



SUCCESS IN DAIRY FARMING

LAND, machinery, buildings, live stock, feed, seed, fertilizer, and labour are needed in the operation of a dairy farm. The kind and amounts of these resources used in a farm business will affect the returns to the owner. Farm management studies are designed to measure the importance of these factors and in this pamphlet, figures obtained in a survey of dairy farms in Ontario are used. In table 1, a summary of dairy farm businesses is presented which reflects variation in farm returns. It will be observed that total farm receipts per farm ranged from \$2,225 in the North Bay-Sault Ste. Marie zone to \$4,722 in the Ottawa zone. Total farm expenses varied from \$1,884 in the Owen Sound-Oshawa-Peterboro area to \$3,316, on the group of farms located near Ottawa. Farm incomes or the difference between receipts and expenses were lowest in the North Bay-Sault Ste. Marie district and highest in the Ottawa area. Labour earnings¹ however were highest in the Brantford-London zone and lowest in the Owen Sound-Peterboro-Oshawa district. The net cash receipts were largest in the Ottawa area and lowest in the North Bay-Sault Ste. Marie area. These farms were all producing milk for fluid milk markets. The findings of this survey would in all probability be comparable with those of any other survey conducted in any dairy district of Canada.

TABLE 1.—FINANCIAL SUMMARY OF THE AVERAGE FARM BUSINESS FROM WHICH MILK WAS SOLD FOR FLUID CONSUMPTION, ONTARIO, 1937-38

Milk market zones	No. farms	Total farm receipts	Total farm expenses	Farm income	Interest at 4 per cent	Operator labour income	Farm perquisites	Operator labour earnings	Net cash receipts
		\$	\$	\$	\$	\$	\$	\$	\$
Toronto.....	128	3,676	2,708	970	576	392	349	741	1,679
Windsor-Chatham.....	24	3,831	3,009	822	647	175	363	538	1,853
London-Brantford.....	49	4,188	2,812	1,375	568	808	402	1,210	2,068
Hamilton-Niagara.....	39	4,041	2,953	1,089	646	443	408	851	1,852
Owen Sound-Peterboro-Oshawa.....	30	2,579	1,884	696	440	256	303	559	1,282
St. Lawrence Towns.....	26	3,298	2,270	1,027	501	527	323	850	1,665
Ottawa.....	24	4,722	3,316	1,407	668	739	384	1,123	2,522
North Bay-Sault Ste. Marie	13	2,225	1,886	339	325	14	331	345	914

¹ The labour earnings are derived by subtracting expenses from receipts; deducting a 4 per cent interest charge on capital invested from the foregoing remainder to secure Labour Income; to the latter figure is added the value of food, fuel and use of the farm house as a dwelling. The resulting figure is the operator's labour earnings. In these calculations, allowances are made for family labour whether paid or unpaid and for depreciation on buildings and machinery.

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In building up a successful dairy business, good farmers pay particular attention to four main factors. The first of these is rates of production of live stock and crops; second, efficient use of labour; third, efficient use of capital including farm implements; and fourth, a sufficiently large output—for without this, low operating costs cannot be established. These factors are related and must be combined to develop a successful farm business.

Rates of Production.—High rates of production of both live stock and crops have an important bearing on farm returns. The dairy farmer grows a good deal of the roughage fed to stock. He will use home-grown feeds as much as possible. High crop yields are, therefore, of significant importance, but in the final analysis emphasis must be placed on milk production per cow. In this study of dairy farming in Ontario in which 334 farmers provided statements, there were 80 who had cows producing less than 6,000 pounds of milk during the year 1937-38. On these farms, labour earnings averaged \$584, while on 65 farms on which production per cow was 9,000 or more pounds per year, labour earnings were \$1,091—a difference in income of more than \$500 per year.

In this illustration the latter group had better cows than the former; production per cow was greater. It should be remembered, however, that when increased production per cow is emphasized, it is of little benefit to the farmer if, with the same number of cows, it merely increases production beyond market requirements. Benefit accrues only if the farmer obtains the required quantity of milk with fewer cows, and in this way saves the feed and labour which would be needed for the additional animals. Thus the difference between expense incurred and the price received is increased. In a dairy business cows are perhaps the most important part of the farmer's capital. Proper selection of heifers for the milking herd or the purchase of good breeding stock is, therefore, vital to success.

Crop yields above average add materially to farmers' incomes. For example: among the 334 Ontario dairymen already referred to, there were 25 having crop yields more than 20 per cent below average, and whose labour earnings were \$280. On the other hand, 221 farmers whose crop yields were 20 per cent or more above average, obtained labour earnings of \$1,000 for the year. High crop yields are secured by choosing high yielding varieties of crops adapted to the locality, by timely and thorough cultivation, by proper control of weeds, by suitable rotation of crops, by the application of manure, and by the judicious application of commercial fertilizer to increase fertility and balance soil deficiencies. Some farmers are so situated that a good deal of grain may be grown but others must emphasize forage crops and purchase greater amounts of feed grain and concentrates.

Labour Efficiency.—Labour, whether hired or family labour, is one of the larger items of expense. This is particularly true if allowance is made for family labour at wages which would have to be paid if all labour was hired.

The importance of efficiency in the employment of labour may be shown in several ways. On a dairy farm, one of the best measures is the number of hours of man labour required to produce 100 lb. of milk. On 30 Ontario farms, where less than 2.6 hours of man labour were required per 100 lb. of milk, operator's labour earnings were \$1,027 per year, whereas on farms requiring 3.6 to 4.5 hours, labour earnings averaged \$669, and on 46 farms where more than 4.6 hours were required per 100 lb., operator's labour earnings were \$252. Stated in another way, the cost of producing milk on farms where more than 4 hours were required to produce 100 lb. was 65 per cent higher than on the farms where less than 2 hours were required per 100 lb.

On dairy farms, efficiency of labour might be measured by the pounds of milk produced per man employed, or it may be measured in terms of receipts per man. Fifty dairymen in Ontario had receipts of \$900 or less per man employed and the operator's labour earnings on these farms averaged only \$171 per year but on 114 farms where receipts per man were \$1,500 or more, the operator's labour earnings were \$1,370.

This does not necessarily mean that the 50 farmers mentioned above did not work hard enough. It really means that they might have planned their operations better. They might have used their labour to better advantage if it had been applied to better land, to better cows or utilized along with better implements. In all these arrangements, a plan of work to get things done on time will be useful. In this way, the farmer will be prepared in advance as well as possible for each round of farm work throughout the year. Plans for long-time changes in farm operations should be drawn up too.

Efficient Use of Capital.—The use of capital in the farmers' business is a complicated problem involving such matters as a decision to build a barn or a house, purchase a tractor as combine, breeding stock or feed, and the selection of seed. The wise use of capital is associated with the amount of business transacted and the rapidity of turnover. It has been found that on a profitable farm the annual receipts should equal capital invested in about 4 years. If it takes longer, it is probable that the farm has been over-valued or that capital in the form of live stock and equipment is of inferior quality or that it is badly handled. Ontario dairymen whose farm receipts were only sufficient to equal capital invested in their farms in 6 or more years, had labour earnings of only \$279 per year compared with \$1,305 on those farms where yearly receipts equalled capital in 4 years or less.

But this is not the only way in which efficiency in the use of capital may be emphasized. Errors in the purchase of heavy machinery, construction of elaborate buildings, over-emphasis on purebred cattle by farmers inexperienced in the specialized business of breeding foundation stock, are all examples of unwise and inefficient use of farmer's capital. In purchasing a tractor, one must answer such questions as, "how many acres can I cultivate with tractor drawn equipment? How much more can I accomplish with available labour supply? How will I use the feed that is now fed to horses which will be displaced? What is the relationship between the prices of hay and oats, and fuel and oil? How many tractor hours will my farm provide? How much belt work is required?" These points may be further illustrated by the experience of 74 dairymen whose investment in real estate, land and buildings represented less than 65 per cent of the total investment in their farms. Their labour earnings averaged \$1,000. However, there were 104 farmers whose investment in real estate was more than 76 per cent of their investment and their labour earnings were only \$271. Lack of operating capital severely hampered their business activities.

Size of Business.—Important as are rates of production, efficient use of labour and such like, there is another factor which is perhaps of greater importance, namely size of business. This does not merely mean a large farm. It is true that in most cases, large farms enable higher returns than small ones but it is equally clear that a large crop acreage associated with low crop yields, poor cattle, poor equipment and poor management will result in large losses. In periods of falling prices, inventories on large farms shrink quickly and such farms are often unable to meet the cash outlay necessary. If a farmer has too little land, he may rent additional acres thus avoiding an increase in capitalization to some extent. *It is the volume of business that is important.* This means that a certain amount of business must be produced on the farm before it will be successful. In dairy farming, the importance of this factor is shown by

the experience of 69 farmers who sold 70,000 pounds of milk each year and obtained labour earnings of \$415, whereas 112 dairymen whose sales averaged 130,000 pounds of milk secured labour earnings of \$1,153. In the former group, the cost per 100 lb. of milk was 36 per cent higher than was the case in the latter group.

There is still another point which may require some emphasis. In bringing about an increase in the volume of business, a dairy farmer will of necessity secure the major portion of his income from milk, but the most efficient dairymen will combine milk production with other farm enterprises such as hogs, poultry or cash crops in such amounts that the business will result in the economical use of all the resources of the farmer.

TABLE 2.—A COMPARISON OF THE REVENUE FROM DIFFERENT SOURCES ON ALL FARMS WITH THAT OF THE TWO MOST SUCCESSFUL FARMS OF EACH MARKET ZONE 334 FARMS FROM WHICH MILK WAS SOLD FOR FLUID CONSUMPTION, ONTARIO, 1937-38.

Milk market zones	Crop receipts		Net returns					
			Dairy		Hogs		Poultry	
	All farm records	Two with highest earnings	All farm records	Two with highest earnings	All farm records	Two with highest earnings	All farm records	Two with highest earnings
	\$	\$	\$	\$	\$	\$	\$	\$
Toronto.....	326	1,706	2,300	8,550	139	534	289	704
Windsor-Chatham.....	1,129	1,755	1,595	2,931	284	341	255	333
London-Brantford.....	304	1,490	2,695	3,631	198	10	310	208
Hamilton-Niagara.....	834	7,049	2,153	3,109	105	140	267	508
Owen Sound-Peterboro-Oshawa...	184	570	1,660	2,483	111	404	208	34
St. Lawrence Towns.....	233	1,304	2,357	2,695	115	175	265	31
Ottawa.....	242	536	3,172	5,929	71	388	1,233
North Bay-Sault Ste. Marie.....	51	26	1,727	2,363	14	33	100	282

These points are well illustrated by the figures presented in table 2 in which a comparison is made of the average farmers' returns and the returns from the two farmers securing the highest net returns in each of the seven zones. The variation in supplementary enterprises from district to district is significant. The returns from the dairy enterprise are higher than average on the two most successful farms in each case, but in the Toronto zone they were also much higher in crop receipts, sales of hogs and poultry. In the Windsor-Chatham, Brantford-London and Hamilton-Niagara zones, crop receipts were most important aside from the dairy enterprise. In the Owen Sound-Peterboro zone, crops and hogs were important. In the St. Lawrence towns zone, crops were again the chief supplementary source of income. In the Ottawa district, poultry was second in importance whereas in the North Bay-Sault Ste. Marie zone, the dairy business was rather highly specialized.

High rates of production, efficient use of labour and capital, balanced production of live stock and crops on an adequate scale are the chief factors about which successful dairymen construct their plans.

*Prepared by Economics Division, Marketing Service,
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