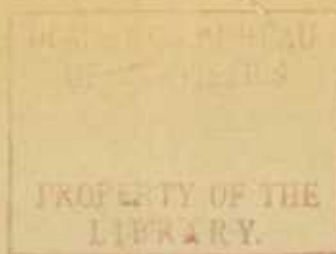


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C A N A D A
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
INTERNAL TRADE BRANCH

ECONOMIC POSITION
of the
CANADIAN PRAIRIE PROVINCES
in
1923

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Published by authority of the Hon. James Malcolm, M. P.,
Minister of Trade and Commerce

+ + +

OTTAWA

1928

ECONOMIC POSITION OF THE CANADIAN PRAIRIE PROVINCES IN 1923.

Preface.

The present study of the economic position of the Prairie Provinces of Canada is based on various records, notably those of invested capital, production and the transportation and marketing of commodities; more particularly is it an attempt to analyze the relations of these provinces (which constitute more or less a single economic unit) with the rest of Canada and the outside world. The year covered is 1923, the latest annual period for which comprehensive and comparable figures are available for the purpose of a general conspectus of this character.

Perhaps the outstanding result of the investigation is that it shows net exports from the Prairie Provinces amounting to approximately \$270,000,000, whilst imports into this area were approximately \$145,000,000. The "favourable" trade balance of this section of Canada was, therefore, in the neighborhood of \$125,000,000.

It may be well to explain the general policy of which this investigation is a result. For some time past the Dominion Bureau of Statistics has been desirous of establishing a periodic measurement of interprovincial trade in Canada and of the general economic relationships of the several provinces. As the first step in this direction an annual survey of production in all its phases was instituted in 1918, including agriculture, fisheries, lumbering, mining, manufactures, construction, etc. Subsequently in 1920 an arrangement was made with the railway companies whereby a monthly record is obtained by provinces (1) of all goods loaded on cars, and (2) of all goods unloaded from cars, with supplementary figures of goods received from and delivered to foreign connections. From these figures it is possible to obtain a rough idea of the imports and exports of each province in so far as goods handled by the railways are concerned, the difference between the figures of goods loaded and goods unloaded being either an import or export. When such figures are considered in juxtaposition with the local figures of production and of imports and exports by customs ports, some valuable conclusions can be reached as to the economic relations of the areas under investigation, both with the rest of Canada and with other countries.

Up to the present no transportation record has been obtained for goods handled by water carriers, so that conclusions can be reached only for those sections of Canada in which water transportation is not a factor. Even for these, the returns are not entirely satisfactory, as additional light would undoubtedly be thrown on local conditions by increased comprehensiveness in the data for Canada. It is thought, however, that a statement for the Prairie Provinces, as the region for which rail transportation figures show practically the whole of the trade movement, would be of interest and value. In the case of these Provinces the comprehensive marketing statistics that have been established in the Bureau, covering both field crops and live stock and their products, yield an additional body of information that is relatively of great importance.

It must be remembered, of course, that the records of goods handled by the railways are available only for a limited classification and that quantities are expressed in tonnages only, necessitating translation, sometimes on an arbitrary basis, into the quantities used in commerce in order to obtain values, and thus present comparative and comprehensive figures. It is believed, however, that the main conclusions of the present survey may be relied upon as approximately correct, and that the setting out of the more important basic data in this way will permit those interested to examine the situation for themselves. The investigation as a whole is meant to be suggestive rather than final.

The statement includes in addition to the introductory summary a brief treatment of the natural resources of the prairie region and the more important figures relating to invested capital and production.

R. H. COATS

Dominion Statistician.

Dominion Bureau of Statistics,
Ottawa, February 25, 1926.

The first step in the investigation of the case was to determine the facts of the case. This was done by interviewing the witnesses and the person who was accused of the crime. The results of the investigation were as follows:

1. The person who was accused of the crime was interviewed and he stated that he did not commit the crime.

2. The witnesses were interviewed and they stated that they saw the person who was accused of the crime at the scene of the crime.

3. The results of the investigation show that the person who was accused of the crime did not commit the crime.

4. The person who was accused of the crime was released from custody.

5. The case was closed.

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS - CANADA
INTERNAL TRADE BRANCH

Dominion Statistician:	R. H. Coats, B.A., F.S.S.(Hon.), F.R.S.C.
Chief, Internal Trade Branch:	F. J. Horning, B.A., F.S.S.

ECONOMIC POSITION OF THE CANADIAN PRAIRIE PROVINCES IN 1923.

INTRODUCTION AND SUMMARY.

Canada is one of the largest countries in the world, comprising areas of the most varied resources, separated from each other by great mountain chains or long stretches of sparsely inhabited wilderness. It is frequently divided into four, and by some writers into five, economic areas, viz., the Maritimes, Quebec, Ontario, the Prairie Provinces and British Columbia. Each of these is as large as great nations in other parts of the world. The Maritimes are as large as England; Quebec is as large as Germany, France, Spain and Italy together; Ontario is much larger than Sweden, Norway and Denmark united; the Prairie Provinces are together larger than Quebec; British Columbia is almost three times as large as the United Kingdom.

Trade between such great areas as the above and over such long distances would in most parts of the world constitute international trade, and therefore be carefully recorded in quantities and values. Here, however, no record is kept of the values of trade between the areas, and no adequate record of the articles and the various quantities of those articles which are transported by water. There is, however, a fairly complete record of quantities of articles entering into the trade by land over our railways. In the case of four of the five great economic areas, however, which ship goods both by land and by water, there is no complete record even of the quantities of the goods which are imported and exported from the area in question. It is as if one who was investigating the trade of France had no record of the goods shipped via Calais, Havre, Brest, Bordeaux and Marseilles; but had to rely exclusively on his statistics of the trade over the Belgian, German, Swiss, Italian and Spanish frontiers.

Four of the five great economic areas ship goods both by land and by water. Only in the case of the Prairie Provinces is it necessary for all shipments into or out of the area to be made by land. Possessing as we do statistics of the quantity of all shipments by land, or rather of all shipments by rail, it is possible by approximating as closely as possible to average values, to attain ^{to} conclusion as to the value of the commodities which those provinces ship South, East and West, and of the commodities which they import in return. In other words, it is possible to arrive at some rather tentative conclusions as to the balance of trade between the Prairie Provinces, considered as a unit, and the rest of the world. As already stated net exports from the prairie region during this year were valued at the sum of \$270,000,000, while imports into the Prairie Provinces reached a total value of \$145,000,000, leaving a favourable trade balance for this section of Canada of \$125,000,000.

The data on which these conclusions are based are as follows: During the year the gross volume of all traffic loaded by railways in the Prairie Provinces amounted to 20,776,288 tons made up of 13,681,557 tons of agricultural products; 662,616 tons of animal products; 7,641,783 tons of mine products; 245,000 tons of forest products and 1,339,332 tons of manufactured and miscellaneous products. On the other hand, freight unloaded by railways at stations within the prairie region amounted to 10,870,330 tons grouped as follows: agricultural products 2,367,173 tons; animal products 425,505 tons; mine products 4,213,792 tons; forest products 1,312,132 tons and manufactured and miscellaneous products 2,492,178 tons. The excess of freight loaded over freight unloaded, therefore, amounted to 9,905,958 tons. In comparison with this figure it is

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
RESEARCH REPORT

Submitted by: [Name]
Date: [Date]

SYNOPSIS

1. INTRODUCTION

The purpose of this study was to investigate the effect of [Topic] on the reaction of [Topic] with [Topic]. The results show that [Topic] has a significant effect on the rate of reaction, with [Topic] increasing the rate by a factor of [Topic]. This is attributed to the fact that [Topic] acts as a catalyst in the reaction, lowering the activation energy and thus increasing the rate of reaction.

The reaction was studied under a variety of conditions, including different concentrations of [Topic] and [Topic], and different temperatures. The results show that the rate of reaction increases with increasing concentration of [Topic] and [Topic], and with increasing temperature. This is consistent with the fact that the reaction is first order with respect to [Topic] and [Topic], and second order with respect to [Topic].

The activation energy of the reaction was determined to be [Topic] kJ/mol, which is in good agreement with the value of [Topic] kJ/mol reported in the literature. This suggests that the reaction mechanism is similar to that reported in the literature, involving the formation of a [Topic] intermediate.

The results of this study have important implications for the understanding of the reaction mechanism, and for the development of new catalysts for this reaction. Further studies are needed to investigate the effect of [Topic] on the reaction, and to determine the exact nature of the [Topic] intermediate.

very interesting to note that the tonnage of wheat actually shipped out of the Prairie Provinces, as shown by railway returns, amounted to 9,580,152 tons.

The balance of trade above mentioned, be it first understood, is in no way connected with the figures periodically published of the imports and exports of the Prairie Provinces. Those imports and exports merely cross the international frontier into or from these provinces. They do not include the great quantities of goods originating in the Prairie Provinces and consumed in the East or exported by way of the East or of the West to other countries. Nor do they include the large quantities of commodities imported for consumption in the Prairie Provinces, but entering Canada through Montreal or Vancouver. What is attempted in the present study is, so to speak, the drawing of a line around the Prairie Provinces along the 49th parallel, the Rocky Mountains, the 60th parallel, and the Eastern boundary of Manitoba, and ascertaining as well as possible, the values of the commodities crossing this line inward and outward - as if the Prairie Provinces were in themselves a nation, with all the privileges of the same, such as that of maintaining a cordon of custom-houses where the value of everything entering or leaving the country was accurately ascertained. Undoubtedly much may be learned about the Prairie Provinces by carefully examining the data available from the production and transportation statistics of this immense area.

The present investigation is divided into six parts; the first being a brief outline of the natural resources of the Prairie Provinces of Canada; the second dealing with the wealth, i.e., the capital investments made against this physical background; the third with the income of the Prairie Provinces; the fourth with the production of the district - mainly creation of utilities and income; the fifth with the volume of the external trade of the Prairie Provinces in 1923; whilst the sixth part uses conclusions of the preceding parts to obtain the approximate value of the external trade of the Prairie Provinces in the above year.

NATURAL RESOURCES OF CANADIAN PRAIRIE PROVINCES.

The Prairie Provinces comprise in part a great interior continental plain of vast fertility and extend roughly from a line joining the West coast to Hudson Bay and the Lake of the Woods to the Rocky Mountains on the West. On the North and South this section is bounded by the 60th and 40th parallels of latitude respectively.

Manitoba, the most Easterly of the Prairie Provinces and the oldest in point of settlement, extends Westerly to a line approximating closely to the 102nd meridian West from Greenwich. The total area of Manitoba is 251,832 square miles. This area may be compared to that of the United Kingdom with its area of 121,633 square miles, and Manitoba is seen to be 8,566 square miles greater than twice the total area of the British Isles. The province is typically an agricultural one, its southern plains being specially adapted to this form of industry. Its northern districts, with a topography very different from that of its prairies, are of importance in the production of copper ore and of timber products.

The central prairie province, Saskatchewan, extends from the 102nd to the 110th meridian, and covers an area of 251,700 square miles, but slightly less than that of Manitoba, and greater by 5,000 square miles than the combined areas of the United Kingdom and Norway. The country consists for the most part of open rolling prairie at an average altitude of 1,500 feet above sea-level, while in the north it assumes a more broken aspect and is as yet but slightly developed. The climate is quite different from that of eastern Canada, with less precipitation and perhaps slightly greater extremes in temperature than are encountered in many other parts of the country, but it is nevertheless most favourable to plant and animal growth. The northern districts are abundantly watered by lakes and rivers and are rich in coal and timber resources.

Alberta lies between Saskatchewan on the east and the Rocky Mountains and 120th meridian on the West. Its area is slightly greater than that of Saskatchewan or Manitoba, comprising a total of 255,285 square miles, a little more than the combined areas of Germany and Bulgaria. Formerly a great ranching country, it has now become a great wheat producing region, the frontier of the grain growing area now approximating to the line of the foot-hills of the Rockies. In the southwest, considerable coal mining is carried on, sixteen percent of the world's coal resources being contained within the province. Natural gas and petroleum are also found in considerable quantities. Lumbering is important in the more mountainous western parts and in the north, where some ranching is still pursued. The climate of Alberta is a particularly favourable one, less severe in summer than more eastern parts of the country and tempered in winter by the "Chinook" winds from the Pacific.

The Prairie Provinces are also fortunate in having within their boundaries important water-powers. While the Southern agricultural districts are flat with few opportunities for the development of water-power, there are many large rivers in the Rocky Mountains and Northern parts of the Provinces capable of such development.

With its immense area and varied topography, this district also has rich resources in fur-bearing and game animals. The place of fur in commerce is now well established and these provinces afford a rich field not only for trapping but for the raising of animals for their pelts.

In all the three Prairie Provinces, numerous lakes and rivers, covering nearly 31,000 square miles in area, abound in valuable food fishes. Lake Winnipeg, Lake Winnipegosis, Lake Manitoba and the smaller lakes to the North and East furnish most of the fish products of Manitoba. Whitefish and pickerel are the chief products, but pike, tullibee, goldeye and many other varieties abound. In Saskatchewan and Alberta commercial fishing is confined to the regions North of the Saskatchewan River, where whitefish in large quantities are taken.

The wide stretches of the North abound with wild life and afford attractive opportunities for hunting and fishing. This feature will bring many tourists to the district and give an enhanced value to what are considered by many to be "barren lands."

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The total land area of the Dominion is placed at 2,306,502,308 acres, of which the three Prairie Provinces of Canada comprise 466,068,798 acres. Of this, 215,281,000 acres, or 46.2%, consists of possible farm land as estimated in the census of 1921. The occupied farm land amounted to 87,931,800 acres or 40.8% of the total farm land available for cultivation. There is therefore 127,349,200 acres of arable land unoccupied in the Prairie Provinces of Canada.

The population of the Prairie Provinces was shown by the census of 1921 to be 1,956,082. It is estimated that in 1923 the population had increased to 2,055,400.

Particulars of the land area, estimated possible farm land, farm land occupied, and population by provinces are shown in the following table:

		Manitoba	Saskatchewan	Alberta	Total
Area in Acres	(1)	148,432,698	155,764,100	161,872,000	466,068,798
Arable Land	(1)	24,700,000	93,458,000	97,123,000	215,281,000
Area under Cultivation	(1)	14,615,844	44,022,907	29,293,053	87,931,804
Arable Land Unoccupied		10,084,156	49,435,093	67,829,947	127,349,196
Population, 1921		610,118	757,510	588,454	1,956,082
Population, 1923		637,400	797,000	621,000	2,055,400

(1) From "Census of Agriculture, 1921" Pg. XI.

WEALTH OF CANADIAN PRAIRIE PROVINCES.

The national wealth of Canada in 1921 was estimated at \$22,195,302,443 which is equivalent to \$2,525 per capita. Agricultural wealth only, based on the value of lands, buildings, equipment, etc., of operating farms, but not including the value of unoccupied lands, amounted to \$7,982,871,126 or \$908 per capita. Of this \$6,586,648,126 represented farm investments in land, buildings, implements, machinery and live stock as shown by the census of 1921, the balance being the value of agricultural products in the possession of farmers and traders. On this basis the per capita wealth invested in farming and equipment was \$749.

In the Prairie Provinces the total estimated capital wealth amounted to \$6,447,112,332 or \$3,296 per capita. Of this the total agricultural wealth amounted to \$3,747,384,259 or \$1,916 per capita, the sum of \$3,269,144,259 representing the farm values of land, buildings, implements, machinery and live stock as shown by the census of 1921. This shows the per capita investment in farms and equipment in the Prairie Provinces to be \$1,671 on the basis of the 1921 census. The balance of the agricultural wealth was represented by the value of agricultural products in the possession of farmers and traders.

Particulars of the estimated capital wealth of the Canadian Prairie Provinces in 1921 by provinces and chief component items are shown in Table I in the appendix hereto.

INCOME OF CANADIAN PRAIRIE PROVINCES.

The total net value of all production in Canada in 1923 amounted to \$3,051,456,821. These values were produced by approximately two-thirds of the gainfully employed persons in the Dominion - those engaged in the various kinds of "production", defined according to the usual acceptance of the term as including agriculture, forestry, fisheries, trapping, mining and manufacturing, etc. The remaining one-third of the gainfully employed are considered to be also producers in the larger sense of the word, being engaged in activities such as transportation, trade, administration, the professions, domestic and personal service. As exemplifying the importance of the latter activities, it may be pointed out that railway gross earnings in 1923 amounted to \$478,328,047, street railway gross earnings to \$50,191,387 and telephone and telegraph earnings to \$53,550,243, all of which from a broad point of view, should also be considered

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as "production". Since the above values were produced by only two-thirds of the employed population we may add one-half to the total value of production as shown above, as a rough estimate of the value in dollars of the total productive activity of the Canadian people, according to the economist's definition of production, which approximates to the concept of national income. According to this broader interpretation, production in 1923 represented created values of \$4,577,000,000.

In order to arrive at the figure of national income, however, certain heavy deductions from the above amount must be made - deductions especially connected with the maintenance of the industrial equipment of the country - providing not only for depreciation but for obsolescence or replacement by new and improved apparatus of production. After these deductions have been made the 1923 income of the Canadian people is estimated at somewhere in the neighbourhood of \$4,200,000,000.

On the basis of the net value of production in the Prairie Provinces as shown in Table II in the appendix at \$645,493,271, this being the production of approximately two-thirds of the population, the value of all production by the people in this region would amount to approximately \$968,000,000. Similar allowances as in the case for all Canada, however, have also to be made for depreciation of the agents of production and the cost of their maintenance. After such deductions the total "national" income of the prairie region of Canada would seem to approximate to about \$888,000,000 in 1923 or \$432 per capita.

PRODUCTION OF CANADIAN PRAIRIE PROVINCES IN 1923

The Prairie Provinces are fundamentally agricultural. A survey of the production of these provinces in 1923 shows that more than 91 per cent of the value of the output of Saskatchewan was obtained from farming; in Manitoba and Alberta, the proportions were 55 per cent and 74 per cent respectively. Mineral production, consisting chiefly of coal-mining, held second place in Alberta, with an output of 13 per cent of the provincial total. Manufacturing was second in importance in Manitoba and Saskatchewan.

The total value of production of all branches of industry in the Prairie Provinces in 1923, classified according to industrial divisions, is shown in Table II in the appendix hereto.

Agriculture was responsible for a gross revenue in 1923 in the prairie region of Canada estimated at \$585,347,299. The net value of agricultural production amounted to \$500,192,440 after allowances have been made in order to eliminate the cost of the materials consumed in the production process. The largest item of revenue comes from the production of field crops which were valued at \$474,825,000. Particulars of this agricultural revenue are shown by provinces and branches of agriculture in the following statement:

Agricultural Revenue, 1923.

	Manitoba	Saskatchewan	Alberta	Total
	\$	\$	\$	\$
Field Crops	60,707,000	248,778,000	165,340,000	474,825,000
Fruits and Vegetables	1,702,000	2,461,000	1,860,000	6,023,000
Grass and Cloverseed	61,000	103,000	58,000	222,000
Farm Animals	5,082,000	11,912,000	11,584,000	28,578,000
Wool	73,000	142,000	264,000	479,000
Dairy Products -				
Dairy Butter)				
Whole Milk)	6,708,000	9,820,000	7,880,000	24,408,000
Milk to Factories	4,086,781	3,285,726	5,575,352	12,947,859
Dairy Factories	6,531,902	5,083,910	7,971,211	19,587,023
Poultry and Eggs	3,198,000	8,670,000	6,264,000	18,132,000
Fur Farm Pelts	17,247	1,271	5,041	23,559
" " Animals	69,030	2,000	50,828	121,858
Gross Total	88,235,960	290,258,907	206,852,432	585,347,299
Paid to patrons by dairy factories	4,086,781	3,285,726	5,575,352	12,947,859
Seed	5,501,000	20,801,000	8,960,000	35,262,000
Feed	10,160,000	12,300,000	14,450,000	36,910,000
Nursery Stock	15,000	12,000	8,000	35,000
Net Production	68,473,179	253,860,181	177,859,080	500,192,440

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the various projects and the results achieved.

The second part of the report deals with the financial situation of the organization. It includes a statement of the income and expenditure for the year, and a comparison with the budget.

The third part of the report deals with the personnel of the organization. It includes a list of the staff members and a description of their duties.

The fourth part of the report deals with the future plans of the organization.

The fifth part of the report deals with the conclusions of the year's work.

The sixth part of the report deals with the recommendations for the future.

The seventh part of the report deals with the appendixes.

The eighth part of the report deals with the index.

The ninth part of the report deals with the bibliography.

The tenth part of the report deals with the list of figures.

The eleventh part of the report deals with the list of tables.

The twelfth part of the report deals with the list of references.

The thirteenth part of the report deals with the list of acknowledgments.

As field crops occupy such an important position in the economy of the Prairie Provinces, full particulars of the production and value of those crops in 1923 are shown in the following Statement:

<u>Field Crops</u>	<u>Quantity</u>	<u>Value</u> \$
Fall wheat	2,359,000 bush.	1,534,000
Spring wheat	449,901,000 "	293,092,000
All wheat	452,260,000 "	294,626,000
Oats	391,756,000 "	99,725,000
Barley	59,778,200 "	21,155,000
Fall Rye	15,758,000 "	7,062,000
Spring Rye	5,084,000 "	2,258,000
All Rye	20,842,000 "	9,320,000
Peas	147,000 "	223,000
Beans	28,000 "	78,000
Mixed grain	1,730,000 "	516,000
Flaxseed	7,044,800 "	12,505,000
Total Grain	933,586,000 "	438,148,000
Potatoes	18,451,667 "	8,265,000
Turnips and Mangolds	2,210,000 cwt.	2,015,000
Hay and Clover	1,192,100 tons	8,753,000
Grain Hay	4,204,100 "	12,662,000
Alfalfa	139,000 "	1,567,000
Fodder Corn	781,800 "	3,415,000
All Field Crops		474,825,000

Manufacturing in the Prairie Provinces stands second to agriculture. The Census of Industry of these provinces for 1923 conducted by the Bureau included 2,173 establishments representing a total capital investment of \$183,978,000. The employees of these plants numbered 27,715 persons who received as salaries and wages a total of \$34,416,444. Fuel consumed in manufacturing represented a value of \$4,289,357. The gross value of products produced by these plants amounted to \$186,010,133. The cost of materials entering into the manufacture, however, was \$106,919,090 leaving the net value of manufacturing production in the three Prairie Provinces of Canada at \$79,091,043.

As the production of grain is the foremost activity in the Prairie Provinces it naturally follows that the flour and grist milling industry occupies a premier position among the manufacturing industries of this region. The number of plants engaged in this branch in 1923 was 107 with a total capital investment of \$15,291,407; there were 1,790 employees receiving a total of \$2,298,118 in salaries and wages; the gross value of products in 1923 amounted to \$36,742,036; the cost of materials entering into the manufacture was \$30,335,026, leaving the net value of products produced in the flour and grist milling industry in the Prairie Provinces of \$6,407,010.

Slaughtering and meat packing and the manufacture of butter and cheese, which are likewise closely allied to agriculture, rank second and third respectively, judged by value of products. The number of slaughtering and meat packing establishments in the Prairie Provinces in 1923 was 14 with a total capital investment of \$11,015,065, employing 2,345 persons with a gross annual wage bill of \$2,989,874; the cost of materials used in slaughtering and meat packing was \$18,311,644 and the gross value of products \$25,602,617, leaving the net value added by manufacture at \$7,290,973. The manufacture of butter and cheese was carried on in 207 establishments. Capital invested in these plants amounted to \$8,203,000, while 1,938 persons receiving annually \$2,468,000 in salaries and wages were employed. The gross value of products amounted to \$19,587,023, the cost of materials being \$13,619,059 and the net value of products \$5,967,964.

The mineral production of the three Prairie Provinces was valued in 1923 at \$34,103,156, to which Manitoba contributed \$1,768,037, Saskatchewan \$1,047,583 and Alberta \$31,287,536. The production of coal in Alberta was the largest single item amounting to \$28,018,303. The total number of operating plants or mines in the three provinces was 552 and the capital investment \$81,368,047. The number of employees was 12,662 and the total salaries and wages paid amounted in 1923 to \$20,747,393.

EXTERNAL TRADE OF CANADIAN PRAIRIE PROVINCES IN 1923.

For the broad measurement of trade in the Prairie Provinces a monthly return from transportation companies of goods delivered and received for shipment within the provinces has been used. These returns show all freight loaded and unloaded, classified in seventy different groups. While similar returns have not as yet been received from water transportation companies, compilations based on the railway returns show the complete movement to and from the three Prairie Provinces of Canada. The three provinces have been treated as one unit and a statement of the traffic to and from this district has been compiled.

The returns received are based on railway accounts and figures of tonnage only are available. The Bureau, however, receives detailed returns from all manufacturing industries through its Census of Industry showing the value of goods at the place of manufacture. These and similar average valuations have been applied to the quantities returned by the railway companies and a general valuation of the commodities moving to and from the Prairie Provinces of Canada has thus been obtained.

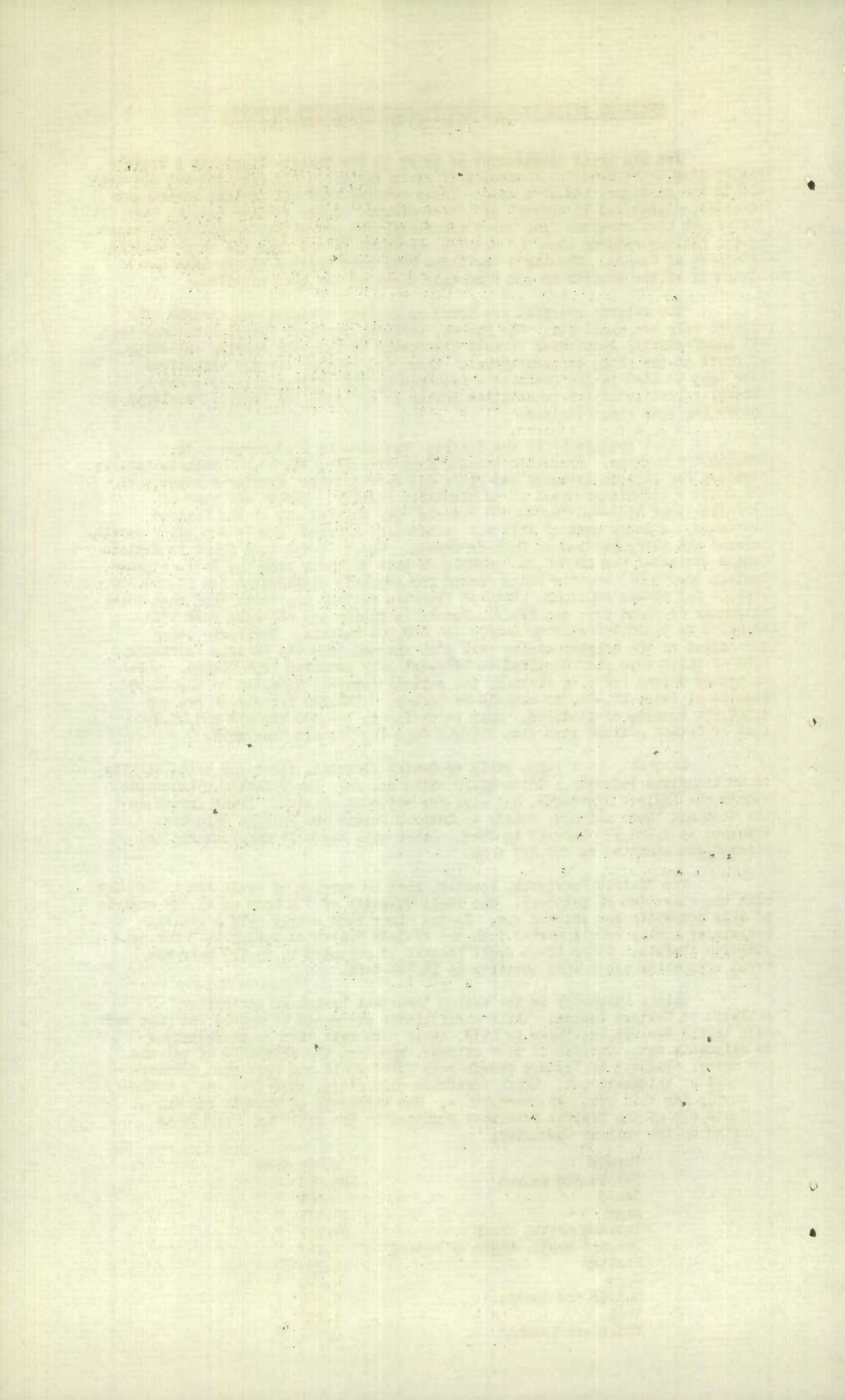
Wheat production in the Prairie Provinces in 1923 amounted to 452,260,000 bushels. From this amount, approximately, 30,000,000 bushels must be deducted for loss in cleaning and grain not merchantable, leaving a balance of 422,000,000 bushels of wheat of merchantable quality. During the crop or marketing year 1923-4, 350,000,000 bushels were shipped out of the Prairie Provinces. A large part of this was eventually exported from Canada after passing through and being handled in Eastern Canada. Wheat ground into flour in Eastern Canada accounted for 80,000,000 bushels of this shipment from the West, approximately 30,000,000 bushels being ground for domestic consumption and 50,000,000 bushels for export as flour. Returns from the railway companies show that total shipments of wheat from the Prairie Provinces during the calendar year 1923 amounted to 9,580,152 tons or nearly 320,000,000 bushels. Similarly large quantities of the coarser grains were also shipped from the Prairie Provinces, some of which were also destined to be eventually exported from Canada. These shipments during 1923, as shown by the railway returns, amounted to 40,032,650 bushels of oats, 14,471,200 bushels of barley, 6,382,200 bushels of rye and 3,805,600 bushels of flaxseed. Corn amounting to 194,000 bushels and 23,242 tons of "other grains" were also shipped from the Western Provinces.

Naturally in a large grain producing district, flour and grist milling is an important industry. These mills grind not only for domestic consumption within the Prairie Provinces, but also for shipment outside. Flour ground in the West and later shipped, mainly to Eastern Canada and British Columbia, amounted to 3,228,870 barrels in 1923. Other mill products manufactured and shipped out amounted to 202,283 tons.

The Prairie Provinces, however, have no surplus of fruit and vegetables, with the exception of potatoes. The small quantity of 775 tons or 25,833 bushels of this commodity was shipped out. On the other hand nearly half a million barrels of apples were imported into the Prairie Provinces during 1923 for consumption therein. Other fresh fruit brought in amounted to 65,710 tons and fresh vegetables other than potatoes to 16,544 tons.

Animal husbandry is the second important branch of agriculture followed in Western Canada. While considerable shipments of cattle and hogs were made to the Western Provinces in 1923, these were more than counterbalanced by shipments out. Outside of live animals, however, the shipments of animals and animal products to Western Canada were quite small and more than counterbalanced by shipments out. These provinces also stand, therefore, as a source of supply for this group of commodities. Net shipments of animals and animal products out of the Prairie Provinces amounted to the following weights as reported by the railway companies:

Horses	2,429	tons
Cattle and calves	105,068	"
Sheep	2,001	"
Hogs	19,525	"
Dressed meats, fresh	24,111	"
Dressed meats, cured or salted	8,067	"
Poultry	1,754	"
Eggs	4,244	"
Butter and Cheese	8,869	"
Wool	1,008	"
Hides and Leather	9,020	"



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Shipments into the prairie area consisted of 844 tons of "Other Packing House Products" and 1,691 tons of "Other Animal Products", making a net shipment of 183,561 tons of animal and animal products out of the Prairie Provinces.

Alberta is a large producer of coal and a large part of the supply of coal required for consumption in the Prairie Provinces is naturally drawn from this source. The small amount of 79,384 tons of lignite coal was shipped out of the Prairie Provinces in 1923. This shipment was likely made to Ontario for consumption there. The movement of Alberta coal to Central Canada, for use rather than imported United States coal, is being fostered and the likelihood is that in later years larger amounts of Canadian western coal will find their markets in Ontario. On the other hand some United States anthracite and bituminous coal is brought into the West via the Great Lakes for consumption in Eastern Manitoba (mainly Winnipeg). Alberta coal, however, is becoming firmly established in this market and with the development of the trade in Alberta coal in the East, it may be presumed that Manitoba will become less dependent on coal imported from the United States. The amount of United States coal brought in during 1923 as revenue freight amounted to 176,785 tons of anthracite and 165,073 tons of bituminous coal; in addition coal shipped in for railway purposes amounted to approximately 543,000 tons. Coke amounting to 24,395 tons was also shipped into the Prairie Provinces. Shipments of crude petroleum from the United States to refineries located in the Prairie Provinces are also of considerable extent. In fact in tonnage crude petroleum comes next to coal among the mineral products shipped into the Prairie Provinces. In 1923 these shipments amounted to 209,401 tons. Shipments of salt were also large amounting to 44,237 tons. Other shipments into the Prairie Provinces in this group were as follows:

Iron ores	892 tons
Other ores and concentrates	12 "
Clay, gravel, sandstone (crushed)	21,363 "
Slate, dimension or block stone	3,515 "
Asphaltum	3,116 "
Other mine products	2,604 "

The aggregate net shipment of mine products into the Prairie Provinces in 1923 was 572,009 tons.

The timber supply of this district falls short of the needs of the people. While 95,400 tons of pulpwood were shipped out of the Prairie Provinces net shipments in were as follows:

Logs, posts, poles and cordwood	48,519 tons
Railway Ties	80,442 "
Lumber, timber, box shooks, staves and heading	332,745 "
Other forest products	16,324 "

The net import of forest products into the Prairie Provinces in 1923 amounted to 352,630 tons.

The industrial section of Canada is located mainly in the central provinces. While manufacturing occupies an important place in Western Canada, as shown above, large amounts of manufactured goods are also imported. In addition to the large quantities of crude petroleum shipped in for refining purposes 182,197 tons of refined petroleum and its products were imported into the Prairie Provinces. Sugar beet cultivation is carried on in southern Alberta and southern Manitoba, and a beet sugar refining plant has been established at Raymond, Alberta, (in 1925). This is a comparatively new industry and the sugar produced will probably fall short of meeting the requirements of the people of the Prairie Provinces for a considerable time. Imports of sugar amounted to 92,565 tons in 1923. Agricultural implements and vehicles, other than automobiles, form the next item in point of size. Net imports of commodities in this group amounted to 63,086 tons in 1923. Automobiles and auto trucks were shipped in during 1923 to the net amount of 11,009 tons. Iron and steel products were also shipped to the Prairie region in considerable quantities. Net shipments of bar and sheet iron, structural iron and iron pipe into the Prairie Provinces amounted to 39,952 tons; of iron, pig and bloom, to 17,029 tons; of rails and fastenings to 10,980 tons and of castings, machinery and boilers to 23,005 tons. Shipments of steel rails and fastenings carried by railways "on company service" amounted to an additional 40,000 tons. Paper, printed matter and books shipped showed a net volume of 34,309 tons; canned goods shipments amounting to 25,317 tons net, included 1,271 tons of

canned meats and 24,046 tons of other canned food products. Other shipments of manufactured goods made to the Prairie Provinces during 1923 were as follows:

Brick and artificial stone	726 tons
Sewer pipe and drain tile	1,440 "
Furniture	7,997 "
Liquors and Beverages	3,053 "
Other manufactures and miscellaneous	115,581 "
Merchandise	69,943 "

Among the shipments of manufactured and miscellaneous goods from the Prairie Provinces to other parts of Canada, cement comes first with 13,556 tons and lime and plaster second with 10,421 tons. Other shipments of manufactured and miscellaneous goods consisted of 3,221 tons of all kinds of fertilizers; 2,078 tons of fish, fresh, frozen, cured, etc.; and 1,565 tons of household goods. The net shipments of manufactured and miscellaneous commodities into the Prairie Provinces in 1923 are shown by the railway returns to have amounted to 667,348 tons.

From the statement of revenue freight carried by Canadian railways, it would, therefore, appear that while the prairie region is a considerable exporter of grains and also of live animals and animal products, it imports products of the forest and mines, and manufactured and miscellaneous goods. The net shipments in tons under these headings are as follows:

	<u>Shipped out</u>	<u>Shipped in</u>
Agricultural (vegetable) products	11,314,384 tons	
Animal products	183,561 "	
Mine products		572,009 tons
Forest products		352,630 "
Manufactured and miscellaneous		667,348 "

This would show a total net export of all commodities from the prairie region of 9,905,958 tons. The total amount of freight loaded at stations situated in the Prairie Provinces amounted to 20,776,288 tons as opposed to 10,870,330 tons unloaded.

VALUE OF EXTERNAL TRADE OF CANADIAN PRAIRIE PROVINCES.

The trade of the Canadian Prairie Provinces in 1923 as set out in the preceding section was derived from monthly reports furnished by railways operating in these provinces showing tons of freight loaded and unloaded according to a simple classification agreed on mutually by the companies and the Bureau. These reports being derived from the railway accounts do not show the value of the goods themselves but merely the weights. The feature of value, however, is very important. In the industrial census conducted by the Bureau values of commodities at the point of production are returned by the manufacturing companies. The average prices as shown from these and similar returns have been used and applied to the quantities as shown by the railway returns discussed above and show that the net exports from the Prairie Provinces are valued at approximately \$270,000,000, whilst imports into the prairie region are valued at approximately \$128,000,000.

In the commodities exported, agricultural or vegetable products form the largest group in value as in quantity and account for \$255,000,000 of the total figure of \$270,000,000. Wheat is the largest single commodity and the quantity of wheat shipped out of the Prairie Provinces in 1923 had a value at the farm based on farm prices as returned by crop correspondents to the Bureau of nearly \$208,000,000. Of the other grains oats accounted for \$10,000,000, barley for \$5,000,000, rye for \$2,800,000 and mixed grains for a further \$800,000, making a total for all grains of \$226,000,000. In addition flax shipments out of the region were valued at approximately \$6,500,000 making a total for this group of \$232,500,000. Manufactured products included in this group, namely, flour and other mill products were valued at \$17,000,000 and \$5,500,000 respectively, making a total of \$255,000,000 as set out above.

Shipments of commodities based on animal husbandry come next in importance and show a gross value of about \$12,000,000. Cattle shipments were valued roughly at \$2,500,000, while other live animals shipped out amounted to a further sum of \$500,000, making a total value of all shipments of live animals of \$3,000,000. The dairy industry in the West has grown rapidly in the last

few years and large quantities of butter and cheese are manufactured not only for local consumption but also for shipment to Eastern Canada and British Columbia either for consumption there or for furtherance. In 1923 these shipments were valued at over \$5,000,000. Hides and leather shipped out also form a considerable item and have a value of say \$2,000,000. Poultry and egg shipments are also important and may be valued at a further sum of \$2,000,000, shipments of poultry being valued at a little less than \$1,000,000 while shipments of eggs are valued at a little more. These items form a total of \$12,000,000 for the animal products group.

Shipments as shown above based on the two branches of agriculture, namely, field crops and animal husbandry, therefore, account for a total of \$267,000,000 out of a grand total of \$270,000,000 for all exports. The balance of \$3,000,000 is divided between the three groups of mine products, forest products and manufactured and miscellaneous products at \$250,000, \$1,750,000 and \$1,000,000 respectively.

Lignite coal shipped out of the prairie region accounts for the full amount of \$250,000 in the mining group, whilst pulpwood accounts for the full amount of \$1,750,000 in the forest products group. In the manufactured and miscellaneous items shipped out, cement is valued at \$425,000; lime and plaster at \$165,000; fish (fresh, frozen, cured, etc.) at \$335,000 and fertilizers at \$75,000 making a total value for exports in this group of \$1,000,000.

While agricultural or vegetable products form the largest group of shipments from the Prairie Provinces it conversely is the smallest group for shipments in. These shipments had a gross value of \$3,000,000 and consisted mainly of apples and other fruits, and vegetables. Imports of mine products including railway coal were valued at \$9,000,000 made up of coal and coke valued at \$6,800,000; crude petroleum valued at \$1,400,000; salt valued at \$500,000 and miscellaneous items aggregating \$300,000.

Forest products have a value of \$8,000,000, of which \$6,000,000 is accounted for by lumber, timber, box shooks, staves, heading, etc. Ties are valued at \$1,200,000 and logs, posts, poles and cord wood at \$800,000.

The largest group, comprising manufactured and miscellaneous articles, accounts for \$109,000,000 of shipments into the prairie region or nearly 85 per cent of the total value of all shipments. The principal items making up this total are as follows:

Refined petroleum and its products	\$ 5,400,000
Sugar	17,500,000
Iron pig and bloom	400,000
Rails and fastenings	2,000,000
Bar and sheet iron, structural iron and iron pipe	4,200,000
Castings, machinery and boilers	8,300,000
Agricultural implements and vehicles other than autos	28,500,000
Automobiles and auto trucks	15,000,000
Furniture	5,500,000
Liquors and beverages	700,000
Paper, printed matter and books	17,500,000
Canned meats	500,000
Canned goods	3,500,000
Total	<u>\$109,000,000</u>

The values used above for both exports and imports are computed at point of origin. On the other hand, if valuations were made on the basis of the point of entry into the purchasing country, it is estimated that the value of all imports would amount to about 110 per cent of the total value of all exports as shown by the statistics of the exporting countries, which are naturally based on values at the respective points of exit. This increment of 10 per cent is accounted for by the inclusion of transportation, insurance and similar charges under such a system. If the same percentage is accepted as the increase in the value of the goods shipped into the Prairie Provinces the value of \$132,000,000 at point of origin becomes approximately a value of \$145,000,000 laid down.

On the other hand, exports from the prairie region were valued at \$270,000,000 leaving a "trade" balance in favour of the prairies of \$125,000,000. While freight, insurance and similar charges have already been provided for there are other charges for "invisible" exports and imports for which allowance must be

made similar to those which are made in discussions of the international trade and trade balance of complete "political" or national entities. Some of the items, for example, which must be included in a complete statement of the exports from the Prairie Provinces of Canada would include (1) Payments of interest and sinking fund sent outside the area; (2) Payments of dividends on securities of Prairie companies to persons resident outside the Prairie region; (3) Remittances of cash by immigrant residents; (4) Expenditures of travellers; students, etc., ordinarily resident in and deriving their income from the Prairie Provinces, made outside the Prairie district; (5) Payments to outside insurance companies; (6) The export of capital accompanying emigration; (7) Capital sent away from the Prairies for investment; (8) Charges for transient labour recruited mainly from Eastern Canada (harvesters' excursions). Similarly the following items would, inter alia, have to be included in a complete statement of the values imported into the Prairie Provinces (1) Earnings on capital invested outside by residents of the Prairie Provinces; (2) Expenditures by travellers in the Prairie Provinces from outside districts; (3) Cash remittances to the Prairies by friends of residents; (4) Insurance payments to the Prairie district; (5) Capital brought in by immigrants; (6) Capital imported for investment. These items, while to some extent offsetting each other, account for the services and other utilities representing the favourable trade balance of \$125,000,000 set out above.

TABLE I.- ESTIMATED CAPITAL WEALTH OF CANADIAN PRAIRIE PROVINCES BY PROVINCES AND CHIEF COMPONENT ITEMS, 1921.

	Manitoba	Saskatchewan	Alberta	Total
Farm Values (land, buildings, implements and machinery, and live stock: census, 1921)	\$ 650,638,045	1,650,069,196	968,437,018	3,269,144,259
Agricultural Products in the possession of farmers and traders, 1921	100,016,000	253,712,000	124,512,000	478,240,000
Total Agricultural Wealth, 1921.....	750,654,045	1,903,781,196	1,092,949,018	3,747,384,259
Mines (capital employed, 1921)	5,343,706	4,761,177	73,603,005	83,707,888
Forests (estimated value of accessible raw materials, pulpwood, and capital invested in woods operations)	20,560,000	46,585,000	70,475,000	137,620,000
Fisheries, (capital invested in boats, gear, etc. in primary operations, 1921)	695,414	37,096	134,523	867,033
Central Electric Stations (Capital invested, 1921)	14,873,661	6,720,585	8,531,270	30,125,516
Manufactures-machinery and tools, 1921	14,687,848	4,099,873	7,363,086	26,150,807
Manufactures-materials on hand, stocks in process; estimate for amount in dealers' hands, 1921	35,108,300	9,873,336	15,662,382	60,644,018
Steam Railways (investment in road and equipment)	250,640,000	342,590,000	255,840,000	849,070,000
Electric Railways (investment in road and equipment)	13,307,741	3,579,386	6,279,366	23,166,493
Canals (amount expended on const. to March 31, 1922)
Telephones (cost of property and equipment)	17,520,122	25,476,719	20,026,415	63,023,256
Urban Real Property (assessed valuations and exempted property, and estimated for under valuation by assessors, and for roads, sewers, etc.)	410,820,516	349,803,449	290,247,235	1,050,871,200
Shipping estimated from 1918 census and distributed according to tonnage owned	784,200	36,500	...	820,700
Imported Merchandise in store being one half imports during year 1921	18,300,315	5,098,668	5,962,172	29,361,162
Household furnishings, clothing, carriages, motors, etc.	83,200,000	125,800,000	90,400,000	299,400,000
Specie held by Government Chartered Banks and estimated for public holdings (a)	14,000,000	17,400,000	13,500,000	44,900,000
Total Estimated Wealth, 1921.....	\$ 1,650,495,868	2,845,642,985	1,950,973,479	6,447,112,332
Percentage	7.4	12.8	8.8	29.0
Percentage distribution of Canadian population by provinces and territories, 1921	6.94	8.62	6.70	22.26

(a) The specie holdings are here distributed among the several provinces according to population.

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TABLE II.- VALUE OF PRODUCTION IN PRAIRIE PROVINCES BY INDUSTRIAL DIVISIONS, 1923.

	MANITOBA		SASKATCHEWAN		ALBERTA		TOTAL		Per Cent of Net
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	
Agriculture	88,235,960	68,473,179	290,258,907	253,860,181	206,852,432	177,859,080	585,347,299	500,192,440	77.49%
Forestry	5,073,000	4,011,982	2,438,003	2,278,417	3,670,754	3,266,446	11,181,757	9,556,845	1.48%
Fisheries	1,020,595	1,020,595	286,643	286,643	438,737	438,737	1,745,975	1,745,975	.27%
Trapping	1,655,642	1,655,642	2,241,520	2,241,520	1,816,972	1,816,972	5,714,134	5,714,134	.89%
Mining	1,768,037	1,768,037	1,047,583	1,047,583	31,287,536	31,287,536	34,103,156	34,103,156	5.26%
Electric power	3,647,361	3,292,859	2,672,406	2,660,179	3,067,003	2,827,322	9,386,770	8,780,360	1.36%
Construction	9,992,756	6,464,468	5,793,300	3,750,000	7,066,400	4,540,000	22,852,456	14,754,468	2.29%
Custom and Repair	7,227,600	4,505,309	5,564,188	3,630,750	5,892,011	3,824,738	18,683,799	11,960,797	1.85%
Manufactures (a)	97,334,531	41,361,438	34,337,811	15,004,191	54,337,801	22,725,424	186,010,143	79,091,053	9.09%(b)
GRAND TOTAL (a)	202,478,428	124,228,542	336,458,857	280,023,272	301,105,188	241,241,457	840,042,473	645,493,271	100.0%

(a) Includes some duplication, eliminated in grand total.

(b) Percentage adjusted.

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