and uniform quality. It is in these last two respects that Canada is particularly fortunate by reason of having an exceptionally efficient government grading system. Buyers abroad do not need to buy Canadian wheat by sample. The grade awarded the wheat in question by Canadian government graders is taken as ample proof of the quality. The government in its turn takes every precaution to keep up standards of quality and uniformity and in every way is worthy of the confidence placed in it.

Then too, Canada is fortunate in producing a hard wheat, the high protein content even of the lower grades, being outstanding. It yields a strong white flour, which absorbs water freely, forms a strong elastic dough and yields more loaves to the barrel than do weaker flours. As the bulk of European wheat is soft, at least that grown in the Western section, and much of that exported from Argentine, Australia and the United States is either semi-hard or soft, Canadian flour, or wheat for its flour, is widely in demand for blending with weaker flours. These qualities have long been realized in British milling circles particularly and account in large measure for the degree of preference given to Canadian wheat and flour.

#### (c) Destination of Exports

The market which absorbs most of the Canadian wheat is the foreign market. In recent years, as Table No. 8 shows, this market has absorbed almost two-thirds of the total Canadian crop. The quality and quantity of Canadian wheat which this market wants is best indicated by the amount and grade of Canadian wheat which it buys from year to year.

Canada has enjoyed a wide market for her wheat and flour. It is, however, next to impossible to trace the ultimate destination of exports, and a very large margin of error has to be allowed in every calculation.

This is so because the exports in question do not necessarily have to arrive finally at the port they are consigned to upon clearance from Canadian ports. The fact that considerable quantities of Canadian wheat are shipped from American ports, as shown in Table No. 9 complicates matters, as the destination is not determined until after it leaves Canada. The data, as shown in summarized form in Table No. 9, are sufficiently reliable for general purposes.

Great Britain is by all odds the major market for Canadian wheat and flour. Before 1912 this percentage ran as high as 90% and she was the only buyer of importance. Large pre-war crops brought the United States and the Orient in as somewhat larger buyers than formerly. War stimulus caused a large increase of buying in north Europe, due in part to the cutting off of Russia's supplies and the difficulty experienced in shipping from the southern hemisphere. In spite of everything, in the five years ending 1919, nearly 80 per cent of the wheat and flour shipped from Canada went to Great Britain.

Larger post-war crops have naturally broadened the scope of these markets but have only stressed the importance of the British market which is by far our largest buyer. That one market cannot be expected to take all our wheat. Canada produces more than the British market requires, so that if our production keeps on increasing, and unless markets that demand the peculiar qualities of the wheat that Canada raises, can be broadened, these wheats will have to meet competitive wheats on a strict price basis.

(d) Effect of Export Markets

The existence of an export market has been responsible for the development of the Canadian wheat production on the lines that it has taken. Export has, until recently at least, provided a market at a price for all that Canada has been able to produce. A country, to export an article permanently, must possess some advantage in its production sufficient to overcome the cost of transportation and any artificial handicap such as tariffs. Canada's advantage lies in a large part in the fact that most of its hard spring wheats are of a high quality. This, coupled with a good yield per acre, low cost of production, wide use of the most modern farm equipment and the latest and most scientific equipment for handling, cleaning, storing and transporting the crop from the local elevator to the ocean vessel, has enabled Canada to hold her own in the markets of the world. The result has been, seeing that the small population of Canada is unable to absorb all the production of wheat of the Canadian West, that Western agriculture has built itself up round the export market.

(e) Position of Wheat and Flour in  
Export Trade of Canada -

It is seldom realized just how large a part of the export trade of Canada is attributable to wheat and flour. Canada exports a wide variety of commodities, but by a considerable measure the largest is wheat and its flour derivatives. Not only is this item the single largest one, but it is contributed by the

Canadian West almost completely - a fact that certain Easterners may be prone to forget. Table No. 10 shows in detail the value of the wheat and flour exports, and the total value of exports of Canada's produce for the sake of comparison. It can be seen that in 1919 the percentage was very small but it regained its position almost immediately.

The percentage of the total of the exports of Canada attributable to wheat and flour alone, as shown for more recent years in Table No. 11 gives some idea of the degree of specialization which has been attained in Western Canada. The specialization is everywhere apparent and strikingly so in the effect upon the trade balance of Canada, and perhaps many of the wide fluctuations in the total value of exports come largely from changes in agricultural exports, especially of wheat and flour.

(f) Reasons for Increase and Later Decrease  
of European Requirements

Having mentioned that Canada's exports have increased at an astonishing rate, it is now time to attempt to account for the fact that Europe was able for so long to take such increasingly great quantities of wheat, and is now able to restrict her requirements. The very fact that Canada, just one of several large exporters, was able to increase her exports to so many countries, shows that there were certain movements at work.



In the course of the nineteenth century the population of the world increased to an extent previously unparalleled, whereas in 1800 the total population of the world was not quite 600 millions, in 1870 it was about 1,400 millions and in 1930 something over 2,000 millions. In the course of the last hundred years the world population has doubled and as compared with 1800 more than trebled.<sup>1</sup>

The natural growth of the population, or of consumers, in this fashion brought about almost an unlimited expansion of the market. There was, in fact, a race between population and production, in which the former had the advantage for some time and served as an elusive bait that was to lure production on. Now there has been, however, a decided slackening in the tendency toward increase. According to the Statesman's Year Books, Britain's population grew from 30 millions in 1881 to 46 millions in 1931; that of France grew from 36 million in 1876 to 41 million in 1931; Italy from 26 million in 1876 to 41 million in 1931; that of the United States from 39 million in 1876 to 122 million in 1931; and Japan from 48 million in 1906 to 64 million in 1930. The tremendous growth then was certainly something for production to pursue and pursue it, it did, with rather vicious consequences.

The phenomenal growth of population gave rise to a popular belief that over population was inevitable in the Western world. The fact that the increase was so rapid caused an idea to become current that a constantly increasing demand for agriculture and manufactured products was inevitable, a natural phenomenon.

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<sup>1</sup> Wenner Henkelmann - Population Development, Wheat Production and Wheat Trade of the World.

This reasoning led to the development of whole continental areas and as a result tremendous increases in wheat production.

Today the possibility of over population is limited, because there has been a definite slowing down in the rate of increase. There are, of course, differences in intensity in the different nations, but the fundamental tendency is everywhere the same; there is a general participation in the international phenomenon of the decline in the birth rate.<sup>2</sup>

Just as the very rapid increase in population accounted for increasing exports to Europe being made possible, so a steadying of growth or even a decline of population must be expected to limit the market of the future. While the exporting countries have been expanding production at about the old rate, population in the major importing countries has ceased its intense growth, a fact that the producers have not yet come to realize. If there is any further increase in acreage it will probably more closely approximate the increase in population.

It has been shown how a very large percentage of the Canadian wheat exports has gone to Great Britain, and that it has been inclined to increase rather much in the years immediately past. The downward trend of wheat production in Britain was arrested by the war, but that since the war there has been a marked downward trend can be seen from Table No. 15.

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<sup>2</sup> T O. E. Baker - "The Potential Supply of Wheat" - Economic Geography, March, 1925.

Land in Britain until very recently, has been taken from wheat by British growers who were unable to meet the force of the competition of cheap wheat from exporting countries. It is probable that the movement would have been stronger upon the continent had it not been for the imposition of restrictive policies of one sort and another by the respective countries. Just the opposite has been the effect and a further comparison of the table clearly indicates that instead of falling wheat acreage and production has grown.

A very potent reason for reduced wheat demands can be seen from an examination of Table No. 16. It is there revealed that in the years 1925-32 there was a growing production in certain of the grains and particularly the root crop, potatoes - the food of poorer people. In some instances the rate of increase was not very startling but in every case a noticeable growth is evidenced. A comparison of the averages would suggest that there is a shifting particularly away from rye, corn and oats to wheat and potatoes, which in fact, would account for the largely diminished quantities of Canadian and other wheat that are being taken.

The shifting is attributable in large part to the protective policies adopted during the last few years by various countries

These policies have resulted in a more favourable level of wheat prices being reached which naturally encouraged production of wheat at the expense of other cereal crops. How marked the transition is likely to become and how long it may persist remain to be seen, but if the shifting is carried very far it will not contribute any good to the world wheat surplus situation.

## 7. CANADA'S FUTURE AS A WHEAT PRODUCER

Having brought the development of Canadian wheat exports to date, it remains to examine Canada's future as a wheat producer and exporter. The problems that must be borne in mind are infinitely numerous and just as complex as they are numerous. They are not confined to any one field but are scientific, economic and political, as well as technological. An attempt will be made to estimate the weight that must be attached to the several factors in order to arrive at some conception of what faces Canadian wheat production and exportation in the next few years at least.

### (a) Price Influences

It was for long thought that price considerations, or the world price of wheat exerted, or would exert, a very powerful influence upon production. From 1921 to 1927 Canada's wheat acreage was inclined to be slightly reduced, primarily because of the depressing influence of low price wheat. It cannot be noted that there was any distinct advance in wheat acreage in the subsequent year, or years, to correspond to the very substantial advance which did take place in wheat prices. Since that time of high prices upon the Liverpool market (1924-25) prices of wheat have steadily declined until they reached new low levels about a year or so ago. There has been no appreciable reduction in wheat acreage experienced in Canada, in fact that of 1932 set a new all time record for the Dominion, over 27 millions of acres.

From this sketch it would seem that price has but little direct short time effect upon production, as far as acreage planted is able to govern matters. Rather the acreage planted in any given year is materially influenced by weather conditions affecting fall plowing and spring seeding and cultivation.

While short time price fluctuations may have no appreciable effect upon production, it being carried on from year to year in the hope of things eventually becoming better, over long terms there will be some effect. Consistently higher prices will result in increased production due to additional acreage being pressed into cultivation; as consistently lower prices will naturally result in some of the marginal land going out of wheat production. However, wheat prices may not react immediately if the costs of production and distribution progressively fall with the price of wheat as compared with those of other commodities. Due to a variety of factors the production of wheat over short time has not fallen with price, because continuous economy in the means of production has resulted in progressively declining cost of production in relation to other commodities.<sup>1</sup>

In Canada, the effect of the long time influence of prices has been hindered from working by governmental and marketing organization action. The five cent bonus plan of the government naturally has considerable part in preventing a contraction of acreage.

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<sup>1</sup> Report of Imperial Economic Committee - The Wheat Situation 1931, page 59.

Similarly, the orderly marketing agitation of the Canadian Pools prevented acreage reductions. The farmers were led to believe that the Pool could secure a better price for them than could the ordinary grain marketing agencies. This idea naturally operated against acreage reductions when prices fell, but its misguidance was shown when the government had to come to the rescue of the Pool. The real effect of price dropping is not truly apparent even yet because of governmental activity in the futures market, with a view to bolstering up wheat prices. So far no appreciable reduction in acreage is apparent in Western Canada, due to price or any cause other than nature's actions.<sup>2</sup>

(b) Potential Acreage in Future

The future is equally uncertain as to the number of acres Canada is potentially able to bring under cultivation. Rash statements have at time been made, as have estimates that have long since been passed. Sir William Crookes, in an address delivered to the British Association in 1898, said:-

"The most trustworthy estimates give Canada a wheat area of not more than 6 million acres in the next twelve years, increasing to a maximum of 12 millions in twenty-five years. The development of this promising area necessarily must be slow since prairie land cannot be laid under wheat in advance of a population sufficient to supply the needful labour at seed time and harvest. As population increases, so do home demands for wheat."<sup>3</sup>

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<sup>2</sup> The Scoop Shovel - August 20th, 1925, page 2 and December, 1927, page 4.

<sup>3</sup> Sir W. Crookes - The Wheat Problem - London, 1917, page 20

The estimate just quoted was perhaps a little on the conservative side but just as confused statements have been made in the other extreme. The highest serious estimate has been that of 80 million acres, made by Dr. O. E. Baker of the United States Department of Agriculture.<sup>4</sup> So varied are the estimates that careful consideration must be given to the practical possibilities of expansion to any great degree.

The future extension of wheat acreage may take place as follows:-

(1) In new farms, by extending cultivation to the north of the present area.

(2) In new farms by the occupation of unoccupied or unimproved land within the present settled regions.

(3) In existing farms by bringing into cultivation unimproved land.

(4) In existing farms by devoting to wheat some of the improved land which has not been seeded to wheat in recent years because of the unremunerative wheat prices.<sup>5</sup>

Regions to the north are largely held by the government and as a consequence are open for homesteading. There are several major drawbacks, however, to their opening; the land is to a goodly extent bush and expensive to clear, the climate is fairly severe and railroads are lacking.

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<sup>4</sup> O. E. Baker - "The Potential Supply of Wheat" - Economic Geography - March, 1925.

<sup>5</sup> Wheat Studies, Vol. 1, No. 8, July, 1925, page 221.

None of these difficulties could not be overcome but until high wheat prices, no great development is likely to take place, particularly with respect to the railroads.

In the present cultivated district, much land is still unoccupied though it has been taken up. There is a large amount of the unoccupied land in private hands but it is questionable if much of the land is suitable for wheat growing, even if it is within hauling distance to a railroad.

The settlement of the unoccupied lands depends on several things; the development of new varieties of wheat, the building of roads and a level of wheat prices which may tempt the application of labour and capital to the lands recently considered to be below the margin of profitable cultivation.

The day of unlimited free lands which are good and as capable of producing wheat as readily as occupied lands in Western Canada is nearly gone. There is still some land in Saskatchewan and parcels in Alberta, including the Peace River District, that may be opened but the old idea of unlimited land resources has gone, or should have gone into the discard. It should be borne in mind, too, that these lands can only profitably raise wheat if the price of the wheat is very high.

The very fact that acreage possibilities are limited renders the likelihood of Canada producing greatly increased quantities of wheat highly improbable. There may be some applications of fertilizers, and a more intense cultivation may increase production somewhat, but very startling increases are unlikely.



(c) Potential Yield Changes

The question of a reduced yield per acre is very neatly dealt with by E. S. Hopkins, Dominion Field Husbandman at Ottawa:-

"There is no indication at the present time of a falling off in the yields of cereals due to a decline in the fertility of the soil. Variations in yield take place from year to year, and even over a period of years it is true, but the causes of this must be attributed to changes in precipitation, to the inroads of weeds, or to presence of insects or fungous pests, rather than to lack of fertility. When it is remembered that variations of over 100 per cent may be found in some localities in the average, annual precipitation of one five year period, compared with another five year period, and as much as 50 per cent in comparing ten year periods, the comparison of yields must be made with caution. By following a suitable rotation, by using the best varieties, by effective conservation of moisture and by a thorough control of weeds, insects and fungous diseases, there is no reason to believe that the yields of cereals throughout most parts of the prairie will, for many years, suffer any decline."<sup>6</sup>

(d) Diversification: Possibility Of

One field, as yet not dealt with, that may be a factor in reducing acreage devoted to wheat for export as such, is diversification of Western agriculture. The economic dependence of the farmer upon wheat has been seen to result in financial insecurity and the result has been changes in production methods. Shifts in agricultural production have been frequent in the past, and will probably continue to be frequent in the future. Some of these shifts have been forced upon the farmer, some he has made voluntarily. Shifts in agricultural production in the end must and will conform to the consumers' demand, to what the consumer votes for by his purchases.

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<sup>6</sup> C. W. Peterson - Wheat - The Riddle of Markets - Calgary, 1930.

For we are living in an age of commercial agriculture, an agriculture that is, which sells its products upon the market. The consumer may seem to the farmer to be a silent, passive, inert mass, but the consumer is the market, and in his hand rests the final power of giving or withholding patronage, and so of making or breaking any industry.<sup>7</sup>

There has been, and is going on at the present time, an evolution in the types of crops harvested in Manitoba. There are now fewer acres devoted to wheat than formerly, but this movement has so far been confined to Manitoba and is not yet, at least, general throughout the West. There will probably be some settling down of agriculture from the pioneer stages, yet it must be borne in mind that a very large area in the West is technically better suited to the production of wheat than to any other product; and that the wheat produced within the areas in question is of the very highest quality. Most of the areas that now yield high protein wheat will continue to produce that cereal.

In considering diversification, it must be remembered that the climate of Western Canada is a limiting factor in all directions. There are large districts, most of Manitoba and northern Saskatchewan, where coarser grains can be grown as well as wheat. But, on the other hand, there are millions of acres in the southern and central sections of Alberta and Saskatchewan where natural conditions permit of practically no alternative to the growing of the bread grains.

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<sup>7</sup> J. E. Boyle - Marketing Canada's Wheat - Winnipeg.

It would then seem that the districts best suited to the production of wheat, in fact, those capable of producing little else than wheat, should not be tampered with in any experimenting. Districts where poorer wheats are grown, or where other crops can be successfully grown, are those where diversification should be tried.

Presuming that the production of grain is basic in prairie agriculture, Dean A. M. Shaw of Saskatchewan, wonders if there is not a possibility of marketing some of it in the form of livestock and livestock products. In this connection livestock that most efficiently uses grain and at the same time provides products that are in demand and can be sold on the export markets, must be kept to the fore.

The southern and central districts of Saskatchewan and Alberta are generally unsuited for livestock raising because of the vagaries of the climate and a general scarcity of water. The northern districts with more water, less likelihood of failures, with hazards reduced to a minimum and capabilities of producing crops of pasture hay, forage and coarse grains, are generally better suited to the raising of livestock.

The types of livestock suggested are poultry, cattle and swine. Poultry, Dean Shaw sees as particularly well adapted for raising in Western Canada in that natural conditions are favourable; their products are suitable for local consumption, and they utilize much material that would otherwise be waste.

They are large consumers of grain; and eggs and birds are both acceptable and saleable on the export market.

Cattle cannot be as widely raised as poultry, but are in many ways well suited, particularly as they are in turn basic to the butter and cheese trade. Beef and dual purpose cattle should be chosen in this connection, with more attention paid to deriving revenue from meat with milk production a somewhat secondary consideration. Special care should be taken as to types chosen and only the best grade stock securable introduced into the herd.

Swine follow as a natural consequence to the raising of cattle as does the production of creamery butter as an integral part of the system.

"Natural conditions in Western Canada - being what they are - control to a greater extent than is generally realized our agricultural production, and because of these facts the alternatives to present farm practices are limited. This being the case, I am inclined to the belief that the ultimate solution lies, not in the restrictive measures applied to grain production, but rather in the direction of a change in our methods of production and marketing, in order that a greater diversity of agricultural products suitable for export may be developed."<sup>8</sup>

It is all well and good to consider the problem of diversification from the Canadian viewpoint. The chances are that according to the types of climate and soils in the West the problem could be carried out, but what of disposing of the products so produced in additional quantities?

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<sup>8</sup> C. W. Peterson - Wheat, The Riddle of Markets - Calgary, 1930

The possibility of any very marked increase in any of the fields suggested by Dean Shaw being taken care of by an enlarged domestic market is decidedly limited. Some butter is imported, true enough, and this could be replaced - (in fact, the imports are rather limited in amount). Beef is plentiful on the Canadian market at present and outlets must be sought for surpluses elsewhere. So with increased production the question of export markets would be rendered just that much more important. Canada is a considerable exporter of pork and pork products, so an increase here would again make larger export markets necessary. A somewhat similar situation is found with regard to poultry. An attempt will be made later to consider possible markets for the products of diversified agriculture.

#### 8. PROBLEMS

In any attempt to look into the future of the Canadian West as a wheat producer and exporter it is rendered almost impossible to make any predictions, particularly at the present time. There are two great and uncertain quantities which loom bold whatever path we take; namely, that of surplus or carry-over, both in Canada in particular and the world in general and the economic nationalism that is so rampant in Europe today.

(a) Surplus

Surplus year end stock or carryover, call it what you will, has been a bogey to Canada for some time, as it has been to the rest of the world generally. Both Canada and the United States have shared the dubious honour of carrying from one year to another ever growing wheat surpluses - see Table No. 12. The problem of persisting surplus is the world's wheat problem today. So long as wheat acreage is maintained at the level of recent years, a large current surplus over domestic requirements must be expected, on the average for lower yields are not in prospect.

Economic surpluses exist when the supply of a commodity is so large that buyers for consumption, manufacture or storage cannot be found to purchase the total supply at prices that will cover marketing costs and yield sufficient remuneration to the great body of producers to make it worth their while to keep on producing the commodity. For a time producers may continue, for the lack of a better alternative, or in the hope of a turn for the better, but with a sacrifice of invested capital, upkeep of equipment, or living standards that cannot be endured indefinitely. Occasional surpluses are tolerable; persisting surpluses are disastrous.<sup>1</sup>

The existence of a world wheat surplus is usually accompanied by the concurrent appearance of:- (1) very low wheat prices -

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<sup>1</sup> The World's Wheat Problem - Wheat Studies, Vol. 8, No. 8, July 1932, pages 141-142.

the effect of the surplus; (2) abnormally heavy wheat stocks; (3) a large excess of carryovers plus new crops over prospective disappearance for the year, for seed, food and feed; (cf. Table No. 7) and (4) a large excess of exportable surpluses over import requirements for the season. It is this condition of world wheat surplus, to which Canada is simply one contributor, that renders our large surplus above domestic requirements a source of weakness rather than a source of strength.

The 1933 Canadian carryover of 212 million bushels was by far the largest on record - 78 million larger than the previous high carryover of 1931. The total Canadian carryover reached so high a level, partly because Canada had ample surplus in 1932-33, but only limited outlets in international trade; partly because Canadian wheat prices rose strikingly in relation to Argentine and Australian wheats on European markets, and partly because, more or less throughout the crop year, large government sponsored holdings of Winnipeg futures tended to keep Canadian wheat from competing as actively as it might have done on the import markets.

### (1) How Surplus Arose

To place the problem of surpluses in their proper setting a sketch of how they arose may not be out of place. From 1924-27, prior to which time there was not much worry regarding surpluses, increased use of power machinery gave weight to a rising yield per acre. There was, in 1927, a large crop, followed in 1928 by the bumper crop when growing conditions had proved to be exceptionally

good in several of the major exporting countries. The liberal surplus from the 1927 crop was badly aggravated by the 1928 crop, even although a record amount was exported.

The year 1929 saw a tremendous reduction in the production of the leading exporters over the record of the previous year - see Table No. 13. That in itself might have taken care of the large surplus from the previous year, but the importing countries of Europe, in 1929, themselves had high yields of wheat, rye and other food crops. The fact that continental countries about this time began to take action to help their farmers who were suffering from low prices, taken with the fact that demand was, of necessity, cut by economic conditions generally, did not look at all good for the carryover situation.

In 1930 Russia played an important part in the world wheat drama by exporting well over 100 million bushels. This, coupled with the contracted use of wheat as food in various countries, and the fact that the ever present depression had reduced the purchasing power available for imports generally, added to the difficulty in dealing with the surplus. The year 1931 saw a large crop again, though under that of 1930. Russia in this year again played an important role in the export picture, placing upon the world markets about 80 million bushels of wheat.

New financial crises and further deepening of the world depression, an extension of import restrictions and other protective measures, continued to restrict the consumption of wheat for



food and to urge importing nations to become as nearly self-sufficient as was possible under the circumstances. A striking feature of the depression has been the world-wide collapse of commodity prices. The reasons for the collapse are as varied as the people who are asked to express opinions, but whatever may be the cause one result is certain; that there has been a vast, inclusive sweeping decline of prices, profits and wages generally.

The course of things in a depression has been very ably put by A. B. Genung of the United States Department of Agriculture,

"So it is that when the general price level declines violently, the most crushing burden always falls upon the producers of basic raw materials - especially upon the farmer and upon every agricultural country. When prices go down in a deflation period, forward buying largely stops. Industry slows down. Unemployment becomes widespread. Consumer buying power is thereby reduced, so slowing the wheels still more. A vicious downward spiral of deflation sweeps over the country, or as in this case over the whole gold standard world, paralyzing business and trade, halting the normal exchanges between great producing groups and between countries. Banks fail. Corporations and individuals go into bankruptcy. Many governmental units default on their bonds. Each family and each nation, striving to conserve its dwindling income, withdraws into a shell of self-sufficiency, thereby bringing further stagnation upon the community at large." 2

It was a series of events, then, resulting from a world wide fall in prices of commodities in general as portrayed above, that resulted in good part in difficulty in disposing of surplus grains.

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A. B. Genung - "Causes of the Agricultural Depression" - World's Grain Exhibition and Conference Proceedings, Regina, 1933, page 97.

Purchasing power being reduced tremendously, importing nations strove to cut down their imports as much as possible, with none too pleasant effects for the exporting countries.

### (2) Disposition of the Surplus

Having secured some idea of how the surplus arose we must examine the possibility of its being increased or decreased, just how either will be brought about, and the likelihood of success in the attempt to diminish it.

According to accepted economic theory, reductions in prices normally tends both to expand consumption and to decrease production. Within limits this is true, to the smooth operation of the law of supply and demand there may be and have been disturbing forces. It is commonly assumed that low world prices for wheat, for which there is a "world market" and a large volume of international trade, will tend to lower world wheat acreage and to increase world wheat consumption. That this tendency exists there is abundant evidence; but other factors may overbalance it. In the present surplus period, abundance and low wheat prices have helped to set in motion, in various countries, political forces that effectually reversed the expected effects there. Most of Continental Europe and to a less extent Great Britain, are walled off from the world wheat market, and wheat made artificially dear to consumers and at least relatively profitable to farmers.

Not only have importing countries undertaken to tamper with natural movements but various exporting countries have, by governmental action, retarded the reduction of wheat growing, and some have even sought to expand their own wheat acreage, regardless of the world surplus condition. Several countries contributed in this sphere, namely Russia, whose government has constantly worked for acreage expansion and Australia, part of whose large crop of 1930 must be attributed to the government which, in seeking to enlarge the value of the country's wheat exports, succeeded in persuading farmers to expand their wheat acreage by about 21 per cent.<sup>5</sup>

### (3) Acreage Reduction

To a certain extent the surplus could be combated by reduction of world acreage. The reduction would be most effective if it could be voluntary in character. One obstacle to voluntary reduction is, however, that curtailment by any one farmer has no appreciable effect upon the whole output and it cannot be counted upon that individuals will all act alike. Another obstacle is that profitable alternative uses for the acreage taken out of wheat have been and would be hard for most farmers to find. Compulsory reduction of wheat acreage appears quite impracticable, and any attempt to organize farmers for united action is doomed to failure.

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<sup>5</sup> J. S. Davis - "Wheat and the World Depression." World's Grain Exhibition and Conference Proceedings - Regina, 1935, page 105.

The problem is to find some effective inducement to contraction to supplement and in part to replace the cruel instrument of low prices leading to bankruptcy of farmers. Instead of an incidental bonus for expansion, a virtual bonus for contraction is sought.<sup>4</sup>

There are two methods by which acreage reduction might be accomplished, if that is a desirable course of action in itself. Voluntary reduction might be practised or compulsory reduction might be accomplished through legislation. The farmer would be by far the most practical if it could be worked with the proper psychological idea behind it. The tendency would, however, be for the acreage dropped by one man, under a voluntary scheme, to be taken up by some one else. Under a compulsory scheme all sorts of dodges would be tried in order to raise production up to the old level.

Certain farm organizations themselves do not think voluntary acreage reduction altogether practical, witness "The Memorandum Presenting the Views of the Central Board of the Canadian Wheat Pools with Respect to the International Wheat Agreement":-

"We are convinced that the Wheat Agreement, which implies a reduction of about three and a half million acres in Canadian wheat acreage, cannot be left on an entirely voluntary basis and that the reduction in production which Canada has agreed to can only be brought about by carrying the quota system on which the International Agreement is based, back to the individual farmer.

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<sup>4</sup> Wheat Studies, Vol. IX, No. 1, October 1952, page 55.

"Furthermore, we question whether a straight acreage reduction by legislation is practicable or would achieve the desired results, as there could be a substantial decrease in acreage by taking marginal lands out of cultivation, and by more careful cultivation and selection of seed, and use of commercial fertilizers. Canada's wheat crop might easily reach record figures with the full 15 per cent reduction put into effect. The farmer himself would decide how much land to sow to wheat, when he knew definitely how many bushels he would be permitted to market ..... If no legislative measures are taken and the matter of adjusting production to fixed demand is left entirely to the producer, it is more than probable that reduction of acreage by one farmer would be offset by increased wheat acreage by his neighbour."

The above very plain and straightforward statement of facts by a farmers' organization gives a very practical idea of the difficulties that would be encountered in a scheme of acreage reduction, voluntary or otherwise.

Farm organizations would not be alone in evading acreage reduction; the business community generally would in all probability enter the fray. The possible elimination of the exportable surplus of wheat by reduction in acreage and crops, would reduce the volume of business for railways, elevators, banks, exporters, dealers and the volume of the exchange operations. Such a reduction would of necessity involve some major changes in business organization and would not be submitted to willingly.

If production for export is profitable it will continue naturally, without government intervention and support. If it is unprofitable, the loss entailed must in some manner be borne by the grower, the wheat purchaser or the taxpayer, or be distributed among them.

No tariff policy has yet been perfected, however, that will protect the agricultural interests from the readjustments necessary after a period of over expansion or from losses incidental to such readjustments.

Restriction of acreage would not constitute control of production, as reduction in acreage sown would not necessarily be followed by a corresponding reduction in wheat produced or necessarily lead directly to price improvements. Because of wide variations in the extent of abandonment and in yield per harvested acre, there is no close correlation year by year, between the acreage sown and the production returned; and it is the production and not acreage sown that affects wheat prices and per bushel costs as well.

It would seem then that Canada would be a very difficult country in which to effect a compulsory reduction of acreage as such. Rather to achieve somewhat the same ends the application of a quota to each farmer would compel that trusty to accommodate his acreage to his sales. This would not, of course, imply that he could not grow more grains for feed purposes - it would just apply to wheat to be marketed as such.

(b) Economic Nationalism in Respect to Wheat

The natural and obvious way to get rid of a wheat surplus, particularly when it is concentrated in one or two countries is to increase exports. Simple as this may sound when put on paper, the actual carrying out of the simple and obvious, is not so simple and the probability of it being carried out in the near future not so obvious.

There is apparent in the world of today, as well as a host of dictators, real or make believe, and planning of economic organization, ample evidence of a nationalism that is seeking expression in a variety of ways. Economic nationalism is not altogether unknown to us in Canada, it is widespread in Europe and is concentrated or most intensified there.

(1) Causes

The nations of Europe did not jump at an economic national policy overnight. Faced with large demands upon the treasuries of their respective countries, brought on by instability of currency and banking, agricultural distress and unemployment generally, they sought some means of balancing the budget and at the same time of relieving some of the greatest burdens.

Faced with the fact that gold stopped moving between European countries to settle balances, the cessation movements of securities and other ordinary operations, the governments felt that some artificial manipulation of the visible items was necessary.

Wheat, as an item of obvious importance and easy to detect, offered itself at once as a good subject to begin with and a general movement to curtail wheat imports began. Various means were adopted to secure the desired ends. Extensive regulations of the milling industry, deterioration of quality and increase in price of wheat products, reduced wheat consumption and higher costs of poorer living.

A prosperous agricultural community, it was thought, would mean a larger market for home manufacturers, and would serve as a good bulwark against the radical elements, as well as serving as a resource in time of war. Probably too much stress is laid upon the last mentioned fact as the reason for Europe seeking to become as nearly self sufficient in regard to food stuff as is possible.

To rid themselves of some of their fear the stricken countries, each in turn, naturally looked to the largest items imported which at the same time they themselves produced in reasonably large quantities. Agriculture was an obvious field in which to begin operations. The result has been that a programme of producing at home a larger proportion of food stuffs and importing a correspondingly smaller amount, has been adopted. Practically every nation in Europe is now determined to produce the greatest possible volume of food within its own boundaries.



This desire finds expression in redoubled efforts in the field of agricultural research, promotion of intensive methods of farming and improvement in transportation and marketing machinery. The results are seen by examination of Table No. 14.

Italy is reclaiming districts and opening up waste spaces for cultivation. Poland is endeavouring, by the further use of fertilizer and farm machinery, to increase her exports of rye and wheat, and ensure her independence in the cereals concerned. Czechoslovakia has increased her yield, under protection and better farming methods as also has Austria. Germany has gone back to agricultural protection and is increasing her yields. France, already the greatest European producer, is trying to become independent of the world, or import just a little from Africa. Not only are the importing countries trying to increase home production but the exporting countries are seeking to increase production.

There is, generally speaking, little room for expansion of arable land in Europe, but there is a possibility of acreage shifts among the various uses. In most European countries, wheat acreage has not only increased but constitutes a larger proportion of bread grain acreage than before the war. Western Europe, if hard pressed, could raise several additional millions of wheat - such an expansion would involve some disruption of rotation and some reduction of other crops.

It would mean higher costs and growers would expect substantially higher prices; but the result could be attained if such agricultural policy became a matter of state policy.

The matter of how imports could be regulated is not one of great importance. One of a dozen or more methods might be used. They include tariffs, embargoes, bounties and subsidies, import certificates, quotas and numerous others. Bargaining tariffs and most favoured nation treatment may be brought into play to obtain desired results.

It is the last suggestion which contains what is perhaps the key to the question or riddle. The European programme of self-containment is not merely a scheme to reduce dependence upon foreign wheat; it is part of a great plan for trade by arrangement and negotiation. The wheat importer of Europe is not merely a grain merchant, he is at once part of a political and economic system. That this is in a measure true, is amply illustrated by the action of France at the World Conference at Rome, when on April 6th she made "a proposal which called for trade concessions by wheat exporting countries in return for reduction of wheat growing by the importing nations." Its essence is that France should receive from the overseas wheat exporting countries commercial concessions in compensation for cuts in French wheat production. In other words, if France is to grow less wheat, then the wheat exporters should be prepared to buy more French products.<sup>5</sup>

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<sup>5</sup> Manitoba Free Press, April 6th, 1934, page 5.

Such, in part, are certain of the schemes common to Continental European countries. How successful they will be in solving the wheat problem is purely a matter of conjecture. From a Canadian viewpoint they cannot be very welcome but in all probability would meet with a certain approval in Danubian countries. The effect upon world surpluses is likely to be slight as countries granting concessions are not likely to reduce acreage to any considerable extent. Rather than provide salvation, such schemes are likely to be barriers to eventual elimination of policies that lead to expansion of output in the face of burdensome surpluses.

The larger the proportion of European imports purchased upon quotas and preferences through negotiation, the smaller the proportion to be expected by a country with free prices and open markets. In this sense if Canada is not a party to various pacts she can expect to sell less of her wheat upon open markets. The quotas and preferences will in all probability be extended first to European neighbours and an elaborate network of treaties result.

### (2) Progress

The crop years 1929-30, 1930-31 and 1931-32 have indicated to wheat producers in Germany, France and Italy what can be accomplished in supporting domestic wheat prices under circumstances of glut in the world supply of wheat, and with the collapse of world wheat prices to the lowest known levels.

The experience has drawn many nations to the continental policy. Each country, whether net-importing or net-exporting, aims to place its wheat growers on an elevated wheat price position comparable with that enjoyed by the wheat grower of Germany, France and Italy.

Much of the general sentiment of Europe can readily be summed up as in a letter by Mr. Baldwin which appeared in The Times of October 16th, 1930, addressed to Mr. Neville Chamberlain.

"In the case of wheat we have already stated our intention, as part of our domestic agricultural policy, to introduce a system under which a definite proportion of the flour used to make the bread baked in this country shall be made from home-grown wheat. This proportion will be fixed from time to time in such a way that all the wheat of the requisite quality produced in this country will be utilized. We have adopted this method in preference to a tariff on foreign wheat, because no tariff which we could recommend -would be sufficient in itself to solve the problem of the wheat producer in this country. But by combining a guaranteed price for wheat with the legislation to which I have referred, we shall be able to give the home farmer not only a guaranteed market for his produce, but a market at a price which will make it worth his while to grow it."

Another cause of attempted regulation of imports of wheat, etc. may be the desire to redistribute population in various European countries, or to put to work again those who have for so long been idle in the cities. European countries have begun to realize the tremendous cost of maintaining hordes of people idle in cities and how very depressing it is upon the national morale. The costs of maintaining the unemployed have been tremendous and it may be felt that if some can be re-established upon the land the cost may be somewhat reduced and

at the same time they will be occupied in work.

The course of action being followed by the Rt. Hon. W. E. Elliott, Britain's Minister of Agriculture, may perhaps be typical - "He is convinced that she has workers sufficiently imbued with the love of the land to raise Britain's foodstuffs ..... He believes that what is good enough for the Dominion manufacturer is good enough for the British farmer".<sup>6</sup>

It may then be that the economic nationalism of Europe has in mind, as well as self sufficiency in foodstuffs, something along the lines of redistribution of population, within each nation; an attempt to conduct a back-to-the-land movement, trying at the same time both to reduce unemployment maintenance costs and to revitalize the people of the country. If this is one motive of the plan, the outlook for the Canadian wheat exporter is by no means promising, since nations may be willing to go to considerable lengths in order to reduce the staggering cost of unemployment relief.

As has already been suggested, the nations of Europe have had wheat they considered good and sufficient reason for pursuing their national policy. In addition to the various internal reasons there is something which we on this side of the Atlantic are prone to dismiss too readily - national self-consciousness. That is rather a vague term but it must be realized that some European nations are striving to regain the self respect that they consider essential to national good.

Recent evidences of nationalistic outbursts in Europe generally are but significant of deeper movements. They are outward expressions of a nationalistic impetus that is sweeping Europe - a national revival is taking place in some countries, a Renaissance if you will. Europe is afraid of the future, and what it holds in store for the many countries concerned. With this in mind, the countries are seeing to it, as best they can, that they become as really self-sufficient in foodstuffs as a protective policy can make them. In the catastrophe of 1914 there was revealed in startling colour and contrasts the degree to which some of the belligerent nations were dependent upon overseas sources for their means of subsistence. They are seeing to it that such a condition does not occur again.

Where, it may be asked, does this change in attitude of the European nations leave Canada, and the other wheat exporters? It means that we can count upon reduced exports of wheat until such countries as Germany have strengthened their position, then there may be some relaxing of barriers to trade. We have supplies for export but we find that the farmer importers, or some of them, are not interested in what Canadians have to offer. They are so busy putting their own houses in some manner of what they conceive to be order that they do not give Canada a thought.

(3) Effect on Canadian Exports

It may well be asked what effect all the economic nationalism will have upon the Canadian export trade.

As has been pointed out the buying of wheat may have political strings attached to it and in a world where substitutes and adaptations can readily be made with wheats, it does not look too cheerful for Canada, a country which is itself engaged in shutting out the manufactured articles of other countries.

Canadian wheat is not indispensable for the mixing purposes of European millers, so if cheaper qualities are offered elsewhere at proportionately lower prices, they will be taken advantage of by European importers to secure the desired flour quality at minimum cost. The prevalent policy of seeking self-containment in wheat in European countries operates not merely to restrict the gross volume of imports but also to bring about shifts in the countries from which these imports are sought.

Decreased demand for foodstuffs in the world does not appear to be imminent as population is very slowly increasing, although even now in some European countries it is becoming stabilized. For this reason it is suggested that no great permanent reduction of the world's wheat acreage is possible. While no permanent reduction may be likely there is one thing that is obvious - that the increasing growth of wheat at as alarming a rate as in the past will not be continued.

Extension of areas and technical progress in wheat production have outstripped the natural growth of population. Of this there is ample evidence in Western Canada; and possibilities of production have been found to be in advance of market requirements.

For many years the wheat producers of the world have gone ahead opening up whole countries and continental areas, believing that this action was necessary to prevent a world shortage of foodstuffs. They believed, apparently, that there was an insatiable market for all the wheat the world could produce, because of the rapid increase of population, and even a fear of over-population. As has been said before, the fear of over-population in the Western world has pretty well been dissipated, but agriculture has not yet seen the necessity of adapting itself to the new conditions. Agriculturists must realize that rising consumption, equal to that of pre-war years, can no longer be counted upon.

In the long view, the importance of European agriculture for the wheat supply of Europe is likely to become greater, while that of overseas agriculture will probably decline. The tendency to wheat acreage extension in overseas countries is not likely to persist and a change over to livestock farming in the next few years is probable. Overseas countries, then, are likely to experience a decline in wheat growing. <sup>5</sup>

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<sup>5</sup> Wemer Henkelmann - International Review of Agriculture - Rome, November issue - p. 486.



Canadian exports of wheat, as has been shown, are in large part directed toward the British markets and it may be argued that any nationalistic move in Britain will show its results more slowly in regard to wheat than most other products. Every increase in British production, however, means a smaller potential market for Empire and other wheat that invades the British market, a market that at present shows every sign of contracting.

Major Elliott, the British Minister of Agriculture, has indicated very definitely that he aims at having Britishers eat more British produced food - (British in the sense of British Isles first, and Empire definitely second). The Ottawa Agreement is a limiting factor with regard to food produced in the Dominions, but indications are that Dominion imports would be reduced if the Agreement did not hold. However, the Major secures "voluntary" pledges from the Dominions to hold down their exports. He does not hesitate to exclude Empire products not covered by the Ottawa Agreements, and there is plenty of evidence that he views these agreements merely as a temporary obstacle to his plans.<sup>6</sup>

Faced with a British Minister of Agriculture who is apparently going to stick to his guns, how do the chances look for Canada to dispose of her wheat in increasing quantities, as a primary and secondary product? By Intra-Empire Trade?

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<sup>6</sup> Manitoba Free Press, Jan. 16th, 1934.

Wheat sent to Empire countries other than Britain is of negligible amounts, and the British market must be shared with Australia within the Empire and other countries without.

What then of the secondary products that were mentioned as being able to seek an export market and take out of circulation considerable quantities of wheat? It is in this field that Major Elliott has most pronounced ideas, and where the lapse of the Ottawa agreements is likely to see some drastic changes. The nominally free entry of such produce has already been cut by the acceptance by the Dominions of "voluntary" quotas in cattle, oats, bacon, etc.

The protection so far given to British producers has not been deemed by them sufficient, particularly the dairymen and poultry-raisers. British milk production has been greatly stimulated by the Government's milk marketing scheme, which includes a virtual guarantee of prices, and a surplus in a short time that will be diverted to the manufacture of butter and cheese.<sup>7</sup> As the Dominions have not accepted a quota in regard to milk products, the government has adopted a policy of guaranteeing prices until a restriction can begin.<sup>8</sup>

Such a policy of guaranteeing prices is but a stop gag and the flood will come when the Agreements signed at Ottawa are null and void in November 1935.

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<sup>7</sup> Manitoba Free Press, Jan. 16th, 1934.

<sup>8</sup> Manitoba Free Press, April 14th, 1934.

There are clear indications that limitations on imports of dairy products would have been imposed had it been possible to do so without violating the Agreement.

Poultry finds itself regarded in an unfavourable light because after duties had been levied upon foreign products, Canadian producers shipped a record quantity of over 2 million dozen to the British market in 1953.<sup>9</sup>

This survey of products, other than wheat, which Canada had some hope of placing upon the British market in increasing quantities, does not present a glowing picture. It is indicative of the movement that is sweeping over the world, and shows that as far as possible the British market for farm products is to be reserved for the producers of the British Isles. It also shows that the surplus wheat situation of Canada is not much nearer being solved by any scheme of diversification.

Rather than expand our exports of cattle, bacon and dairy produce to Britain, if Major Elliott's plans succeed, Canada may find herself having to struggle to maintain her present share. The planned or controlled imports will not allow of convenient switching from one export product to another to fit rises and falls in the cycles of demand. That will be a thing of the past - each country will apparently be allotted a certain quota and be thankful that it has even that much.

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<sup>9</sup> Manitoba Free Press, Jan. 16th, 1954.

Black as the picture is at present it yet remains to be seen whether Major Elliott will draw any distinction between Empire producers and foreign producers after November 1935, if the "National" Government survives until then. If he does not the future of wheat production and agriculture generally in Western Canada is decidedly gloomy.

The experiences of recent years have proved that there is a limit to the premiums Europeans will pay for hard spring wheat such as Canada has to offer in such large quantities. It is clear that beyond a certain volume Canadian wheat cannot be sold in Europe at a premium, and the grades below No. 1 and No. 2 may go at a discount. The discount will in all probability bring them down to the level of wheats that other countries produce in large quantities for surplus, so in large part the better qualities of Canadian wheat will be lost.

Canadian wheat is desired in certain quantities on the markets of the world and technical conditions of production make it advisable that Western Canada should cultivate wheat within a large area. The cost of producing wheat can be put on such a basis that it will be profitable to sell if the world's prices of wheat stay somewhat in advance of the low levels that were struck in 1932. With this consideration in mind it seems reasonable to presume that Canada will continue to play an important part in the export market.

It being seen that some regulation of export trade in wheat appeared necessary the governments of the world held a conference in London during the summer of 1933.

(4) International Wheat Agreement

Almost in desperation as to where things were heading the nations of the world at the instigation of the exporters, met in London to discuss the wheat problem of the world. The result of their deliberations was the International Wheat Agreement of August 1933, that will undoubtedly prove to be important in the future of Canadian wheat exports. Of this fact there is no doubt whatever as Canadian wheat exports for 1933-34 were set at 200 million bushels. The 1934-35 wheat exports are to be limited to 15 per cent less than average production for the last three years, after domestic requirements have been deducted.

The primary purpose of the Agreement is set forth in the preamble as follows:-

"To consider the measures which might be taken in concert to adjust the supply of wheat to effective world demand and eliminate the abnormal surpluses which have been depressing the wheat market, and to bring about a rise and stabilization of prices at a level remunerative to producers and fair to consumers of breadstuffs."

Importers agreed to undertake certain obligations:-

1. Not to further increase wheat acreage and not to increase production by governmental measures.
2. To increase consumption of wheat in every possible way and to progressively remove measures which tend to lower the quality of foodstuffs.
3. To begin to lower tariffs on wheat when the international price of wheat reaches and maintains for a period of 16 weeks a gold price of 63.02 gold cents per bushel.

4. To accompany tariff reductions with modifications in quantitative restrictions such as milling quotas.

Delegates from the four major exporting countries subscribed to general policies of controlling their exports for one or two years through allocation of quotas. The United States and Canada tentatively agreed to reduction of acreage. Australia and the Argentine tentatively agreed to a policy of diverting surplus wheats to non-food uses. The tentative export quotas for the year ending July 31st, 1954, were as follows:-

Canada .....	200 million bushels.
Australia .....	105 million bushels.
Argentine .....	100 million bushels.
The United States .....	47 million bushels.
The Danube Countries ....	50 - 54 million bus.

The main feature of the wheat agreement is that importing countries have undertaken to co-operate with exporting countries in solving the wheat problem and in increasing consumption. This offer of co-operation on the part of the those countries which purchase wheat makes it doubly important that exporting countries should carry out their obligations to the letter - just how has got to be worked out, in Canada at least.

The question of Canadian exports then for the next year or so need not cause anyone any worry. They have been taken care of by the government in its all paternal manner. One half of Canada's part in the agreement has been thought of - what of acreage reduction?

So far, no definite plan has been put forward, and it seems at present as if any such policy would be hard to enforce.

The Free Press sees the situation as this:-

"Canada is to sell on a quota basis, restrict exports and cut production, all to maintain price in a world which is - from the price standpoint - fatally competent to produce wheat, and which has been showing that it could produce wheat by doing so."10

The price maintaining endeavours are not perhaps of paramount importance. Europe, and the world, at present have only a certain margin of imports that they want. The quantity they want has been rationed out among the chief exporters for them to supply.

Few are willing to face the hard facts that agriculture almost the world over is relatively overextended, and at least relative contraction is inevitable. Some economic forces are irresistible. They cannot be safely ignored or fought against; wisdom consists in making adaptations to them. The degree of necessary contraction of agriculture depends greatly upon a wide range of policies. The trend of recent national policies has been in the direction of restraining consumption of farm products, and, in certain countries, increasing agricultural output at the same time. If this trend persists, both distress and severe contraction of agriculture are inevitable, at least in the exporting countries. This applies to Canadian production as much as that of any part of the wheat producing world; if Canada cannot market the wheat she must reduce acreage and lower production or get a large enough population to consume the surplus.

### 9. THE FUTURE

Joseph S. Davis sketches the possible course events will take in a very concise manner:-

"Serious depression of world wheat prices will persist for some time, now relieved, nor intensified. Wheat growing in European importing countries will be maintained or further expanded under regimes of subsidies, fixed prices, milling quotas, high tariffs, and import prohibitions or restrictions, but on a relatively high cost level. Continental European consumers in many countries will continue to pay dearly for poor bread. Russia will maintain or increase her wheat acreage, but only at heavy real costs, and expect wheat involving curtailment of her people's diet, without getting much in return. European exporting countries will secure preferential export conditions within Europe, with disappointing results to exporting and importing countries, and with damage to economical trade. Large numbers of wheat growers in the major overseas exporting countries will gradually loose their farms for debt. Some contraction of acreage in wheat will result, but much more extensive "liquidation" of farmers. Other farmers will step into their places with lower costs for land and equipment. Costs of wheat growing will fall further, and world wheat prices tend still lower. Eventually European nations will be forced to adopt policies of cheaper and better wheat. This will be forced by labour, business and consumer interests. The change of policy will be disastrous for European wheat growers who have expanded their wheat production at high costs, and they in turn will undergo extensive liquidation. Meanwhile, the process will have increased the unbalance and distress that characterize the depression, and operate against recovery of general equilibrium. In some such way, the wheat surplus problem may actually be solved, by restraint on consumption forcing liquidation of farmers, first in exporting countries and later in others."



## 10. SUMMARY

1. Much of the continental plain in Canada is admirable suited to the production of hard wheats, very high in protein.

2. The expansion of Western Canada was decidedly slow until the arrival of the railroad. The period 1900-1911 saw the period of most rapid growth at a time when railway building, immigration and homesteading all coincided.

3. Only the very liberal land bonus scheme of the various governments made possible the network of railways that were spread over Western Canada.

4. Immigration was very materially aided, in fact made possible by the very liberal land policy of the government. It was also aided by the activity of the railways in bringing people out to settle on the millions of acres that had been given them.

5. Western farmer agitation has resulted in the introduction of many measures that have been to the best advantage of the country generally in agricultural development.

6. Canada's ability to meet world competition in wheat is due in part, at least, to the very efficient system of bulk handling that has been developed to care for the crop, from the farm to the hold of the ocean steamships.

7. In crop production, because of the greatly increased acreage, crop yield per acre has come to play an increasingly important part in total yield.

8. In addition to a spectacular increase in land cultivated, crop increases have been materially aided by farm mechanization and by the improvements made in breeds of wheat sown. The last factor has enabled many new districts to be opened up.

9. Canada's export market is in part due to the demand for wheat of milling and baking qualities such as our's possess, which qualities are maintained by government inspection service, up to highest specifications.

10. Domestic requirements being limited, Canada must seek to dispose of her surplus of wheat abroad; the foreign market taking as high as two-thirds of the production.

11. Western agriculture has become concentrated upon the production of a single commodity, wheat, for export. Western wheat is the largest single item in Canadian export trade.

12. The export market has provided Canada with a market at a price. The price received has, however, not been the chief cause of the rapid development of the Canadian West.

13. Expansion in Western Canada depended upon the development of new varieties of wheat, the building of roads (rail and otherwise) and a higher level of prices for wheat.

14. The probability of increased acreage yields is doubtful. Diversification may cut into acres of wheat production somewhat, but the West will remain primarily an area devoted to wheat production.

15. Wheat acreage and production having increased at a far more rapid rate than population in the world, we are today faced with a surplus, that will prove burdensome if the amount is not reduced. It is this surplus to which Canada is a contributor.

16. The surplus is partly attributable to the governmental activity that has been noticed on the Winnipeg market, in that it prevented the disposal of wheat at world prices.

17. The exporting countries' bumper crop of 1928 was aggravated by the large crop of the importing countries in 1929, to add again to the surplus.

18. Acreage reduction appears to be the one means of disposing of the surplus; but Canadian farmers are going to be very loathe to reduce crops in the least, preferring to produce as much as they can in the hope of getting good returns for it.

19. Internal strife in European countries has led to a revival of economic nationalism which is evidenced by a growing desire to become self-sufficient in regard to foodstuffs.

20. There is little room for expansion of acreage under cultivation in Europe, but types of crops planted may be changed to give more wheat.

21. Certain quantities of Canadian wheat are going to be wanted for mixing purposes, if for nothing else. This, added to the fact that Britain can never become self-sufficient in foodstuffs, gives one market for which Canada can at least be a competitor.

22. Quotas and preferences are being used as a weapon by European nations in bargaining, a game in which Canada will come off second best, unless we stop trying to make ourselves self-sufficient in manufactures.

23. The prevalent policy of Europe today is not likely to be abandoned in the near future because it has met with such remarkable success. The trend of European wheat is toward a greater supply.

24. Wheat acreage in Canada is not likely to increase to any extent for some years. Livestock breeding is likely to occupy a more prominent place in Western agriculture, which has to date been built upon one commodity - wheat.

25. The low cost of production on the Canadian prairies will in all probability be more than a match for any competition in the world's market arising from expensive land reclamation ventures in Europe or elsewhere.

26. As countries with high standards of living have passed the point of rapidly increasing populations, and have stationary or declining trends of consumption, it is not likely that the total wheat consumption of the world will increase faster than the production increases.

27. Overproduction as a factor in surplus can be questioned, it is rather the inability of the wanting people to get that which they want. For this reason "the cure for the agricultural depression is not restriction of production, but the starting up in the world at large of the wheels of trade and exchange." as put by Sir D. A. Hall at the Regina Conference in 1933.

28. The national policy being pushed by Mr. Elliott of Great Britain is such that Canada will do well to hold her own in exports to the British market after November 1935.

29. Empire Trade seems to hold out little hope for the future in regard to Canadian agricultural products because there are so many Empire countries competing for an ever diminishing British market.

#### 11. CONCLUSION

Because of the great importance of wheat in the whole commerce of the Dominion of Canada, and to the economic structure of the Canadian West, it would seem that there is great risk attached to any governmental interference with the natural movement of Canadian wheat to the markets of the world. That any attempts to regulate acreage planted to wheat and price paid for wheat will succeed is extremely doubtful. It has been seen that the attempts by exporting nations, governments or organizations to try and lift wheat prices have failed, and have resulted in large monetary loss, without accomplishing any good for the producer. For this reason, any move by the Canadian government to regulate acreage or any attempt at price fixing seems predestined to fail.

The policy at present in favour is really misdirecting the attention of the farming community in the pursuit of higher prices and away from the necessity for lower costs, to be secured by tariff reductions on the commodities the farmer buys.

It is in the latter direction that there lies any hope for the salvation of Western agriculture.

The real wheat problem facing Canada is one of overseas markets. It is to the development and improvement of these markets for the future that Canadian attention should be directed, not to internal regulation. What measure of success can be expected is uncertain, but it is certain that the salvation of Western Canada lies in the securing of wider markets for the one commodity upon which the narrow foundation of its economic structure is based - namely wheat.

TABLE NO. I

STEAM RAILWAY MILEAGE IN THE PRAIRIE PROVINCES 1895-1951

As of June 30th	Manitoba	Saskatchewan	Alberta	Total
1895	1,472		1,772	3,244
1896	1,474		1,780	3,254
1897	1,575		1,780	3,355
1898	1,621		1,778	3,399
1899	1,603		1,930	3,533
1900	-----		-----	-----
1901	2,056	1,107	978	4,141
1902	2,128	1,102	978	4,208
1903	2,224	1,117	978	4,319
1904	2,364	1,180	1,020	4,564
1905	2,672	1,523	1,020	5,215
1906	2,823	1,973	1,200	5,996
1907	3,074	2,025	1,323	6,422
1908	3,111	2,081	1,323	6,515
1909	3,205	2,631	1,321	7,157
1910	3,221	2,932	1,488	7,641
1911	3,466	3,121	1,494	8,081
1912	3,520	3,754	1,897	9,172
1913	3,993	4,651	2,212	10,856
1914	4,076	5,089	2,545	11,710
1915	4,498	5,327	3,174	12,999
1916	4,309	5,378	3,894	13,581
1917	4,194	6,124	4,444	14,762
1918	4,168	6,162	4,273	14,603
1919	4,193	6,141	4,354	14,688
1920	4,403	6,220	4,474	15,097
1921	4,417	6,296	4,557	15,270
1922	4,585	6,267	4,680	15,532
1923	4,521	6,518	4,784	15,823
1924	4,520	6,942	4,818	16,280
1925	4,540	7,056	4,965	16,561
1926	4,296	7,268	5,048	16,612
1927	4,293	7,358	5,139	16,790
1928	4,293	7,551	5,307	17,151
1929	4,294	7,761	5,543	17,598
1930	4,420	8,166	5,607	18,193
1931	4,419	8,268	5,656	18,343

Note: Data not available for year 1900.

Figures are as at June 30th, 1895-1919, and Dec. 31st, 1919-1931.

References: Canada Year Book: as 1933, page 651.

TABLE NO. 2

GOVERNMENT INVESTMENTS IN RAILWAYS TO MARCH 31, 1932.

Item	Expenditure Fiscal Year 1932	Total Expenditure
<u>Canadian Government Railways</u>		
Intercolonial System .... Cr.	2,505	132,745,801
National Transcontinental Cr.	59,185	169,259,000
Canadian Government Railways (Rolling Stock) ... Cr.	23,948	35,882,095
Other Lines .....	1,091,296	52,900,394
	<u>1,005,658</u>	<u>390,787,290</u>
Hudson Bay Railway and Terminal .....	5,265,506	49,040,613
TOTAL CANADIAN GOVERNMENT RAILWAYS .....	6,242,326	439,827,903
 <u>Other Railways</u>		
Canadian Pacific .....		62,791,435
Grand Trunk-Debenture Account .....		15,142,634
Grand Trunk-Interest Account .....		10,457,458
Grand Trunk-Special Account .....		7,302
Grand Trunk-Preference Account .....		121,740
Canadian Northern-Purchase of Capital Stock .....		10,000,000
<u>Loans to Railways:</u>		
Canadian Northern .....		255,408,804
Grand Trunk .....		118,582,182
Grand Trunk Pacific .....		116,006,599
Canadian National .....		57,482,653
Purchase of Equipment .....		56,926,001
Other Roads .....		1,458,546
		<u>704,385,354</u>
TOTAL OTHER ROADS .....		
GRAND TOTALS - CAPITAL EXPENDITURE .....	6,242,326	1,144,213,257

Reference: Annual Report Department of Railways and Canals, year ending March 31st, 1932, page 267.



TABLE NO. 3

NUMBER OF HOMESTEAD ENTRIES AND NUMBER OF HOMESTEAD  
CANCELLATIONS FROM 1874 TO MARCH 31, 1931

Year	Number of Entries	Number Cancelled	Net Entries
1874	1,376	889	487
1875	499	503	196
1876	347	153	194
1877	845	457	388
1878	1,788	1,577	411
1879	4,068	2,045	2,023
1880	2,074	679	1,395
1881	2,753	937	1,816
1882	7,483	3,485	3,998
1883	6,063	1,818	4,245
1884	3,753	1,330	2,423
1885	1,858	597	1,261
1886	2,657	812	1,845
1887	2,036	459	1,577
1888	2,655	668	1,987
1889	4,416	639	3,777
1890	2,955	794	2,161
1891	3,523	934	2,589
1892	4,840	1,322	3,518
1893	4,067	899	3,168
1894	3,209	648	2,561
1895	2,394	683	1,711
1896	1,857	301	1,556
1897	2,384	1,090	1,294
1898	4,848	1,546	3,302
1899	6,689	1,746	4,943
1900	7,426	1,096	6,330
1901	8,167	1,682	6,485
1902	14,633	3,296	11,337
1903	31,383	5,208	26,175
1904	26,073	8,702	17,371
1905	30,819	11,296	19,523

TABLE NO. 4

NUMBER OF IMMIGRANTS SETTLING IN CANADA CALENDAR YEARS

1867-1899 AND FISCAL YEARS 1900-1933

ALSO EXPENDITURES ON IMMIGRATION IN THE FISCAL YEARS

ENDED 1868-1933

<u>Year</u>	<u>Number</u>	<u>Expenditure</u>
1867	14,666	
1868	12,765	36,050
1869	18,630	26,952
1870	24,706	55,966
1871	27,773	54,004
1872	36,578	109,954
1873	50,050	265,718
1874	39,373	291,297
1875	27,382	278,777
1876	25,633	338,179
1877	27,082	309,353
1878	29,807	154,351
1879	40,492	186,403
1880	38,505	161,213
1881	47,991	214,251
1882	112,458	215,359
1883	133,624	373,958
1884	103,824	511,209
1885	79,169	423,861
1886	69,152	257,355
1887	84,526	341,236
1888	88,766	244,789
1889	91,600	202,499
1890	75,067	110,092
1891	82,165	181,045
1892	30,995	177,605
1893	29,633	180,677
1894	20,829	202,235
1895	18,790	195,653
1896	16,835	120,199
1897	21,716	127,438
1898	51,900	261,195
1899	44,543	255,879

(Continued)

TABLE NO. 4 (CONTINUED)

Year	Number	Expenditure
1900	23,895	434,563
1901	49,149	444,730
1902	67,379	494,842
1903	128,364	642,914
1904	130,351	744,788
1905	146,266	973,357
1906	189,064	842,668
1907	124,667	611,201
1908	262,469	1,074,697
1909	146,908	979,326
1910	208,794	960,676
1911	311,084	1,079,130
1912	354,237	1,365,000
1913	402,432	1,427,112
1914	384,878	1,893,298
1915	144,789	1,658,182
1916	48,537	1,307,480
1917	75,374	1,181,991
1918	79,074	1,211,954
1919	57,702	1,112,079
1920	117,336	1,388,185
1921	148,477	1,688,961
1922	89,999	2,052,371
1923	72,887	1,987,745
1924	148,560	2,417,374
1925	111,362	2,823,920
1926	96,064	2,328,931
1927	143,991	2,338,992
1928	151,597	2,704,698
1929	167,722	2,631,967
1930	163,288	2,757,331
1931	88,223	2,255,249
1932	25,752	1,873,006
1933	19,752	-----

56,552,450

Reference: Canada Year Book, 1933, pages 166-187, 199.

TABLE NO. 5

AREAS OF LAND GRANTED TO STEAM RAILWAYS BY THE DOMINION  
AND PROVINCIAL GOVERNMENTS UP TO DEC. 31, 1931

Item	Bonus Grants. Acres.
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Granted by -	
Dominion .....	31,785,655
Nova Scotia .....	160,000
New Brunswick .....	1,788,592
Quebec .....	2,085,710
Ontario .....	3,241,207
Saskatchewan .....	-----
Alberta .....	-----
British Columbia....	8,253,410
Total ....	47,292,374

Item of Grants by Dominion Only, to Dec. 31, 1931	Bonus Grants. Acres
--	------------------------

Granted to -	
<u>Canadian National Lines</u>	
Canadian Northern (Main Line and Branches ) .....	3,422,528
Manitoba and South Eastern .....	680,520
Qu'Appelle, Long Lake and Sask- atchewan .....	1,625,344
<u>Canadian Pacific Lines</u>	
Alberta Railway and Irrigation Co...	1,101,712
Calgary and Edmonton .....	1,820,685
Canadian Pacific Main Line .....	18,206,986
Canadian Pacific Branches .....	1,609,024
Great North West Central .....	320,000
Manitoba North Western .....	1,501,376
Manitoba South Western Colonization.	1,396,800
Saskatchewan and Western .....	98,880
	31,785,655

Reference: Canada Year Book 1933, pages 661 and 662.

TABLE NO. 6

WHEAT ACREAGE, PRODUCTION, AND YIELD PER ACRE  
IN MANITOBA, 1883-97

Crop Year	Acreege (thousand acres)	Production (million bushels)	Yield per acre (bushels)
1883	261	5.7	21.8
1884	307	6.2	20.1
1885	357	7.4	20.8
1886	384	5.9	15.3
1887	452	12.4	28.6
1888	---	---	---
1889	652	7.2	11.4
1890	746	14.7	19.6
1891	917	23.2	25.3
1892	876	14.5	16.5
1893	1,004	15.6	15.6
1894	1,010	17.2	17.0
1895	1,140	31.8	27.9
1896	1,000	14.4	14.4
1897	1,291	18.3	14.1

Reference: Wheat Studies, Vol. 1, 1924-25, page 280

TABLE NO. 6A  
 PROVINCIAL ESTIMATES OF WHEAT ACREAGE, PRODUCTION,  
 AND YIELD PER ACRE 1898-1907

AND YIELD PER ACRE 1898-1907

Year	Acreage (thousand acres)		Production (million bus)		Yield per acre (bushel)	
	Total	Sask. Alb.	Total	Man. Sask. Alb.	Total	Man. Sask. Alb.

1898	1,795	1,488	276	31	30.9	25.3	4.8	.8	17.2	17.0	17.3	25.3
1899	1,993	1,630	328	35	34.8	28.0	6.1	.8	17.5	17.1	18.5	23.7
1900	1,869	1,457	382	30	17.1	13.0	3.4	.6	9.1	8.9	9.0	19.2
1901	2,517	2,012	470	35	63.3	50.5	12.0	.9	25.2	25.1	25.4	24.6
1902	2,666	2,040	581	45	67.0	53.1	13.1	.9	25.1	26.0	22.6	18.9
1903	3,284	2,445	778	63	56.4	40.1	15.1	1.2	17.2	16.4	19.4	19.0
1904	3,377	2,412	910	55	56.0	39.2	16.0	.9	16.6	16.2	17.5	17.1
1905	3,881	2,644	1,130	107	84.2	55.8	26.1	2.3	21.7	21.1	23.1	21.6
1906	5,051	3,142	1,731	178	102.3	61.3	37.0	4.0	20.2	19.5	21.4	22.3
1907	5,046	2,790	2,048	208	71.6	39.7	39.7	4.2	14.2	14.2	13.5	20.2
Dominion Estimates												
1908	5,624	2,957	2,396	271	91.9	50.3	34.7	6.8	16.3	17.0	14.5	25.2
1909	6,878	2,808	3,685	385	147.5	52.7	85.2	9.6	21.4	18.8	23.1	24.9
1910	7,868	2,760	4,228	880	110.2	34.1	67.0	9.1	14.0	12.4	15.8	10.3
1911	9,991	3,095	5,256	1640	208.4	62.7	109.1	36.6	20.9	20.3	20.8	22.3
1912	10,011	2,839	5,582	1590	214.3	65.0	107.0	34.3	20.4	22.2	19.2	21.6
1913	10,036	2,804	5,720	1512	209.4	53.3	121.7	34.4	20.8	19.0	21.2	22.8
1914	9,335	2,616	5,348	1371	141.0	38.6	73.6	28.9	15.1	14.8	13.7	21.1
1915	13,867	2,800	8,929	2138	360.2	69.3	224.3	66.5	26.0	24.8	25.1	31.1

(Continued)

TABLE NO. 6A (CONTINUED)

Year	Acreage (thousand acres)		Production (million bus.)		Yield per Acre (bushel)							
	Total	Sask. Alb.	Total	Man. Sask.	Total	Man. Sask. Alb.						
<u>Dominion Estimates (Contd.)</u>												
1916	14,363	2,726	9,032	2,605	242.3	29.7	147.6	65.1	16.9	10.9	16.3	25.0
1917	13,620	2,449	8,273	2,898	212.0	41.0	117.9	53.0	15.6	16.8	14.2	18.3
1918	16,125	2,984	9,249	3,892	164.4	48.2	92.5	23.8	10.2	16.4	10.0	6.1
1919	17,750	2,880	10,587	4,283	165.5	41.0	90.0	34.6	9.3	14.2	8.5	8.1
1920	16,841	2,706	10,061	4,074	234.1	37.5	113.1	83.5	13.9	13.9	11.2	20.5
1921	22,181	3,501	13,557	5,123	280.1	39.1	118.0	53.0	12.6	11.2	13.8	10.4
1922	21,224	3,126	12,332	5,766	375.2	60.1	250.2	65.0	17.7	19.2	20.2	11.3
1923	20,879	2,916	12,791	5,172	452.3	55.8	271.6	144.8	20.8	12.3	21.3	28.1
1924	21,065	2,459	13,032	5,573	235.7	41.5	132.9	61.2	11.2	16.9	10.2	11.0
1925	20,625	1,902	13,003	5,720	377.0	53.6	240.5	102.9	19.0	17.7	18.5	15.0
1926	21,758	2,085	13,558	6,115	378.8	47.1	218.6	113.1	17.8	22.6	16.2	18.5
1927	21,525	2,195	12,979	6,251	454.5	20.7	252.5	171.3	25.4	14.0	16.4	27.4
1928	23,158	2,660	13,791	6,707	---	---	---	---	---	---	---	---
1929	24,297	2,301	14,445	7,551	276.6	31.5	154.6	90.5	25.5	13.7	10.7	12.0
1930	23,960	2,470	14,326	7,164	---	---	---	---	---	---	---	---
1931	25,439	2,540	14,961	7,938	301.2	28.1	132.5	140.6	---	11.1	8.9	17.7
1932	26,395	2,651	15,543	8,201	408.4	42.4	202.0	164.0	---	16.0	13.0	20.0

References: Annual Report, Department of Agriculture and Immigration of Manitoba;  
 Census and Statistics Monthly 1908-17; Monthly Bulletin of  
 Agricultural Statistics 1917

TABLE NO. 7

WHEAT SUPPLIES AND DISPOSITION IN CANADA FROM 1921-33

Year Aug.-July	Initial Stocks	Supplies Crop	Total	Mill- ed (Net)	Domestic Seed Use	Domestic Unmer- chant- able	Disappearance Loss in Clean- ing	Resi- due	Total	Surplus over Domest- ic Use	Net Ex- por- ts	End Year Stocks
1921-22	25	301	326	37	39	12	9	+54	151	175	185	40
1922-23	40	400	440	41	40	10	12	+26	129	311	279	32
1923-24	32	474	506	42	39	19	12	+3	115	391	346	45
1924-25	45	262	307	42	38	12	10	-14	88	219	192	27
1925-26	27	395	422	42	40	11	6	-37	62	360	324	36
1926-27	36	407	443	45	39	12	19	-11	102	341	293	48
1927-28	48	480	528	42	42	28	7	-2	117	411	333	78
1928-29	78	567	645	44	44	50	10	+4	135	510	406	104
1929-30	104	305	409	45	44	7	7	+12	110	296	185	111
1930-31	111	421	532	42	39	45	8	+6	140	392	258	134
1931-32	134	321	455	42	37	28	6	+3	116	339	207	132
1932-33	132	455	587	42	36	39	7	-12	112	475	263	212

Source: Standard Food Research Institute - Vol. X, No. 3, page 137



TABLE NO. 8

CANADIAN EXPORTS OF WHEAT AND FLOUR 1890-1933

(MILLIONS)

Year Ending	Total Wheat and Flour (Bushels)	Wheat (Bushels)	Flour and Wheat (Bushels)	Flour (Bushels)
<u>June 30th</u>				
1891	3.4	2.1	1.3	.30
1892	10.4	8.7	1.7	.38
1893	11.1	9.3	1.8	.41
1894	11.2	9.3	1.9	.43
1895	9.8	8.8	1.0	.22
1896	10.8	9.9	0.8	.19
1897	9.8	7.9	1.9	.42
1898	24.6	19.0	5.6	1.25
1899	13.9	10.3	3.6	.79
1900	20.3	16.8	3.5	.77
1901	14.8	9.7	5.0	1.12
1902	31.0	26.1	4.9	1.09
<u>July 31st</u>				
1903	39.9	33.8	6.1	1.36
1904	23.2	16.3	6.9	1.54
1905	19.4	13.7	6.7	1.27
1906	48.1	40.8	7.3	1.62
1907	46.5	39.4	7.0	1.56
1908	47.6	40.1	7.5	1.67
1909	56.7	47.7	9.0	2.01
1910	67.8	52.6	15.2	3.37
1911	62.4	48.4	14.0	3.10
1912	97.9	78.8	19.1	4.25
1913	115.7	95.5	20.2	4.50
1914	135.6	114.9	20.7	4.60
1915	86.7	63.9	22.8	5.08
1916	269.2	235.7	33.4	7.43
1917	174.6	140.2	34.3	7.63
1918	169.2	118.6	50.7	11.26
1919	104.5	63.0	41.0	9.12
1920	92.5	63.4	29.0	6.46
1921	167.2	137.0	30.2	6.72
1922	185.8	151.0	34.7	7.72
1923	279.4	229.9	49.5	12.02
1924	346.1	292.4	53.7	11.93
1925	192.1	146.6	45.5	10.11
1926	324.2	275.4	48.8	10.85
1927	292.5	251.1	41.4	9.19
1928	332.5	288.4	44.1	9.79
1929	406.2	353.4	52.8	11.73
1930	184.9	154.7	30.2	6.70
1931	258.4	228.3	30.1	6.68
1932	206.9	182.8	29.1	5.36
1933	263.4	239.4	24.0	5.34

Source: Stanford Food Research Institute - Successive Issues to December, 1933

TABLE NO. 9

CANADIAN EXPORTS OF WHEAT AND FLOUR BY COUNTRIES OF  
DESTINATION - FISCAL YEARS 1905-1932

Year Ending	Wheat and Flour as Wheat (million bushels)						
	Total	Great Britain	Other North Europe	South Europe	United States	Japan, China, Hong-kong	Others
<u>June 30</u>							
1905	17.9	13.9	.57	-----	.44	.08	2.90
1906	47.3	40.3	.66	.02	3.95	.09	2.30
<u>March 31</u>							
1907	50.4	27.3	.46	.04	.82	.26	1.53
1908	52.5	48.1	.66	.03	.24	.69	2.78
1909	57.0	50.5	2.50	.27	.91	.17	2.59
1910	63.5	55.0	2.00	-----	2.42	.18	3.89
1911	59.5	52.1	2.16	-----	.36	.09	4.80
1912	81.3	70.9	4.32	.02	1.26	.31	4.51
1913	113.3	90.7	6.89	.07	9.97	.59	5.12
1914	142.2	121.2	5.50	.17	7.61	1.45	6.20
1915	94.2	78.4	4.66	.47	4.33	.32	6.00
1916	186.5	157.9	8.77	5.11	9.50	.14	5.08
1917	223.1	170.2	20.82	8.29	19.03	.04	4.69
1918	195.1	153.1	11.64	.41	25.87	-----	4.06
1919	83.2	61.0	14.10	1.65	2.03	-----	4.49
1920	117.9	77.6	13.67	13.77	6.80	-----	5.98
1921	156.3	41.7	30.32	28.60	46.67	.09	7.95
1922	169.9	113.8	12.42	14.81	19.16	2.93	6.72
1923	261.1	188.1	24.76	15.88	18.97	5.61	9.77
1924	309.6	192.3	46.70	20.60	22.23	16.72	11.08
1925	241.4	157.7	44.82	14.17	5.68	9.34	9.68
1926	249.7	186.4	26.83	7.66	9.19	18.60	-----
1927	248.5	179.9	33.52	14.88	8.21	10.14	-----
1928	266.9	188.7	55.66	11.38	7.50	12.28	-----
1929	370.5	229.8	67.23	29.66	10.63	28.84	4.34
1930	177.0	113.3	34.28	10.96	6.80	10.74	.92
1931	217.2	131.7	35.92	18.52	10.34	14.9	-----
1932	191.3	110.6	-----	-----	4.82	-----	-----
<u>5 year average</u>							
1905-09	41.0	36.0	.97	.07	1.27	.26	2.42
1910-14	92.0	78.0	4.19	.05	4.32	.52	4.90
1915-19	156.4	124.1	12.00	3.19	12.15	.10	4.86
1920-24	202.9	122.7	25.58	18.33	22.97	5.07	8.30
1925-29	275.4	188.7	-----	-----	-----	-----	-----

Source: Annual Reports, Department of Trade and Commerce

TABLE NO. 9 (CONTINUED)

CANADIAN EXPORTS OF WHEAT AND FLOUR BY COUNTRIES OF  
DESTINATION - FISCAL YEARS 1905-1932

Flour (thousand barrels)							
Year Ending	Total	Great Britain	Other North Europe	South Europe	United States	Japan, China, Hong-kong	Others
<u>June 30</u>							
1905	1,522	593	39	---	31	17	642
1906	1,532	944	53	5	26	20	484
<u>March 31</u>							
1907	1,093	634	67	8	4	52	328
1908	1,964	1,131	50	6	29	153	595
1909	1,738	1,029	66	---	58	37	548
1910	3,064	1,877	198	---	126	39	824
1911	3,049	1,885	195	---	26	19	924
1912	3,739	2,339	291	5	58	68	978
1913	4,478	2,810	362	15	30	79	1,112
1914	4,833	2,795	444	30	19	208	1,337
1915	4,951	3,137	457	28	52	70	1,207
1916	6,399	3,895	1,127	31	251	31	1,064
1917	7,426	4,031	1,886	291	185	9	1,024
1918	9,932	6,604	1,863	43	519	---	903
1919	9,205	5,254	2,859	93	9	---	990
1920	8,863	5,825	866	812	30	1	1,329
1921	6,017	2,747	221	179	1,188	20	1,662
1922	7,415	4,737	525	33	571	112	1,437
1923	10,228	4,724	1,992	303	613	496	2,100
1924	11,716	4,234	3,745	393	222	989	2,133
1925	11,029	3,275	4,952	380	57	514	1,851
1926	10,085	2,792	2,303	607	13	1,383	2,987
1927	10,148	3,589	2,192	666	12	626	2,463
1928	9,387	3,072	2,300	628	7	1,251	2,059
1929	11,406	2,776	2,917	619	2	2,565	2,527
1930	7,894	2,279	1,752	251	2	1,939	1,672
1931	7,218	2,728	1,155	96	.6	693	-----
1932	5,414	2,065	-----	---	1.2	-----	-----
<u>5 year average</u>							
1905-09	1,530	866	55	4	30	56	519
1910-14	3,833	2,355	298	10	52	83	1,035
1915-19	7,583	4,584	1,638	97	203	22	1,038
1920-24	8,848	4,453	1,470	344	525	324	1,732

Source: Annual Reports, Department of Trade and Commerce

TABLE NO. 10

EXPORTS OF WHEAT AND FLOUR FOR FISCAL YEARS 1868-1933

Year	Wheat & Flour Bushels	Value per Bushel \$	Value in Dollars \$	Total Value Exports \$
1868	4,201,422	1.60	6,722,275	48,504,899
1869	4,685,303	1.13	5,294,392	56,400,772
1870	5,467,986	1.04	5,686,705	59,043,590
1871	3,280,912	1.31	4,297,994	57,630,024
1872	5,258,919	1.37	7,230,610	65,851,083
1873	6,513,630	1.31	8,532,855	76,538,025
1874	9,012,643	1.42	12,797,955	76,741,997
1875	5,745,545	1.12	6,435,010	69,709,823
1876	7,940,161	1.24	9,845,799	72,491,437
1877	3,601,877	1.16	4,178,177	68,050,546
1878	6,537,474	1.33	8,694,840	67,989,800
1879	9,197,985	1.06	9,749,864	62,431,025
1880	7,541,164	1.24	9,351,043	72,899,697
1881	4,232,449	1.11	4,698,018	83,944,701
1882	5,958,860	1.18	7,031,454	94,137,657
1883	8,068,165	1.12	9,036,344	87,702,431
1884	1,635,776	1.06	1,731,454	79,833,098
1885	2,987,952	0.86	2,492,238	79,131,735
1886	5,156,613	0.87	11,486,253	77,756,704
1887	7,972,684	0.89	7,095,688	80,960,909
1888	3,739,271	0.85	3,178,380	81,382,072
1889	1,081,219	0.89	962,285	80,272,456
1890	940,219	0.97	865,001	85,257,586
1891	3,443,744	0.75	2,582,808	68,671,738
1892	10,428,636	0.80	8,342,909	99,002,466
1893	11,117,717	0.76	8,449,464	105,488,798
1894	11,200,953	0.66	7,392,628	103,851,764
1895	9,829,076	0.61	5,995,736	102,828,441
1896	10,759,764	0.58	6,240,663	109,707,805
1897	9,753,185	0.71	6,924,761	123,632,540
1898	24,689,698	0.91	22,467,625	144,548,662
1899	13,907,927	0.76	10,570,024	137,360,792
1900	20,365,393	0.71	14,459,429	168,972,301
1901	14,867,133	0.71	10,555,664	177,431,386
1902	31,098,000	0.72	22,390,560	196,019,763
1903	38,888,006	0.74	28,777,124	214,401,674
1904	24,055,528	0.80	19,244,422	198,414,439
1905	20,646,925	0.84	17,343,417	190,854,946
1906	47,293,465	0.83	39,254,576	235,483,956
1907	30,394,680	0.80	24,315,744	180,545,306
1908	52,486,998	0.92	48,288,038	246,960,968
1909	56,958,620	0.98	55,819,448	242,603,584

(Continued)

TABLE NO. 10 (CONTINUED)

EXPORTS OF WHEAT AND FLOUR FOR FISCAL YEARS 1868-1933

Year	Wheat & Flour Bushels	Value per Bushel \$	Value in Dollars \$	Total Value Exports \$
1910	63,529,476	1.06	67,341,244	279,247,551
1911	59,522,822	0.99	58,927,593	274,316,553
1912	81,291,048	0.97	78,852,316	290,223,867
1913	113,317,202	0.95	107,651,340	355,754,600
1914	142,171,402	0.98	139,327,972	431,588,439
1915	94,198,901	1.03	97,024,868	409,418,836
1916	186,546,432	1.10	205,201,040	741,610,768
1917	223,059,599	1.29	287,746,884	1,151,375,768
1918	195,082,203	2.43	474,049,746	1,540,027,988
1919	83,233,372	2.31	192,269,089	1,216,443,806
1920	117,861,843	2.37	279,332,466	1,258,492,098
1921	156,291,801	2.41	376,663,238	1,189,163,701
1922	169,853,507	1.32	224,206,620	740,240,680
1923	261,096,336	1.17	305,482,671	931,451,443
1924	309,587,417	1.04	321,970,896	1,045,351,056
1925	241,396,058	1.31	316,228,760	1,069,067,353
1926	295,061,853	1.46	430,790,228	1,315,355,791
1927	294,162,154	1.42	417,710,182	1,252,157,506
1928	309,144,917	1.32	408,071,268	1,228,349,343
1929	221,785,327	1.15	255,053,095	1,363,709,672
1930	212,528,200	1.20	261,210,670	1,120,258,302
1931	249,724,882	0.84	210,296,003	799,742,667
1932	215,677,763	0.62	134,636,926	576,344,302
# 1933	171,097,830	0.69	118,107,024	

# - - 9 months to December 31st, 1933.

Sources: Canada Year Book - 1932 - pages 526-527 & 544  
Also earlier volumes.

TABLE NO. II  
IMPORTANCE OF WHEAT AND FLOUR IN  
CANADIAN EXPORTS 1920-32

Year Ending March 31	(Million Dollars)			Total Exports	Percent of Total
	Wheat	Flour	Wheat and Flour		
1921	311	67	378	1,169	31.8
1922	180	53	233	740	31.5
1923	252	60	312	931	33.5
1924	268	63	331	1,045	31.7
1925	252	71	323	1,069	30.2
1926	364	70	434	1,315	33.0
1927	353	69	422	1,252	33.7
1928	352	60	412	1,228	33.5
1929	429	65	494	1,363	36.2
1930	216	46	262	1,120	23.4
1931	178	33	211	800	26.4
1932	116	19	135	576	23.4

Source: Reports - Department Trade and Commerce - 1932

TABLE NO. 12

WHEAT IN STORE IN CANADA AND THE UNITED STATES (IN 1,000 BUSHELS)

	Jan. '34	Dec. '33	Nov. '33	Jan. '33	Jan. '32
Canadian in Canada	227,645	243,055	249,008	236,516	172,621
U. S. in Canada	2,249	2,251	2,724	6,938	28,586
U. S. in United States	132,511	142,187	153,262	168,626	226,874
Canada in U. S.	14,038	14,767	8,631	13,574	25,512
TOTAL .....	376,433	402,240	413,625	425,664	453,603

Source: International Institute of Agriculture.

TABLE NO. 12A

CANADIAN WHEAT AND FLOUR EXPORTED ANNUALLY FROM 1923-34

August-July	Grand Total	To. U. S.	Total O Overseas	Thru U.S. Ports	Thru Canadian Ports Total	Pacific
1923-24	245.7	22.1	223.6	164.7	158.8	58.4
1924-25	192.7	3.2	189.5	99.1	90.4	26.0
1925-26	224.5	10.5	214.0	161.3	152.7	58.7
1926-27	292.9	7.7	285.2	150.8	154.4	39.7
1927-28	353.0	8.5	324.5	151.5	173.0	85.7
1928-29	407.6	10.1	397.5	172.2	225.3	108.1
1929-30	186.3	7.3	179.0	77.2	101.8	54.9
1930-31	258.6	8.1	250.5	96.3	154.2	79.6
1931-32	207.0	4.5	202.5	52.3	150.2	79.8
1932-33	264.3	.3	264.0	57.2	206.8	102.2

Source: Stanford Food Research Institute.

TABLE NO. 13

WHEAT PRODUCTION 1920-33  
OF FIVE LEADING PRODUCER-EXPORTERS

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Year	(million bushels)				
	United States	Canada	Argentina	Australia	British India
1920	833	263	156	146	378
1921	815	301	191	129	250
1922	868	400	196	109	367
1923	759	474	248	125	369
1924	840	262	191	165	364
1925	669	395	191	115	331
1926	834	407	230	161	325
1927	875	480	282	118	335
1928	913	567	349	160	291
1929	822	305	163	127	321
1930	890	421	232	214	391
1931	932	321	220	191	347
1932	744	455	235	212	337
1933 #	527	272	256	160	350

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# - As of about Jan. 15th, 1934; rough estimates

Source: Stanford Food Institute. Vol. X, No. 4, page 177.

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TABLE NO. 14

WHEAT PRODUCTION, ACREAGE AND YIELD IN  
PRINCIPAL PRODUCING COUNTRIES, 1923-33

Year	Total	U.S.	Canada	India	Australia	Argentina	Lower Danube	British Isles	France	Germany	Italy
1923	3,441	759.5	474.2	372.5	125.0	247.8	260	60.6	275.6	106.3	224.8
1924	3,055	840.1	262.1	560.6	164.6	191.1	204	53.9	281.2	89.2	170.1
1925	3,302	669.1	393.5	531.0	114.5	191.1	296	52.7	330.3	118.2	240.8
1926	3,364	833.5	407.1	524.7	160.8	230.1	294	52.2	231.8	95.4	220.6
1927	3,580	874.7	279.7	535.0	118.2	282.3	272	27.2	276.1	120.5	195.8
1928	3,917	926.1	566.7	290.9	159.7	349.1	367	50.9	281.3	141.6	228.6
1929	3,414	812.6	304.5	520.8	126.9	162.6	303	50.9	537.3	123.1	260.1
1930	3,577	858.9	420.7	590.8	213.6	252.3	353	43.4	228.1	139.2	210.1
1931	3,637	900.2	321.3	547.4	190.6	219.7	370	38.6	264.1	155.5	244.4
1932	3,703	744.1	455.0	536.9	212.4	235.4	224	44.4	335.5	183.8	277.2
1933	5,274	527.4	271.8	552.9	160.0	256.2	361	62.5	338.7	205.8	297.6
<u>Average</u>											
1927-31	3,645	874.5	418.6	537.0	161.8	249.2	353	48.2	277.4	136.0	227.8
1909-13	2,998	690.1	197.0	551.8	90.5	147.1	330	59.6	325.6	131.3	184.4

TABLE NO. 14 (CONTINUED)

WHEAT PRODUCTION, ACREAGE AND YIELD IN  
PRINCIPAL PRODUCING COUNTRIES, 1923-33

ACREAGE (million acres)

Year	Total	U.S.	Canada	India	Austr- alia	Argent- ine	Lower Danube	British Isles	France	Ger- many	Italy
1923	219.5	56.9	21.9	30.9	9.5	17.0	16.2	1.8	13.67	3.65	11.55
1924	215.2	52.5	22.1	31.2	10.8	16.0	18.1	1.6	13.62	3.62	11.28
1925	216.1	52.4	20.8	31.8	10.2	17.6	18.5	1.6	13.87	3.84	11.67
1926	227.4	56.8	22.9	30.5	11.7	19.0	18.7	1.7	12.97	3.96	12.14
1927	233.3	59.6	22.5	31.3	12.3	20.2	18.9	1.7	13.06	4.52	12.30
1928	241.5	59.3	24.1	32.2	14.8	22.4	19.6	1.5	12.96	4.27	12.26
1929	238.5	62.7	25.3	32.0	15.0	15.9	18.3	1.41	13.34	3.96	11.79
1930	247.0	61.2	24.9	31.7	18.2	19.5	20.0	1.43	13.28	4.40	11.92
1931	238.3	55.3	26.2	32.2	14.7	16.0	20.9	1.27	12.84	5.36	11.88
1932	244.7	57.2	27.2	33.8	15.2	17.8	19.2	1.26	12.45	5.64	12.24
1933	---	47.5	26.0	33.0	14.5	---	18.9	1.8	13.36	5.73	12.52
<u>Average</u>											
1927-31	239.7	59.6	24.6	31.9	15.0	18.8	19.5	1.47	13.10	4.06	12.03
1909-13	196.1	47.1	9.9	29.2	7.6	14.9	19.6	1.80	16.50	4.03	11.79

TABLE NO. 14 (CONTINUED)

WHEAT PRODUCTION, ACREAGE AND YIELD IN  
PRINCIPAL PRODUCING COUNTRIES, 1923-32

YIELD PER ACRE  
(bus. per acre)

Year	Total	U.S.	Canada	India	Austr- alia	Argent- ine	Lower Danube	British Isles	France	Ger- many	Italy
1923	15.7	13.3	21.7	12.1	13.1	14.5	16.1	32.9	20.2	29.1	10.5
1924	14.2	16.0	11.8	11.6	15.2	13.0	11.3	33.0	20.6	24.6	15.1
1925	15.1	12.8	19.0	10.4	11.2	10.8	16.0	34.1	23.8	30.8	20.6
1926	14.8	14.7	17.8	10.7	13.8	12.1	15.7	31.0	17.9	24.1	18.2
1927	15.3	14.7	21.4	10.7	9.6	14.0	14.4	32.8	21.1	27.9	15.9
1928	16.2	15.6	23.5	8.0	10.8	15.6	18.8	34.2	21.7	33.2	18.6
1929	14.3	13.0	12.1	10.0	8.5	10.2	16.5	36.0	25.3	31.1	22.1
1930	14.9	14.0	16.9	12.3	11.8	11.9	17.6	30.3	17.2	51.6	17.6
1931	15.3	16.3	12.3	10.8	12.9	13.7	17.7	30.4	20.6	29.0	20.6
1932	15.1	13.0	16.7	10.0	14.0	13.2	11.7	32.6	24.8	32.6	23.6
1933	---	11.1	10.5	10.7	11.0	---	---	34.8	25.4	35.9	23.8
<u>Average</u>											
1927-31	15.1	14.5	17.4	10.8	13.0	12.8	16.0	32.7	20.9	29.0	18.7
1909-13	15.3	14.7	19.8	12.0	11.9	9.9	16.8	31.6	19.7	32.6	15.6

Source: Wheat Studies, Vol. X, No. 3, December 1933 - pages 120-21-22-23

TABLE NO. 15

CHANGES IN WHEAT ACREAGE - BASE 1909-13 = 100

CHANGES IN WHEAT PRODUCTION - BASE 1909-13 = 100

Year	U.S.		Canada		Argentina		Australia		India		G. Br.		Europe		All Others		World		
	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Prod.	Ac.	Pr.	
1920	130	121	183	134	89	106	119	161	102	107	105	98	83	69	111	96	106	106	103
1921	135	118	234	153	95	130	128	143	88	71	111	131	88	88	104	116	110	110	103
1922	138	126	226	203	108	133	128	121	97	104	110	112	88	75	112	102	112	112	105
1923	127	116	220	241	115	168	126	138	106	106	98	102	90	91	132	133	114	114	116
1924	112	125	222	133	107	130	142	182	107	103	86	91	92	77	119	115	111	111	103
1925	111	98	209	201	118	130	134	127	109	94	84	91	95	103	130	149	113	113	112
1926	120	120	230	207	127	156	154	178	104	92	90	88	97	89	127	127	117	117	113
1927	125	127	226	243	136	192	162	131	107	95	92	96	98	93	151	166	122	122	122
1928	124	133	243	288	135	209	195	176	110	83	79	86	99	104	131	130	123	123	129
1929	130	117	254	154	109	93	196	140	109	91	75	86	96	106	107	143	120	120	112
1930	130	123	250	201	143	185	239	236	107	110	76	93	101	101	131	121	127	127	123
1931	117	129	263	151	116	149	184	188	110	99	68	65	103	107	113	118	120	120	118

Note: "Europe" - (Ex. Great Br. & Russia)  
 "All Others" - (Ex. China & Russia)

Source: Twentieth Report - 1931 - "Reports of the Imperial Economic Committee." Page 99-100

TABLE NO. 16

CEREAL AND POTATO PRODUCTION IN EUROPE EX-RUSSIA

1923-32

Year	Wheat	Rye	(million bushels)		Corn	Potatoes
			Oats	Barley		
1923	1,257	831	1,722	649	469	3,707
1924	1,057	654	1,572	565	589	4,053
1925	1,397	946	1,709	672	626	4,582
1926	1,216	761	1,843	674	653	3,714
1927	1,274	812	1,738	659	485	4,610
1928	1,409	904	1,879	743	384	4,562
1929	1,449	939	2,060	827	705	5,186
1930	1,362	922	1,711	760	611	5,055
1931	1,434	775	1,695	689	638	5,027
1932	1,490	932	1,853	780	770	5,328
<u>Average</u>						
1927-31	1,386	870	1,819	736	565	4,888
1909-13	1,346	982	1,929	701	581	4,183

Source: Wheat Studies - Vol. X, No. 3, December 1933,  
page 124.

TABLE NO. 17

POPULATION OF THE PRAIRIE PROVINCES AND CANADA 1871-1931

Census Year	Canada	Prairie Provinces	Manitoba	Saskatchewan	Alberta
1871	3,689,257	73,228	25,228	48,000	
1881	4,325,810	118,706	62,260	56,446	
1891	4,833,239	251,473	152,506	98,967	
1901	5,371,315	419,512	255,211	91,297	73,022
1906"	6,171,000	808,646	365,688	257,793	185,195
1911	7,270,643	1,328,121	461,394	492,432	374,295
1916"	8,036,000	1,698,137	555,860	647,835	496,442
1921	8,788,949	1,956,082	610,118	757,510	588,454
1926"		2,067,378	639,036	820,738	607,584
1931	10,376,786	2,353,529	700,139	921,785	731,605

" Estimated

Sources: Census Report of Canada, 1921, page 3.  
 Canada Year Book, 1933, page 102.

TABLE NO. 18

POPULATION OF CANADA BY PROVINCES AND TERRITORIES

IN 1871 AND INCREASE PER CENT BY DECADES FROM 1871 TO 1931.

Provinces	Population in 1871	Increase per Cent by Decades				Increase % in 60 Years	
		1871 to 1881	1891 to 1901	1911 to 1921	1921 to 1931		
Prince Ed. Is.....	94,021	15.82	0.17	- 5.33	-9.23	-0.65	- 6.36
Nova Scotia.....	387,800	13.61	2.23	2.04	7.13	6.40	32.24
New Brunswick.....	285,594	12.48	0.01	3.07	6.27	10.23	42.94
Quebec.....	1,191,516	14.06	9.53	10.77	21.64	17.69	141.23
Ontario.....	1,620,851	18.88	9.73	3.25	15.77	16.08	111.72
Manitoba.....	25,228	146.79	144.95	67.34	80.79	32.23	2,675.25
Saskatchewan.....	-----	-----	-----	-----	439.48	53.83	-----
Alberta.....	-----	-----	-----	-----	412.58	57.22	-----
British Columbia.....	32,247	36.45	98.49	81.98	119.68	33.66	1,815.37
Yukon.....	-----	-----	-----	-----	-68.73	-51.16	-----
N. W. T.....	48,000	17.60	75.33	-79.60	-67.67	22.76	- 79.74
Totals	3,689,257	17.23	11.76	11.13	34.17	21.94	181.27

Large drops in N.W.T. since 1891 due to carving up to create Alberta, Saskatchewan and the Yukon; and to enlarge Manitoba, Ontario and Quebec.

Source: Canada Year Book, 1933, page 103.

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