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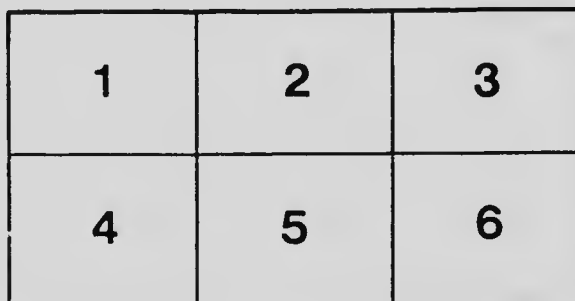
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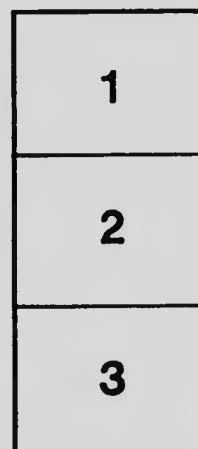
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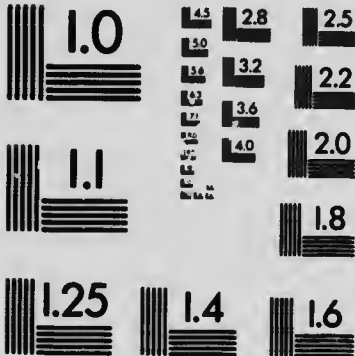
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DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE

DOMINION EXPERIMENTAL FARMS

SEP 8 1920

FARM BUSINESS IN QUEBEC

During the Year ending March 31, 1920

*A Preliminary Agricultural Survey in One District
Each of Six Counties in Quebec
.. Province ..*

Made by

J. A. STE. MARIE, B.S.A.
of the Division of Animal Husbandry



BULLETIN No. 96

630.4
C212
Exp. Farms
Service
Bul.

The Honourable.
The Minister of Agriculture,
Ottawa.

SIR,—I have the honour to transmit herewith the manuscript of Bulletin 96 of the regular Experimental Farms series, entitled, Farm Business: "A Preliminary Survey," and prepared by Mr. J. A. Ste. Marie, of the Division of Animal Husbandry.

The manuscript contains the results of the first systematic farm survey work undertaken by this branch. The farms for survey were chosen, as far as possible, among those grouped round some (6) Illustration Stations in the districts visited.

The data have been collected and summarized with the greatest care. Little space has been taken up with deductions therefrom. The figures themselves indicate, even to the casual reader, the main causes why one farm is profitable and another, with equal or better advantages, is conducted at a loss, and, in indicating these causes, also point out the remedy.

It is hoped to carry on and extend this survey work as opportunity permit

I have the honour to be, sir,
Your obedient servant,

E. S. ARCHIBALD,
Director Dominion Experimental Farms.

OTTAWA, May 7, 1920.

FARM BUSINESS IN QUEBEC.

A PRELIMINARY AGRICULTURAL SURVEY.

During these days of recuperation in our national life, we find that the last few years have greatly upset the old order of things, leaving behind them a state of uneasiness, which no particular class cares to shoulder and passes to its neighbour. As a great deal of criticism has been, and is, directed against the farmers in this period of unrest, it was thought that a survey of this kind might help to clear any misconception which some might entertain towards the farming element of our population; and to represent the actual situation as clearly as possible for the benefit of the farmers, who are the producers of the greatest part of the necessities of life and to the general public who are the consumers.

METHOD OF STUDY.

The methods of conducting this survey were by no means original. Somewhat similar methods of study, forms used, methods of calculation and of presenting the summaries therefrom, etc., etc., have been found the most satisfactory after several years trial in many of the States to the south and elsewhere. In the present bulletin the best known and tested of these methods were adopted with variations suitable to the province of Quebec and the immediate localities surrounding our Illustration Stations, where the investigation was carried on.

To obtain information in various parts of the province, this preliminary survey was made in six counties. A representative district in each county was chosen, in each of which districts twenty-five representative farms were surveyed.

To collect all the desired information, special forms were used and with their aid a fairly accurate and complete inventory of each farm surveyed was made. True, very few farmers keep complete records of their operations, but most of them keep accounts of the principal items of revenue and expenditure and with the aid of the enumerator, the questionnaire or form was filled out in a most satisfactory way.

DETERMINATION OF THE LABOUR INCOME.

The receipts from the various sources were itemized and when totalled together constitute the gross revenue of the farm.

The expenditure of the farm was recorded under several items and the total of them constitutes the gross expenditure.

The same approximate value was credited to labour performed by the farmers' sons who were fourteen years of age or over as would have been paid for hired help, so that all might be treated alike in the determination of the labour income.

Annual depreciation of 10 per cent was charged on machinery and live stock and 5 per cent on the farm buildings.

Interest on total capital invested was rated at 6 per cent.

By deducting the total expenditure from the total receipts, the balance is termed the "labour income," or the salary for the farmer and his wife for the management of the farm and the work they perform thereon.

As there are many groups of farms in this work which are making no labour income, the term "plus labour income" will be used whenever the total revenue exceeds the total expenditure, to designate the salary obtained by the farmer and his wife.

The term "minus labour income" will be used throughout this work when an unfavourable balance is the result of the farm operation, leaving a "minus" instead of a "plus labour income".

In reading the unfavourable results obtained by some of the farms one may ask the following question: If a minus labour income is obtained by some farms, how is it that these farmers will keep on staying on these farms?

It will be noted that in working out the labour income the items, "labour performed by non-hired labour," (except that of the farmer and his wife), "depreciation of 10 per cent on machinery and live stock" and "5 per cent on farm buildings" as well as an interest of "6 per cent on the total capital invested," are all charged and included in the total expenditure. As it is often the case on the farms, the non-hired labour may not receive the money credited to it, but merely works for its "living". The depreciation charged against machinery, live stock and farm buildings may not be spent and on such a farm we may see machinery out of date or order, live stock decreasing in value and farm buildings in a very dilapidated state. Lastly and probably the most important reason why so many farmers do stay on farms yielding no "plus labour income" is that the farm may not be mortgaged at all or for only a small fraction of the total capital invested, and the money required to keep on living on these farms is derived from the interest received on the unmortgaged part of the total capital invested which may vary from 6 per cent or less.

DEFINITION OF TERMS

An Animal Unit represents a horse or a cow. Young cattle and other classes of stock are *fractions* of *units* based upon the amount of food consumed, and there will be required the approximate following number of each to make up an animal unit: Heifers one to two years, 2; calves, 4; mature hogs, 4; sheep, 7; and hens, 100. A farm with 24.5 animal units means that it may have 3 horses, 12 cows, 1 bull, 8 heifers, 4 calves, 5 hogs, 14 sheep and 50 hens or its equivalent.

Cash Crop is a common term used to designate all crops that are sold directly for cash.

Crop Index: The value of all crops grown from all farms surveyed is added together and divided by the total crop acres. The result is used as a base and is given the value of one hundred, and a *crop index* of 120 means that the value of the crop acres of this particular farm is 20 per cent above the average of the farms surveyed. A crop index of 96 would be 4 per cent below the average of the farms surveyed.

Live Stock Index of 105.5 would denote that this particular farm is receiving 5.5 per cent more return for its animal units than the average of all farms surveyed; a farm with a live stock index of 78 would receive 22 per cent less than the average.

Tillable area is the number of acres of land on a farm which are or could be brought under cultivation.

Crop acres is the number of acres of land from which a cultivated or a pasture crop is taken.

TABLE I.—SIZE OF FARM AND LABOR INCOME.

Size.	Acres. 41-60	Acres. 61-80	Acres. 81-100	Acres. 101-120	Acres. 121-140	Acres. 141-160	Acres. 161-200	Acres. 201- more
No. of farms.....	15	17	37	11	14		21	25
Average size.....	Ac. 50	74	95	113	132		187	311
Average tillable area.....	Ac. 44	71	84	97	119		152	249
Average crop acres.....	Ac. 47	71	89	102	120		161	252
Average total capital.....	\$ 9,408	12,673	16,881	16,867	20,091		25,232	41,657
Average capital in Real Estate.....	\$ 5,199	8,017	11,640	11,614	13,765		18,370	32,521
Average capital in Buildings.....	\$ 1,640	1,576	1,657	1,700	2,257		1,871	2,000
Average capital in Machinery.....	\$ 967	1,171	1,173	1,264	1,229		1,355	1,716
Average per cent Capital in Live Stock.....	% 12	9	6.9	7.5	6.1		5.8	4.1
Average per cent Capital in Live Stock.....	% 17	15	14.3	13.6	14.2		14.7	11.6
Average per cent Capital in Live Stock.....	% 39	41	48	54	62		66	78
Average Crop acres per man.....	Ac. 22	28	33	36	38		39	54
Average Crop Acres per horse.....	Ac. 12.9	16.7	19.2	20.2	23.9		23.1	42.3
Average Animal Unit.....	A.U. 100.1	96.5	96.1	88.2	104.2		102.2	101.2
Average Live Stock Index.....	No. 133.1	110.0	113.8	116.9	102.4		105.8	81.7
Average Crop Index.....	No. 99	221	409	449	349		827	971
Average Stock sold.....	\$ 155	315	307	224	302		419	411
Average Butter, cheese or milk return.....	\$ 600	653	700	835	1,167		1,630	1,908
Average Swine sold.....	\$ 176	167	241	237	310		277	634
Average Sheep or Wool sold.....	\$ 16	23	43	22	11		71	83
Average Poultry sold.....	\$ 37	108	19	17	19		20	34
Average Total Revenue.....	\$ 1,083	1,487	1,779	1,784	2,159		3,195	4,043
Average Labor.....	\$ 109	287	252	244	312		404	1,216
Average Feed Fought.....	\$ 128	71	116	84	221		225	367
Average Current Expenses.....	\$ 120	133	164	175	198		214	356
Average Depreciation on Buildings, Machinery, Live Stock.....	\$ 339	387	438	440	513		583	777
Average Interest on Capital.....	\$ 564	700	1,013	1,012	1,205		1,513	2,499
Average Labor Income.....	\$ 177	151	204	171	485		149	1,182
Average Labor Income for best 5 farms.....	\$ 155	880	+1,285	326	384		+2,273	556
Average Labor Income for poorest 5 farms.....	\$ 418	819	-1,467	664	-1,279		-1,149	3,403

* 4 farms only.

The results obtained by the findings of the above table (Table I) bring forth information which is quite contradictory to similar surveys made elsewhere, in that the "plus" labour income, instead of increasing in proportion to increase in the size of the farm, varies indifferently with the various groups. For such findings a word of explanation is due: As aforesaid, groups of farms were surveyed in different districts of the province and of these, two are mainly responsible for these different results. In l'Assomption district, owing to their system of farming, their labour income was generally higher than the other districts, and in the Lake St. John district, on account of the high value placed on their real estate, the average net labour income is a minus quantity. Hence in whatever groups a predominance of farms from these two districts happens to appear, alterations in the findings are caused which would have otherwise been very much in accordance with other surveys of this kind. The tables that follow will support this explanation and will enable us to study the farm business according to districts.

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TABLE II.—FARM BUSINESS IN QUEBEC.

District.	No.	Aubrey.	L'Assomption	Lachute.	Bedford.	Montmagny	St. Gedeon (Lake St. John).
No. of farms.....	25	25	25	25	23	24	27
Average size.....	98	98	175	173	184	102	148
Average tillable area.....	86	86	154	146	134	90	132
Average crop acres.....	91	91	155	145	145	92	130
Average total capital.....	14,147	14,147	23,266	20,737	16,543	13,139	38,016
Average capital in real estate.....	8,700	8,700	16,832	14,600	10,450	8,074	30,946
Average per cent capital in Real Estate.....	61.5	61.5	73.3	70.4	63.2	61.4	81.4
Average Capital in Buildings.....	1,888	1,888	1,808	1,764	2,213	1,692	2,096
Average Capital in Machinery.....	7.8	7.8	8.5	8.5	13.4	12.9	3.5
Average capital in Machinery.....	1,154	1,154	1,578	1,195	1,052	1,263	1,278
Average Cap. in Live Stock.....	8.2	8.2	6.8	5.8	6.3	9.0	3.6
Average per cent capital in Live stock.....	2,405	2,405	3,048	3,178	2,828	2,110	3,696
Average Crop Acres per Man.....	17.0	17.0	13.1	15.3	17.1	16.1	9.7
Average Crop Acres per Horse.....	46	46	62	62	60	42	54
Average Animal Unit.....	27	27	40	41	41	34	41
Average Live Stock Index.....	19.4	19.4	26.0	27.4	25.8	17.7	30.3
Average Crop Sold.....	113.5	113.5	105.7	113.9	104.3	79.8	76.5
Average Stock Sold.....	12.8	12.8	127.1	92.4	94.6	97.2	103.6
Average Butter, Milk or Cheese sold.....	318	318	1,403	187	180	270	608
Average Sheep or Wool Sold.....	540	540	304	391	310	158	229
Average Poultry Sold.....	849	849	1,257	1,884	1,148	577	959
Average Total Revenue.....	180	180	405	42	568	276	363
Average Labor.....	88	88	26	44	3	40	129
Average Current Expenses.....	1,975	1,975	3,440	2,539	2,223	1,347	2,300
Average Depreciation on Buildings.....	281	281	555	406	570	361	608
Average Depreciation on Machinery.....	116	116	211	368	378	100	333
Average Interest on Capital.....	441	441	225	174	207	139	602
Average Labor Income.....	848	848	1,398	525	496	423	788
	+	+	+	1,244	992	788	2,287
	154	154	500	173	422	462	1,533

We will note that two districts only are making an average plus labour income, an a close study will reveal why some districts are successful and others less successful. To bring forward the factors underlying the success and failure of the farms in the same districts and to establish a clear demonstration and comparison as well among the different districts, the following two tables have been prepared.

TABLE III.—FARM BUSINESS IN QUEBEC.

District.	No. of Farms.	L'Assomption.		Lachute.		Aubrey.		Bedford.		Montmagny.		St. Gedeon (Lake St. John.)	
		Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5
		Ac.	%	Ac.	%	Ac.	%	Ac.	%	Ac.	%	Ac.	%
Average size.....		153	155	164	184	106	114	237	255	305	146	69	308
Average tillable Area.....		143	142	133	138	101	90	157	208	88	122	55	276
Average crop acres.....		143	143	140	143	103	99	159	211	89	127	57	278
Average total capital.....	\$	2,1074	22,456	21,966	21,731	14,856	16,731	21,964	23,536	12,421	18,407	17,400	80,421
Average Capital in Real Estate.....	\$	1,4946	16,120	15,240	15,561	9,180	10,860	14,290	14,230	6,810	12,630	12,550	69,000
Average per cent Capital in Real Estate.....	%	71	72	70	72	62	65	65	60	55	69	72	86
Average Capital in Buildings.....	\$	1,500	1,600	2,100	1,500	2,100	1,940	2,800	3,100	1,900	1,900	1,540	3,100
Average per cent capital in buildings.....	%	7	7	9	7	14	12	13	13	15	10	9	4
Average Capital in Machinery.....	\$	1,160	1,822	1,200	1,200	1,200	1,140	1,040	2,040	1,180	1,440	1,190	1,720
Average per cent Capital in Machinery.....	%	5	8	5	6	8	7	5	9	110	8	7	2
Average Cap. in Live Stock.....	\$	3,468	2,914	3,426	3,470	2,376	2,791	3,834	4,166	2,531	2,437	2,129	6,001
Average per cent Capital in Live Stock.....	%	17	13	16	15	16	16	17	18	20	13	12	8
Average crop acres per man.....	Ac.	71	62	72	64	49	49	59	73	40	50	54	63
Average crop acres per horse.....	Ac.	39	43	36	36	30	30	38	49	38	41	29	62
Average Animal Unit.....	A.U.	28.1	27.0	31.5	27.5	20.2	22.8	37.4	31.4	19.8	20.1	17.6	58.2
Average Live Stock Index.....	No.	146.2	90.6	154.0	93.4	182.6	91.6	124.2	98.9	93.1	80.2	77.0	72.2
Average Crop Index.....	No.	176.0	86.0	114.1	94.0	125.0	100.4	124.9	78.2	96.2	92.2	118.5	92.0
Average crop sold.....	\$	2,131	382	392	35	658	12	423	284	304	195	190	1,610
Average stock sold.....	\$	590	205	638	247	1,010	570	587	300	265	132	136	374
Average Butter, Cheese or Milk sold.....	\$	1,800	1,056	2,710	1,705	1,175	870	1,721	1,680	698	707	510	1,825
Average Swine sold.....	\$	435	37	355	6	150	98	1,141	378	348	448	294	644
Average Sheep or wool sold.....	\$	61	33	74	6	342	38	29	42	42	31	57	272
Average Poultry sold.....	\$	16	167	36	18	342	38	29	42	31	57	272	6
Average total Revenue.....	\$	5,033	2,108	3,887	2,011	3,335	1,588	3,901	2,642	1,707	1,517	1,193	4,734
Average Labor.....	\$	385	480	372	580	330	350	832	480	346	480	40	4,734
Average Feed Bought.....	\$	190	320	383	415	110	140	448	1,720	95	217	12	1,820
Average Current Expenses.....	\$	261	178	189	172	151	137	275	265	131	193	170	578
Average Depreciation on Buildings.....	\$												
Live Stock and Machinery.....	\$	538	561	566	542	443	490	617	775	466	482	388	955
Average Interest on Capital.....	\$	1263	1,357	1,315	1,304	884	1,003	1,305	1,436	745	1,108	1,032	4,825
Average Labor Income.....	\$	+2,396	-	+1,105	-1,002	+1,416	-	+424	-1,664	-76	-954	-448	-3,444

In studying the results of the two tables, (Tables III & IIIA) we will note that the terms "Best 5 and Poorest 5 farms" simply indicate and include the farms with the highest and lowest labour income, regardless of quality of land, of stock or capital invested.

At the outset we will note the difference of labour income obtained for the average of the best and poorest 5 farms, indicating the possibilities of fair returns in one case and the shortcomings in the other.

In studying the results obtained for the best and poorest 5 farms in l'Assomption district one will at once observe that the difference obtained in the labour income is not caused by a difference of capitalization, indicating poorer land or stock of inferior quality, nor by a difference in the average size of the farm nor in the average per cent cost of total expenditure but by the important factor of good management, which is expressed by an average gross return of 23.9 per cent on its capitalization for the best 5 farms against an average gross return of 9.3 per cent for the poorest 5 farms. This difference in gross return in favour of the best 5 farms is explained by their receiving \$103 for every animal unit against \$67 as an average for every animal unit on the poorest 5 farms. This difference is further supplemented by getting for the best 5 farms a return in cash crops of \$14.90 per acre against a return of \$2.67 per acre for the poorest 5 farms. (For detailed information see table III). Hence by getting a difference of 14.6 per cent of gross return in favour of the best 5 farms, we have a labour income of \$2,396 for the more successful farms against a minus labour income of \$708 for the poorest 5 farms. As these two groups of farms are located in the same district, working under the same climatic conditions, farms composed of similar soil, of the same acreage, with practically the same capitalization, we are forced to conclude that the most of the prevailing possibilities are not made on the average of the poorest 5 farms. This is further emphasized by a live stock index of 146.2 and a crop index of 176.0 for the best 5 farms compared with 90.6 and 86.0 respectively for the less successful farms. These are the factors that should receive a great deal of consideration and that are responsible for such an astonishing difference in the labour income of these two groups.

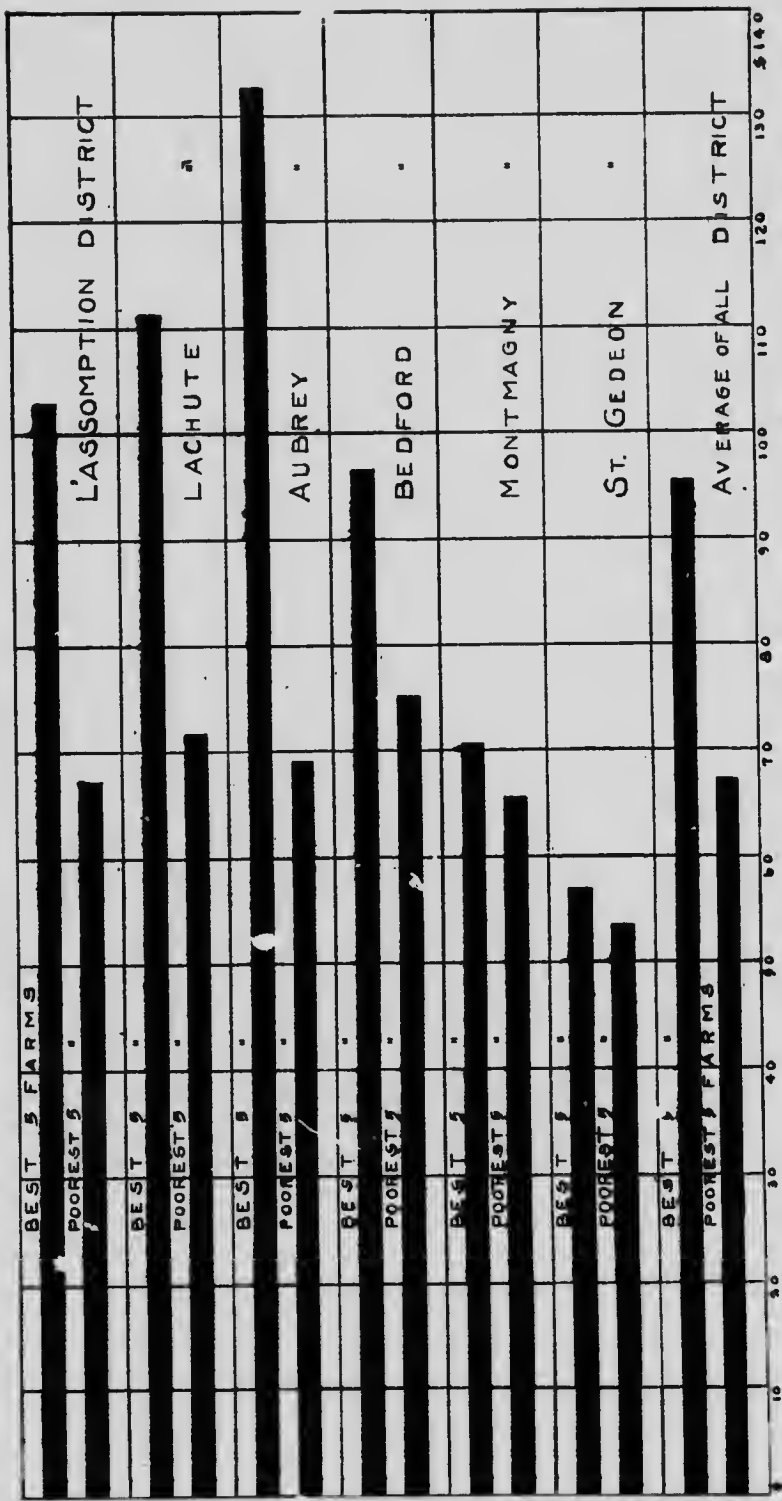
TABLE IIIA.—FARM BUSINESS IN QUEBEC.

District.	L'Assomption.		Lachute.		Aubrey.		Bedford.		Montmagny.		Lake St. John.		Average of all Districts.	
	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5
Average total capital.....	\$ 21,074	\$ 22,456	\$ 21,966	\$ 21,731	\$ 14,856	\$ 16,731	\$ 21,984	\$ 23,536	\$ 12,421	\$ 18,407	\$ 17,400	\$ 80,421	\$ 18,260	\$ 30,540
Average size of farms.....	153	155	164	184	106	114	237	255	105	146	69	308	139	194
Average Animal Unit.....	28.1	27.6	31.3	27.5	20.2	22.8	37.4	31.4	19.8	29.1	17.6	58.2	25.7	31.2
Average per cent Gross Return.....	103.2	67.3	111.6	71.9	132.5	69.1	96.7	75.1	70.9	8.3	6.9	53.7	17.1	9.0
Average return per animal unit.....	\$ 14.90	\$ 2.67	\$ 0.12	\$ 0.24	\$ 2.80	\$ 6.39	\$ 2.66	\$ 1.35	\$ 3.42	\$ 1.54	\$ 3.33	\$ 5.80	\$ 4.54	\$ 3.00
Average return of cash crop per acre.....	\$ 12.5	\$ 12.9	\$ 12.9	\$ 13.8	\$ 12.9	\$ 12.7	\$ 15.8	\$ 18.3	\$ 14.4	\$ 13.5	\$ 9.4	\$ 10.2	\$ 13.0	\$ 13.0
Average per cent cost of total expend.....	% +2,396	% -708	% +1,105	% -1,002	% +1,416	% -532	% +424	% -1,669	% -102	% -964	% -448	% -3,403	% +799	% -1,380

liture but by the important factor of good management, which is expressed by an average gross return of 23.9 per cent on its capitalization for the best 5 farms against an average gross return of 9.3 per cent for the poorest 5 farms. This difference in gross return in favour of the best 5 farms is explained by their receiving \$103 for every animal unit against \$67 as an average for every animal unit on the poorest 5 farms. This difference is further supplemented by getting for the best 5 farms a return in cash crops of \$14.90 per acre against a return of \$2.67 per acre for the poorest 5 farms. (For detailed information see table III). Hence by getting a difference of 14.6 per cent of gross return in favour of the best 5 farms, we have a labour income of \$2,396 for the more successful farms against a minus labour income of \$708 for the poorest 5 farms. As these two groups of farms are located in the same district, working under the same climatic conditions, farms composed of similar soil, of the same acreage, with practically the same capitalization, we are forced to conclude that the most of the prevailing possibilities are not made on the average of the poorest 5 farms. This is further emphasized by a live stock index of 146.2 and a crop index of 176.0 for the best 5 farms compared with 90.6 and 86.0 respectively for the less successful farms. These are the factors that should receive a great deal of consideration and that are responsible for such an astonishing difference in the labour income of these two groups.

Now if we study the other groups in the same light, we will arrive at the same conclusion and we will realize the role that good live stock plays in making farming a success. We will observe that all the groups or districts where the farms are not

RETURNS PER ANIMAL UNIT



making a plus labour income, are districts or groups where the live stock index is below 100. Or in other words these farms are keeping classes of stock of such quality and fed in such a way that the maximum production is not obtained from every animal unit kept.

This survey, through the above tables, reveals that it costs an average of 13 per cent on total capitalization to operate a farm, and unless we plan our farming operations to obtain a gross per cent return from the various sources of revenue, that will be higher than the cost of operation, we shall be faced with a "minus" instead of a "plus" labour income.

SPECIALIZED OR GENERAL FARMING.

To ascertain what type of farming brings the highest labour income, three groups of twenty-five farms each were surveyed from the three districts that were nearest alike. Each of these districts supplied a certain number of farms to each group.

The first group, "Dairy farming plus a cash crop", includes farms that were marketing their milk either as cheese or butter, and 70 per cent of the cash crop sold consisted of fruits, grass and clover seed, potatoes, maple sugar, tobacco and vegetables, which were not marketed through the live stock.

The second group, "General Dairy farms," includes farms which marketed their milk through the cheese factory or creamery and 70 per cent of the cash crop sold consisted of hay and grain.

The third group, "Dairy Farming for City trade", includes farms producing and selling their milk for city trade and their cash crop was similar to either of the preceding groups.

TABLE IV.—SPECIALIZED OR GENERAL FARMING.

		Dairy Farming plus a Cash Crop.	General Dairy Farms.	Dairy Farming for City Trade.
Number of farms.....	Ac.	25	25	25
Average size.....	Ac.	158	134	146
Average crop acres.....	Ac.	141	113	129
Average total capital.....	\$	20610	16319	19402
Average capital in real estate.....	\$	14680	10768	13141
Average per cent Capital in real estate.....	%	71.2	66.0	67.7
Average Capital in Buildings.....	\$	1788	1912	1852
Average per cent Capital in Buildings.....	%	8.7	11.7	9.5
Average Capital in Machinery.....	\$	1366	1123	1248
Average per cent Capital in Machinery.....	%	6.6	6.9	6.4
Average capital in Live Stock.....	\$	2776	2515	3161
Average per cent Capital in Live Stock.....	%	13.5	15.4	16.3
Average Crop Acres per Man.....	Ac.	40	31	34
Average Crop Acres per horse.....	Ac.	61	53	64
Average Animal Unit.....	A. U.	24.0	22.1	26.4
Average Live Stock Index.....	No.	103.5	100.2	116.5
Average Crop Index.....	No.	125.8	108.5	108.3
Average Crop Sold.....	\$	1108	324	225
Average Stock sold.....	\$	270	402	498
Average Butter, Cheese or Milk sold.....	\$	1060	910	1676
Average Swine sold.....	\$	465	333	65
Average Sheep or Wool sold.....	\$	30	1	31
Average Poultry sold.....	\$	45	18	27
Average Total Revenue.....	\$	2978	1988	2523
Average Labour.....	\$	488	311	381
Average Feed bought.....	\$	238	139	352
Average Current Expenses.....	\$	194	162	163
Average Depreciation on Buildings, Live Stock and Machinery.....	\$	504	455	533
Average Interest on Capital.....	\$	1234	981	1164
Average Labour Income.....	\$	+ 320	- 60	- 70

TABLE IVA.—SPECIALIZED OR GENERAL FARMING.

		Dairy Farming plus a Cash Crop.	General Dairy Farms.	Dairy Farming for City Trade.
Number of farms.....	No.	25	25	25
Average total capital.....	\$	20610	16319	19402
Average size of farms (crop acres).....	Ac.	14.1	113	129
Average Animal Unit.....	A.U.	24.0	22.1	26.4
Average Live Stock Index.....	No.	103.5	100.2	116.5
Average Crop Index.....	No.	125.8	108.5	108.3
Average per cent Gross Return.....	%	14.4	12.2	13.0
Average Return per Animal Unit.....	\$	81.2	75.2	87.0
Average return of Cash Crop per acre.....	\$	7.86	2.87	1.74
Average per cent Cost of Total Expenditure.....	%	12.9	12.6	13.4
Average Labour Income.....	\$	+ 320	- 60	- 70

The results obtained in the above tables (Tables IV & IVA) for these three groups of farms are quite self-explanatory. We will at once note that only one group, *Dairy Farming plus a Cash Crop*, has made a plus labour income, while the two other groups are just about breaking even.

The average size of farms varies slightly with each group, but as the capital invested per acre is very nearly constant for all groups, the difference in the average size of the farms cannot be the responsible factor, as group 2 is obtaining about the same result as group 3. The per cent cost of total expenditure, although slightly higher for group 3 cannot be the only responsible factor, as group 2 has the lowest per cent cost and makes no labour income. Therefore, we have to conclude that group one is obtaining a higher average labour income by making an average gross return of 1.4 and 2.2 per cent more than groups 2 and 3; difference made up by getting fair revenue from its animal units, supplemented by a cash crop return per acre exceeding the two other groups.

The farms of group 3, "Dairying for City Trade", have more live stock, mainly cows, of higher quality than either group 1 and 2 as illustrated by the live stock index and returns per animal unit. But despite high quality stock, the side lines, including cash crops, hogs and sheep, being neglected, an average per cent gross return is made that does not equal the average per cent of total expenditure, leaving a minus labour income. This indicates that specialization in the production of milk for city trade as practised is not the most remunerative type of farming.

The farms of group 2, "General Dairy Farms", can be termed the intermediate type and are the type that prevails in most districts. As indicated by the live stock index and animal unit returns, the live stock kept is of a lower quality. But by selling hay as the principal cash crop, fewer cattle kept, less labour is required, less concentrated feed is bought, all tending to reduce the cost of operation, and although these farms are obtaining a lower average per cent gross return than the other groups, they are getting about the same final results as group 3 but are falling behind group one, which is the only successful group.

These three types of farming further demonstrate by the above tables, that an average gross return of 14 or more per cent must be made on the total capitalization of the farms before a plus labour income can be expected.

THE SIRE AND THE QUALITY OF OUR COWS.

Much has been and is being said and written on the importance of using pure-bred sires of quality to head our various classes of live stock, if we wish this stock to be profitable. In order to test the value of this policy, all the dairy herds included in this survey have been divided into three groups as follows: Group 1 comprises herds having a few or all pure-bred cows, headed by a pure-bred sire. Group 2 comprises grade and high grade cows headed by a pure-bred sire. Group 3 includes common cows headed by a scrub sire. The results are embodied in the following table.

At the outset we will observe that no groups are making a plus labour income. Factors not altogether related to the quality of the cows are responsible for such results. Nevertheless it is of interest to note that the "minus labour income" increases at about the same ratio as the quality of the cows decreases.

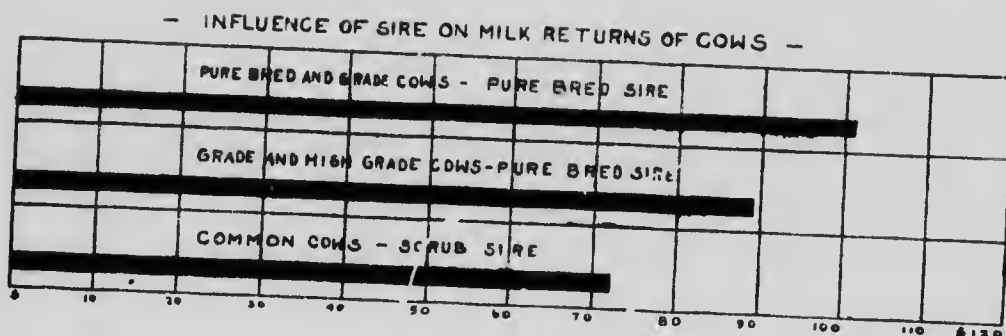
The most important feature of this table (Table V) is the influence of the pure-bred sire in relation to the average return of the cows for the various groups. Group one comprising pure-bred and high grade cows have an average return of \$101 against \$89. for group 2 with grades and high grade cows headed by a pure-bred sire and an average of \$72. for group 3 containing common cows headed by a scrub sire, making a difference in average return per cow of \$12, between group one and 2 and \$29, between group one and 3. As the herds of group 3 comprise an average of 12 cows, this makes an average yearly difference in return of \$348, between group one and 3 or against the scrub sire and common cows without taking into consideration the

TABLE V.—QUALITY OF SIRE. MILK RETURN OF COWS AND LABOR INCOME.

District.	No. of Farms.	Pure bred and High Grade Cows Headed by Pure Bred Sire.	Average Milk Revenue per cow.	Average Labor Income.	High grade cows, headed by pure bred sire.	Average Milk Revenue per cow.	Average Labor Income.	Common cows and scrub sire.	Average Milk Revenue per cow.	Average Labor Income.
		Average No.	\$	\$	Average No.	\$	\$	Average No.	\$	\$
L'Assomption.....	25	25.0	108	1746	12.8	97	+1,248	12.9	85	91
Lachute.....	25	16.2	126	28	13.3	134	- 136	14.2	110	884
Aubrey.....	23	10.9	108	39	9.0	87	+ 313	8.5	70	269
Bedford.....	22	15.0	90	1011	18.8	67	- 630	16.5	67	119
Montmagny.....	24	10.4	66	388	7.5	61	- 336	9.1	63	542
St. Gedeon (Lake St. John).....	26	16.0	66	1127	21.3	65	- 1,931	11.5	54	1,384
Average of Total.....	24.2	15.0	101	140	14.0	89	- 324	12.0	72	487

results of the future generations. The most discouraging feature is that at least 65 per cent of the dairy herds of the province are either headed by or are using a scrub sire. Many will claim that it costs more to feed well-bred, well-kept cows than common cows. Unfortunately no data could be obtained to verify the truth of such claims, but let us assume that it does cost slightly more (a difference, though, offset by other factors) and let us bring the difference of \$29, between group one and 3 to \$15, allowing \$14. to cover the extra cost of feed, depreciation, etc., and then multiply this plus return of \$15. by 65 per cent of the cows in the province of Quebec* (756512 cows) which are headed by or using scrub sires and we are faced with a staggering loss of \$11,347,680 in one year alone, which can only be attributed to the use of these scrub bulls without taking into consideration the losses involved in future generations.

* (No. 1919 Quebec Statistical Year Book p. 334).



GENERAL SUMMARY.

1. To obtain a "plus labour income", the management of the farm should be such as to make a gross return exceeding 13 per cent on total capital invested, and to keep expenditure within this amount.
2. To obtain a return of over 13 per cent on capital invested under present conditions, an average return of \$90. or more should be received for every animal unit kept, and be supplemented with a cash crop return.
3. To obtain an average return of \$90. or more per animal unit, these animals must be of good breeding, receive liberal feeding and good management.
4. The cash crop sold to increase the gross return must be of a kind that will not cause a material reduction in the number of animal units kept.
5. The farms obtaining a plus labour income are the farms with a live stock and crop index of 100 or more.
6. The farms with a high live stock index invariably have their herds headed by a pure-bred sire of quality.
7. The farms with a live stock index of 100 or more, as a rule return a plus labour income.
8. The farms with a crop index of 100 or more and a live stock index below 100, invariably return a minus labour income.
9. Table No. I reveals that the size of the farm is not the only factor responsible for failure or success in farming.
10. Table II reveals that some districts of the province are farming more successfully than others and shows the reason why they are more successful.
11. Tables III and IIIa reveal the possibility of successful farming and further demonstrate why some are successful and others not in the same district as well as what is done in other districts.
12. Tables IV and IVa show that "General Dairy Farming" and "Dairy Farming for City Trade" do not bring as satisfactory results as "Dairy Farming plus a cash crop".
13. Table V reveals that the returns of the cows vary with the quality of sire used and that the scrub sire is responsible for an annual loss to the province of Quebec of over \$11,347,680 under a very conservative estimate.

FOOD FOR THOUGHT.

Have you ever made an inventory of your farm ?

What is the total capital invested ?

How much capital is invested in Farm Buildings, Real Estate, Horses, Cattle, Hogs, Sheep, Poultry, Machinery, Home Conveniences ?

What classes of stock bring the highest per cent return on the capital invested ?

Has the crop index of your farm increased during the last five years ?

Has the profit per animal unit increased during the last five years ?

Are you practising winter dairying ?

If not, what use is made of your available labour ?

Are you controlling the milk production of your cows by keeping milk records to enable you to practise selection ?

Are you availing yourself of the Experimental Farm Publications ?

Are you aware that you can obtain milk record forms free from the Dairy Division, Department of Agriculture, Ottawa ?

Are you making it a point to visit your nearest Experimental Farm annually.

Do you receive an agricultural paper ?

Do you belong to an agricultural club ?

Do you belong to an agricultural society and do you take an active part in it ?

Is your herd of cows headed by a pure-bred sire of quality ?

Is your farm divided so as to permit the practice of a systematic rotation ?

Is the environment of your home made interesting for your children, your wife, your neighbour and your country ?

Yesterday is gone, tomorrow may never come, act now ?

