

**CAPITALIZATION OF THE AGRICULTURAL INDUSTRY
IN WESTERN CANADA**

by

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I A - THE NATURE OF THE PROBLEM

Capital has been variously defined, but perhaps the most satisfactory definition for the purpose of this report is "Capital is wealth employed in or available for production."

Economists give land, labor and capital as the factors of production. Buildings being permanently attached to land are usually regarded as part of it. When referring to agriculture, however, it is necessary to consider that land and buildings constitute a large percentage of the farmers wealth; land in particular, being the source of all agricultural production. It seems reasonable and justifiable, therefore, to use the term 'capital' with respect to agriculture to mean the entire amount of funds which are tied up in the farm business.

Several classifications of farm capital have been put forth by leading authorities on farm management and agricultural economics. Among these are:

Holmes (1) classification in his book on The Economics of Farm Organization and Management. He classifies capital on

the basis of:

- (a) Inanimate equipment (dead stock)
 - 1. Fixed equipment.
 - 2. Movable equipment.
- (b) Animate equipment (livestock)

In addition he enumerates seed, feed, fertilizers and miscellaneous cash for running expenses as being part of the farmers capital.

W. J. Spillman (2) in his book on Farm Management classifies capital on the basis of Fixed and Working Capital. Fixed capital being real estate and improvements thereon; the working capital including livestock, machinery, feed and supplies and cash for current expenses.

The Cyclopaedia of ^{Am.} Agriculture (3) classifies capital on the basis of permanence or length of life.

- (1) Permanent or immovable capital, comprising real estate.
- (2) The movable inventory or equipment, tending to wear out and disappear with use.
- (3) The more temporary annual or even seasonal capital, comprising ready cash, labor, seed, fertilizers, feed and current supplies.

Perhaps the most satisfactory classification for the purpose of this report is that of Fred W. Card (4) in his article "General Considerations as to Capital and its Distribution in the Management of a Farm". He classifies capital as:

(a) Permanent or Invested Capital

- (1) Land - Natural value and improvements.
- (2) Buildings - Dwelling, farm buildings and building equipment.
- (3) Equipment - Teams; Implements; Livestock used in production.

(b) Working or Less Permanent Capital.

- (1) Seed, feed, fertilizer and supplies.
- (2) Market crops or market livestock growing or unsold.
- (3) Cash for running expenses.

Equipment will be subdivided into two sections; Livestock and Machinery.

Credit used for current expenses is just as much a part of farm capital as actual cash would be when used for the same purpose, and in addition it is a cost on the production of farm products.

In the early days of agricultural development in Western Canada, farm capital was a minor consideration; land was abundant and so of little intrinsic value; buildings were usually built of logs cut on the homesteaders land and erected at little or no expense, save the time and work of the homesteader himself; machinery was limited and livestock were few in number. With the rapid agricultural and industrial development following the completion of the C. P. R. in 1885 all this was changed and agriculture alongside the other industries became definitely capitalistic in nature. The farmer of Western

Canada is now producing for a world market and his large scale production necessitates a considerable investment of capital in land, buildings, machinery and livestock and in addition a considerable amount of working capital.

Capitalization means "The amount at which a property is valued", and has no reference to the amount of capital invested in a business at its inception. If a farmer bought land in 1900 for \$5.00, per acre which today is worth \$50.00 per acre, the value of his property has increased ten fold and the capital value of his property is \$50.00 per acre - its present value - and not \$5.00 per acre which was his original investment. If beef cattle are selling for \$7.00 per hundred weight and a farmer has a carload for sale, but before the sale has been effected the price falls to \$6.00 per hundred weight the farmers working capital will be decreased by \$1.00 per hundred-weight on the net weight of his carload of stock. Thus it will be seen that capitalization or property value varies from decade to decade, from year to year and in some instances even from day to day.

THE SCOPE AND METHOD OF THE STUDY

As the title indicates, the purpose of this report is to give as complete a picture as possible of the capitalization of agriculture in the three Prairie Provinces. Unfortunately-

ly the 1931 Census figures will not be available until next year, so that the most recent source of authentic information are the Census Reports of the provinces for 1926, and in addition there is considerable data available from the economics surveys conducted in Manitoba and Alberta last summer and in Saskatchewan in 1927 and 1928. A survey was also conducted in Saskatchewan last summer but this source of information is not available at present. The above mentioned surveys covered certain limited areas such as the Dauphin and Swan River areas in Manitoba; the Alameda, Belbeck and Melfort areas in Saskatchewan; and the Peace River area in Alberta. They may be taken collectively, indicative of capitalization throughout the West and will be used to supplement the more general data obtained from the Census.

The opening part of the report will consist of a general survey of Western Canada as a whole and will include:

- (1) A section on land settlement and population.
- (2) The distribution of the value of farm property for the three Prairie Provinces taken collectively.
- (3) The trend of capitalization in the three Prairie Provinces.
- (4) The trend of size of farm in the three Prairie Provinces.

In addition figures for total land area, occupied area, improved area and livestock figures will be given. Following this more or less general introductory chapter the three provinces will be considered separately and the cap-

ital investment of the farmer will be considered in more detail. This will include:

- A survey of the province including,
 - (1) The value of farm property by classes of property, i.e. land, buildings, machinery and livestock.
 - (2) The trend within classes including variations in percentages as between classes.
 - (3) The average capital by census divisions.
 - (4) The capitalization of the above mentioned areas in the three prairie provinces.

Following the above/^achapter on agricultural credit will be included. This will consist of a discussion of credit as a factor in agricultural development, the history of agricultural credit in Western Canada and in addition a study of farmers indebtedness in areas mentioned above. A discussion of the subject will be included, and conclusion drawn from the study will terminate the report.

THE OBJECT OF THE STUDY

Up to the present time very little has been done in the way of getting a clearer understanding of the amount of capital which Western Canada's farmers use in their farming operations or the manner in which this capital is divided up among the various phases of the farm business. During the last thirty years agricultural development in the West has been

extremely rapid, and as a result tremendous sums of money have been invested until at the present time agriculture is Canada's greatest industry. It will be interesting then to get a picture of this development from the early years to the present time.

In agriculture as in all other industries, competition is continually becoming stronger, particularly so between the great agricultural countries of the world. We are rapidly coming to the point where in agriculture, as in other industries, the survival of the fittest is coming to the fore. In order to meet this competition and be successful the farmer must, of necessity, become more and more of a business man and invest his funds in the manner which will bring him the largest returns.

The object of this report will be to study the manner in which the farmer is investing his capital in his farm business, to study the trend of investment as between the various farm enterprises, and to show how the farmer's investment is reflected in income derived from these enterprises. Some of the things necessary to the investment of funds in the farm business will also be pointed out, and conclusions will be drawn as to what has been the result of capital investment in agriculture in the West.

II - THE STUDY

(A) - A GENERAL SURVEY OF WESTERN CANADIAN AGRICULTURE AS A WHOLE

Prior to 1870 Western Canada was a vast expanse of potential agricultural land, rich in fertility, but up to that time untouched by man or plow, with the exception of a narrow strip of land adjacent to the Red and Assiniboine rivers which had been settled as far back as 1813 by the Lord Selkirk settlers. These people had somehow managed to eek out a precarious existence from that time until the date mentioned above. Scattered bands of Indians roved the Western Prairies living on the fish of the streams, the buffalo of the plains, with, perhaps, a small addition to this fare as the result of their trading operations with the Hudson's Bay Company.

From 1870 onward the tide of settlement began, at first very slowly but gradually increasing in volume as the years went by. The first settlers from the east and south had to come in through the United States, usually coming to Winnipeg by way of the Red River on the old International steamboat. They would get together here a meagre supply of the necessities of life and then fare forth on the great adventure, and truly it was an adventure going out into a great un-inhabited country with no railroads or other means

of communication, with Indians only for neighbours and with no knowledge of what lay ahead. It is a common saying that we live by faith, but surely the faith of those early pioneers beginning in 1813 surpasses anything which we have today. When we sit in our fully modern homes of an evening, turn on the electric lights, tune in the radio and listen to music through a station a thousand miles away, then think back to those early settlers with all of the hardships and none of the luxuries of life, we can readily imagine the fortitude and bravery of those hardy pioneers in this great western land.

With the completion of the C. P. R. in 1885 the tide of settlement flowed swifter but, with the exception of the province of Manitoba, the full flood of settlement did not come until 1900. There are no authentic population statistics for the North West Territories prior to 1901, however, figures are available for Manitoba from 1871 onward. In 1871 Manitoba had a population of 25,228, in 1881 it had increased to 62,260, in 1891 to 152,506, while in 1901 Manitoba boasted of a population of 255,201 - 72%, or approximately 183,745 of which was rural and 28%, or 70,436 urban. In the same year Saskatchewan had a population of 91,279 - 84%, or approximately 77,013 of which was rural and 16%, or 14,266 urban. Alberta had a population of 73,022 - 75%, or 54,489 rural and 25%, or 18,533 urban. The total rural population in 1901 for the three Prairie Provinces was approximately 314,185, and the

urban population 105,317.

From 1901 to 1926 the development of land settlement has been extremely rapid. During this period Manitoba's population increased 150%; Saskatchewan's population increased 900%; and that of Alberta 731%. The relatively small increases in Manitoba as compared with that of Saskatchewan and Alberta, is due to the fact that settlement began earlier and had proceed further in Manitoba prior to 1900 than it had in the other two provinces. In 1926 Manitoba had a population of 639,056 - 56%, or approximately 357,861, of which was rural and 44%, or 281,195, urban; Saskatchewan had a population of 820,736 - 70%, or 574,505, rural and 30%, or 246,211, urban; Alberta had a population of 607,599 - 62%, or 376,711, rural and 38%, or 230,888. In 1926 the rural population of the three Prairies Provinces was approximately 1,309,077 and the urban population 758,294. From 1901 to 1926 the rural population of the three provinces increased approximately 313%. With all this great increase in rural population the percentage of rural population has decreased considerably. In 1901 the rural population of the three provinces was 75% of the total population, while in 1926 it had decreased to 63%. This can be explained by the fact that in Western Canada rural development preceded urban development; industrial development took place in the larger cities and following

was a corollary of agricultural development. So much for settlement: (5)

It does not require a great stretch of imagination to realize that the initial capital of the pioneer settlers was not great. Some fared forth with only a pack on their backs, and their legs as their only means of locomotion. Others were slightly more fortunate and may have had the wherewithal to purchase a team of horses or a yoke of oxen with, perhaps, a plow or a meagre supply of household equipment. Land was free and plentiful and thus had little or no intrinsic value, while the early settlers home was either a sod shack or one built of logs. Figures are not available for the value of farm property prior to 1901 so the discussion must, of necessity, be confined to an analysis and discussion of the data available for the years 1901 - 1926.

Figures for the increase in the number of farms in the three prairie provinces are of interest. In 1901 there were 55,179 farms and by 1911 this number had increased to 199,203 - a percentage increase of 261%. In 1916 there were 218,563 farms, an increase over 1911 of 9.7%. From 1916 to 1921 the number of farms increased to 255,657, an increase of 16.97%. In 1926 there were 248,162 farms in the prairie provinces - a decrease from 1921 of 2.93%. From 1901 to 1926 there was an increase in the number of farms of 351%. It

will be noticed that the periods of most rapid expansion were from 1901 to 1911 and from 1916 to 1921. The relatively small increase from 1911 to 1916 was, no doubt, due to the effect of the Great War; while the decrease from 1921 to 1926 is largely the result of the tendency towards larger sized farms during the last few years. (6).

In Table No. 1 there are several significant features which are worthy of special notice. The large increase in number of farms and the total value of farm property from 1901 to 1911 represents the period of most rapid agricultural development in the west. During this decade the percentage invested in land increased from 56% to 69%, while there was a decrease in the percentage invested in buildings, implements and livestock. This does not necessarily mean that the total value, or value per farm, of buildings, machinery and livestock had fallen - in fact there was a considerable increase in value all along the line - it merely indicates that the percentages relatively to percentage invested in land had decreased. From 1911 to 1921 there was another large increase in the number of farms and in the total value of farm property and during this period there was a considerable decrease in the percentage invested in land and livestock and a fairly large increase in the percentage invested in buildings and machinery. From 1921 to 1926 there was a decrease in the

TABLE No. I

PERCENTAGE DISTRIBUTION OF THE VALUE OF FARM PROPERTY WESTERN
CANADA (1901 - 1926)

<u>Year</u>	<u>No. of Farms</u>	<u>Total Value of Property</u> \$	<u>Land</u> %	<u>Buildings</u> %	<u>Implements</u> %	<u>Livestock</u> %
1901	55,179	230,515,736	56.09	12.50	7.90	23.51
1911	199,203	1,788,962,159	69.22	10.03	6.13	14.63
1916	218,563	2,174,092,872	63.59	10.05	7.63	18.74
1921	255,657	3,255,894,259	63.02	13.86	10.54	12.58
1926	248,162	2,609,416,646	60.37	16.41	12.09	11.13

Source -

number of farms and a decrease in the total value of farm property of approximately \$644,000,000. There was a further decrease in the percentage investment in land and livestock and another increase in building and machinery percentages. From 1901 to 1926 there was an increase in percentage of land investment from 56.09% to 60.37%; an increase in the percentage invested in buildings from 12.5% to 16.41%; for machinery an increase from 7.90% to 12.09% and for livestock a decrease from 23.51% to 11.13%.

The most striking features of these percentages are the large increase in the percentage invested in machinery and the large decrease in the percentage invested in livestock. These percentages clearly indicate the tendency for the Western Canadian farmer to rely on cash crops rather than on livestock and livestock products as the chief source of income from his farming venture.

In 1900 the receipts from cash crops for the three Prairie Provinces were approximately \$23,895,000 and for livestock and livestock products \$14,691,000. Approximately 61.5% of farm receipts were obtained from cash crops and 38.5% from livestock and livestock products. In 1925 receipts from cash crops were \$618,692,000 and for livestock and livestock products \$108,195,000. Approximately 82.5% of farm receipts were obtained from cash crops and 17.5% from livestock and livestock products.

THE AVERAGE VALUE OF PROPERTY PER FARM

From 1901 to 1911 there was an increase in the total value of farm property per farm of \$4,802, and increase of 114.8%. From 1911 to 1916 there was a further increase of \$968 - a percentage increase of 10.8%. In 1921 the total value per farm had increased to \$12,735, an increase over 1916 of \$2,788 or 28%. From 1901 to 1921 the value of land per farm for the three prairie provinces increased from \$2,343 to \$6,348 - this being due to enhanced land value and also to increased size of farm. During the same period building values increased from \$522 to \$1,725; machinery values increased from \$330.00 to \$1,271 per farm and livestock values from \$982.00 to \$1,171.00 per farm. While there was a small increase in the value of livestock per farm in 1926 over the corresponding figure for 1901, the increase was very small as compared with the large increase in the value of land, buildings and machinery.

During this period the percentage of total farm capital invested in livestock was halved. The trend in Western Canada towards large scale production of cash crops and the placing of less emphasis on the production of livestock and livestock products has been due to the fact that the prairie provinces are particularly well suited to the production of grain with the result that grain farming

brought larger returns to the farmer than did participation in the other farm enterprises. Farmers tended to increase their farm acreage and in order to handle their farms in the most efficient manner bought new and larger machinery. From 1918 on farmers commenced to use tractor power to supplement horse power and in some cases to supplant it. This fact is a decided factor in the large increase in the value of machinery per farm in the census years 1921 to 1926.

In Table No. II the actual figures per farm, the total value of property per farm and its distribution between land, buildings, machinery and livestock for the census years 1901 to 1926 are given.

THE TREND OF CAPITALIZATION

For the first twenty years of this century there has been a very pronounced upward trend in the capitalization of the agricultural industry. From 1921 to 1926. However, there has been a decrease in the value of farm property due largely to a fall in land values. 1926 census figures are the most recent authentic figures available but this downward swing in the trend of capitalization has been making itself felt much more keenly during the last couple of years than even the 1926 figures would indicate.

From 1901 to 1921 the total value of property per farm increased from \$4,177 to \$12,735 - an increase of 205%. From 1921 to 1926 there was a decrease to \$10,515 per farm -

TABLE No. II

THE AVERAGE VALUE OF PROPERTY PER FARM - (THREE PRAIRIE PROVINCES)
1901 to 1926

<u>Year</u>	<u>No. of Farms</u>	<u>Total Value per Farm</u>	<u>Land</u>	<u>Buildings</u>	<u>Machinery</u>	<u>Livestock</u>
1901	55,179	4,177	2,343	522	330	982
1911	199,203	8,979	6,215	901	550	1,314
1916	218,563	9,947	6,324	1,000	759	1,864
1921	255,657	12,735	8,026	1,765	1,343	1,602
1926	248,162	10,515	6,348	1,725	1,271	1,171

a decrease of 17.43%. Land values per farm increased from \$3,343 in 1901 to \$8,026 in 1921 and decreased to \$6,348 in 1926. The trend in building values per farm increased from \$522. in 1901 to \$1,765 in 1921 - decreasing very slightly from 1921 to 1926. Implement values increased from \$330. per farm in 1901 to \$1,343 per farm in 1921 and decreased to \$1,271 in 1926. The trend in the value of livestock per farm was upward from 1901 to 1916, increasing from \$982 in 1901 to \$1,864 in 1916. From 1916 to 1926 the value of livestock per farm decreased from \$1,864 to \$1,171.

Taking the figures for the three Prairie Provinces, the trend of total value of all farm property is the same as in the case of total value per farm, except that the percentage increase is very much greater. From 1901 to 1921, the total value of farm property increased from \$230,515,736 to \$3,255,894,259 - an increase of 1,270%. From 1921 to 1926 there was a decrease to \$2,609,416,646 - a decrease of 20%.

FARMS AND FARM ACREAGE CLASSIFIED BY SIZE OF FARM

Prior to the 1921 census, farms of 201+ acres were all grouped under the one caption. This was, however, changed in 1921, the above group being subdivided into two classes of 201-299 acres and 300+ acres. Of the 53,252 farms in Manitoba in 1921, 41.5% of them were in the 300+ acre class; 5.3%

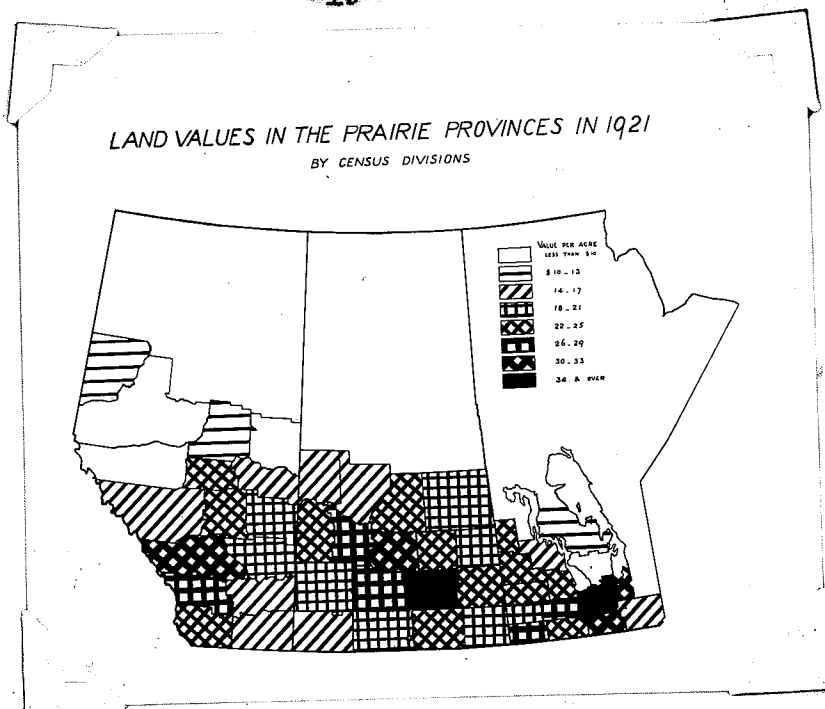


Chart No. I

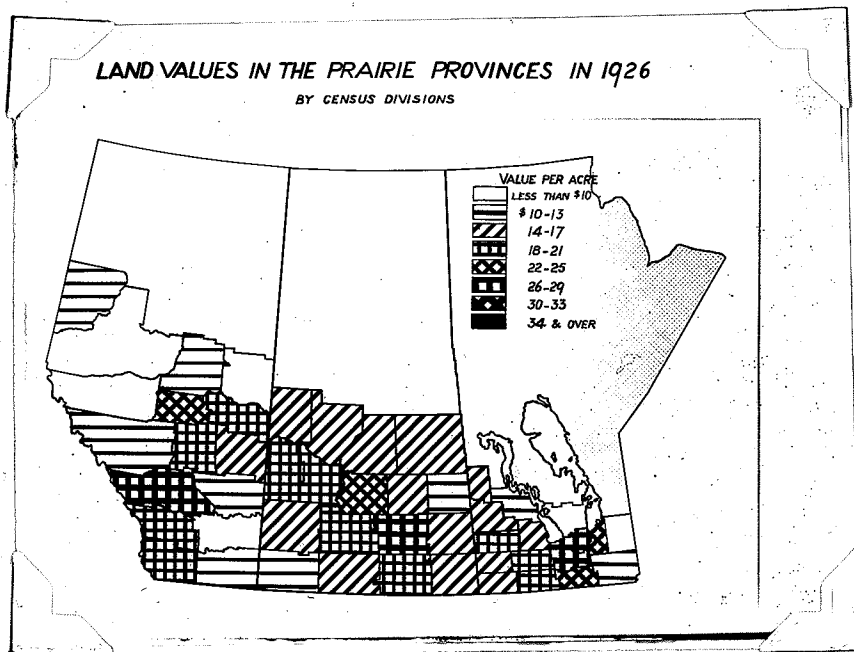


Chart No. II

The above charts illustrates the decrease in land values from 1921 to 1926. In 1921 two areas - the one just west of Winnipeg and the other around Moose Jaw and Regina in Saskatchewan, had land values of \$34.00 per acre or over. In 1926 the same areas had land values of \$26.00 to \$29.00 per acre. In practically all the Census Divisions there was a decrease in land value per acre in 1926 as compared with 1921.

in the 201-299 acres class; 42% were 101-200 acres in extent, while the remaining 11.2% were 100 acres or less in size. In Saskatchewan 98.5% of the farms were over 100 acres in size, while 65.5% were over 300 acres. In Alberta 96% of the farms were over 100 acres and 51.5% over 300 acres. This information is given in Table No. III.

For the three Prairie Provinces in 1921, 55.8% of all farms were over 300 acres in extent. The average size for these farms were 455.7 acres in Manitoba; 478.8% in Saskatchewan and 535.9 for Alberta. The average size of all farms were 274.2 acres for Manitoba; 368.1 for Saskatchewan and 352.2 for Alberta. For the purpose of showing the trend of size of farm, the percentages for farm holdings of 100 acres and less are omitted in Tables IV, V and VI. There has been little variation in the number of these farms during the years 1901 to 1926 and the percentage of the total number of farms is small, being approximately 13.5% for Manitoba in 1926; 1.7% in Saskatchewan, and 4% in Alberta. Incidentally, it might be mentioned that in Manitoba the percentage increased from 10.5% in 1921 to 13.5% in 1926, the increase in the number of farms of 50 or less acres being 12.15 during the five year period. Tables IV, V and VI deal with farms of more than 100 acres by provinces.

In Manitoba there was an increase of 6,396 farms in the 101-201 acre class from 1901 to 1926 and an increase

TABLE No. III

FARMS AND FARM ACREAGE CLASSIFIED BY SIZE OF FARM 1921
IN ACRES

	Total	1-4	5-10	11-50	51-100	101-200	201-299	300
<u>MANITOBA</u>								
No. of Farms	53,252	694	735	1,674	2,599	22,696	2,802	22,052
Average Area	274.2	2.3	7.3	30.2	78.9	158.8	244.3	455.7
<u>SASKATCHEWAN</u>								
No. of Farms	119,451	331	271	423	797	37,059	2,585	77,985
Average Area	368.1	1.9	7.3	27.9	84.7	159.6	248.3	478.8
<u>ALBERTA</u>								
No. of Farms	82,954	295	401	605	1,216	35,278	2,415	42,744
Average Area	352.5	2.2	7.7	30.3	80.7	159.2	248.9	535.9

TABLE No. IV

FARM HOLDINGS BY SIZE - MANITOBA 1901 - 1926

Census Year	Number of Holdings (Acres)					Percent of Total Holdings (Acres)	
	Total	Under 51	51-100	101-200	201	101-200	201
1901	32,252	1,400	1,254	14,394	15,204	44.63	47.14
1906	36,141	-	-	-	-	-	-
1911	43,631	3,670	1,943	17,610	20,408	40.36	46.77
1916	46,580	3,236	2,277	20,548	20,519	44.11	44.05
1921	53,252	3,103	2,599	22,696	24,854	42.62	46.67
1926	53,251	4,318	2,895	20,790	25,248	39.04	47.41

TABLE No. V

FARM HOLDINGS BY SIZE - SASKATCHEWAN. 1901 - 1926

Census Year	Total	Number of Holdings (Acres)				Percent of Total Holdings (Acres)	
		Under 51	51-100	101-200	201	101-200	201
1901	13,455	148	72	8,041	5,184	59.81	28.56
1906	55,971	-	-	-	-	-	-
1911	95,103	657	598	48,330	45,428	50.87	47.81
1916	104,006	543	476	39,256	63,631	37.74	61.18
1921	119,451	1,025	797	37,059	80,570	31.02	67.45
1926	117,781	1,226	759	33,276	82,520	28.25	70.06

TABLE No. VI

FARM HOLDINGS BY SIZE - ALBERTA. 1901 - 1926

Census Year	Number of Holdings (Acres)					Percent of Total Holdings (Acres)	
	Total	Under 51	51-100	101-200	201	101-200	201 +
1901	9,479	161	154	6,577	2,587	69.39	27.29
1906	30,286	-	-	-	-	-	-
1911	60,559	1,195	907	34,436	24,021	58.86	39.67
1916	67,977	1,185	793	34,584	31,415	50.88	46.21
1921	82,954	1,301	1,216	35,278	45,159	42.53	54.44
1926	77,130	1,987	1,150	29,605	44,388	38.38	57.55

of 10,044 farms in the 201+ acre class. The percentage of 101-200 acre farms decreased 5.59%, while the number of farms of 201+ acres increased 0.27 of 1%. The number of larger sized farms showed a much larger increase than did the 101-200 acre farms and the percentage of total farms showed little increase due to a proportionate increase in the number of small sized farms.

In Saskatchewan the number of farms in the 101-200 acre class increased from 8041 in 1901 to 48,330 in 1911, and then decreased to 33,276 in 1926. The large number of farms in this class in 1911 was, no doubt, due to the large number of homesteads taken up prior to that date. The decline in more recent years can be accounted for by the fact that large numbers of the homesteaders increased their holding which thus moved into the 201+ class. The number of farms in the 201+ class shows a steady increase from 5,184 in 1901 to 82,520 in 1926. The percentages given in Table No. V show very clearly the trend towards larger sized farms. In 1901, 59.8% of the total number of farm holdings were in the 101-200 acre class. The percentage decreased with each subsequent census report until in 1926 it had decreased to 28.25%. On the other hand, the percentage of farms in the 201+ acre class increased steadily from 38.56% in 1901 to 70.06% in 1926.

In Alberta the number of farms in the 101-200 acre class increased from 6,577 in 1901 to 34,436 in 1911, and then increased slightly to 35,278 in 1921. There was a decided drop

to 29,605 in 1926. In the 201+ acre class the number of farms increased from 2,587 in 1901 to 45,159 in 1921 and then decreased slightly to 44,388 in 1926. As in Saskatchewan, the downward trend in the 101-200 acre farms, and the upward trend in the larger sized farms is clearly evidenced, decreasing from 69.39% to 38.38% in the case of the 101-200 acre farms and increasing from 27.29% to 57.55% for the larger sized farms.

The above figures and percentages for the three Prairie Provinces show that the tendency throughout the west has been towards larger sized farms. In Manitoba, while the percentages do not vary to any great extent, there is an increase in the number of large farms at least proportionate to the increase in the total number of farms. In Saskatchewan and Alberta there has been a large decrease in the percentage of small farms and a correspondingly large increase in the number of large sized farms. The tendency towards larger sized farms in the west has been the result of the farmers turning to large scale wheat production resulting in the practical exclusion of all other farm enterprises. This applies to the open prairie area of the west where the production of cash crops has yielded the largest returns, and to a more limited extent in the other areas of the prairie provinces where, in general, mixed farming is the type of farming followed.

TENURE OF FARM LANDS

Table No. VII shows that from 1921 to 1926 the percentage of owned farms in the three Prairie Provinces decreased by approximately 10%. The number of rented farms increased 6.1% in Manitoba; 5.9% in Saskatchewan; and 4.8% in Alberta. The part-owned-part-rented farms tends to increase as an agricultural country grows older. Land values rise and many farmers, not having sufficient capital to buy a farm will rent land.

Increase in size of farm also has a tendency to increase the number of part owned farms. Farmers wishing to enlarge their farm will rent adjacent land rather than invest their funds in high priced land. In Western Canada the largest number of tenants are found on the highest priced land.

The cultivable area of the three prairie provinces had been set at 167,000,000 acres. Of this area 37,800,000 acres, or 22.6% was under crop in 1923. From 1921 to 1923 there was added to the area field crops of all kinds in the prairie provinces. 7,623,490 acres, the added acreage being equal to 211.7% of the total crop area in 1910. The increase over 1920 was 25.2%. In the five years from 1919 to 1923 virgin prairie sod was broken to the extent of 6,252,028 acres. It is said:

"Yield may vary with the weather from year to year, and the agricultural dollar may shrink and expand, but acreage under crop is a real measure of progress" (7)

TABLE No. VII

TENURE OF FARM LANDS - PRAIRIE PROVINCES
(1921 - 1926)

Prov- ince	Owned		Rented		Part Owned	Part Rented
	1921	1926	1921	1926	1921	1926
	%		%		%	%
Man.	82.0	73.8	11.4	17.5	6.6	8.7
Sask.	77.6	66.2	10.8	16.7	11.6	17.1
Alta.	80.3	70.6	9.7	14.5	10.0	14.9

The figures in Table No. VIII will give an idea of the rapid increase in crop area in the West:

TABLE No. VIII

CROP AREA - PRAIRIE PROVINCES
(1890-1923)

Year	Area Under Crop Acres	Percentage Increase
1890	1,419,399	153.6
1900	3,600,119	153.6
1910	13,607,697	277.9
1915	22,451,330	64.9
1920	30,185,404	34.5
1923	37,808,894	25.2

The 1921 census gives the following figures for the Prairie Provinces.

Total land area	466,068,740 acres
Area occupied	87,916,018 "
Area improved	44,847,480 "
Area under field crops	32,187,593 "

The occupied land was equal to 18.86% of the total land area; 51.1% of the occupied land was improved and 36.6% under crop. When it is realized that only half of the cultiv-

able area of the Prairie Provinces is occupied and only slightly more than one-third of this is under crop, the possibility of further development in agriculture in the west can be readily seen. It is, no doubt, true that a large part of the uncropped land is inferior in quality and is not advantageously situated, but never-the-less, it presents the possibility of expansion of the livestock enterprise and also of increased production of cereals when favourable prices prevail.

The figures showing the expansion in the number of domestic animals in the Prairie Provinces given in Table No. IX are interesting. On an average each occupied farm had 9.05 cattle in 1911; 13.3 cattle in 1921 and 15.0 in 1923. From 1901 to 1921 the number of swine increased five fold, and from 1921 to 1923 there was an increase of 60%. There were 4.13 swine per farm in 1921 and 6.5% in 1923. The number of horses almost doubled from 1911 to 1921. Sheep are not extensively raised. The average farm area of 343.9 acres in 1921 with 51% improved on an average, leaves scope for expansion in livestock without taking into consideration the unoccupied lands in the west.

Quality in livestock has also shown considerable improvement. Between 1911 and 1921 there was a marked increase in the number of purebred stock in Western Canada, as shown by the census of these years in Table No. X.

TABLE NO. 1X

NUMBERS OF LIVESTOCK IN THE PRAIRIE PROVINCES - 1891-1923

<u>Year</u>	<u>Horses</u>	<u>Cattle</u>	<u>Sheep</u>	<u>Swine</u>	<u>Poultry</u>
1891	147,711	462,523	100,758	70,460	735,767
1901	339,981	941,625	189,665	200,281	1,717,019
1911	1,194,995	1,808,931	285,130	712,222	8,432,423
1921	2,294,493	3,395,172	735,902	1,005,245	17,761,619
1923	2,328,851	3,747,722	469,576	1,677,784	19,020,966

TABLE No. X

PUREBRED STOCK IN WESTERN CANADA 1911 & 1921

<u>Stock</u>	<u>Census 1911</u>	<u>Census 1921</u>
Cattle	25,875	82,572
Horses	13,079	28,586
Swine	13,008	36,305
Sheep	3,280	22,287

When these figures are compared with the figures for total livestock in the Prairie Provinces for the same years, it will be noted that the number of purebred stock kept by the farmers is insignificant. Too much emphasis cannot be placed on the advisability of increasing the quality of the livestock on the farms, the increased satisfaction and additional revenue derived from the production of quality stock should prove a large factor in solving the difficulties which are facing the agricultural industry.

During the last twelve years many farmers in the west have invested in tractors as a source of power for their farming operations. In most cases tractors are used to supplement horse power, although some Western Canadian farms use

tractors exclusively as a source of farm power. The use of tractors has developed along with the increase in size of farm, and their chief usefulness is found in speeding up farming operations during the busy seasons. The figures in Table XI will give an idea of the extent to which tractors have come into general use on Western Canadian farms.

Western Canada had 248,162 farms in 1926 so it will be seen that there is approximately one tractor to every 2-1/2 farms in the Prairie Provinces. Saskatchewan has more tractors than Alberta and Manitoba combined, but this is not to be wondered at for the improved acreage of that province is considerably more than the combined acreage of the other two provinces. In 1926 Saskatchewan's improved acreage was 27,714,490 acres; that of Alberta 13,204,114 acres and for Manitoba 8,346,021 acres. Figures are not available for the total value or purchase price of these tractors, but the farmers of the west have undoubtedly invested more than \$100,000,000 in this type of farm equipment during the last twelve years.

The combine harvester is rapidly becoming a factor in the harvesting of the grain crop of the west. This is particularly true on the larger farms in Saskatchewan and Alberta. The combine, while doing away with large numbers of hired help, harvests the grain in one or two operations. In this way costs of harvesting are considerably reduced and consequently production costs also.

TABLE No. XI

TRACTOR SALES IN WESTERN CANADA 1919 TO 1930

Year	Manitoba	Saskatchewan	Alberta	Total
1919	3,627	3,514	1,703	8,844
1920	3,671	4,229	2,379	10,279
1921	1,057	1,655	716	3,428
1922	1,361	2,475	386	4,222
1923	911	2,524	731	4,166
1924	465	1,213	434	2,112
1925	1,008	2,176	869	4,053
1926	1,498	3,704	1,311	6,513
1927	1,414	5,727	2,885	10,026
1928	2,209	8,703	6,231	17,143
1929	2,423	6,906	5,228	14,557
1930	1,514	4,350	2,720	8,610
Totals	21,185	47,176	25,593	93,954

TABLE No. XII

COMBINE SALES IN WESTERN CANADA 1925 TO 1930

Year	Manitoba	Saskatchewan	Alberta	Total	Total No. in Operation
1925	-	12	2	17	17
1926	2	148	26	176	193
1927	21	382	195	598	791
1928	206	2,356	1,095	3,657	4,448
1929	158	2,484	858	3,500	7,948
1930	134	939	541	1,614	9,562
Total	521	6,321	2,720	9,562	

The foregoing pages are a general summary of agricultural development in the west and serve as an introduction to a more detailed study of the Prairie Provinces which will be dealt with individually.

(B) - MANITOBA

Manitoba is the oldest of the three Prairie Provinces, being incorporated in 1870. It has now passed its 60th milestone, and, while its development has not been as rapid as that of Saskatchewan and Alberta, steady progress has been made. Soon after 1870 settlers began to come in and by 1900 there were 32,252 farms in the province. These farms had an average area of 274.2 acres and an average improved area of 123.9 acres. In 1910 the number of farms had increased to 43,631 having an average area of 279.2 acres and an average improved area of 154.6 acres. The 53,252 farms in 1920 had an average area per farm of 274.2 acres which is exactly the same size as the average for all farms in 1900. The improved acreage, however, was 151 acres per farm as compared with 124 in 1900. In 1926 Manitoba had 53,251 farms.

Figures for population were given in the preceding section so it will not be necessary to repeat them here.

TABLE No. XIII

DISTRIBUTION OF MANITOBA FARMS ACCORDING TO SIZE
1926

<u>Size of Farms</u> <u>(acres)</u>	<u>No. of Farms</u>
All Farms	53,251
Under 51	4,318
51-160	22,615
161-320	15,627
321-480	5,654
481-640	3,029
641-800	1,019
801-960	511
961+	478

The value of all livestock on Manitoba farms in 1926 was \$55,485,480. Domestic animals were reported on 47,726 farms having a total value of \$53,116,158 - an average of \$1,112.93 per farm.

The average number of horses per farm was 7.6 and the average value \$696.66. The average number of cattle was 13.9 and the average value per farm \$398.81. The value of horses constituted approximately 58% of the value of all live-

stock. Sheep were kept on only 3,486 farms, the average sized flock being 32.3. Swine were reported on 32,124 farms, the average number per farm was \$100.93. The average number of poultry per farm was 102.8 and the average value \$50. This will be seen by referring to Table No. XIV.

(1) THE VALUE OF FARM PROPERTY

From 1901 to 1911 the total value of farm property increased 198.2%. From 1911 to 1921 there was an increase of 45.4% and from 1921 to 1926 a decrease of 25.3%. This table differs from Table No. I in that the percentage increases in total value are not so great for the period. This can be accounted for by the fact that the total value of farm property in 1901 was equal to 67.4% of the total for the three Prairie Provinces at that time. The percentage invested in land increased from 61.59% in 1901 to 66.91% in 1911 and then decreased to 55.98% in 1926. The rise from 1901 to 1911 was not nearly as great as for the three Prairie Provinces, while the decrease 1921 to 1926 was greater. This would seem to indicate that land values did not rise as high in Manitoba during the boom years, before the war, as they did in Saskatchewan and Alberta, and also that they decreased more in recent years than in the provinces to the west. The percentage invested in buildings remained stationary at 13% until 1916 and then increased to 17.7% in

TABLE No. XIV

LIVESTOCK ON MANITOBA FARMS 1926

<u>Stock</u>	<u>No. of Farms</u>	<u>Average per Farm</u>	<u>No. of Animals</u>	<u>Total Value</u>	<u>Value per Farm</u>	<u>Value per Animal</u>
				\$	\$	\$
Horses	44,919	7.6	340,979	31,293,476	696.66	91.77
Mules	-	-	1,469	142,555	-	97.04
Cattle	43,887	13.9	610,002	17,502,743	398.81	28.69
Sheep	3,486	32.3	112,703	934,929	268.19	8.30
Swine	32,124	9.5	304,434	3,242,455	100.93	10.65
Poultry	43,935	102.8	4,516,450	2,197,331	50.00	.48

1921 and to 20% in 1926. Machinery values showed a steady increase from 8% in 1901 to 12% in 1926. These percentages correspond very closely to those for the three provinces. The percentage in livestock decreased from 17.11% in 1901 to 11.66% in 1926. Generally speaking, it may be said that the long time trend of percentage investment in land and livestock has been downward, while that in buildings and machinery has been definitely upward. Table No. XV and Bar Diagram No. I give the total value of farm property for the census years 1901 to 1926 and the percentage distribution of the value of farm property among land, buildings, machinery and livestock.

(2) THE TREND WITHIN CLASSES

From 1901 to 1921 the total value of property per farm increased 160.3%, as shown in Table No. XVI. During the same period the average value of land per farm increased 156%; that of buildings 239%; that of machinery 238% and livestock 77.8%. From 1921 to 1926 there has been a considerable decrease in value in each class, the decrease being most pronounced in the case of land and livestock.

(3) THE AVERAGE CAPITAL

The Census Divisions having average capital per farm below the average for the province are found in the

TABLE No. XV

VALUE OF FARM PROPERTY

MANITOBA

<u>Year</u>	<u>Total</u>	<u>Land</u>	<u>Buildings</u>	<u>Machinery</u>	<u>Livestock</u>
	<u>\$</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1901	155,355,081	61.59	13.24	8.04	17.11
1911	463,243,591	66.91	13.51	6.03	13.53
1916	471,517,321	62.82	13.15	7.61	16.40
1921	637,388,045	59.75	17.72	10.64	11.88
1926	475,711,736	55.98	20.16	12.18	11.66

BAR DIAGRAM No. I

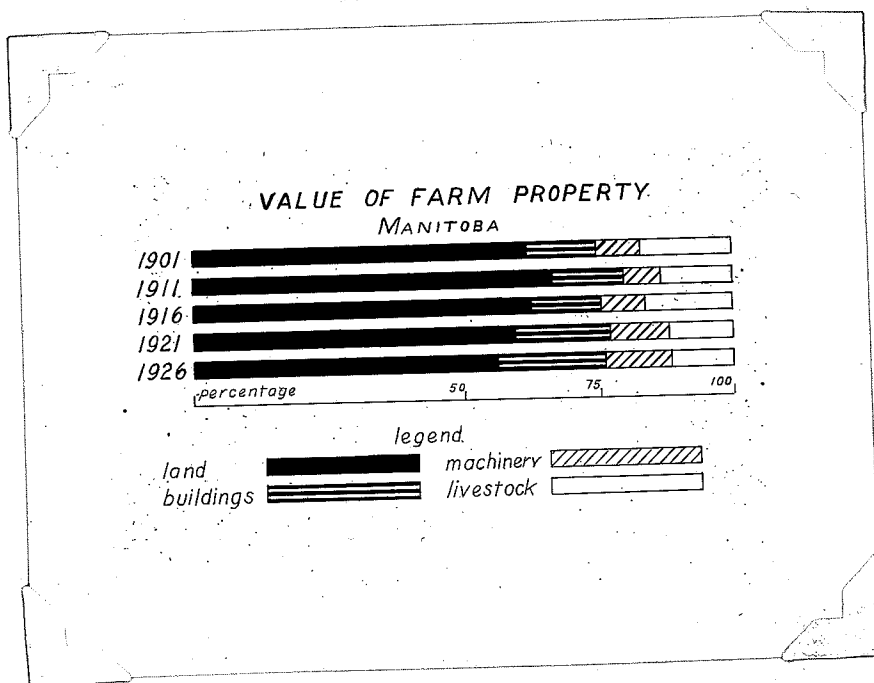


TABLE No. XVI

AVERAGE VALUE OF PROPERTY PER FARM AND PER ACRE 1901 TO 1926

MANITOBA

Census Year	Total		Land		Buildings		Machinery		Livestock	
	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre
1901	4,693.	17.12	2,891.	10.54	622.	2.27	377.	1.38	803.	2.93
1911	10,618.	38.02	7,104.	25.24	1,435.	5.14	641.	2.29	1,438.	5.15
1916	10,123.	35.09	6,359.	22.05	1,332.	4.62	771.	2.67	1,661.	4.76
1921	12,218.	44.51	7,400.	26.96	2,122.	7.73	1,274.	4.64	1,422.	5.18
1926	8,933.	33.01	5,001.	18.48	1,802.	6.66	1,088.	4.02	1,042.	3.85

northern and eastern parts of the province, including the area to the north and east of the Riding Mountains, the Inter-Lake area, and the territory lying east of the Red River. The Census Divisions having 'Capital per farm' higher than the average for the province extend from the Red River on the east, to the Saskatchewan boundary on the west; as far north as the southern edge of the Riding Mountains, and to the southern tip of Lake Manitoba and Lake Winnipeg. The average capital per farm for all farms in the province in 1926 was \$8,933. Figures covering this information are found in Table XVII.

(4) THE CAPITALIZATION OF THE DAUPHIN AREA

Using data taken from the 228 farm records obtained last summer by the Canadian Pioneer Problems Committee in this district an analysis will be made of the capitalization of these farms. Following this the Swan River area will be treated in a similar manner, the two areas being used to try and show what may be taken as typical capitalization on Manitoba farms. There is considerable variations in the average amount of capital per farm as between areas. This is shown in the above table, but throughout all the areas there is the same tendency with respect to capital investment, with only slight variations in the percentages of capital in the different phases of the farm business.

TABLE No. XVII

AVERAGE CAPITAL PER FARM BY CENSUS DIVISIONS 1926

Census Division	No. of Farms	Total \$	Land \$	Buildings \$	Implements \$	Livestock \$
Manitoba Division	53,251	8,933	5,001	1,801	1,088	1,041
1	3,266	3,815	1,899	898	428	589
2	5,192	10,545	6,222	2,067	1,226	1,035
3	3,897	12,234	6,914	2,432	1,478	1,410
4	2,937	13,122	7,265	2,603	1,681	1,571
5	3,754	5,003	2,823	1,028	590	361
6	3,917	13,938	8,552	2,591	1,593	1,200
7	3,272	12,301	6,927	2,484	1,447	1,441
8	2,456	14,854	8,332	2,931	1,790	1,799
9	2,510	9,646	5,542	2,101	996	1,005
10	2,928	8,471	4,617	1,775	1,024	1,054
11	4,146	11,988	6,724	2,384	1,533	1,346
12	4,207	3,002	1,164	760	436	641
13	3,530	6,439	2,290	967	658	722
14	4,322	7,017	3,842	1,378	913	883
15	1,425	6,917	3,807	1,352	966	790
16	1,492	2,850	1,316	643	395	494

The best starting point undoubtedly is a review of the Initial Capital of farmers on taking up land in this area. Initial capital consists of all wealth owned by the farmer on beginning farming operations. It may consist of livestock and machinery owned by the farmer and brought by him to his new farm, or it may be a certain sum of cash which the farmer has ready to invest in his farm business both as fixed and as working capital.

INITIAL CAPITAL OF DAUPHIN FARM OWNERS

Average initial capital per number of farms, namely 188, recording this item is \$2,727.

It will be noted by referring to Table No. XVIII that more than half of the farmers reporting initial capital had less than \$1,000, while 37 out of 188 farmers commenced operations with no initial capital or were in debt. The modal class is the class having initial capital of \$1. to \$500.; 53 farms out of 188 reported initial capital of this amount; 20 farms had over \$5,000. initial capital. In the early days of agricultural development initial capital was not necessary to the same extent as it is today. In recent years in order to make a financial success of his farm business, a farmer must operate on a fairly extensive scale and this necessitates a considerable investment of capital in land and equipment. The farmer who has to commence farming operations without a

considerable amount of funds is at a distinct disadvantage, for he, of necessity, must go heavily into debt and this acts as a deterrent to success in his farming venture.

TABLE No. XVIII

FARMS CLASSIFIED ACCORDING TO INITIAL CAPITAL
DAUPHIN AREA

<u>Initial Capital</u>	<u>No. of Farms</u>
0 or in debt	37
1 - 500	53
501 - 1000	26
1001 - 1500	16
1501 - 2000	11
2001 - 2500	-
2501 - 3000	10
3001 - 3500	5
3501 - 4000	7
4001 - 4500	1
4501 - 5000	2
5001 - and over	20
No information	40
<u>Total</u>	<u>228</u>

Table No. XIX gives the percentage distribution of present capital by size of farm in the Dauphin area and in addition, the average total capital by size of farm. It will be noted that the average total capital increased regularly in practically the same proportions until the 960 acre farms are reached, when there is a slight decrease. There were, however, only two farms in this class, the number not being large enough to have significance. In the 961+ acre class there was only one farm which was capitalized at a very low figure and really should not be included in the picture. The percentage of capital in land shows a considerable amount of variation, increasing steadily from 38.73% for the 160 acre farms to 60.37% for the 800 acre farms and then decreasing considerably for the three larger sized farms. Building percentages decreased from 28.08% for the 160 acre farms, to 11.43% for the 960 acre farms; Machinery percentages from 15.68% for the 160 acre farms to 8.46% for the 960 acre farms; Livestock percentages from 17.51% for the 160 acre farms to 10.76% for the 800 acre farms. These figures would seem to indicate that the larger the farm the greater is the percentage of capital invested in land and the less the percentage invested in buildings, machinery and livestock. There are, undoubtedly, exceptions to this, but it seems reasonable that in most cases it should be true. The question might be asked how does this come about?

TABLE No. XIXPERCENTAGE DISTRIBUTION OF PRESENT CAPITAL - DAUPHIN

Size of Farm (acres)	No. of Farms.	Av. Total Capital \$	Land \$	Buildings \$	Machinery \$	Livestock \$
1-160	104	4,940.16	38.73	28.08	15.68	17.51
161-320	76	9,039.88	44.39	27.30	14.22	14.09
321-480	28	14,356.97	51.02	23.68	14.73	10.56
481-640	11	17,122.18	51.34	25.70	11.81	11.15
641-800	6	23,149.83	60.37	18.66	10.21	10.76
801-960	2	22,963.00	47.36	11.43	8.46	32.75
961+	1	8,927.00	38.09	17.92	16.77	27.22
Average all Farms	228	8,705.87	46.08	25.59	14.10	14.23

With respect to buildings, a set of farm buildings that are in use on a quarter section farm might prove equally satisfactory on a half section or a three quarter section farm, therefore, the value of the buildings would remain practically stationary, while investment in land would have increased two or three fold. Similarly with machinery, a complete set is required for a quarter section farm, while the same number of machines, perhaps slightly larger in size, will take care of a half section or even a three quarter section farm. It is not until the section or larger sized farms are reached that duplication of machinery is required with a resultant increase in machinery investment. The amount of farm capital tied up in livestock is somewhat different and may depend upon several factors such as, the farmers ability to care for livestock and make a profit on them, the kind of farm, whether suited to grain growing or mixed farming, livestock prices, and suitable market for livestock products. With respect to horses kept on the farm, the efficiency factor enters in just as in the case of machinery. The average quarter section farm will require say 6 horses, while the half section farm can be operated successfully with 8 horses. Larger farms make for more efficient use of horse power and equipment with a resultant decrease in the percentage investment as compared with land.

Table No. XX gives in actual figures what was shown in percentages in the preceding table. It will be noted that,

TABLE No. XX

AVERAGE VALUE OF LAND, BUILDINGS, MACHINERY AND LIVESTOCK
BY SIZE OF FARM - DAUPHIN AREA

<u>Size of Farm</u>	<u>Av. Total Capital</u>	<u>Land</u>	<u>Buildings</u>	<u>Machinery</u>	<u>Livestock</u>
<u>(acres)</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>
1-160	4,940.16	1,913	1,387	774	864
161-320	9,039.88	4,013	2,467	1,285	1,273
321-480	14,356.97	7,325	3,400	2,115	1,516
481-640	17,122.18	8,790	4,400	2,022	1,908
641-800	23,149.83	13,975	4,320	2,363	2,490
801-960	22,963.00	10,875	2,625	1,942	7,521
961+	8,927.00	3,400	1,600	1,497	2,430
<u>Av. All Farm</u>	<u>8,705.87</u>	<u>4,012</u>	<u>2,228</u>	<u>1,225</u>	<u>1,239</u>

while in the above mentioned table on percentage distribution of present capital the percentages for buildings, machinery and livestock decreased with increasing size of farm, in Table XX there is an increase in the average value per farm for buildings, machinery and livestock as size of farm increased. The fact to be noted here is that the investment in buildings, machinery and livestock, while increasing with increased size of farm, does not increase proportionately with the increasing land investment. The total amount of capital invested in these 228 Dauphin farms was \$1,984,898.64.

A brief comparison between the average amount of capital per acre for the Survey Records 1929-30 and for Census Division No. 13 (which corresponds to the area surveyed) for 1926 is given in Table No. XXI. The average sized farm for the Census Division was 203.7 acres and for the Survey Reports 285.66 acres.

TABLE No. XXI
COMPARISON OF THE VALUE OF FARM PROPERTY
(per acre)

	Survey Records 1929-30	Census Report 1926
Land	\$ 14.05	\$ 11.24
Buildings	7.80	4.75
Machinery	4.30	3.23
Livestock	4.34	3.54
Total	30.49	22.76

These figures represent the value per acre of occupied land, and go to show that the farms surveyed during the past summer were considerably above the average for the district, the difference being particularly noticeable with respect to real estate.

Normally working capital includes Feed and Supplies, Seed, Fertilizers, etc. for use on the farm and cash required for carrying on the farm business. In the Survey Records few farms reported feed and supplies and those that did reported limited amounts with very small valuations. It was thought advisable, therefore, to disregard these figures and take the figures for total cash expenses to represent the working capital on these farms. In order to avoid complications due to varying percentages of working capital furnished by tenant and landlord, it was decided to consider only owner operated farms in compiling Table No. XXII. There were 31 tenant and 197 owner operated farms in the survey. 197 farms had total cash expenses of \$147,101 - an average of \$746. per farm. Feed and supplies, such as seed, etc. are usually produced on the farm, but apparently the area surveyed was lacking in these commodities or the farmers were unable to give the required information.

In the Dauphin area 223 farms reported 1583 horses having a total value of \$118,697, an average of \$532. per farm. The average number of horses per farm was 7.09.

Cattle numbering 4026 represented 226 farms, an average of 17.8 head per farm. The total value was \$169,050 -

an average of \$748. per farm.

Sheep were kept on 27 farms, the average value per farm being \$346.

Swine were reported on 206 farms, the average number per farm was 13.4 and the average value per farm \$196.

Poultry were kept on 226 farms, the average sized flock consisted of 134 birds, while the average value per farm was \$103.

The total number of animal units per farm, exclusive of poultry was 24.0, with poultry the number of animal units per farm was 25.33, as shown in Table XXIII.

PERCENTAGES OF CASH RECEIPTS FROM DIFFERENT SOURCES

It will be noted by referring to Bar Diagram No. II that as the size of farm increases the percentage of cash receipts obtained from crop sales tends to increase, while that of livestock decreases. The percentages are practically the same for crop sales and stock sales for the quarter section farm and also for the 960 acre farms the percentages are quite close. There are, however, only two farms in the 960 acre class, both of which have incomes below the average for farms of that size, crop sales in particular being very low. A large percentage of the other farm products consist of butter, milk and cream, so that by adding these percentages to those of livestock sales the two combined would be equal to the percentage of crop sales at least.

TABLE No. XXII

AVERAGE WORKING CAPITAL BY SIZE OF FARM - DAUPHIN AREA

<u>Size of Farm</u> <u>(acres)</u>	<u>No. of Farms</u>	<u>Tenant Farms</u>	<u>Total Capital</u> \$	<u>Average Capital</u> \$
1-160	86	18	39,646	461
161-320	69	7	53,988	782
321-480	24	4	30,158	1,256
481-640	10	1	13,002	1,300
641-800	6	-	8,833	1,472
801-960	1	1	1,079	-
961+	1	-	395	-
Total	197	31	147,101	746

Note: Tenant farms omitted.

TABLE No. XXII

LIVESTOCK ANALYSIS - DAUPHIN AREA

<u>Stock</u>	<u>Farms having item</u>	<u>Total Number</u>	<u>Ave. No. per farm having item</u>	<u>Total Value</u>	<u>Ave. Value per Farm having item</u>	<u>Ave. Value per Animal</u>
				\$	\$	\$
Horses	223	1,583	7.09	118,697	532	75
Cattle	226	4,026	17.8	169,050	748	42
Sheep	27	1,141	42.2	9,365	346	8
Swine	206	2,779	13.4	40,489	196	14
Poultry	226	30,282	134.0	23,493	103	77 cents.

From these percentages one would conclude that the Dauphin area is a mixed farming district and this contention is born out in fact. 8.8% of the average farm receipts consists of outside labor, while 8% comes from threshing and custom field work. Out of 228 farms 219 had stock sales; 213 had sales of other farm products; while only 190 had crop sales. The total receipts on 228 Dauphin farms in 1929c was \$265.936.

Table No. XXIV gives in actual figures the average cash receipts for 228 Dauphin farms. The average receipts on 228 farms was \$1,166; the average cash expenses were \$746. leaving an average net income of \$419. Average crop sales per farm were \$416; average stock sales \$297. and the average for other farm products \$205. The 800 acre farms had the largest average receipts for crop sales, stock sales and other farm products together with outside labor. The 640 acre farms had the largest receipts from threshing and custom field work.

It might be argued that cash receipts have nothing to do with farm capital and therefore should not be included in this report. This, however, is a mistaken idea, for a very large percentage of cash receipts on the farm are used to improve the farm and thus increase its value or become working capital for use in carrying on the farm business.

In order to try and ascertain what relationship, if any, existed between net income and farm capital, the net in-

BAR DIAGRAM No. II

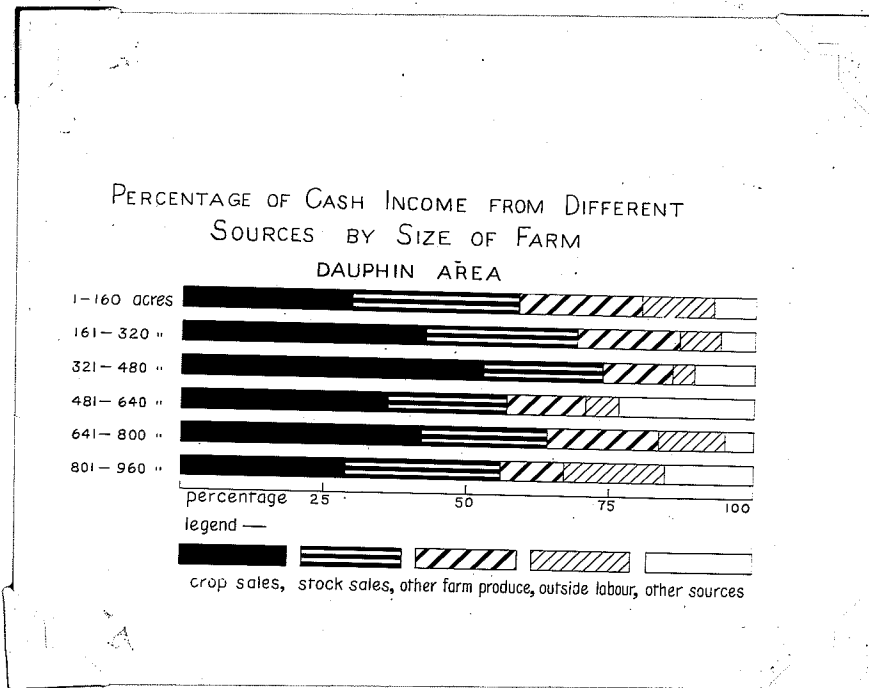


TABLE No. XXIV

AVERAGE CASH INCOME ON 228 FARMS - DAUPHIN AREA

Size of Farm (acres)	No. of Farms	Crop Sales \$	Stock Sales \$	Other Farm Products \$	Outside Labor \$	Thresh. Receipts \$	Cust-om Labor \$	Feed Grind. Sawing \$	Past-ure Use \$	Breeding Fees \$	Total \$
1-160	140	227	222	163	99	32	17	3.00	-	1.86	1,768
161-320	76	503	311	211	87	60	3	3.22	2.63	1.21	1,184
321-480	28	946	375	222	69	109	59	5.36	2.86	7.57	1,798
481-640	11	688	398	262	106	193	251	2.36	-	1.63	1,907
641-800	6	1,318	695	607	370	108	25	-	22.50	.83	3,148
801-960	2	649	612	251	397	-	302	-	-	-	2,262
961-1120	-	-	-	-	-	-	-	-	-	-	1,299
1121+	1	-	635	364	300	-	-	-	-	-	1,299
Av. all farms		461	297	205	102	60	32	3.23	1.82	1.83	1,166
No. of farms having item		190	219	213	98	30	26	17	3	16	228

comes of 20 farms having the highest labor income and the 20 farms having the lowest labor incomes were related to the total capital and also to the capital per acre occupied. The net incomes of the 20 highest ranged farm +362 to +2,183, while the total capital varied from \$3,077 to \$19,144, the capital per acre occupied varied from \$16.73 to \$70.30. The farm having the highest net income for this group had the highest total capital in the group, namely \$19,144, and capital per acre occupied \$59.82. The farm with the lowest net income in the group +362 had a total capital of \$3,200, and a capital per acre occupied of \$20. The net incomes of the 20 farms having the lowest labor incomes ranged from \$757. to \$3,035; the total capital per farm ranged from \$6,606 to \$27,993 and the capital per acre occupied from \$16.52 to \$72.21. The farm having the highest net income, namely \$757 has a total capital of \$20,906 and a capital per acre of \$21.77. The farm having the lowest net income - \$3,185 had a total capital of \$24,964 and a capital per acre of \$52.00. The farms in the first group had an average net income of +\$1,009 and an average total capital of \$7,992, the farms in the second group had an average net income of -\$1,573 and an average total capital of \$16,900. The average capital per acre for the first group was \$30. and for the second group \$35.

From the above it would appear that there is little or no correlation between net income and farm capital. 1929 was not a good year in the Dauphin area, farm receipts were low

and consequently the greater expenses on the larger farms would make for a low net income, this no doubt accounts for the fact that farms having negative net incomes had a total capital more than double in amount the total capital of those farms in the first group which had a positive net income. The labor income on the farm is the surplus which remains as recompense for the farm operator for his management and labor after all expenses have been paid and interest on the farmer's investment at the current rate of interest has been deducted. From Table No. XXV it would appear that the year 1929 was not a successful one for the Dauphin farmers - crops were poor in this area that year and this fact accounts for the small incomes made during the year. In a large number of cases cash receipts were less than cash expenses. Where receipts were larger than expenses but the surplus less than the interest on the farm capital the farmer receives just the amount or less than the amount which he would receive if his money were invested elsewhere. He receives no recompense for his years work on the farm. Labor income is a measure of farm success and is dependent on several factors, such as managerial ability, selection of enterprises, the kind and quality of soil and to a very large extent on the market value of the farmer's produce. In grain growing areas, where cash crops are grown extensively the farmer's labor income will vary a great deal due to the several factors influencing growth and quality in crops.

TABLE No. XXV

LABOR INCOMES BY SIZE OF FARM - DAUPHIN AREA

<u>Size of Farm</u>	<u>Number of Labor Incomes</u>	<u>No. of + Labor Incomes</u>	<u>Lowest Labor Income</u>	<u>Highest Labor Income</u>	<u>Average Labor Income</u>
1-160	93	10	-2,179	+ 873	- 620
161-320	64	11	-2,906	+1,034	- 968
321-480	25	2	-3,595	+ 149	-1,666
481-640	11	0	-2,865	- 772	-1,802
641-800	5	1	-3,028	+1,532	-1,449
801-960	2	0	-3,147	-1,574	-2,361
961+	1	0	- 87	- 87	- 87
<u>Total</u>	<u>201</u>	<u>24</u>			

Note: Excluding 3 schedules in which data was incomplete.

An attempt was made to determine the relationship between Labor Income and Total Farm Capital, taking the 20 farms having the highest labor incomes and the 20 farms having the lowest labor incomes in the Dauphin area. Due to the fact that 1929 was not a normal year in the area it is impossible to draw definite conclusions, but it was found that the smaller farms having relatively smaller amounts of capital had the largest labor incomes. Greater expenses and larger amounts of interest on capital would limit the labor incomes on the larger farms. The findings were as follows:

The average size of farm for the group having the highest labor incomes was 253 acres; the average labor income was +\$573 and the average total capital \$7,992. For the group having the lowest labor incomes the average size of farm was 480 acres; the average labor income was -\$2,582 and the average total capital \$16,900. A comparison between the average farm capital per farm and per acre for the Dauphin area in 1929 and for Manitoba is shown in Table XXVI.

The average size of the Dauphin farms surveyed was 285.66 acres, the typical farm was 160 acres - 104 farms out of 228 being this size; 180 farms out of 228 were 320 acres or less. The average size of farm for all of Manitoba in 1926 was 270.63 acres. It will be seen that the farms surveyed were slightly larger than the average Manitoba farm. The

TABLE No. XXVI

AVERAGE FARM CAPITAL - MANITOBA 1926, DAUPHIN 1929

	Manitoba 1926			Dauphin 1929 (Survey Records)		
	Ave. Value per Farm	Ave. Value per Acre Occupied	Total Capital	Ave. Value per Farm	Ave. Value per Acre Occupied	Total Capital
	\$	\$	%	\$	\$	%
Land	5,001	18.48	55.98	4,012	14.05	46.08
Buildings	1,801	6.66	20.17	2,228	7.80	25.59
Machinery	1,088	3.85	12.18	1,239	4.30	14.23
Livestock	1,041	4.02	11.66	1,225	4.34	14.10
Total	8,933	33.01	100.00	8,705	30.48	100.00

value of land per farm and per acre was considerably less for Dauphin than for Manitoba, while the value of buildings, machinery and livestock was considerably greater.

THE SWAN RIVER AREA

The Swan River Valley is a much newer area than is the Dauphin area from the point of view of land settlement. It could be likened to the Peace River area in Alberta in that it is the newest and most northerly area of occupied farm land in this province. Settlement began about 1900 and development was fairly rapid. In 1926 there were 1,425 farms in the area - 994 of which were occupied by owners, 9 by farm managers, 251 by tenants, while 171 were part owned and part rented. The average size farm for the Swan River area (1926 Census) was 251.6 acres. The population of the area in 1926 was 8,714.

INITIAL CAPITAL OF SWAN RIVER FARM OWNERS

The average initial capital for 161 farms recording this information was \$13,000. Of the farmers reporting initial capital 72% commenced farming operations with \$1,000 or less; 27 farmers out of 161 commenced operations with no initial capital or in debt. The modal class is the class \$1.-\$500. and there were 49 farmers in this class, which will be noted by referring to Table No. XXVII.

The average initial capital of all farmers reporting was low, being less than half the amount of initial capital of the Dauphin farmers reporting. When settlers went into the Swan River Valley they went in as homesteaders. Generally speaking low initial capital is characteristic of homestead areas.

TABLE No. XXVII

FARMS CLASSIFIED ACCORDING TO INITIAL CAPITAL
SWAN RIVER AREA

	Initial Capital	Total Number of Farms
	\$	
	0 or in debt	27
	1-500	49
	501-1000	33
	1001-1500	11
1501	1501-2000	10
	2001-2500	7
	2501-3000	8
	3001-3500	3
	3501-4000	1
	4001-4500	2
	4501-5000	-
	5001- and over	10
	No information	37
	Total	198

PERCENTAGE DISTRIBUTION OF PRESENT CAPITAL

The average total capital and the percentage distribution among land, buildings, machinery and livestock are given in Table No. XXVIII. The figures for total capital show a much better trend than in the case of the Dauphin area. There is a steady increase as the size of farm increases from \$4,696 for the 160 acre farms to \$31,150 for the 961+ acre farms. Average total capital for all farms is slightly less than for the Dauphin area. It is difficult to account for the sharp decline in the percentage of capital invested in land for the 800 acre and the 961+ acre farms. These farms have a high investment in buildings and machinery which would tend to reduce the land percentage. It is also probable that the owners of these large farms have increased their holdings by buying up more land at a low figure. A feature of this table is the large percentage of capital invested in buildings on the larger sized farms and also the large percentage of capital invested in machinery.

The large machinery investment is a result of the emphasis placed on the production of cash crops by Swan River farmers. The livestock percentages are considerably lower than corresponding figures for the Dauphin area, livestock being a minor farm enterprise in the Swan River Valley.

AVERAGE VALUE OF LAND, BUILDINGS, MACHINERY & LIVESTOCK

Here the trends, particularly with respect to land buildings and machinery, are brought out more clearly

TABLE No. XXVIII

PERCENTAGE DISTRIBUTION OF PRESENT CAPITAL - SWAN RIVER

<u>Size of Farm</u> <u>(acres)</u>	<u>Number</u>	<u>No</u>	<u>Ave. Total</u>	<u>Land</u>	<u>Buildings</u>	<u>Machinery</u>	<u>Livestock</u>
	<u>Reporting</u>	<u>Report</u>	<u>Capital</u>				
			\$	\$	\$	\$	\$
1-160	67	6	4,696	41.33	25.15	16.49	17.03
161-320	71	7	9,256	45.80	25.42	16.31	12.47
321-480	24	6	11,878	48.84	23.20	15.56	12.39
481-640	7	2	14,655	60.62	14.42	15.45	9.51
641-800	3	1	21,471	54.05	20.47	18.84	6.64
801-960	-	-	-	-	-	-	-
961+	3	1	31,150	48.04	20.13	22.56	9.27
<u>All Farms</u>	<u>175</u>	<u>23</u>	<u>8,686</u>	<u>46.47</u>	<u>23.48</u>	<u>17.07</u>	<u>12.98</u>

in Table No. XXIX than the percentages shown in Table No. XXVIII. would appear to indicate. Land values increase regularly from \$1,940 for the 160 acre farms to \$14,963 for the 961+ acre farms - the average for all farms being \$4,034. Building values increased from \$1,181 for the small farms to \$6,270 for the largest farms. The figures for machinery would indicate that Swan River farms are well stocked with this class of equipment. Livestock values do not show a definite trend, varying from \$800 to \$1,425 for the 160 acre to the 800 acre farms, the value was doubled for the 961+ acre farms.

AVERAGE CAPITAL PER ACRE OCCUPIED

Table No. XXX shows that the Swan River area figures approximate much closer to those for Manitoba than do the Dauphin figures; the figures for land and livestock particularly being practically the same. Swan River has a high machinery investment per acre occupied, while Dauphin has a high building investment. It must be borne in mind that the Census figures for Manitoba are for 1925-26 while the Survey figures are for 1929-30, a difference of four years. This is ample time for a considerable change to come about in the distribution of farm capital. The average size of farms surveyed in the Swan River Valley was larger than those in the Dauphin area. The average size of the Swan River farms was 323.17 acres and of the Dauphin farms 285.66 acres.

TABLE No. XXIX

AVERAGE VALUE OF LAND, BUILDINGS, MACHINERY AND LIVESTOCK BY
SIZE OF FARM - SWAN RIVER AREA

Size of Farm (acres)	Average Total Capital \$	Land \$	Buildings \$	Machinery \$	Livestock \$
1-160	4,696	1,940	1,181	774	799
161-320	9,256	4,239	2,353	1,509	1,154
321-480	11,878	5,802	2,755	1,848	1,472
481-640	14,655	8,884	2,113	2,264	1,393
641-800	21,471	11,605	4,395	4,046	1,425
801-960	-	-	-	-	-
961+	31,150	14,963	6,270	7,029	2,887
Average All Farms	8,686	4,034	2,038	1,487	1,126

Note: Swan River No Reports. Land 19; Buildings 15; Livestock 2; Machinery nil.

TABLE No. XXX

AVERAGE CAPITAL PER ACRE OCCUPIED - MANITOBA 1926;
DAUPHIN 1929-30, SWAN RIVER 1929

	Price Per Acre		
	Manitoba 1926	Survey Records Dauphin 1929-30	Survey Records Swan River 1929-30
	\$	\$	\$
Land	11.24	14.05	11.29
Buildings	4.75	7.80	5.83
Machinery	3.23	4.30	4.56
Livestock	3.54	4.34	3.45
Total	22.76	30.49	25.13

WORKING CAPITAL ON SWAN RIVER FARMS

As was stated previously with reference to the Dauphin area, cash expenditure and working capital have been taken as synonymous for the purpose of this report. Tenant farms have been omitted as in Dauphin. The number of farms reporting cash expenditures were 174. The total expenditure for these farms was \$148,316 - an average of \$852 per farm. This average for Swan River is larger than the corresponding average for Dauphin by more than \$100. Cash expenditure gives an approximation to the amount of ready cash which is

required to carry on farming operations for a year. In this is included seed and feed purchased - the only omissions from working capital being seed and feed produced on the farm for which it is difficult to obtain valuations. In most cases the values were small and would not materially affect the averages, which are given in Table No. XXXI.

TABLE No. XXXI

AVERAGE WORKING CAPITAL BY SIZE OF FARM

SWAN RIVER AREA

Size of Farm	No. of Farms Reporting	No. Report	Tenant Farms	Total Capital	Average Capital
(acres)				\$	\$
1-160	64	1	8	27,217	425
161-320	67	-	11	56,713	846
321-480	29	-	1	31,403	1,082
481-640	8	-	1	13,536	1,692
641-800	3	-	1	7,296	2,432
801-960	-	-	-	-	-
.961+	3	1	-	12,151	4,050
Total	174	2	22	148,316	852

Note: Tenant Farms omitted.

LIVESTOCK ON SWAN RIVER FARMS

The total value of all livestock in 1926 was \$1,126,945. Domestic animals were reported on 1235 - having a total value of \$1,084,079 and an average value of \$877.79 per farm.

It will be noted from the figures in Table No. XXXII that livestock are not kept in the Swan River Valley in as large numbers as they are in the Dauphin. Figures for cash receipts which will be given later will bear out this statement and will show that the Swan River farmers rely to a large extent on cash crops as their chief source of income. The value of horses per farm is practically the same as for the Dauphin area, but it is in the other classes of livestock that the numbers and values are less. The average value of cattle per farm is \$309. for Swan River as compared with \$748 for Dauphin. Swine figures per farm are \$109 for Swan River and \$196. for Dauphin.

TABLE No. XXXII

LIVESTOCK ANALYSIS - SWAN RIVER AREA
(1926 Census)

<u>Class of Stock</u>	<u>No. of Farms</u>	<u>No. of Stock</u>	<u>Total Value</u>	<u>Ave. Value per farm havin</u>
Horses	1,195	7,220	642,175	538
Cattle	1,079	11,660	334,392	309
Sheep	90	2,406	20,439	227
Swine	757	7,692	83,149	109
Poultry	1,063	90,319	40,319	37

PERCENTAGE OF CASH RECEIPTS FROM DIFFERENT SOURCES

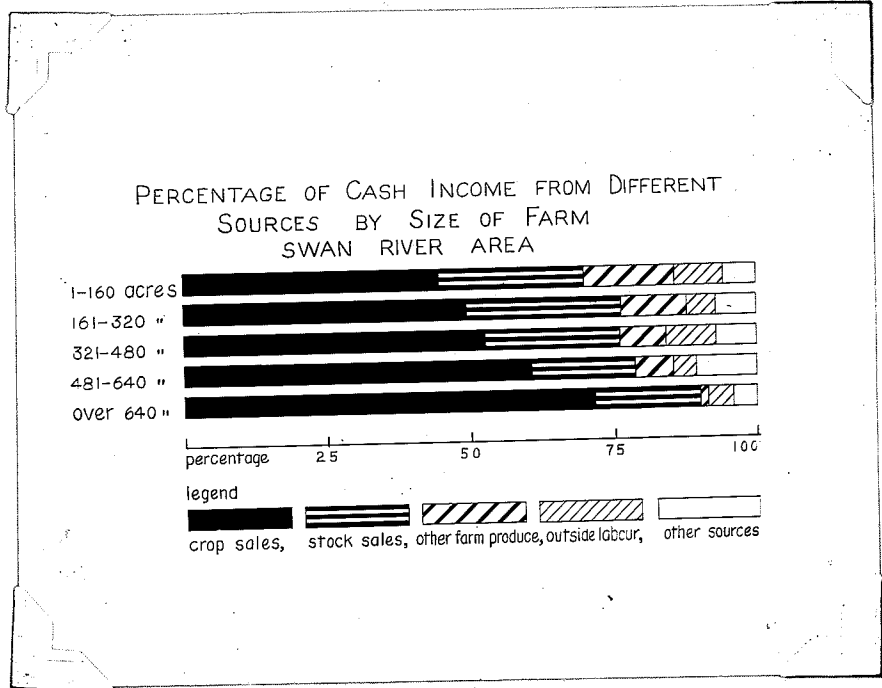
Crop sale percentages for Swan River varied from 44.54% for the 160 acre farms to 72% for the 961+ acre farms, the trend being definitely upward, and the percentage increasing with each increase in size of farm. On the other hand livestock sales decreased from 25.48% for the 160 acre farms to 16.9% for the 961+ acre farms, while other farm products decreased from 15.86% to 1.82%.

From these percentages it would appear that the small farms are mixed farms combining cash crops sales with livestock and livestock products sales in almost equal proportions. The large farms are distinctly grain growing farms, livestock being a minor consideration as a source of farm income. Taking the average for all farms 52.18% of cash receipts was derived from crop sales and 34.7% from sale of livestock and other farm products 6.34% of cash receipts were obtained from outside labor, the larger amount being obtained by owners of the smaller sized farms. Threshing receipts accounted for 5.35% of the cash receipts of all farms. Custom field work was considerably less than in the Dauphin area, being only 1.08% of the total cash receipts. Bar Diagram No. III covers this information.

AVERAGE CASH RECEIPTS ON 197 FARMS - SWAN RIVER AREA

Table No. XXXIII gives the average cash receipts by

BAR DIAGRAM No. III



size of farm and also the average cash receipts for all farms. The average cash receipts from crop sales for all farms was \$908.76; the average by size of farm varying from \$416 to \$4,194. Receipts from stock sales averaged \$423 for all farms and sale of other farm products averaged \$181 for all farms. The average receipts from outside labor was \$110 per farm and the average threshing receipts were \$92.87. Crop sales were reported on 173 farms, while 185 reported stock sales and 172 reported sale of other farm products.

The average receipts per farm was \$1,741 and the average cash expenditure \$852 - leaving an average net income per farm of \$889. The average net income per farm for the Dauphin area was \$419, so that the Swan River farmers had a net income more than double that of the Dauphin farmers.

LABOR INCOMES ON SWAN RIVER FARMS

Of the 171 farms reporting 35.2% had a + labor income 27 records were omitted in which data was incomplete. The average labor income for all farms was -\$228.

The farmers of the Swan River area had on the average a much larger net income than did the Dauphin farmers. The interest on farm capital would be practically the same for the two areas, the average total capital per farm varying little between the two. Consequently the Swan River farmers had larger labor incomes than did the Dauphin farmers. Figures for labor income in the Swan River area are given in Table XXXIV.

TABLE NO. XXXIII

AVERAGE CASH RECEIPTS ON 197 FARMS

SWAN RIVER AREA

Size of Farm	Average Acreage Improved	No. of Farms	Crop Sales	Stock Sales	Other Farm Produce Sales	Outside Labour	Threshing	Custom Field Work	Feed Grinding & Sewing & Other	Total
Acres			\$	\$	\$	\$	\$	\$	\$	\$
1-160	75.04	73	416	238	148	79	31	16.70	3.77	935
161-320	150.49	78	898	491	213	88	100	18.63	9.04	1,821
321-480	222.27	30	1,257	555	191	214	140	20.30	8.23	2,386
481-640	293.78	9	1,858	556	212	115	312	11.11	----	3,066
641-800	401.00	4	2,880	745	56	225	93	20.00	----	4,020
801-960	-----	-	-----	---	---	---	--	-----	-----	-----
961(x)	925.67	3	4,194	983	105	221	233	80.00	----	5,818
Average all Farms	152.35	-	908	423	181	110	92	18.79	6.23	1,741
No. of Farms Having Item	197	-	173	185	172	104	38	30	17	197

(x) - One Farm Omitted in this Class.

TABLE NO. XXXIV

LABOR INCOME BY SIZE OF FARM - SWAN RIVER AREA

Size of Farm	Number of - Labor Incomes	Number of + Labor Incomes	Lowest Labor Income	Highest Labor Income	Average Labor Income
			\$	\$	\$
1-160 Acre	48	20	-2,061	+1,310	- 233
161-320 "	45	24	-2,199	+1,462	- 330
321-480 "	12	10	-1,672	+1,275	- 123
481-640 "	3	4	-1,455	+3,624	+ 583
641-800 "	3	0	-1,674	- 313	-1,087
801-960 "	-	-	-----	-----	-----
961+ "	-	2	+ 370	+1,086	+ 728
Total	111	60	-	-	- 228

(C) SASKATCHEWAN

Saskatchewan became a province of the Dominion on September 1st, 1905. It is the largest of the three Prairie Provinces and has become noted for its large farms, wide expanses of level prairie and the No. 1 Hard Wheat produced thereon. Saskatchewan is pre-eminently a grain growing province, wheat production in normal years being almost double the combined total wheat production of Alberta and Manitoba. In 1925 Saskatchewan produced 235,471,780 bushels of wheat; Alberta 97,962,372 bushels and Manitoba 33,624,023 bushels. Saskatchewan has 27,714,490 acres of improved land as compared with 13,204,114 in Alberta and 8,346,021 acres in Manitoba. The open plain area, which covers considerable more than half of the province, is almost entirely given over to the raising of cash crops.

Very little livestock, other than horses, are kept due to the suitability of the area to large scale grain farming and also to lack of adequate water supply in many parts of the province. In the eastern and northern parts of the province, which correspond more closely to farm conditions in Manitoba, (with respect to topography, rainfall and soil), larger numbers of livestock are kept, while some ranches are to be found in the drier areas in the south-western part of the province.

Horses are used extensively on Saskatchewan farms, but of recent years large numbers of tractors are being introduced on the farms to supplement and in some cases supercede horse power on the farms. Where farming is done on a large

scale tractor power is particularly useful in that it speeds up farming operations in the busy seasons and also tends to reduce production costs. Even on the medium sized farms tractors have proved their usefulness in reducing the peak load in farming operations during the busy seasons. (Seed time and harvest).

In 1926 Saskatchewan had 117,781 farms having an average size of 390.08 acres. The average improved acreage of Saskatchewan farms in 1926 was 235.3 acres the improved acreage being equal to 60.3% of the occupied land. Table No. XXXV shows the distribution of farms according to size:

TABLE No. XXXV

DISTRIBUTION OF SASKATCHEWAN FARMS ACCORDING TO SIZE (1926)

<u>Size of Farms</u> (acres)	<u>No. of Farms</u>
All Farms	117,781
Under 50 acres	1,226
51-160	32,967
161-320	42,072
321-480	19,111
481-640	12,343
641-800	4,634
801-960	2,490

Of Saskatchewan farms 29.03% were 160 acres or less; 35.72% were from 161-320 acres; while the remaining 35.25% were over 320 acres in size. In 1925 there was 29.5% of the total land area in farms.

The following figures, taken from the 1926 Census, give the number and values of the various classes of livestock in Saskatchewan in 1925:

The value of all livestock in the province in that year was \$140,140,547;

Domestic animals were reported by 107,216 farms, having a total value of \$136,054,057 - an average value of \$1,268 per farm.

It will be seen from the figures in Table No. XXXVI that the value of horses constitutes almost three quarters of the value of all livestock. At least 80% of the horses on farms are work animals, so that livestock to a value of more than half the value of all stock are used to furnish power for operating Saskatchewan farms. In 1926 livestock constituted 10.43% of the total value of all farm property in Saskatchewan. By deducting horse values it will be found that approximately 4% of the value of all farm property was invested in other classes of livestock. This shows the limited extent to which livestock are used in the farm business in Saskatchewan.

(1) THE VALUE OF FARM PROPERTY BY CLASSES

Table No. XXXVII and Bar Diagram No. IV give the total

TABLE NO. XXXVI

LIVESTOCK ON SASKATCHEWAN FARMS - 1925-26

Class of Stock	Number of Farms	Number of Animals	Number per Farm	Total Value	Average Value Per Farm	Average Value Per Animal
				\$	\$	\$
Horses	105,551	1,104,258	10.46	96,684,890	916	87.56
Mules	-----	5,258	-----	470,414	---	89.47
Cattle	93,179	1,160,125	12.45	31,647,141	339	27.28
Sheep	3,861	161,831	41.91	1,342,227	347	8.29
Swine	65,048	597,660	9.18	5,909,385	90	9.89
Poultry	94,983	9,180,674	96.65	4,049,417	42	.44

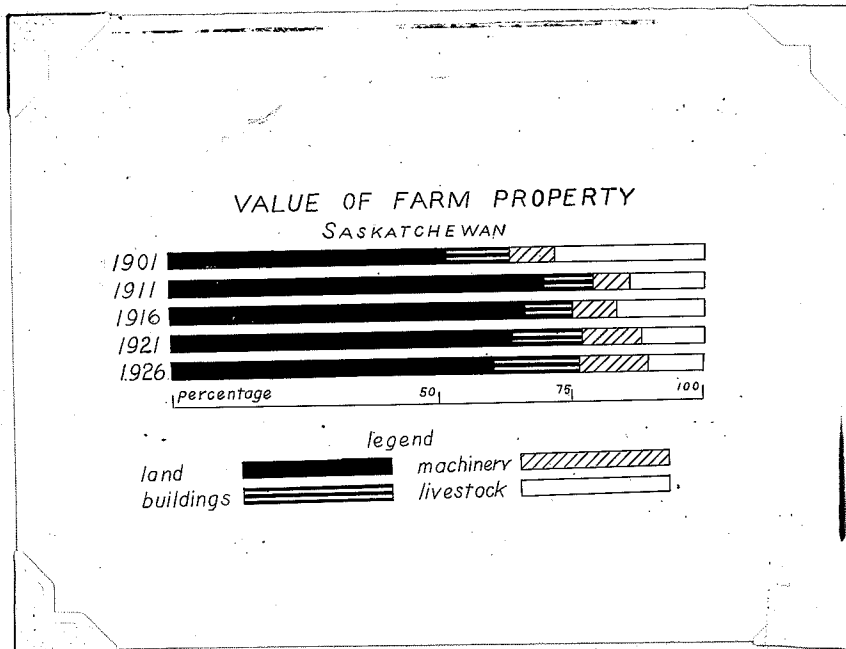
value and percentage distribution of the value of farm property for the Census years 1901-1926. The most interesting feature of this table is the extremely rapid increase in the total value of farm property particularly between the years 1901-1911. During this decade the number of farms in Saskatchewan increased 13,445 to 95,013. The value of land increased from 23 million dollars to 583 million; building values from 5 million to 76 million. Machinery from 4 million to 57 million and livestock from 12.5 million to 116 million. It is doubtful if a parallel of this extremely rapid development can be found elsewhere. From 1911 to 1921 the value of farm property was doubled, the latter date, however, represented the peak in farm property value for in 1926 there was a considerable decrease in the value of all classes of farm property, the decrease being greatest in the case of land and livestock.

The large increase in the land percentage in 1911 is noteworthy. Land values were high in Western Canada in that year, and this fact would account for the increase, then too building and machinery investments did not begin to increase rapidly until after 1911. Another striking fact is the large increase in the percentage invested in machinery and the larger decrease in the percentage in livestock. This shows definitely the trend towards straight grain growing in preference to cattle raising and mixed farming.

TABLE NO. XXXVII
VALUE OF FARM PROPERTY
SASKATCHEWAN

<u>Year</u>	<u>Total</u>	<u>Land</u>	<u>Build-ings</u>	<u>Mach-inery</u>	<u>Live-Stock</u>
	\$	%	%	%	%
1901	44,460,874	51.46	11.64	8.73	28.17
1911	832,812,560	70.10	9.14	6.90	13.87
1916	1,102,858,732	65.28	9.19	8.06	17.45
1921	1,650,069,196	64.27	13.11	10.70	11.90
1926	1,343,357,826	60.94	16.00	12.61	10.43

BAR DIAGRAM No. IV



(2) THE TREND WITHIN CLASSES

From 1901 to 1921 the average value of property per farm increased from \$3,307 to \$13,814 while the value per acre increased from \$11.60 to \$37.48. From 1921 to 1926 there was a fall in average total value per farm of \$2,409. It might be noted here that while the total value per farm in Saskatchewan was considerably larger than the corresponding figures for Manitoba, the total value per acre was considerably less, these being due to difference in the size of the average farm. The Saskatchewan figures for 1926 were \$11,405 for total values and \$29.24 per acre. The figures for Manitoba for the same year were \$8,933 for total value and \$33.01 per acre. The increase in property values are most noticeable by a comparison of the 1901 and 1911 figures in Table No. XXXVIII and are indicative of the great expansion in agriculture during that period. Total value of property per farm increased 165%, land values per farm increased 245% building and machinery values increased approximately 100% while livestock values increased 25%. 1921 showed another increase in total value per farm and per acre the largest increase being in the value of buildings and machinery. Livestock values per farm and per acre decreased from 1916 to 1921 and there was a further large decrease from 1921 to 1926. Land values per farm and per acre also decreased considerably from 1921 to 1926, while building and machinery values showed very little variation.

TABLE NO. XXXVIII

AVERAGE VALUE OF PROPERTY PER FARM AND PER ACRE. CENSUS YEARS

1901 - 26 SASKATCHEWAN

Census Year	Total		Land		Buildings		Machinery		Livestock	
	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1901	3,307	11.60	1,702	5.97	385	1.35	289	1.01	931	3.27
1911	8,766	29.64	6,140	20.76	802	2.71	606	2.05	1,218	4.12
1916	10,603	29.97	6,922	19.56	975	2.76	855	2.42	1,851	5.23
1921	13,814	37.48	8,878	24.09	1,812	4.92	1,479	4.01	1,645	4.46
1926	11,405	29.24	6,951	17.82	1,825	4.68	1,439	3.69	1,190	3.05

(3) THE AVERAGE CAPITAL BY CENSUS DIVISIONS

Table No. XXXIX on average capital per farm by census divisions gives the number of farms and average total capital by divisions and also the distribution of this capital among land buildings, machinery and livestock.

The areas corresponding to the Census Divisions having the largest average capital per farm in 1926 are found in the south eastern, southern, central and western parts of the province, while those having the lowest average capital are found in the eastern, northern and southwestern parts of the province. The area having the largest average capital per farm was Census Division No. 6, which is the area around Regina and Moose Jaw.

CAPITALIZATION OF THE MELFORT, BELBECK AND ALAMEDA AREAS

During the years 1926 and 1927 the department of Farm Management of the University of Saskatchewan made a survey of three farming areas in that province, namely the Melfort Area in Northern Saskatchewan; the Belbeck Area north of Moose Jaw; and the Alameda Area in South Eastern Saskatchewan. These three areas can be taken as fairly representative of the province. Melfort, the newest of the three areas from the point of view of land settlement is located in the park belt in Northern Saskatchewan. This area is typical mixed farming county, but strange to relate,

TABLE NO. XXXIX

AVERAGE CAPITAL PER FARM BY CENSUS DIVISIONS - 1926

SASKATCHEWAN

Census Divisions	No. of Farms	Total \$	Land \$	Buildings \$	Implements \$	Livestock \$
Saskatchewan Division	117,781	11,405	6,951	1,825	1,439	1,189
1	5,616	13,073	7,575	2,288	1,645	1,560
2	6,148	13,955	8,637	2,149	1,697	1,470
3	7,928	12,617	7,714	1,935	1,694	1,272
4	5,478	9,293	5,414	1,412	1,244	1,220
5	7,516	10,857	6,254	2,034	1,372	1,196
6	7,978	18,879	12,011	3,157	2,172	1,537
7	8,196	13,195	8,385	2,029	1,512	1,268
8	8,412	11,112	6,801	1,742	1,455	1,112
9	8,111	6,634	3,646	1,199	957	841
10	6,505	9,106	5,395	1,464	1,193	1,052
11	6,805	15,702	9,920	2,520	1,832	1,428
12	6,701	13,153	8,251	2,008	1,575	1,318
13	6,826	12,816	8,124	1,774	1,618	1,299
14	5,571	6,563	3,857	1,042	891	771
15	10,238	8,632	5,133	1,401	1,180	917
16	6,101	7,993	4,657	1,261	1,127	947
17	3,651	8,247	4,552	1,150	1,057	1,086

Melfort is almost entirely a grain growing area, approximately 80% of the cash receipts being obtained from cash crops.

The Belbeck district, situated as it is in the very heart of the wheat growing area of Saskatchewan, is strictly a grain growing area. In 1926, 92.1% of cash receipts was obtained from sale of cash crops. Of the cash crop sales wheat accounted for approximately 95%.

The Alameda Area, while quite suitable for livestock enterprise is also largely a grain growing district. In this area 45% of the farmers limit their livestock to farm requirements, while the remaining 55% supplement their major enterprise of grain growing with sales of livestock and livestock products. In 1926, 81.8% of cash receipts were obtained from cash crops and 11.8% from livestock and livestock products.

For the purpose of this report a short account of the capitalization of these three areas will be given in order to supplement the figures which have been given for Saskatchewan and also to try and get a clearer picture of the farmers investment in that province.

MELFORT

The average farm in the Melfort district had a total area of 465 acres. The typical farm was 320 acres - 38 farms out of 106 being of this size. Farm land, including buildings had an average value of \$43 per acre in 1926. The

average farm in Saskatchewan in 1926 was 390 acres in area and had an average value per acre, including buildings, of \$22.50 per acre.

COMPARISON OF AVERAGE FARM CAPITAL - SASKATCHEWAN 1926
AND MELFORT AREA 1926.

It will be seen from Table No. XL that the Melfort farms have a much larger capital investment than the average Saskatchewan farm. The average size farm in the Melfort Area in 1926 had an area approximately 18% larger than the average Saskatchewan farm, while the total average farm capital was considerably more than double that of the average Saskatchewan farm. Land values were 91% higher at Melfort than the provincial average for 1926. Buildings on the average Melfort farm were valued at 2-1/2 times the average for the province in 1926. Machinery and equipment values per farm were 73% higher and livestock values per farm 63% higher in Melfort than those of the average Saskatchewan farm.

In the Melfort District the value of farm buildings per acre of land amounted to \$10. The corresponding figure for Saskatchewan for 1926 was \$4.68. Building investment equalled 30% of the total real estate investment on Melfort farms in 1926 and 20% of the value of all real estate of Saskatchewan farms for the same year.

A feature of this table is the large investment in buildings and machinery on Melfort farms, which is indicative

TABLE NO. XL

AVERAGE FARM CAPITAL FOR SASKATCHEWAN AND
MELFORT AREA - 1926

	Saskatchewan 1926 117,781 Farms		Melfort 1926 106 Farms	
	Average Value per Farm	Per Cent of Total Capital	Average Value per Farm	Per Cent of Total Capital
	\$	%	\$	%
Land	6,951	60.9	15,562	63.1
Buildings	1,825	16.0	4,651	18.9
Machinery & Equipment	1,439	12.6	2,492	10.1
Livestock	1,190	10.5	1,938	7.9
Total	11,405	100.0	24,643	100.0

of the financial success of the farmers in that area.

BUILDINGS ON MELFORT FARMS 1926

The high average value of dwellings on Melfort farms is worthy of especial notice. Of these farm dwellings 30% were estimated to be worth \$3,000 or over. The total range of values was from \$250. to \$10,000. The large percentage of total building value invested in dwellings is also noteworthy. The large percentage of Melfort buildings were erected during the years 1914-1920. Crops were good and prices were high during this period. Building construction can usually be considered a fair index of a districts prosperity and usually follows years of good crops and remunerative prices. This is shown in Table No. XL.

MACHINERY AND EQUIPMENT ON MELFORT FARMS

Melfort farms have an average machinery and equipment investment of \$2,492 - equal to 10.1% of the estimated value of all farm capital. The use of machinery is closely associated with progress in agriculture and with scarcity of farm labor. In Saskatchewan land is relatively cheap and labor is expensive, farming is extensive and machinery of large capacity is the most common type found. In this area, not considering tractors, plows had the largest average value per

TABLE NO. XLI

BUILDINGS ON MELFORT FARMS - 1926

Building	Farms With This Building	No. of Buildings	Total Value of Buildings	Average Value per Building	Average Value per 106 Farm	Per Cent of Total Value of All Buildings
			\$	\$	\$	%
Operator's House	106	110	259,050	2,355	2,443	52.5
Main Barn	106	106	125,504	1,184	1,184	25.5
Other Barns	26	26	6,422	247	61	1.3
Implement Shed	39	48	19,056	397	180	3.9
Poultry House	71	72	8,352	116	79	1.7
Hog House	27	27	7,047	261	67	1.4
Garage	58	58	6,844	118	65	1.4
Graneries & Bins	104	412	44,496	108	452	9.7
Other Buildings	53	68	12,716	187	120	2.6
All Buildings	106	---	489,487	---	4,651	100.0

farm. On an average there were 2.4 plows per farm, valued at \$92.80 each or \$226. per farm; Drills had an average value of \$140. per farm; Binders \$202. per farm; Wagons \$184. per farm; Harness \$155. per farm. There were 58 tractors in the area surveyed, having an average value of \$1,342 per unit - an average of \$620. per farm. Separators were not valued. Autos and trucks numbered 71 - an average of \$414 per unit or \$277. per farm. There were 15 farms with electric light plants, having an average value of \$323.

The total equipment investment on 106 Melfort farms was \$264,142.

LIVESTOCK ON MELFORT FARMS

Conditions in the Melfort area are well adapted to livestock enterprises, but on many of the farms livestock are not materially greater than in many prairie areas where cattle raising is less suitable. On many of the farms specialized grain growing is the type of farming followed and livestock kept do not exceed the requirements of the farm. Livestock values in Melfort represent 7.9% of the total farm capital, while the average for the province for the same year, namely 1926, was 10.5%.

Table No. XLIII shows that the work horse is the most important animal on Melfort farms. The average farm had 13 horses, having an average total value of \$1,296, or an average of \$100. per animal. Horse values constituted 66.9% of the total value of all livestock.

TABLE NO. XLII

LIVESTOCK SUMMARY OF 106 FARMS IN THE MELFORT AREA

	No. of Farms Having Stock	All Farms Having Stock			Average per Farm Having Stock		Average per Farm 106 Farms		Per Cent of Total Livestock Value
		Total No. of Stock	Total Value	Value per Unit	No.	Value	No.	Value	%
			\$	\$		\$		\$	
Horses	105	1,372	137,401	100.3	13.1	1,309	12.9	1,296	66.9
Cattle	103	1,531	48,962	32.0	14.9	475	14.4	462	23.8
Swine	96	1,052	14,708	14.0	11.0	153	9.9	139	7.2
Sheep	3	22	209	9.5	7.3	70	0.2	2	0.1
Poultry	101	5,143	3,758	0.7	50.9	37	48.5	35	1.8
Bee-hives	2	22	430	19.5	11.0	215	0.2	4	0.2
	---	-----	205,468	-----	-----	---	---	1,935	100.0

Small herds of cattle were customary in the area the typical herd being 8 to 10 head of all classes. The average herd consisted of 14 cattle. The average value per animal was \$32. Cattle constituted 23.8% of the total value of livestock. Swine and poultry were kept on most farms, while sheep were of no significance in the district.

Receipts from the sale of livestock products constituted only 1.6% of the total farm receipts.

CASH RECEIPTS AND EXPENSES ON 106 MELFORT FARMS

Total cash receipts varied from \$2,625 for the smallest to \$18,658 for the largest farms. The percentage of receipts from crop sales increased with size of farm, being 83% for the smallest and 90% for the large farms. On the average farm receipts from cash crops were 88.9% of total receipts and the average income from this source \$6,002. Livestock sales and threshing receipts constituted 8.6% of total receipts. Other sources of income were negligible. Wheat sales constituted approximately 90% of the income from crop sales. The average gross cash income of the Melfort farms was \$6,752. This is shown in Table No. XLIII.

The total operating expenses on 106 farms was \$276,237 - an average of \$2,606 per farm. Total expenses which consists of the above plus new buildings, cash rent and livestock bought were \$299,275 or \$2,823 per farm. Of the operating expenses on Melfort farms 40% consisted of labor and its board,

TABLE NO. XLIII

TOTAL CASH RECEIPTS ON 106 MELFORT FARMS - 1925-26

Item	Total	No. of Farms Having Item	Average per Farm Having Item	Average for 106 Farms	Per cent of Total Receipts					
	\$		\$	\$	Crops <td data-bbox="688 857 829 898">636,235</td> <td data-bbox="940 865 1003 898">106</td> <td data-bbox="1192 865 1287 906">6,002</td> <td data-bbox="1402 865 1497 906">6,002</td> <td data-bbox="1633 865 1707 906">88.9</td>	636,235	106	6,002	6,002	88.9
Livestock Products	11,606	78	149	109	1.6					
Livestock Sales	40,038	99	404	378	5.6					
Garden Produce	315	12	26	3	---					
Outside Labor	4,831	30	161	46	0.7					
Threshing Receipts	21,260	27	787	201	3.0					
Hail Insurance	1,314	4	328	12	0.2					
Other	75	1	75	1	---					
	715,726	106	6,752	6,752	100.0					

an average of \$105. per farm; Threshing was the next largest expense - averaging \$353 per farm; Machinery bought averaged \$224 per farm; Taxes averaged \$190 per farm; Tractor costs \$111 and Twine \$109.

The average gross cash income of the Melfort farmer was \$6,752. The average cash outlay, including all items with the exception of unpaid labor, was \$2,663, leaving an average net cash income of \$4,089.

Labor incomes greater than the average for the district were obtained by 46 of the 106 farmers. The average labor income for this group was \$4,538. Labor incomes less than the average were obtained by 60 farmers whose average labor income was \$527. There were 15 farmers with negative labor incomes, showing that they received nothing for their labor and management and lacked enough income to make interest on their investment. The average labor income for all farms was \$2,362. The lowest labor income was -\$2,124 and the highest +\$11,105.

BELBECK

The average size of Belbeck farms in 1926 was 487 acres. The typical farm was 480 acres - 34 farms out of 119 being of this size. Real estate had an average value of \$60. per acre. The average size for Saskatchewan farms in 1926 was 390 acres and the average value of real estate \$22.50 per acre. Belbeck land values per acre were more than 2-1/2 times as great as the average value for Saskatchewan.

TABLE NO. XLIV

AVERAGE FARM CAPITAL SASKATCHEWAN 1926 - BELBECK 1926

Item	Saskatchewan		Belbeck	
	Average Value per Farm	Per Cent of Total Cap- ital	Average Value per Farm	Per Cent of Total Cap- ital
	\$	%	\$	%
Land	6,951	60.9	22,810	66.4
Buildings	1,825	16.0	6,483	18.9
Machinery & Equipment	1,439	12.6	2,970	8.6
Livestock	1,190	10.5	2,105	6.1
Total	11,405	100.0	34,368	100.0

COMPARISON OF AVERAGE FARM CAPITAL - SASKATCHEWAN 1926
AND BELBECK 1926

In glancing over Table XLIV one can readily see that Belbeck farms have a very high average capital investment, due largely to the high real estate values in that area. The farms are large and therefore require a large machinery investment. The average farm had an area 20% larger than the average Saskatchewan farm in 1926. Land investment on the average farm was more than three times the average investment for Saskatchewan, while building values were almost four times as large. Machinery investment was more than double and livestock investment slightly less than double that of the average Saskatchewan farm.

In the Belbeck district the value of farm buildings per acre of farm land amounted to \$13.30, the corresponding figure for the whole of Saskatchewan for the same year -being \$4.68. Buildings investment equalled 22% of the total real estate value of Belbeck farms and in this respect was considerably less than for Melfort farms, where the corresponding figure was 30%. The average capital of the smallest farms was \$15,571 and the largest farms \$76,853. Real estate investment made up 85.3% of the total capital investment on Belbeck farms. Machinery and equipment 8.6% and livestock 6.1%.

BELBECK FARM BUILDINGS

The high average values of dwellings and barns would indicate that Belbeck farms are well equipped with these build-

ings. Operators house and main barn combined equalled 80.4% of the total average investment in buildings. Granaries and implement sheds equalled 12.2%, leaving 7.4% to be divided among the smaller buildings such as garage, poultry house, hog house, etc.

As is shown in Table No. XLV the average value of operator's house \$5,053 is very large for a farming community as is the average of \$2,161 for the main barn. These figures would indicate that Belbeck farmers are prosperous, as building and machinery investments are a fair indication of the prosperity of any agricultural district.

MACHINERY AND EQUIPMENT

Belbeck farms had an average machinery and equipment investment of \$2,970, which equalled 8.6% of the value of all farm capital, the total investment of all farms in equipment was \$353,460. Tractors were used on 62 farms, having a total value of \$89,049, an average of \$1,626 per machine - being equal to 25% of the total investment in equipment. Autos and trucks constituted 15% of the investment. Plows had an average value of \$148 per farm; Drills \$175 per farm; Disc harrows \$141 per farm; Binders \$210 per farm; Wagon gears \$234 and Harness \$172 per farm. These constitute the largest equipment investments - the investment in other implements and equipment being much less in proportion to the above figures. There were 41 farms out of 119 with electric light plants having an aver-

TABLE NO. XLV

BELBECK FARM BUILDINGS - 1926

Building	Farms With This Build- ing	No. of Build- ings	Total Value of Build- ings	Average Value per Build- ing	Average Value per 119 Farms	Per Cent of Total Value of all Buildings
			\$	\$	\$	%
Operator's House	119	120	363,360	3,028	3,053	47.1
Other Houses	10	10	10,100	1,010	85	1.3
Main Barn	119	120	257,160	2,143	2,161	33.3
Other Barns	17	17	6,987	411	59	0.9
Implement Shed	51	51	24,633	483	207	3.2
Poultry House	71	71	15,833	223	133	2.1
Hog House	21	21	4,305	205	36	0.6
Garage	62	62	10,850	175	91	1.4
Silo	10	10	2,410	241	20	0.3
Granaries and Bins	119	270	69,390	257	584	9.0
Other Buildings	42	42	6,468	154	54	0.8
All Buildings	119	---	771,496	---	6,483	100.0

age value per unit of \$527. and an average per farm of \$185. The high average machinery investment would indicate that some of the larger farms must have a very high investment in this class of farm capital. Where farming is carried on on a large scale and labor is expensive this may be permissible. However rapid depreciation in machinery values and high cost of replacements makes it necessary for a farmer to consider the amount of use he will get out of an implement in order to be sure that the increased value of product due to its use will more than make up the capital outlay and also interest on the investment.

LIVESTOCK ON BELBECK FARMS

Belbeck is pre-eminently a wheat growing area and consequently the livestock kept on farms in the district is little more than is required for actual farm needs. Pasture land is not available to any great extent as wheat growing brings greater returns per acre than could be obtained from livestock enterprises. The high land values in the district makes it necessary to use the land so as to bring the largest possible income.

The work horse is the most important animal on the Belbeck farms. The average number per farm in 1926 was 13.6. The total value of horses per farm averaged 1,581, while the average value per horse was \$115.90. Investment in horses constituted 75% of the total livestock investment.

The average number of cattle per farm was 8.9, having

a total average value of \$387. Cattle made up 18.4% of total livestock investment. Swom swine were kept on about half of the farms; Sheep were kept on 3 farms; Most of the farms had a flock of poultry.

By referring to Table No. XLVI it will be seen that the total value of livestock for the district, which included 119 farms, was \$250,520 and represented 6.1% of the total farm capital. The low percentage is due to the type of farming followed.

CASH RECEIPTS AND EXPENSES ON BELBECK FARMS

The bulk of the income of the Saskatchewan grain farmer is obtained from the wheat crop. At Belbeck 92.1% of the farmers income is obtained from cash crops, and 95% of the income from cash crops come from wheat; 5.9% of income comes from livestock sales and threshing receipts; 1.6% from livestock products and the other figures are negligible. The average gross cash income of the Belbeck farmer is \$7,739, as given in Table No. XLVII.

Total operating expenses on 119 Belbeck farms was \$333,872, the average per farm being \$2,805. Total expenses, consisting of the above plus new buildings, cash rent and livestock bought was \$373,689 - an average of \$3,140 per farm. As in Melfort labor and the board of hired labor constituted the biggest farm expense averaging \$936 per farm; Threshing expenses averaged \$329 per farm; New machinery \$253 per farm; Tractor costs averaged \$112. per farm and Twine \$108 per farm.

TABLE NO. XLVI

NUMBERS AND VALUES OF LIVESTOCK ON 119 BELBECK FARMS

Items	No. of Farms Having Stock	All Farms Having Stock			Average per Farm Having Stock		Average per Farm-119 Farms		Per Cent of Total Live-Stock Value
		Total No. of Stock	Total Value	Value per Unit	No.	Value	No.	Value	
			\$	\$		\$		\$	%
Horses	119	1,624	188,233	115.9	13.6	1,581	13.6	1,581	75.1
Cattle	114	1,059	46,115	43.5	9.3	405	8.9	387	18.4
Swine	54	399	6,230	15.6	7.4	115	3.4	52	2.5
Sheep	3	166	2,181	13.1	55.3	727	1.4	18	0.8
Poultry	115	8,188	7,761	.9	71.2	67	69.0	67	3.2
---	-----		250,520	---	-0-	---	---	2,105	100.0

TABLE NO. XLV11

TOTAL CASH RECEIPTS 119 BELBECK FARMS - 1925-26 CROP YEAR

Item	Total	No. of Farms Having Item	Average per Farm Having Item	Average for 119 Farms	Per Cent of Total Receipts 119 Farms
	\$		\$	\$	%
Crops	847,640	119	7,123	7,123	92.1
Livestock Products	14,781	103	144	124	1.6
Livestock Sales	31,575	109	290	265	3.4
Threshing Receipts	23,268	29	803	196	2.5
Outside Labor	1,574	10	157	23	0.2
Cash Rent	1,000	1	1,000	8	0.1
Garden Produce	890	17	52	7	0.1
Pasture Use	180	2	90	2	---
Total	920,908	119	7,709	7,738	100.0

Taxes averaged \$180.

The average gross cash income of Belbeck farmers was \$7,739. The average cash outlay, including all items, with the exception of unpaid labor was \$3,043, leaving an average net cash income of \$4,696.

Minus labor incomes were obtained by 7.6% of the Belbeck farmers 92.4% received a plus labor income. The average labor income for all farms was \$2,349. Out of 119 farms 67 made less than this amount - the average being \$890. The lowest labor income was -\$1590 and the highest +\$9297. The lowest labor income and the lowest average labor income was made on the smallest sized farms, while the highest labor income and the highest average labor income was made on the largest farms. This is true in good years, while in poor years the reverse is likely to be the case, for with poor crops and small income, the interest on the large capital investment in the large farms will result in a large - labor income. Small farm business seldom bring large profits or suffer serious loss, while with large farms large profits and large losses are more apt to occur.

ALAMEDA

The average size of the Alameda farms surveyed in 1927 was 563 acres which is considerably larger than the average sized farm in either the Belbeck or Melfort districts.

TABLE NO. XLVIII

AVERAGE CAPITAL PER FARM - SASKATCHEWAN 1921 - 1926

Item	1921 119,451 Farms Averaging 368.1 Acres	1926 117,781 Farms Averaging 389.7 Acres	Decrease Per Farm
	\$	\$	\$
Land	8,878	6,951	1,927
Buildings	1,812	1,825	+13
Equipment	1,479	1,439	40
Livestock	1,645	1,190	455
Total	13,814	11,405	2,409

Census of Saskatchewan 1926, pp 198,199 - Tables 55 and 59

From 1921 to 1926 Saskatchewan farms increased in size by 22 acres per farm. During this period the number of farms decrease 1.4%, while the total farms area of the province increased 4.4%. Land values decreased 22.8% during the five years. The decrease in total farm capital averaged 17.4%. Tables Nos. XLVIII and XLIX will give a comparison of the average capital for Saskatchewan farms during this period.

Table No. XLIX is presented to permit of comparison of the three areas surveyed in Saskatchewan. Although Alameda farms are larger than those of the other two areas, all classes of capital are lower, the greatest difference being found in the case of land and buildings. Farm land, including buildings, had an average value of \$23. per acre as compared with \$60 for the Belbeck area and \$43 for the Melfort area. The proportion of farm capital invested in the various classes differ little as between areas, the percentage invested in equipment and livestock is higher in Alameda than either Belbeck or Melfort. The percentage invested in land was higher in Belbeck than in the other two areas. Total capital on the average Alameda farm was just one half of the total capital invested on the average Belbeck farms and approximately two-thirds of the total capital invested on the average Melfort farm. The average values per farm at Alameda exceeded the average for Saskatchewan farms as follows: Land 45%; Buildings 60%; Equipment 26% and Livestock 68%.

TABLE NO. XLIX

AVERAGE CAPITAL - BELBECK 1926 - MELFORT 1926 - ALAMEDA 1927

Item	Belbeck 119 Farms Averaging 487 Acres		Melfort 106 Farms Averaging 465 Acres		Alameda 100 Farms Averaging 563 Acres	
	Average Value Per Farm	Per Cent Of Total Capital	Average Value Per Farm	Per Cent Of Total Capital	Average Value Per Farm	Per Cent Of Total Capital
	\$	%	\$	%	\$	%
Land	22,810	66.4	15,562	63.1	10,112	60.0
Buildings	6,483	18.9	4,651	18.9	2,923	17.4
Equipment	2,970	8.6	2,492	10.1	2,001	11.9
Livestock	2,105	6.1	1,938	7.9	1,811	10.7
Total	34,368	100.0	24,643	100.0	16,847	100.0

ALAMEDA FARM BUILDINGS

The figures in Table No. 1 would indicate that the Alameda farm buildings, while considerably above the average for Saskatchewan farms, are not as substantial or costly as those in the Belbeck and Melfort areas. The average farm dwelling had a value of \$1,596, the range in values being from \$50 to \$6,000. Buildings, other than operators house, and main barn, were low in value. A feature of all three areas which is worthy of note is the lack of implement shed for housing the farm machinery. Saskatchewan farms have a large investment in machinery, and, in order to protect this investment from rapid deterioration due to lying out under the weather, the erection of some type of implement shed on each and every farm should pay large dividends on the necessary small cash outlay.

EQUIPMENT ON ALAMEDA FARMS

The average total value of equipment on Alameda Farms was \$2001. In practically every case the average value per unit and the total value per farm was considerably less than for either of the other two areas. Plows had an average value per farm of \$109 as compared with \$148 for Belbeck and \$226 for Melfort. Drills had a value of \$99 as compared with \$175 and \$140. Tractors had a value of \$643 as compared with \$1,626 and \$1,342. The same holds good in practically every case. The total investment in equipment in Alameda was \$200,076 as compared with \$353,460 for Belbeck and \$264,142 for Melfort.

TABLE NO. 1

ALAMEDA FARM BUILDINGS - 1927

Item	Farms With This Build- ing	No. of Build- ings	Average Value Per Build- ing	Average Value Per Farm 100 Farms	Per Cent of Total Value of all Buildings
			\$	\$	%
Operator's House	100	104	1,396	1,451	49.7
Main Barn	98	99	946	936	32.0
Other Barns	12	13	242	32	1.1
Implement Shed	25	27	260	70	2.4
Poultry House	35	35	119	42	1.4
Hog House	19	20	88	18	0.6
Garage	36	36	93	34	1.2
Granaries and Bins	97	404	78	314	10.7
Silo	1	1	500	5	0.2
Other Buildings	17	19	113	21	0.7
All Buildings	100	---	---	2,923	100.0

LIVESTOCK

Natural conditions in the Alameda area are suitable for livestock enterprise, but like the other areas, cash crops constitute the chief source of income. In Alameda, however, income is supplemented to a considerable extent by sale of livestock and livestock products. The number of head of cattle per farm is larger for the Alameda area, as is the average total value per farm - being \$526 per farm for Alameda - \$387 for Belbeck and \$462 for Melfort.

The total number of horses on 100 Alameda farms were 1,199, having a total value of \$115,365 - equal to 63.7% of the value of all livestock.

Cattle were kept on 97 farms, the total number being 1,615 and the total value \$52,583.

Swine were kept on 67 farms. Sheep on 8 farms and poultry on 97.

As given in Table No. LI the Total value of livestock on 100 Alameda farms was \$181,128. - being equal to 10.7% of the total farm capital.

CASH RECEIPTS AND EXPENSES ON ALAMEDA FARMS

Total cash receipts varied from \$3,640 on the smallest farms to \$10,084 on the largest. Percentage of total receipts derived from crop sales were slightly larger on the large farms - being 81.4% on the smallest farms and 83.9% on the largest.

TABLE NO. L1

NUMBERS & VALUE OF LIVESTOCK ON 100 ALAMEDA FARMS - 1926-27

Item	No. of Farms Having Stock	All Farms Having Stock			Average per Farm Having Stock		Average per Farm - 119 Farms		Per Cent of Total Live-Stock Value
		Total No. Of Stock	Total Value	Value per Unit	No.	Value	No.	Value	
			\$	\$		\$		\$	%
Horses	100	1,199	115,365	96.2	12.0	1,154	12.0	1,154	63.7
Cattle	97	1,615	52,583	32.6	16.6	542	16.2	526	29.0
Swine	67	287	6,070	21.1	4.3	91	2.9	61	3.4
Sheep	8	342	3,348	9.8	42.7	418	3.4	33	1.8
Poultry	97	5,490	3,732	0.7	56.6	38	54.9	37	2.1
Beehives	1	2	30	15.0	2.0	30	----	--	---
	100	-----	181,128	-----	-----	--	-----	1,811	100.0

Livestock sales and livestock products constituted 11.8% of total receipts; Threshing receipts accounts for 4.6% of the total and other sources of income were negligible. As shown in Table No. LII, the average gross cash income on 100 alameda farms was \$5,978.

Total operating expenses on 100 farms was \$254,102 an average of \$2,541 per farm. Total expenses, including new buildings, cash rent and livestock bought, in addition to the above was \$277,356 - an average of \$2,774 per farm. Of the operating expenses 34.8% represented the cost of labor and its board. This is not as large as for Belbeck and Melfort, which were 38.5% and 40.0% respectively, but is the largest cost item. These percentages do not include the estimated value of the farm operator's labor and management.

Machinery bought was the next largest item, being 16.4% of the total operating expenses; Threshing accounted for 15.7% - averaging \$398 per farm and Taxes averaged \$198. Seed bought averaged \$124 per farm and binder twine \$87. The average gross cash income was \$5,978, the average total cash outlay, including all items, with the exception of unpaid labor was \$2,576, leaving an average net cash income of \$3,402.

Labor incomes obtained by Alameda farmers varied from -\$306. to +\$7,244. These incomes do not show such a wide variation as did those of Belbeck and Melfort. In the area 44 farms had labor incomes greater than the average. These had an average labor income of \$3,726. The 56 farms having

TABLE NO. L11

TOTAL CASH RECEIPTS 100 ALAMEDA FARMS - 1926-27 CROP YEAR

Item	Total	No. of Farms Having Item	Average Per Farm	Average For 100 Farms	Per Cent of Total Receipts 100 Farms
	\$		\$	\$	%
Crops	488,920	100	4,890	4,890	81.8
Livestock Products	20,235	89	227	202	3.4
Livestock Sales	50,114	96	522	501	8.4
Threshing Receipts	27,639	32	864	277	4.6
Outside Labor	7,710	65	119	77	-
Garden Produce	419	16	26	4	-
Pasture Use	409	7	58	4	1.8
Breeding Fees	1,337	8	167	13	-
Hail Insurance	635	3	212	6	-
Others	360	-	-	4	-
Total	597,778	100	-	5,978	100.0

a labor income of \$768. The fact that only one farmer had a negative labor income indicates that farming operations were very successful in the Alameda district during the 1926-27 crop year.

(D) ALBERTA

Alberta, like her sister province Saskatchewan, became a province of the Dominion on September 1st, 1905. This province is better suited to mixed farming than is Saskatchewan, but Alberta farmers go in for grain growing on quite an extensive scale, particularly in the central and eastern parts of the province and in the Peace River area. The southern part of the province does not receive a very heavy rainfall and consequently the area is better suited to ranching than it is to grain growing. North of Lethbridge there are a couple of irrigation projects, and these sections are largely given over to the cultivation of tam hay, sugar beets, etc. The northern part of the agricultural area of the province is not unlike northern Saskatchewan and is typical mixed farming country. The Peace River Country is largely a grain growing area and produces as large yields of wheat and oats as are found anywhere in western Canada.

Alberta has a land area of 161,872,000 acres. The occupied area in 1926 was 28,572,987 acres or 17.7% of the total land area. The improved acreage was 13,204,114 acres - equal to 46.4% of the occupied land. In 1926 Alberta had

77,130 farms averaging 370.5 acres in size.

TABLE No. LIII

DISTRIBUTION OF ALBERTA FARMS ACCORDING TO SIZE
1926

<u>Size of Farms (acres)</u>	<u>No. of Farms</u>
All farms	77,130
Under 50	1,987
51-160	28,949
161-320	23,690
321-480	9,705
481-640	6,288
641-800	2,473
801-960	1,425
961+	2,613

The value of all livestock on Alberta farms in 1926 was \$94,972,979. Domestic animals to a value of \$92,303, were reported on 70,064 farms - an average of \$1,317. per farm.

Here, as in Saskatchewan, horse values constitute the largest proportion of the farmer's investment in livestock, 53.6% of the value of all livestock being in this class of stock - 34.1% was in cattle; 7.8% in swine and 4.8% in sheep.

The number of head of cattle per farm having the above class of stock was 19.53, which was much larger than the corres-

TABLE NO. LIV

LIVESTOCK ON ALBERTA FARMS - 1926

Item	No. of Farms Having Item	No. of Animals	Average No. Per Farm Having Item	Total Value	Value per Farm Having Item	Average Value Per Animal
				\$	\$	\$
Horses	68,669	784,302	11.42	49,401,118	719	62.98
Mules	-	3,066	-	203,676	-	66.43
Cattle	59,848	1,169,012	19.53	31,467,130	525	26.92
Sheep	4,524	504,849	111.59	4,424,017	977	8.76
Swine	42,575	701,277	16.47	6,807,888	159	9.71
Poultry	59,856	6,127,541	102.38	2,625,596	43	.43

ponding figure for either Saskatchewan or Manitoba. The average number of horses per farm was greater than for Manitoba but less than Saskatchewan. Sheep are raised much more extensively in Alberta than in the other provinces. Swine are also raised to a greater extent than in Manitoba or Saskatchewan. In 1926 livestock constituted 12.0% of the average total farm capital on Alberta farms. By referring to Table LIV it is evident that livestock plays a greater part in the set up of the farm business in Alberta than it does in either of the other two provinces.

(I) VALUE OF FARM PROPERTY BY CLASSES

Table No. LV and Bar Diagram No. V, like similar ones for Saskatchewan and Manitoba, compares the total values of farm property in the various census years and also gives the percentage distribution between the various forms of farm capital. Trend in percentage distribution is also shown.

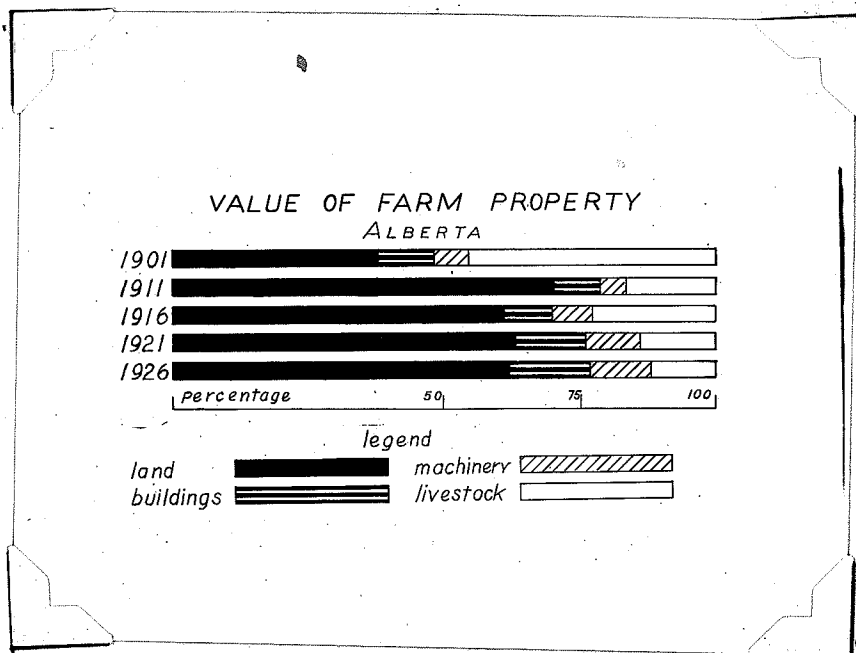
As in Saskatchewan, there was a large increase in the total value of farm property from 1901 to 1911 amounting to \$458,000,000; from 1911 to 1921 there was another large increase, the total value of farm property being practically doubled during the ten years. From 1921 to 1926 there was a decrease of \$178,000,000 in total value of farm property. This decrease came about through a large decrease in the value of land and the value of livestock during the five years. The value of land fell \$120,000,000 and the value of livestock \$43,000,000. During the same period value of buildings decreased slightly as did machinery values.

TABLE NO. LV

VALUE OF FARM PROPERTY - ALBERTA

<u>Year</u>	<u>Total</u>	<u>Land</u>	<u>Build- ings</u>	<u>Mach- inery</u>	<u>Livestock</u>
	<u>\$</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1901	34,699,781	37.92	10.34	6.28	45.46
1911	492,636,008	69.98	8.25	4.87	16.89
1916	599,716,819	61.06	9.18	6.83	22.91
1921	968,437,018	63.04	12.57	10.20	14.19
1926	790,347,084	62.03	14.83	11.11	12.02

BAR DIAGRAM No. V.



(2) THE TREND WITHIN CLASSES

In the case of land buildings and machinery the trend of the percentage of total value has been definitely upward. The trend in livestock has been downward. The percentage of total capital in land increased in the 25 years from 1901 to 1926 from 37.9% to 62.03%. The highest percentage for land was in 1911 when a percentage of 69.98% was recorded. This was due partly to high land values and partly to the fact that settlers had taken up a large amount of land, and had not been able to increase their other forms of farm capital to as great an extent up to that time. Building percentages increased from 10.34% in 1901 to 14.83% in 1926 the percentages in 1911 and 1916 being lower than in 1901. Machinery percentages increased from 6.28% in 1901 to 11.11% in 1926 with a decrease to 4.87% in 1911.

Livestock percentages decreased from 45.46% in 1901 to 12.02% in 1926. It is not to be assumed that less livestock were kept in Alberta in 1926 than in 1901, the implication here is that the percentage of the total value of farm property in livestock was much lower as compared with other classes of capital in 1926 than it was in the former year.

From 1901 to 1926 the total value of property per farm increased from \$3,661 to \$10,247, as will be seen by Table No. XVI. During the same period the value per acre increased from \$12.69 to \$27.66. As was the case in Table LV, total value per farm and per acre was higher in 1921 than in 1926.

TABLE NO. LVI

AVERAGE VALUE OF PROPERTY PER FARM AND PER ACRE

FOR CENSUS YEARS 1901-26

ALBERTA

Census Year	Total		Land		Buildings		Machinery		Livestock	
	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1901	3,661	12.69	1,388	4.81	379	1.31	230	.80	1,664	5.77
1911	8,134	28.37	5,693	19.86	671	2.34	396	1.38	1,374	4.79
1916	8,822	26.00	5,387	15.88	810	2.39	603	1.77	2,022	5.96
1921	11,675	33.06	7,360	20.84	1,468	4.16	1,191	3.37	1,656	4.69
1926	10,247	27.66	6,357	17.16	1,520	4.10	1,139	3.07	1,231	3.33

The large increase in the value of land per farm is due partly to increased value per acre and partly to increase in acres per farm. In 1901 the average size farm in Alberta was 288.6 acres while in 1926 it was 370 acres - an increase of 81.4 acres per farm. The increased values of buildings and machinery is the result of better buildings and larger and more efficient machines. Decrease in the value of livestock per farm and per acre is the result of decreases in the number of stock kept per farm and to decreases in market value. The number of cattle on Alberta farms decreased from 1,401,000 in 1921 to 1,369,000 in 1926, a decrease of approximately 3 head per farm. In 1921 Alberta's cattle had a total value of \$52,300,000, while in 1926 the value of all cattle was \$31,467,000.

(3) THE AVERAGE CAPITAL BY CENSUS DIVISIONS

The areas corresponding to the Census Divisions having the largest average capital per farm in 1926 is found in the southwestern and central parts of the province, as well as in the east. The southeastern part of the province had an average capital per farm slightly lower than the average for the province, but considerably greater than the average capital per farm in the northern and western parts of the province. The areas having the largest average capital per farm were Census Divisions Nos. 4 and 6, given in Table No. LVII, located around Calgary. The average capital per farm for the province in 1926 was \$10,247.

TABLE NO. LVII

AVERAGE CAPITAL PER FARM BY CENSUS DIVISIONS - 1926

ALBERTA

Census Divisions	No. of Farms	Total	Land	Buildings	Implements	Livestock
		\$	\$	\$	\$	\$
Alberta Division	77,130	10,246	6,356	1,520	1,138	1,231
1	3,337	9,329	5,479	1,352	954	1,542
2	4,542	14,767	9,844	1,844	1,242	1,835
3	2,118	9,424	4,930	1,488	1,011	1,993
4	4,304	19,005	13,098	2,473	1,716	1,716
5	5,719	9,196	5,546	1,383	1,119	1,147
6	6,784	18,724	12,666	2,532	1,771	1,754
7	7,071	10,163	6,233	1,552	1,177	1,199
8	9,059	11,468	7,075	1,833	1,255	1,304
9	3,847	6,393	3,665	1,041	784	901
10	9,059	8,616	5,069	1,280	1,151	1,115
11	6,800	9,764	5,855	1,698	1,137	1,073
12	1,621	3,366	1,618	674	507	566
13	3,133	4,035	1,925	696	675	738
14	6,081	4,740	2,581	768	728	662
15	818	4,118	1,993	636	677	811
16	2,796	5,462	3,086	785	783	807
17	1	552	380	100	12	60

THE PEACE RIVER AREA

The Peace River country has been spoken of as "Out last great West." It is a vast area having approximately ninety thousand square miles available for settlement. This is almost twice the present settled area of Manitoba. Situated two hundred and fifty miles north and west of Edmonton, it is not a continuation of the Western Prairie Farming Belt, but rather a separate tract of farming land separated from all other settlement by a barrier of untillable forest land, lakes and swamps. In 1926 there were 2,796 farms in the area. Large numbers of settlers have gone into the country in the last five years, so the number of farms are doubtless very much greater at the present time. The average sized farm in 1926 was 306.5 acres. The population of the area for the same year was 11,352.

The total value of all farm property in 1926 was estimated at \$15,274,234 divided as follows:

Land	\$8,629,204
Buildings	2,195,425
Machinery	2,191,803
Livestock	2,257,802

LIVESTOCK ON PEACE RIVER FARMS, 1926

Table No. LVIII shows that the total number of horses on 2,438 Peace River farms in 1926 was 20,280, having a total value of \$1,377,116, which was equal to 61.1% of the total value of all livestock. Cattle were kept on 1,324 farms, the total

TABLE NO. LVIII

LIVESTOCK ON PEACE RIVER FARMS - CENSUS 1926

<u>Items</u>	<u>Farms Reporting</u>	<u>Number of Stock</u>	<u>Total Value</u>
			⌘
Horses	2,438	20,280	1,377,116
Cattle	1,824	22,372	630,605
Sheep	45	1,673	15,185
Swine	1,292	16,911	161,000
Poultry	1,953	148,798	68,596

being 22,572 and the total value \$630,605 - equal to 27.9% of the value of all livestock; Sheep were reported on 45 farms, the total value being \$15,185; Swine, valued at \$161,000 were reported on 1,292 farms; Poultry were kept on 1,953 farms and had a total value of \$68,596.

The cash receipt from crops sold on all farms in 1925 was \$2,812,390. Livestock sales totalled \$571,509; Animal products were sold to the value of \$356,838. It will be seen that receipts from cash crops were more than three times the receipts from livestock sales and livestock products combined.

The average value of farm property per acre of occupied land in 1925-26 was \$17.82 and was made up as follows:

Land	\$10.07
Buildings	2.56
Machinery	2.56
Livestock	2.63

During the summer of 1930 the Canadian Pioneer Problems Committee conducted a survey in the Peace River Area along with similar surveys in the Swan River and Dauphin areas in Manitoba. A survey was also conducted in Saskatchewan, but this data was not available for the purpose of this report.

The following is a summary of farm capital on 332 Peace River farms surveyed last summer.

INITIAL CAPITAL OF PEACE RIVER FARM OWNERS.

The average initial capital for all farms in the Peace River area was \$3283. By checking over Table LIX it will be noticed, that in the Peace River district, as in Dauphin and Swan River, the modal class is the \$1. - \$500 class - 107 farms out of 332 coming within these limits. On 31 farms - or 9.3% of all farms - an initial capital of \$5,000 or over was reported. The average initial capital for all farms, namely \$3,283, is considerably more than twice that of the Swan River area. This high average can be at least partly accounted for by the fact that a number of settlers going into the Peace River area had farmed previously in other parts of western Canada. These men sold their farms and moved to the Peace River with their stock and equipment. Peace River is still a pioneer region, but its progress has been speeded up due to the fact that agricultural development in western Canada had made great advancement previously to the opening up of this new territory.

PERCENTAGE DISTRIBUTION OF PRESENT CAPITAL

The average total capital showed a steady increase with increase in size of farm until the 961+ acre farms were reached when there was a decrease in total capital. It would appear from the percentages that the quality of land and buildings is not as high for these large farms as

TABLE NO. LIX

FARMS CLASSIFIED ACCORDING TO INITIAL CAPITAL

PEACE RIVER AREA

<u>Initial Capital</u>	<u>Number of Farms</u>
‡	
0 or in Debt	27
1 - 500	107
501 - 1,000	60
1,001 - 1,500	27
1,501 - 2,000	25
2,001 - 2,500	12
2,501 - 3,000	15
3,001 - 3,500	5
3,501 - 4,000	5
4,001 - 4,500	1
4,501 - 5,000	11
5,001 and over	31
No Information	6
<hr/>	
TOTAL	332

for the 960 acre farms, then too a much larger percentage of capital was invested in machinery and livestock on the 961+ acre farms than the average for all farms. The increase from \$3,765 average total capital for the 160 acre farms to \$10,005 for the 320 acre farms is worthy of notice. Large numbers of the quarter section farms are new homesteads and consequently the value of buildings, machinery and livestock is not very high. This fact accounts for the small average total capital on these farms, as given in detail in Table No. LX.

The percentage of capital in land increased with size of farm until the 961+ acre farms, when there is a considerable decrease. Building percentages decreased from 14.55% for the 160 acre farms to 9.98% for the 800 acres farms and then increased for the larger sized farms. Machinery percentages show little variation as between the different sized farms. Livestock percentages decreased regularly for the small sized farms and show a great deal of variation for the large farms.

AVERAGE VALUE OF LAND, BUILDINGS, MACHINERY & LIVESTOCK

In Table No. LXI land values per farm show an increase from \$2,049 for the 160 acre farms to \$16,985 for the 960 acre farms, the average for all farms being \$7,642. This is a high average and is almost double the average value for Dauphin and Swan River farms. Building value per farm are

TABLE NO. LX

PERCENTAGE DISTRIBUTION OF PRESENT CAPITAL - PEACE RIVER

Size of Farm	No. of Farms	Average Total Capital	Land	Buildings	Machinery	Livestock
		\$	%	%	%	%
1-160 Acres	80	3,765	54.44	14.55	13.78	17.23
161-320 "	95	10,055	59.78	14.51	13.37	12.34
321-480 "	63	13,063	61.67	13.17	14.48	10.68
481-640 "	50	18,564	64.70	12.37	14.18	8.74
641-800 "	19	23,424	66.35	9.98	12.88	10.79
801-960 "	11	25,417	66.83	14.02	12.60	6.56
961	14	24,201	60.42	11.04	15.23	13.31
Average all Farms	332	12,331	61.97	12.97	13.91	11.15

TABLE NO. LXI

AVERAGE VALUE OF LAND, BUILDINGS, MACHINERY AND LIVESTOCK BY

SIZE OF FARM

PEACE RIVER AREA

<u>Size of Farm</u>	<u>Average Total Value</u>	<u>Land</u>	<u>Buildings</u>	<u>Machinery</u>	<u>Livestock</u>
	\$	\$	\$	\$	\$
1-160 Acres	3,765	2,049	547	519	648
161-320 "	10,055	6,010	1,459	1,344	1,241
321-480 "	13,063	8,056	1,719	1,891	1,395
481-640 "	18,564	12,011	2,297	2,633	1,622
641-800 "	23,424	15,542	2,337	3,016	2,528
801-960 "	25,417	16,985	3,562	3,202	1,667
961	24,201	14,622	2,672	3,685	3,221
Average All Farms	12,331	7,642	1,599	1,715	1,374

Note: - No Reports - Land 2 - Buildings 5 - Machinery 7 - Livestock 9

are low as compared with the other two areas. Machinery values rise steadily from \$519 for the 160 acre farms to \$3,685 for the 961+ acre farms - averaging \$1715 for all farms, which is high considering that a large number of the farms surveyed were new homesteads. Livestock values show considerable variation and average \$1,374 for all farms. The average size of farm for the survey was 437.76 as compared with 323.17 acres for Swan River and 285.66 for Dauphin. This accounts for the high average total value in Peace River, as compared with the other areas.

Summing up, the value of land, machinery and livestock per farm is higher in Peace River than in Swan River and Dauphin, while building values per farm are considerably less.

WORKING CAPITAL

There were 5 tenant farms among the 332 farms surveyed and for the purpose of Table No. LXII these were omitted. Six farmers did not give the information, while 1 farmer did not have working capital. As in the Swan River and Dauphin areas, total cash expenditure was taken to represent the working capital for these farms. The average capital varied from \$264 for the 160 acre farms to \$2,854 for the 960 acre farms. The average working capital for all farms was \$1,084, as will be seen by referring to Table No. LXII.

TABLE NO. LXII
AVERAGE WORKING CAPITAL BY SIZE OF FARM
PEACE RIVER AREA

Size of Farm	No. of Farms Reporting	No. Report	No. Capital	Tenant Farms	Total Capital	Average Capital
Acrea					\$	\$
1-160	75	5	-	-	19,829	264
161-320	92	1	-	2	75,685	822
321-480	62	-	4	-	77,824	1,255
481-640	48	-	-	2	73,490	1,531
641-800	18	-	-	1	34,926	1,940
801-960	11	-	-	-	31,397	2,854
961	14	-	-	-	33,772	2,412
Total	320	6	1	5	346,923	1,084

Note - Tenant farms omitted

PERCENTAGE OF CASH INCOME FROM DIFFERENT SOURCES

Crop sales and livestock sales make up 81% of the cash receipts for all farms. Threshing receipts averaged 7.14% for all farms. Other farm products receipts averaged 3.57% and outside labor 3.51%. Crop sales and livestock sales show a great deal of variation for the different sized farms, varying from 44.6% for the 961+ acre farms to 75% for the 640 acre farms. The lowest percentage for livestock sales was 8.56% for the 960 acre farms and the highest 31.15% for the 961+ acre farms.

AVERAGE CASH RECEIPTS

It will be noted that 72 new homesteads were omitted in compiling Table No. LXIII. In most cases these homesteads yielded little or no income.

Cash receipts from crop sales varied from \$497 for the 160 acre farms to \$3,787 for the 960 acre farms - the average for all farms was \$1,622. Average livestock sales varied from \$190 to \$1,571 - the average for all farms being \$430. Sales of other farm products were small due to a limited market and averaged \$90. per farm. Receipts from threshing averaged \$180. per farm.

The total average income from all farms was \$2,524, the average cash expenditure \$1084. per farm, leaving an average net income of \$1,440, which is much larger than

BAR DIAGRAM No. VI

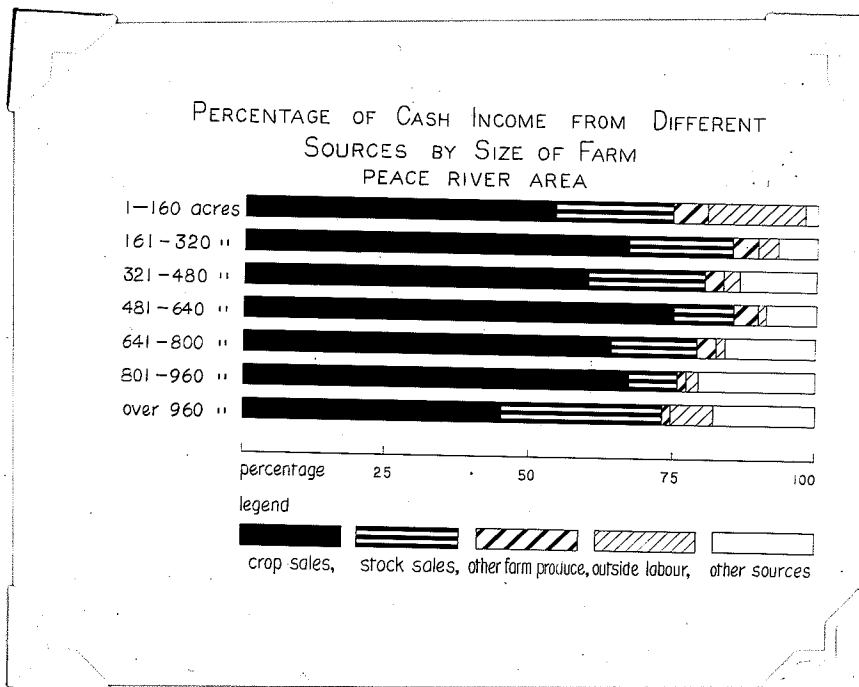


TABLE NO. LXIII

AVERAGE CASH RECEIPTS ON 260 FARMS

PEACE RIVER AREA

Size of Farm	No. of Farms	Average Acres Improved	Crop Sales	Stock	Other Farm Products	Outside Labor	Thresh- ing	Cus- tom Field Work	Other	Total
Acres			\$	\$	\$	\$	\$	\$	\$	\$
1-160	32	82	497	190	54	157	5	5	10	921
161-320	84	152	1,246	339	83	61	76	4	43	1,855
321-480	55	207	1,461	498	85	66	247	64	7	2,430
481-640	47	305	2,302	325	136	34	161	54	54	3,069
641-800	19	373	2,282	532	122	37	279	252	33	3,541
801-960	10	465	3,787	481	77	115	916	101	140	5,618
961-1,120	8	430	2,250	1,571	50	200	370	226	377	5,046
1,121	5	330	2,682	1,402	24	800	320	---	638	5,867
Average for 1 farm	-	223	1,622	430	90	88	180	54	58	2,524
No. Farms Having Item	-	260	237	211	153	72	38	29	36	260

Note: 72 New Homesteads omitted

for Swan River and Dauphin, where the respective figures were \$889.04 and \$419.30.

Table No. LXIV shows that 45% of the Peace River farmers had a + labor income, which is a much larger percentage than for either Dauphin or Swan River for the same year. Interest on the high capitol value of farm property would make for low labor incomes, but the fact that the average net income for all farms was \$1,440, together with the large average sized farms and the large investment in machinery and livestock, indicate that Peace River farmers are prospering.

Table No. LXV shows that:

- (1) Peace River has the highest average value per acre of land occupied.
- (2) Dauphin has the highest value per acre for buildings and livestock and also the highest total value for all classes of farm capitol.
- (3) Swan River has the highest investment per acre for machinery.

TABLE No. LXV

AVERAGE VALUE OF FARM PROPERTY PER ACRE
FOR THE THREE AREAS SURVEYED 1929-30

	Dauphin \$ (per acre)	Swan River \$ (per acre)	Peace River \$ (per acre)
Land	14.05	11.29	17.35
Buildings	7.80	5.83	3.70
Implements	4.30	4.56	3.84
Livestock	4.34	3.45	3.05
Total	30.49	25.13	27.94

TABLE NO. LXIV

LABOR INCOME BY SIZE OF FARM - PEACE RIVER

Size of Farm	No. of - Labor Incomes	No. of + Labor Incomes	Lowest Labor Income	Highest Labor Income	Average Labor Income
			\$	\$	\$
1-160 Acre	31	46	-1,450	+ 842	- 7
161-320 "	53	39	-2,448	+3,979	- 22
321-480 "	33	23	-3,701	+3,545	- 143
481-640 "	27	14	-4,728	+1,231	- 472
641-800 "	10	5	-7,451	+2,654	-1,117
801-960 "	6	2	-2,380	+1,652	- 838
961+	5	6	-2,992	+6,277	+ 305
Total	165	135	-	-	-

Note - Excluding 32 schedules in which data was incomplete

TABLE No. LXVI

COMPARISON OF VALUE OF FARM PROPERTY - PEACE RIVER

	Survey Records 1930 (\$ per acre)	Census Report 1926 (\$ per acre)
Land	17.35	10.07
Buildings	3.70	2.56
Machinery	3.84	2.56
Livestock	3.05	2.63
Total	27.94	17.82

These figures represent the value of the various classes of farm capital per acre of occupied land. Variations as between the two sets of figures may be due^{to} either of two causes: Either the farms surveyed were above the average for the area, or the value of farm property per acre has increased considerably during the last five years.

(3) CREDIT

No report relating to capitalization of agriculture would be complete without a discussion of credit. There are two ways of securing capital - one is to accumulate it for yourself, the other is to borrow it. When an individual borrows, credit is extended to him and capital is received. A farmers credit standing, that is his ability to borrow capital, is one of his greatest assets, and the judicious use of it is of inestimable value.

What are the advantages of borrowing? The big advantage is, that the farmer is able to obtain funds with which he can purchase equipment. He does not have to wait until he has accumulated the wherewithal to buy them. He has their use immediately and can make them produce the means of paying for themselves. It is conceivable that without credit and without the equipment which credit supplies, the farmers production might be so low as to make it extremely difficult to accumulate sufficient funds to effect the purchase. This is the advantage of credit in business and is a great asset to those who use it properly.

To borrow for a genuinely productive purpose, that is, one which will more than yield enough to pay off the debt, both principal and interest is a profitable enterprise. To borrow for consumptive purposes, except in rare cases, is bad business, for the borrowing adds nothing to earning capacity and ability to pay the loan.

In the repayment of a debt it is the principal, not

the interest, which gives the most trouble, hence borrowed funds must, of necessity, yield a product which will repay both principal and interest combined. If \$100. is borrowed to acquire a fertilizer which adds \$150. to the value of the crop, repayment will be easy - if only \$75.00 is added difficulty in payment will be experienced.

T. N. Carver in U. S. D. A. Bulletin No. 593 gives the following five rules for the use of credit:

- (1) Make sure that the purpose for which the loan is secured will produce a greater return than is necessary to repay the debt.
- (2) The contract should call for repayment at the most convenient time - i.e. at a time when the farmer is most likely to have the means of repaying it.
- (3) If a man buys a fertilizer which will be used up in one year, the loan should not run for more than one year, for he will never be able to repay it, unless he draws on some other source. In general the larger the loan the longer it should run, it should not, however, under any consideration run for longer than the life of the improvement for which it was made.
- (4) Provision should be made in the long time loan for a gradual reduction of principal - i.e. the amortization system of repayment should be used.
- (5) As low a rate of interest as possible should be secured, this will depend on the supply of and demand for loanable capital.

Mortgage companies and banks have long been the chief source of credit for the farmer. The mortgage companies supplying him with long period mortgage credit and the banks furnishing short time credit. The farmer was completely

at the mercy of these institutions, and the terms and conditions of loans made it difficult for the farmer to meet his recurring obligations of interest and principal.

From 1880 to 1900 farm mortgages were usually drawn for fifteen to twenty years, repayable by amortization or by a lump sum at maturity. Interest rates were very high, ranging from 9% to 15% largely due to scarcity of capital. About the beginning of the present century, interest rates on mortgage loans began to decline.

The farmers appealed for relief from high interest rates and long mortgage periods. The outcome was that the Dominion Government passed a law, giving the borrower the privilege of paying off his mortgage any time after five years, by giving a bonus of three months interest on the debt. Interest rates were not considered in this measure. As a result of this legislation many leading agencies adopted a five year term for mortgage loans.

When, in 1913, a commission was appointed to visit Europe, to investigate rural credits and agricultural co-operation, delegates were sent with the commission from Alberta, Saskatchewan, Ontario and Nova Scotia. On their return they advocated a Provincial rather than a Dominion system of rural credits.

I. MORTGAGE CREDIT

MANITOBA

The Manitoba Provincial Government passed a farm

mortgage act on March 7th, 1917. It was amended in March 1919 and again in April 1920. It provided for the organization of the Manitoba Farm Loans Association, which was to serve as the leading agency between the Provincial Government and the farmers. The association was to be managed by a board of five members, one of which was designated Commissioner of Farm Loans.

Share capital of the Association was originally \$1,000,000, but this was later reduced to \$550,000 - 11,000 shares of \$5.00 each. Each borrower was to subscribe for capital shares in the Association to the extent of 5% of the value of his loan, but by the 1920 amendment this clause was eliminated, the borrower then receiving the full amount of his loan.

All loans made by the Association, which were secured by a first mortgage of farm land, were to run for thirty years; repayment to be made on the amortization plan with interest at 7%. A provision was made that the full amount could be repaid at any annual payment date on or after five years from the date of mortgage.

Loans could be made for the following purposes:

- (1) The retirement of prior encumbrances.
- (2) The purchase of land for agricultural purposes.
- (3) The making of improvements.
- (4) The purchase of livestock and equipment.
- (5) For increasing the farm's productiveness.

Loans could be made up to 50% of the appraised value of the farm, including improvements. The maximum loan was \$10,000. If the loan was used for any other purpose than those specified by the Board immediate payment with interest, could be demanded.

The Provincial Legislature appropriated \$1,000,000 as operating capital for the Manitoba Farm Loans Association. The Board was authorized to receive deposits of money from persons or corporations; to act as a depository for provincial, municipal or school district funds and to issue and sell bonds at 6% interest up to 90% of the amount of first mortgages on farm lands held by the Association. The mortgages were held as collateral security for the bonds. Interest and principal on bonds was guaranteed by the Provincial Government. They were exempt from taxation and could be issued to the amount of \$12,000,000.

The interest on loans was to be used to pay the interest on bonds and other securities issued by the Association. The balance of the interest received was to be applied towards the expenses of operating the system. Payments on principal of loans was to be put into a sinking fund account for payment of bonds when due.

On June 30, 1923, the Association reported that it had paid out \$8,654,150 on 3,326 loans. At that date 3,033 loans were outstanding for a total including all arrears of \$8,013,361. The profits for the year 1921 were \$43,186 and for the first nine months of 1922 were \$40,554.

On February 25, 1931, Premier Bracken stated in the Manitoba Legislature that:

"There was \$8,647,598 outstanding on farm loans made by the Manitoba Farm Loans Association. Since the beginning of 1931 eight hundred and eighty nine mortgages had been foreclosed. Interest in arrears on the above date was \$1,445,363."

SASKATCHEWAN

In 1917 a law known as the Saskatchewan Farm Loans Act was passed by the Saskatchewan Legislature inaugurating a farm mortgage credit system in Saskatchewan. The system, as set up, being very similar to that in Manitoba. The law was to be administered by a Farm Loan Board consisting of three members, one of whom was to be designated Commissioner. This Board had power to make first mortgage loans on farms within the province. The purposes for which loans could be made were the same as for Manitoba. Loans could not be made for a greater amount than 50% of the Board's valuation of the farm. No maximum or minimum loan was stated. Loans were to run for a period of thirty years, repayable on the amortization plan. Up to 1920 the treasury borrowed \$6,500,000 at 5% and loaned this amount to farmers at 6-1/2%.

A borrower could make a pre-payment on his loan at any time equal to or larger than the payment next accruing due. If a borrower failed to apply the proceeds of the loan for the purposes designated in his application, or allowed the farm to depreciate in value, thus endangering security

for the loan, the balance of the mortgage owing immediately became payable.

Funds for loans were derived from the sale of "Provincial Bonds", debentures or other securities at such rate of interest as the Lieutenant Governor in Council should determine for a term no exceeding forty years. The amount of such securities were limited to \$10,000,000. Mortgages equal to the amount of advances were to be deposited with the Provincial Treasurer as security for bonds. All sums repaid by borrowers on the principal of loans could be reloaned on first mortgage security on farms; could be used for bond purchase under provision of the Act, or could be deposited to meet the obligations of the Board.

On January 1st, 1921 the total amount outstanding against first mortgages on farms was \$7,768,110. On the same date interest was overdue to the amount of \$300,000.

ALBERTA

In April 1917, Alberta passed an Act relating to farm mortgage credit. A farms loans association was to be set up to loan funds to farmers on first mortgage security. Loans were not to exceed \$5,000 to any one individual and were to run for thirty years, repayable on the amortization plan. The interest note was to include the rate paid by provincial treasury for money borrowed, the cost of procuring funds,

the expense of conducting the business and also an amount to be set aside for a reserve fund. This made the interest rate very unstable. Due to inability to borrow money, the farm mortgage credit legislation of the Alberta Government was never actually put into operation.

II. SHORT TIME CREDIT

Due to the danger of incurring loss through the uncertainty and risk attached to crop and livestock production as, well as the more rapid deterioration of capital equipment, than occurs in the case of land, the provinces of Western Canada were reluctant to enter the "Short Time Credit" field. The province of Saskatchewan has established no system of short time loans to the farmers in the strict sense of the term. The chief lines of development in the Western provinces has been to encourage the raising of better livestock and to promote the organization of co-operative credit societies.

CATTLE LOANS

By the provisions of the Livestock Encouragement Act of April 5th, 1917 five or more persons engaged in farming in Alberta could form an association and apply to the Livestock Commissioner for a loan, the proceeds to be used for the purchase of cows and heifers. Each member of an association

could borrow up to \$500. Enquiries was made regarding the members and if satisfactory the amount of the loan was decided and the proportion each member was to receive. A joint note and individual notes of members for the amount loaned were submitted to the Board. Loans were to run for a period not exceeding five years with interest at 5%. A fee of \$1. for each \$100. loan granted was required to cover expenses. Notes and fees were then transmitted to the Provincial Treasurer to be endorsed by him as a guarantee of payment of both interest and principal by the Province. The notes were then transmitted to a bank or other lending agency which advanced the money.

Under this Act, up to March 15th, 1922 loans numbering 27,811 were made to 803 associations for a total of \$1,799,322. At that time it was stated that no more loans were to be made due to the fact that the money provided by the Province for carrying on the work had become exhausted. The amount of interest and principal in arrears is not definitely known but owing to drought and falling prices it was thought that the Province lost a considerable sum of money.

Saskatchewan passed an Act December 19, 1931 called the Livestock Purchase and Sales Act. The object was to assist breeders of cattle to improve their herds, and also to encourage the production of better horses, swine and sheep. The province furnished \$500,000 to purchase livestock for resale to farmers at cost or partly on credit. Credit could

be granted for a period not to exceed three years to a maximum of 75% of the value of any animal, except in case of returned soldiers who could receive credit as high as 90%. Credit to an individual or an association could range from \$300 to \$1,000. In order to benefit farmers had to belong to a "Co-op" or other creamery operated under the supervision of the Saskatchewan Department of Agriculture, or an association organized for the purpose of improving the livestock industry. A lien was taken on livestock purchased and offspring until the debt was paid. Interest was 6%. Notes were payable, one-half at the end of the first year and the balance at the end of the second, except in the case of heifers, when an additional year was added. The notes could be paid at any time with accrued interest to the date of payment.

The Act proved beneficial in that it increased the number of high grade livestock in the Province. According to the Commissioners Report, October 5, 1923, 3,500 farmers had received assistance. The following figures give the numbers distributed to the farmers through the working of the Act:

1,360 pure bred bulls	16,080 grade ewes
80 pure bred cows	409 pure bred rams
66 pure bred boars	50 pure bred sows
587 grade sows	8,594 grade cows.

CO-OPERATIVE CREDIT SOCIETIES

The provinces of Alberta and Manitoba have enacted laws for the purpose of assisting in the organization of co-operative credit societies, to make short time loans to farmers. The laws of the two provinces were practically identical, in that Alberta patterned her law after that of Manitoba with very slight changes. Manitoba's law was known as the Rural Credits Act and was passed March 9, 1917. It has been amended from time to time, to conform to changing conditions.

By the provisions of the Act a co-operative credit society could be initiated by not less than fifteen farmers drawing up a petition and forwarding it to the Provincial Secretary. No society could begin business until it had received 10% of subscriptions to its capital stock, amounting to not less than \$3,500 subscribed by thirty-five farmers or more. The Government or Municipality within which the society was to carry on business, was authorized to subscribe half as much stock as individual subscriptions, to be paid for at the time and in the same manner as had been done by individual members.

Each society was to have nine directors, three appointed by the members, three by the municipality and three by the province. One director to be a provincial officer, devoting his time to this type of work.

The secretary treasurer was to be the only paid officer. Any person wishing a loan made application to the

secretary, stating the purpose of the loan and submitting a statement of his assets and liabilities, if his application was approved, he was granted a line of credit, with such bank, lending company, or individual as the Directors of the association should select. The security for a loan consisted of the borrowers entire personal property and all the returns from the investment of the loan were subject to a lien in favor of the society. No part of the property could be removed, without the consent of the associations secretary. The note of interest could not exceed 7%, of which 1/7 had to be paid to the association by the lender as soon as the principal and interest had been paid. A loan could be renewed for the period of one year if the directors sanctioned it.

The purposes for which loans could be made are as follows: To purchase all farm supplies, seed, feed, machinery, equipment and livestock. To pay the cost of carrying on farming operations and prepare land for cultivation.

The objects of Rural Credit Associations were:

- (1) To procure short-time loans for members in order to help them pay the cost of farming operations of all kinds and to increase the productivity of of farms.
- (2) To act as agents for members in purchasing supplies in selling products, and in placing fire, hail and life insurance.
- (3) To promote co-operation for the improvement of farm living conditions.

In 1920 the lenders asked 6-1/2% interest, and the

societies refused to accept this, with the result that legislation was passed, authorizing the province to take over from the banks all the loans previously issued.

On November 30, 1921 the total loans taken over were \$2,556,975. In September 1923 the Provincial Treasurer reported that the Government was likely to be faced with a loss of from 10% to 15% on \$3,000,000 outstanding.

The Alberta Co-operative Credit Act was passed in 1917 and was practically a reprint of the Manitoba Act. In Alberta societies could do business with 30 members. The maximum rate of interest was 7-1/2%, of which half of 1% was to be paid over to the society. Up to April 1922 there were 800 loans made totalling \$400,000. Loss, if any, by the Government is not reported.

SOLDIERS SETTLERS ACT

The Soldiers Settlers Act of 1919 repealed a similar act of 1917 and provided for government loans to ex-service men, on both land and chattels. If the settler was unable to payn cash for stock and equipment, he was given the privelege of carrying an indebtedness with the Soldiers Settlers Board up to \$2,000. The Board bought stock and equipment and sold it at cost. Commencing not later than three years from date of sale the settler could repay his debt in four annual installments with interest at 5%. No interest was required

for the first two years, and the debtor had the privilege of repayment at any time, to save paying interest after the two years were up. Security consisted of a first mortgage on land, and a chattel mortgage on equipment.

Loss through resale and foreclosure amounted to \$1,361,727 on August 31, 1922. To partly offset this a fund of \$934,817 was accumulated through the sale of public lands, leaving a net loss to the Dominion Government of \$426,910.

AGRICULTURAL CREDIT CORPORATION

Recently a new source of agricultural credit is being opened up to the farmers of Western Canada through the formation of the Agricultural Credit Corporation for which a charter has already been secured. This new scheme is sponsored by E. W. Beatty, President of the Canadian Pacific Railroad, who plans to enlist the aid of railways, banks, trust companies, mortgage and loan companies and large corporations with extensive business interests in the west.

The new corporation has been capitalized at \$5,000,000. Credits are to be advanced to farmers for the extension of livestock production, the amount of individual loans to range from \$200. to \$1,000. Interest rates are not to exceed 6%. The intention behind the scheme is to widen the scope of farming operations by the addition of more livestock on the farms, and by bringing about greater diversification place

the farmer on a more solid money earning basis. Beatty says of this new corporation: "It is a permanent piece of machinery being introduced to the industry of agriculture with a view to developing and maintaining additional sources of revenue for our farmers." (8)

The new plan does not attack wheat farming, nor does it advocate a great swing to animal production, the intention rather is to strengthen the individual farmer by giving him the opportunity to reap additional revenue from the sale of livestock and livestock products.

INDEBTEDNESS OF AREAS REVIEWED

In order to supplement this general survey of mortgage and short term credit in Western Canada, the indebtedness of farmers in the six areas which have been reviewed in this report will now be considered.

DAUPHIN
Table No. LXVII shows that 75% of all farmers giving this information reported debt. From the above distribution of reporting debt it would appear that with increasing size of farm the percentage of farms having debt increases. Of the 320 acre farms 68.5% reported debt and 90.9% of the 640 acre farms. The average indebtedness for farms reporting ranged from \$1,275 for the 160 acre farms to \$6,060 for the 640 acre farms. The average indebtedness was less for the larger sized farms, but the number reporting were too few to give the figures much significance. The total indebted-

TABLE No. LXVII

AVERAGE INDEBTEDNESS BY SIZE OF FARM - DAUPHIN AREA

Size of Farm	No. of Farms	No. Recording Information	No. Reporting Debt	Total Farm Capital \$	Total Indebtedness \$	Average all Farms Reporting Debt \$	Average Debt (All Farms) \$
1-160	104	99	74	513,776	94,377	1,275	907
161-320	76	73	50	687,030	121,763	2,435	1,602
321-480	28	28	24	401,995	79,729	3,322	2,847
481-640	11	11	10	188,343	60,600	6,060	5,509
641-800	6	6	5	138,898	22,327	4,465	3,721
801-960	2	2	2	45,926	2,057	1,028	1,028
961	1	1	0	8,927			
Total	228	220	165	1,984,898	380,853	2,308	1,670

ness of all farms reporting was equal to 19.15% of the total farm capital on 228 Dauphin farms. The percentage was lowest for the 960 acre farms being 4.5% and largest for the 640 acre farms 32.1%.

In order to try to ascertain when and for what purpose the farmers had gone into debt, the mortgage indebtedness of Dauphin farmers was studied; 50 records were selected at random, 17 farmers reported mortgage debt; 4 had mortgaged their farms during the years 1910 to 1913; 10 from 1918 to 1921 and 3 from 1927 to 1930. In practically every case the farm was mortgaged in order to acquire additional land.

SWAN RIVER

In Table No. LXVIII debt was reported by 60% of the farmers giving this information. The average indebtedness for all farms reporting ranged from \$855 for the 160 acre farms to \$4,807 for the 800 acre farms. The average indebtedness for all farms reporting debt was \$2,114. The total indebtedness was equal to 16.5% of the total farm capital. The percentage was lowest for the 160 acre farms, being 8.9% and highest for the 480 acre farms 27.4%.

TABLE No. LXVIII

AVERAGE INDEBTEDNESS BY SIZE OF FARM - SWAN RIVER

Size of Farm	No. of Farms	No. Recording Information	No. Reporting Debt	Total Farm Capital \$	Total Indebtedness \$	Average all Farms Reporting Debt \$	Average Debt (All Farms) \$
1-160	73	73	33	314,634	28,239	855	386
161-320	78	76	48	657,231	88,213	1,837	1,130
321-480	30	29	24	285,090	78,118	3,254	2,603
481-640	9	8	6	102,587	19,900	3,316	2,211
641-800	4	4	3	64,415	14,422	4,807	3,605
801-960	-	-	-	-	-	-	-
961	4	3	3	93,450	12,012	4,004	3,003
Total	198	193	117	1,517,409	250,905	2,114	1,267

Note - 23 farms did not report total capital

PEACE RIVER

Table No. LXIX shows that 72.7% of all farmers from whom this information was obtained reported debt; 65.1% of the farms of 320 acres or less reported debt; 80.7% of the larger farms reported debt. The average debt by size of farm ranged from \$368 for the smallest farms to \$5,550 for the largest farms. The average indebtedness on 235 Peace River farms was \$1,892.

The total indebtedness was equal to 10.8% of the total farm capital.

MELFORT

Mortgage indebtedness was reported by 41 owners, or 50% of all farm owners reporting, giving the information as shown in Table LXX. The average mortgage debt was \$4,598 equal to 18.9% of total farm capital. The ratio of debt to farm capital ranged from 3.4% for the largest farms to 66.2% for the smallest farms. Farms with the shortest term of ownership had the highest ratio of debt to total capital.

BELBECK

In Table No. LXXI 55% of the farm owners reported indebtedness averaging 28.1% of their total farm capital. The average debt in the Belbeck district is very high, being almost double that of any of the other five areas. The

TABLE No. LXIX

AVERAGE INDEBTEDNESS BY SIZE OF FARM - PEACE RIVER (1929-30)

Size of Farm	No. of Farms	No. Recording Information	No. Reporting Debt	Total Farm Capital \$	Total Indebtedness \$	Average all Farms Reporting Debt \$	Average Debt (All Farms) \$
1-160	80	75	44	301,233	16,200	368	202
161-320	95	92	65	945,231	90,420	1,391	951
321-480	63	63	46	822,998	85,735	1,863	1,360
481-640	50	50	43	928,202	107,054	2,489	2,141
641-800	19	19	17	445,071	84,066	4,945	4,424
801-960	11	11	10	279,592	24,538	2,453	2,230
961-1120	9	8	8	338,826	25,710	3,213	2,856
1121	5	5	2	-	11,100	5,550	2,220
Total	332	323	235	4,061,156	444,823	1,892	1,339

TABLE No. LXX

INDEBTEDNESS OF MELFORT FARM OWNERS - 1926

Size of Farm Acres of Crop- land	No. in Group	Average Years Owner of Farm	Farms Reporting Mortgage Indebtedness				
			Number	Average Debt	Ratio of Debt to Farm Capital Average	Low	High
				\$	%	%	%
Under 135 Acres	6	8.2	4	3,050	41.2	21.0	66.2
135-199 "	13	12.8	7	3,429	23.0	17.2	38.9
200-254 "	11	15.5	4	4,100	23.4	11.0	31.0
255-329 "	17	16.7	8	3,112	14.7	8.3	26.9
330-429 "	14	14.2	6	6,167	22.2	10.9	31.9
430-529 "	10	15.5	7	7,000	18.7	7.8	31.8
530 "	11	16.3	5	5,000	12.8	3.4	25.7
All Farms	82	14.7	41	4,598	18.9	3.4	66.2

TABLE No. LXXI

INDEBTEDNESS OF BELBECK FARM OWNERS - 1926

Size of Farm	No. in Group	No. Reporting Debt	Average Years Owner of Farm	Average Capital Farms Reporting	Average Farm Debt	Ratio of Debt to Capital		
						Average	Low	High
				\$	\$	%	%	%
Under 100 Ac. wheat	11	7	12.9	15,571	3,200	20.6	5.6	49.5
101-149 " "	18	12	13.1	23,395	4,917	21.0	6.9	43.0
150-199 " "	19	11	8.6	25,030	10,218	40.8	13.8	77.0
200-249 " "	23	11	14.5	34,039	8,227	24.2	7.5	61.6
250-299 " "	9	5	13.6	42,351	11,200	21.7	13.9	48.5
300-349 " "	8	3	9.0	46,864	20,000	42.7	23.9	75.0
350 " "	8	4	13.8	76,853	19,325	25.1	13.0	69.2
All Farms	96	53	12.4	32,058	9,011	28.1	5.6	77.0

average farm capital is much larger in the Belbeck area than in the other districts surveyed and this fact may account for high indebtedness. There seems to be little correlation between the size of the farm business and the ratio of debt to total capital in the Belbeck area.

ALAMEDA

Of the Alameda farm owners 42% had mortgage indebtedness averaging 25.5% of the total farm/ capital. The average farm mortgage on 30 farms was \$4,110. In Alameda, as in the Belbeck and Melfort areas it was found that farms owned for the shortest period of time had the highest percentage of debt to total capital. Farms owned from 1 to 5 years had an average debt of \$7,200; those from 6 to 10 years a debt of \$4,833, the farms owned for more than 25 years had an average debt of \$3,412. This condition is normal for a progressive district. Most farmers find it necessary to borrow funds on commencing farming operations, but over a period of years this debt should be reduced and ultimately wiped out.

From the above data it will be gathered that a large percentage of Western Canadian farmers are in debt. The debts of farmers in the Dauphin, Swan River and Peace River areas are not so large as those of farmers in the Saskatchewan areas.

TABLE No. LXXII

INDEBTEDNESS OF ALAMEDA FARM OWNERS - 1927

Size of Farm Acres of Crop- Land	No. of Farmers in Group	Number	Farms Reporting Mortgage Indebtedness			
			Average Period of Owner- ship	Average Debt	Ratio of Debt to Capital Average	High
Under 250 Acres	10	4	20.8	\$ 2,050	% 21.5	% 44.5
250-349	" 17	9	8.6	3,832	45.6	109.0
350-449	" 17	6	15.2	3,833	29.4	64.1
450-599	" 17	6	24.2	5,500	21.8	46.4
600	" 11	5	23.8	4,920	17.5	39.3
All Farms	72	30	17.2	4,110	25.5	109.0

Farming is on a more extensive scale in Saskatchewan than in the above mentioned areas and grain farming is the dominant type of farming followed. Until recently grain prices have been good and the tendency has been for the Saskatchewan farmer to extend his land holdings and to invest in larger and more modern farming machinery. These facts will account to a large extent, for the higher average indebtedness in that province.

The Western Canadian farmer is becoming more and more a business man as time goes on. He needs to buy fertilizers, sow good seed, buy new machinery, keep good stock and erect better buildings. The effect of his borrowing should be to increase the quality and quantity of his output, but whether this is the result or not depends largely on the individual farmer. Many farmers today are insolvent due to improper use of credit, while many others have made a real success due to the judicious use of their borrowing facilities.

T. N. Carver in his Farmers Bulletin No. 593, page 2, has the following to say with respect to credit:

"There is no magic about credit. It is a powerful agency for good in the hands of those who know how to use it. So is a buzz saw. They are both equally dangerous in the hands of those who do not understand them. . . . Debts have to be paid with deadly certainty and those who do not have the funds to meet their debts when they come due become bankrupt with equal certainty. However, that is no reason why farmers who know how to use credit should not have it."

IV DISCUSSION OF THE STUDY

In the preceding pages of this report the capitalization of agriculture in the Prairie Provinces has been reviewed. There remains now to consider the factors which the farmer should take into account in effecting capital expenditure in the farm business.

It is impossible to set down any fixed rules governing the distribution of capital, due to the fact that no two farms are identical, while the aptitudes and ability of individual farmers differ tremendously. Some farms are suited to the growing of cereal crops only, others are suitable only for livestock raising while still others are best suited to a mixed type of farming combining the two major farm enterprises, grain growing and livestock raising, on the same farm. Some farmers are born livestock men and will make greater success of farming by investing a large percentage of their capital in livestock. Other farmers are more interested in grain production, and are skillful handlers of farm machinery; they would be well advised to limit their livestock investment and invest a larger percentage of their capital in land and machinery. Other things being equal, a farmer will make a greater success and obtain a larger income by going in for the type of farming in which he is most interested. The extent of the farm income, that is the excess of receipts over expenditures, is the criterion of successful farming, and each individual farmer must decide for himself the manner in which he is going to obtain this income.

Fred W. Card writes as follows "The proper apportionment of the investment among the different forms of capital is a difficult but most important financial problem. The apportionment will vary with the character of the business, the location and attendant conditions. No fixed rule can be given but one fundamental principle should be kept steadily in mind, viz Production will be limited by the minimum amount of the weakest phase of the investment". (9)

Take for example a hypothetical case to illustrate the working of this maxim and assume that a given farmer has invested practically all his capital in land and equipment leaving a very small amount for working capital. As the season progresses the farmer will find that his working capital has been exhausted and that there are many necessities required before he can harvest his crop and obtain more funds. Difficulty will be experienced in obtaining these and the result will be that the farmers production will tend to be decreased due to lack of sufficient working capital which is the weakest phase of his investment.

LAND

First consider land, which invariably constitutes the major portion of the farmers capital investment. The question at once comes up, 'How large should a farm be?' In reply to this question Taylor says, "While there is no proper size for farms in general, there is always a proper size of farm for a given farmer, on a given type of soil, in a given line of production, with given labour and market conditions". (10)

In Western Canada, as in practically all other agricultural countries, the family farm is the typical farm, and there is a tendency for the size of farm to vary with the supply of labour which the family possesses. As the boys on the farm grow up the size of farm is increased with a view of having a piece of land for each when they are ready to commence farming for themselves. This in turn results in a reduction in size of farm as the farm family is dispersed.

Another factor in determining size of farm is the type of farming to be followed. In Western Canada, strictly, grain farms are, generally speaking, larger in extent than are mixed farms. The grain farms are mostly located on the prairie lands of the West where farming is carried on extensively rather than intensively, while the mixed farming areas are found principally in the park country of ^{the} western provinces which does not lend itself as well to large scale farming.

Economy in utilization of equipment is important with respect to size of farm. A set of modern farm machinery can be used to do the work on a half section or three quarter or three quarter section farm, while the same line of machinery would be required to work a quarter section farm. The economy of machinery used on the larger farm is at once apparent. Duplication of machinery is required for larger sized farm and where this is the case sufficient land should be acquired to use two sets of farm machinery in the most efficient manner.

Efficiency of labor with respect to size of farm is

also important. The opinion is fairly general that the two man farm is the smallest farm which can be operated economically. There are many farm operations which require the labour of two men no matter how small the farm may be. If two man farms are taken as the smallest sized farm for economical operation, sufficient land should be incorporated in these farms to make the man labour as efficient as possible.

Taylor says: (11)

"The problem of the right proportions between managerial activity and the factors of production is important in relation to size of farm".

No rule can be given, but in applying managerial activity to land equipment and labour, the law of diminishing returns comes into play. If managerial activity is used up on too small a farm profits will not reach a maximum while, if the farm is too large the result will be the same. As the farmer increases his activity with increased size of farm each addition adds to the labour and by the law of diminishing returns the resultant product will be decreased until a point is reached where the net profit is not sufficient to induce the farmer to exert himself further. There is no one size of farm which pays best for all farmers. The problem for each individual farmer is to combine the factors of production in the proportion which along with his managerial ability will yield the largest net returns.

In the three prairie provinces there has been a decided trend towards increased size of farm. In Saskatchewan in 1901 approximately 62% of the farms were less than 200 acres in extent

while 38% were over 200 acres in size. 30% were under 200 acres and 70% over 200 acres in extent. This large increase in the percentage of larger sized farms is the result of the extent to which wheat production predominates in the west, and also to the rapid development of modern large capacity machinery and equipment.

FARM BUILDINGS

Farm buildings should be adequate but not pretentious. That is, buildings should be present on each individual farm in numbers and quality suitable to the needs of each farm. Buildings of necessity must vary with type of farming and size of farm. In general, the larger the farm the greater will be the building investment, but with buildings as with machinery larger farms make for greater efficiency in building investment. The quarter section farm required a farm home, a barn, granary and other buildings depending on the various enterprises carried out on the farm. Larger farms require larger buildings, but the building investment does not increase in proportion to the increase in size of farm. For example, the value of buildings for the 320 acre farms in Peace River averaged \$1,459, for the 480 acre farms the average value was \$1,719 and for the 640 acre farms \$2,297.

In a survey of 587 farms in Livingstone County, New York, it was found that farms of 30 acres or less had 43% of total capital invested in dwellings while farms of 200 acres

or over had 9% of total capital thus invested. The percentage invested in other buildings for the small farm was 19% and for the large farms 11%. Total building investment on the small farms averaged 62% of total capital and on the large farms 18% of total capital. On the small farms buildings other than dwellings averaged \$164 per animal unit and for the large farms \$50 per animal unit. (12)

Farm buildings represent the most expensive class of farm equipment and show a greater variation in proportion of total investment than do other classes of equipment. It appears that these variations are inevitable due to both the whims of the proprietor and his ability or inability to equip his farm with suitable buildings.

During periods of agricultural prosperity the erection of farm buildings is at its height and it is during these periods that overinvestment in buildings takes place. Numerous farms in Western Canada today have large building investments, altogether out of proportion to farm requirements. In many cases these farms would not sell at the present time for a sum equal to the value of the buildings.

FARM MACHINERY

Farm machinery in the Prairie Provinces constitutes a large percentage of the farmers capital investment. Farming is extensive and large capacity machinery of the most modern type is

found on many farms throughout the west.

The question of investment in machinery is one of the most difficult which the farmer has to face due to the numerous factors entering in. There is the initial investment, depreciation, upkeep, obsolescence and the amount of use to which the implement can be put.

Before buying a piece of machinery the farmer should ask himself two questions, "How much use can be made of this piece of machinery on my farm?", and "Will this investment in this machine increase my income an amount at least equal to the cost of buying it?". If he can find fairly definite proof that the machinery is necessary and will yield a profit he should then make the investment.

The value of machinery to the farm depends to a large extent on the amount of use to which it can be put. Farming operations are seasonal in character, and due to this fact, machinery is idle for a large part of the time. Maximum utilization of farm machinery is the goal to be reached. To this end a farm should be large enough to furnish a maximum amount of use for all machinery which is necessary to it.

Danger of overinvestment in machinery is always present. The farmer likes to operate new and efficient machines and in addition all machinery companies employ skilled salesmen whose business it is to make sales. The temptation to buy too much machinery is one which many farmers find very difficult to resist.

Wasteful practices in the use of machinery occur to some extent on practically all farms causing a large annual loss. Farmers take great precautions to ensure maximum yields in order to receive the largest possible income, yet their income may be lessened to a large extent by the farmer's neglect to care for his machinery. All farm machinery should be protected from the weather and a special building should be erected for this purpose. It is estimated that machinery which is left lying outside while not in use depreciates twice as rapidly as machinery which is kept under cover. This means that machinery which is kept in a machine shed while not in use should last just twice as long. On the Alameda Belbeck and Melfort farms which represent three of the most prosperous areas in Saskatchewan, less than 40% had machine sheds in 1926 - 27. If the more prosperous farmers have such a low percentage, it is reasonable to expect that the average percentage for the west will be even lower. It is thus apparent that Western Canadian farmers suffer large losses annually due to the fact that their machinery is not given adequate protection.

Another factor to be considered is that machinery which is protected from the weather operates much more efficiently when in use.

Careful operation and daily checking over of machinery prevents many breakages and delays which may prove more costly than the expense of their replacement.

The cost of new machinery is always a considerable item in the annual expenses on the farm and it is inevitable that this be so, but a little additional care and foresight on the part of the individual farmer would reduce this expense to a minimum.

LIVESTOCK

Livestock investment is the result of several factors among which are, the suitability of the farm for livestock enterprise; the natural aptitude of the individual farmer in the caring for and handling of livestock; the extent of the market for livestock and livestock products; and the extent to which horses are used for power in carrying out the farming operations. A large part of the west is not suited to livestock production on a large scale. This is particularly true of the great wheat growing areas of Saskatchewan, parts of Alberta and even to a more limited extent in Manitoba. In a considerable extent of this territory water is not obtainable in sufficient quantities to make extensive raising of livestock feasible, while the large scale wheat farming as carried on has proved much more profitable for the farmer. In these areas livestock is practically limited to farm requirements, little or no stress being placed on livestock as a source of income.

Throughout the greater part of Manitoba, northern and eastern Saskatchewan and northern and southern Alberta, livestock can be kept in greater numbers and farmers in these areas rely to a larger extent on livestock and livestock products as a source of income.

The aptitude of the farmer for livestock enterprise has been mentioned previously, so it is only necessary to point out here that this has been a limiting factor in the livestock industry in the west. The Western Canadian farmer is first and foremost a grain farmer and livestock kept are for power purposes and to supplement the farm receipts obtained from the sale of cash crops.

The market for livestock and livestock products in Western Canada is not such as to warrant the extensive raising of livestock. The local market in the west is not extensive due to the comparatively small population for such a vast territory while the foreign market at the present time is distinctly limited. Then again the Western Canadian farmer is not in a position to produce livestock as cheaply as other countries such as the Argentine, South Africa, and Australia, where cattle can remain on the range the year round. The necessity of providing buildings for wintering livestock in the west as well as the increased cost of winter feeding is a deterrent to livestock development. The returns to be gained from the sale of livestock and livestock products have not been such as to warrant any great expansion in the livestock enterprise.

Although tractors have come into prominence in Western Canada in recent years as a source of power for farming operations, the horse has not as yet yielded his place as the premier source of power on farms in the west. Tractors are used to supplement rather than to displace horse power on the farm, the effect being the speeding up of farming operations during the rush seasons.

Too much stress cannot be placed on the desirability of increasing the quality of livestock kept on Western Canadian farms. Efficiency in livestock is just as important as it is in the case of machinery and building investment. It costs little more to produce a high quality animal than it does an inferior one, while the difference in selling price between the two is considerable. A small herd of good cows will produce a larger net profit than a large herd of poor cows. The great saving in labour, investment in animals, barn investment and feed consumed is at once apparent. The same reasoning is applicable to horses used on the farm but perhaps not quite to the same extent.

WORKING CAPITAL

Working capital consists of materials such as feed, seed fertilizers etc., and also cash used in carrying on the farm business. An adequate supply of this form of capital is essential to the successful carrying out of farming operations. Fred W. Card says "It is on his working capital that the farmer must place his chief dependence for profit".⁽¹³⁾ This does not imply that working capital is more necessary than fixed capital, for this would not be true. Land and equipment are the basis of agricultural production, but without working capital to facilitate their functioning profits would be impossible.

A farmer may have a large farm, well equipped with buildings, machinery and livestock, but if he has not a sufficient

supply of working capital the extent of his production will be greatly diminished due to the fact that too large a part of his capital is tied up in the more permanent forms of capital. If the extent of the farmer's production is cut down due to lack of working capital it is quite conceivable that the profits on the farm operations may be nil or even that a loss on the years work may be sustained. The farmer must foresee the whole cost of carrying his farm enterprises through to a successful conclusion and to this end he must provide an adequate supply of working capital.

Another feature that is worthy of note is that many farmers, due to lack of funds have to market their farm products immediately they are obtained and because of this often have to sell on a falling or low market. If the farmer could hold his grain or livestock until such time as the market could use his goods for immediate consumption, he would in many cases, be able to obtain a higher price for his products, which might quite easily mean the difference between a gain and a loss on the years operations.

LIMITS TO THE FARMERS USE OF CAPITAL

The absolute limit to the farmer's use of capital is the amount of funds which he himself possesses, plus the extent of credit which he is able to command. There are, however, other considerations with respect to the amount of capital that the farmer should use.

First there is the opportunity cost limit to the use of funds. If the farmer contemplates investment of funds in more than one direction in his farm business, he must consider alternative

opportunities for the investment of the same funds. This is particularly true if the farmers capital is limited and he is unable to expand his farm business in all directions to the extent which to him seems desirable. If he is going to invest in more land he must consider the returns which he might obtain by investing his funds in, say livestock or machinery.

If the farmer is well supplied with capital he may invest in each of the enterprises open to him. As he increases his investment or continues expansion in a given direction, it will be found that beyond a certain point the further the investment is carried diminishing returns to the use of capital will be encountered. If he continues to invest he will ultimately reach a point where further investment will not bring additional gain, that is, the marginal returns limit to capital investment will have been reached. At this point the farmers investment of capital should cease.

V - C O N C L U S I O N S

- (1) Western Canada is pre-eminently a wheat growing country, and with the exception of a few acres where livestock raising is carried on fairly extensively, the production of cash crops constitutes the major farm enterprise.
- (2) The large increase in the percentage of farm capital invested in machinery and the more than proportionate decrease in the percentage of livestock capital furnishes proof of the predominance of grain production in the Prairie Provinces.
- (3) The development of farm machinery with respect to capacity and efficiency permits of economical wheat production and the extension of size of farm.
- (4) Wheat growing has yielded larger returns than has livestock enterprise and is partly responsible for lack of interest in livestock development in the west.
- (5) The number and value of livestock on farms in Western Canada are greater at the present time than they were at the beginning of the century, but the development of livestock has not kept pace with the development of other forms of farm capital.

- (6) The increase in the value of buildings per farm during the last 30 years has been even greater than the increase in the value of machinery, while the percentage of the farmers total capital invested in buildings has also increased. Agricultural progress and prosperity during the past 30 years is reflected in the increase in building values per farm during the period.
- (7) Land investment is the largest single item in the farmers capital outlay and constitutes a large percentage of his wealth.
- (8) The value of land per farm and per acre, in the Prairie Provinces, has shown a very large increase while the percentage of total capital in land has risen approximately 4% from 1901 to 1926.
- (9) The indebtedness of Western Canadian farmers is large. The periods of most extensive borrowing were the years immediately preceding the war and those immediately following the war.
- (10) Credit has been extended very freely to the farmer. Easy credit leads to large indebtedness which acts as a check to agricultural progress. At the present time, many farmers have all the debt that they can carry and further extension of credit would increase their difficulties.

- (11) The agricultural development of the Prairie Provinces has been rapid. It has been said, that to be permanent progress must come slowly, but this does not seem to apply to the farmers of the west. During the last two years the farmer has been hard pressed to make ends meet, but with a return to normal times agriculture should see an even greater development.

REVIEW OF LITERATURE

Writings on capital and related to agriculture are conspicuous by their absence. There is, however, a limited amount of material found chiefly in Agricultural Economics texts and bulletins published by Universities and agricultural colleges.

Nourse in his book on Agricultural Economics has a chapter dealing with capital goods as a factor in agricultural production. First there is a general introduction to the subject by the author which is followed by articles written by several individuals, dealing with various aspects of the subject. Among these are -

The Relation of Farm Capital to Labour Income
E. H. Thomson and H. M. Dixon.

The Efficiency of Capital Goods as Related to
Size of Farm.
C. F. Warren (From Cornell Exp. Stn. Bul. No. 295)

The Proper Apportionment of Capital Outlays.
L. W. Ellis (Bul. No. 212. U. S. D. A.)

Overinvestment in Buildings and Machinery
C. F. Warren.

The Importance of Working Capital (Author Unknown)

Waste of Capital Invested in Farm Machinery
E. M. D. Bracker.

Depreciation of Livestock
W. J. Spillman (U. S. D. A. Bul. 341)

W. J. Spillman in his book on Farm Management has some interesting information on capital investment.

In addition to the above the three bulletins on the farm business in Saskatchewan published by the Dep't. of Farm Management of the University of Saskatchewan contains a complete write-up of the farm business in the Melfort Belbeck and Alameda areas. A considerable amount of this data has been incorporated in the main body of this report.

THE RELATION OF FARM CAPITAL TO LABOUR INCOME

E. H. Thomson and H. M. Dixon. U.S.D.A. Bul.#41 pp 11 -13.

In a farm management survey in representative areas of Indiana, Illinois, and Iowa, records were secured from 247 tenant farmers. These men had an average labour income of \$870, from an average investment of less than \$2500. Farm owners in the same districts with over 12 times this investment made much smaller labour incomes than these tenants. The writers take this as conclusive evidence that a man with small capital should rent rather than buy a farm. For the amount invested the tenants income was much larger than the farm owners.

The sum available for family living was, however, much smaller in the case of the tenant, for the farm owner with average capital of say \$30,000. would have \$1500. interest to use if interest was at 5%, in addition to his labour income.

The average labour income of 273 farm owners having capital ranging from less than \$5000. to over \$80,000. was \$408.

The chance of a farm owner making a labour income of \$1000. with less than \$15,000. invested capital, was found to be less than 1 in 20. Farm owners also showed the greatest losses, that is, minus labour income, and in most cases had as much capital invested as did those with labour incomes of \$2000. and over. The writers indicate that this is the result of maladjustment of capital outlay. Tenants with less than \$1000. capital had small labour incomes while those with more capital made labour incomes ranging from \$1000. to \$3000. The increase in labour income was found to be less than proportionate to the increase in farm capital.

THE EFFICIENCY OF CAPITAL GOODS AS RELATED TO SIZE OF FARM

G. F. Warren. (Cornell Exp. Stn. Bul. No. 295).

This study is the result of a survey of 586 farms in Thomkins County, New York state. The writer works out the efficiency of horses, machinery and buildings on these farms. Warren says "Three or four horses are the smallest number which can be used efficiently with modern machinery". In the survey farms of 150 to 200 acres were the smallest having an average of 4 horses. Farms having 30 or less acres had an average of 1.4 horses.

Farms having not enough horses to make efficient teams were oversupplied with horses compared with their area.

On these farms the average was 15 acres per horse. On the large farms a horse farmed three times the area with no decrease in yields. When the costs of feeding horses is considered the advantage of larger holdings and the use of efficient teams is at once apparent.

The case of farm machinery was found to be similar. The average value of farm machinery was found to be \$125. for farms of 30 acres or less and \$592. for farms of 150 to 200 acres. The machinery on the smaller farms cost on an average nearly twice as much as on the larger farms.

Generally speaking, small farms do not provide enough use for machinery to pay for the investment. The more numerous and efficient machinery becomes the larger the farms should be. On the small farms the number of acres farmed per \$100 worth of machinery was found to be 17 while on the larger farms it was 30. There is also a tendency for machinery on larger farms to be more modern and up-to-date. "The small farm has relatively more of its capital invested in unproductive ways than does the large farm."

Small farms had 60% of their capital in buildings while farms of 200 acres or over had an average of 20% invested in buildings. On the larger farms investment in barns of \$50. per animal was recorded while on small farms the investment ran as high as \$164. per animal.

The following is from the 13th. United States Census: Farms of 20 acres had 36% of their capital invested in buildings and machinery. Those having from 100 to 175 acres had 17% thus invested, yet had much better buildings and machinery.

THE PROPER APPORTIONMENT OF CAPITAL OUTLAYS L. W. Ellis.

U. S. D. A. Bulletin No. 212. pp 7 & 53

In this article the writer gives figures showing the variation in investment per acre for the various classes of farm capital for a number of farms in Ohio. He then proceeds to point out what he considers necessary in the way of farm buildings, livestock and machinery for an average sized farm. He sets down what he considers an average distribution of farm capital among land, improvements and equipment. Farm organization he says "refers to the distribution of capital and the selection of equipment as well as to cropping system and livestock management.

OVERINVESTMENT IN BUILDINGS AND MACHINERY G.F. Warren

Circular 24 Agricultural Experiment Sta. of the College of Agriculture. Cornell University. P35 - 36.

In Livingston County, New York, the average investment in farm dwellings was 14% of the total farm capital. Warren says that the maximum investment in a farm home should not exceed 20% of the capital. Any investment over this amount should be considered

as out of line with the capital investment in other directions.

The average cost of barns per cow or equivalent in other classes of livestock was \$70. The writer contends that maximum investment should not exceed \$100. per animal. Interest, repairs, taxes, insurance and other costs amount to 8 or 10% making an annual cost of \$10. per cow.. The writer cites a case where a barn was erected costing \$65,000 to house 65 cows. The barn rent per cow would be \$100. a year.

In Livingston County investment in machinery averaged \$6.00, per acre of crops. On a general farm, machinery costs should never exceed \$10.00, per acre of crops. It was found that the cost of maintenance, housing, interest, repairs and depreciation on farm machinery amounts to about 25% of the inventory value. Therefore, a \$10.00, investment per acre would represent a cost of \$2.50 per acre.

DEPRECIATION OF LIVESTOCK W. J. Spillman.

U. S. D. A. Bulletin No. 341, pp 93 - 96.

In Chester county Pennsylvania, the average annual depreciation of dairy cattle was found to be 11.82%, while a similar calculation for southern Michigan showed only 4.07%. This result was largely due to the difference in prices at which cows were bought and sold in the two localities. In Michigan the average price paid for cows was \$48.48 and the selling price of

discarded cows \$42.00, a difference of only \$6.48. The difference between buying and selling price in Pennsylvania was \$26.48, the farmer losing \$20.00 more per cow which accounted for the much larger depreciation for the same localities. In both cases the annual rate was about 5% being 5.09% for Pennsylvania and 4.87% for Michigan. The low rate was largely due to the fact that horses were disposed of while they could still be sold at a satisfactory price. Horses kept until their usefulness is at an end results in a higher rate of depreciation. Michigan farmers kept their horses, on an average, 8.5 years and sold them for \$18.68 less than they paid for them. Pennsylvania farmers kept theirs on an average of 12.1 years and sold them for \$29.34 less than the buying price.

The above figures would indicate that the farmers should make a point of disposing of livestock when they still have some years of usefulness, for in this way, costs due to depreciation can be considerably reduced.

FARM MANAGEMENT W. J. Spillman.

Ch. XIV Farm Organization.

For 26 economic surveys in the United States the average investment in real estate was 80.8%, and in machinery, livestock, and working capital 19.2%. The corresponding figures from the 1910 census were 82.2% and 17.8%. On the average, therefore, in the United States, approximately 4/5 of the farmers in-

vestment is in real estate and 1/5 in other classes of farm capital.

Spillman gives the factors affecting the percentage of real estate as follows:

- (1) The price of land. Other things being equal, high priced land tends to make the percentage investment in real estate high.
- (2) The type of farming. Types which involve large amounts of livestock, machinery and working capital, etc., ceteris paribus have a relatively small investment in real estate.
- (3) Climate. Cold climates require a much larger building investment than do warm climates, consequently the percentage of real estate investment tends to be higher in cold climates.
- (4) Machinery Investment. Large investments in this class of livestock tends to limit the percentage investment in real estate.
- (5) Local custom. This will include the type of farming followed in a community and the size of farms in the area. If farms are large and the type of farming carried on, the production of grain, real estate investment will tend to be high. If mixed farming or cattle raising are the types of farming followed the percentage of real estate investment will tend to be lower.

Spillman states that buildings other than dwellings are used to shelter livestock and house grain, and vary greatly with size of farm. Dwellings shelter the farm family and there is not the same tendency to variation in size of different sized farms. The farmers financial condition and desire for comfort and convenience are contending factors in determining dwelling investment.

LIVESTOCK INVESTMENT

In the sections where work animals were about the only class of livestock kept the percentage investment was

usually 5 to 10% of total investment. In sections where dairying, beef cattle or hogs were important livestock, investment ran from 10% to 20% of total investment. When the figure went over 20% some livestock enterprise was conducted intensively.

MACHINERY INVESTMENT

In 26 United States economic surveys the percentage investment in implements and machinery ranged from 1.5% to 8%, the average being 3.5%. It was found that the percentage on small farms conducted intensively and smaller on large farms devoted to field crops beef cattle or hogs. On farms having tractors, machinery investment was usually about double.

SUPPLIES

The average capital used to furnish feed and supplies and also cash for running expenses for the surveys was 3.2% of total capital.

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