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The impact of management skills on farm incomes in Canada

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Abstract. This study assesses the reported farm income crisis in Canada and uses farm financial data to illustrate the importance and impact that management skills and practices have on farm income and net worth. For grain and oilseed farms, large farms produce higher revenues per hectare and achieve economies of scale on operating expenses, interest and depreciation, making them significantly more profitable than smaller or average sized farms. The higher profits associated with large farms are partly returns to good farm management. While farmland investment returns are competitive with stock and bond markets, grain and oilseed farm labour and management returns are not competitive with provincial average wages and salaries. On average, Canadian grain and oilseed farm families have less disposable income to spend today but have considerably more wealth than their non-farm family neighbours. The higher wealth level for farm families makes it increasingly difficult for governments to acknowledge a farm crisis and increase farm subsidies

Introduction

Recent reports indicate that Canadian farm incomes are at an all-time low. Farm lobby groups are demanding large *ad hoc* subsidy payments from governments (federal and provincial) and a complete re-vamping of farm subsidy programs. The lobby groups indicate that without these farm payments and subsidy changes, many farm families will be forced to discontinue farming. The National Farmers' Union (NFU) reports as follows: "In 2004, Canadian farmers' realized net income from the markets (market net income) – a measure that subtracts out government payments – fell to *negative* \$10,000 per farm. The only year worse than 2004 was 2003, when per-farm market net income was negative \$16,000." (NFU, 2005) They go on to say that "without taxpayer-funded support, off-farm income, depletion of savings and new debt, farming in Canada would have to cease." If that doesn't fully describe the severity of the farm income crisis, they add; "*And farmers' ROE* (return on equity investment) *from the markets has been negative in every year of the last 20.* Overall, Canadian farmers have not earned a single dollar of profits from the markets since 1984." The hardest hit seems to be grain and oilseed farmers as commodity prices have remained low while input prices such as fuel, fertilisers, chemicals, and equipment have continued to rise. This description makes it appear very bleak and many observers have to wonder why anyone would continue to

struggle in an industry that has not offered profits for the past 20 years.

Just how bad are farm incomes in Canada? There are several factors to consider when addressing this question. First, farm income in Canada is based on a cash accounting system that allows farmers to move revenues and expenses between years as opposed to when they were actually incurred and some personal living expenses may be included in farm expenses, both of which can distort true net income in any single year. Second, reported farm income does not separate income and expenses associated with returns to labour, management and capital. Therefore, reported farm incomes may not give a true picture of what is happening in the farm sector because they mix returns to labour and management with returns to capital, so some adjustments need to be made before conclusions are drawn. Third, looking at the aggregate average farm income is not necessarily a good indicator of what is happening in the industry. The industry includes a large number of small hobby farms that are not viable economic units, yet their farm income data is included in the aggregate statistics. Rather, we need to look at farm incomes for various sizes of farm operations.

The objectives of this paper are to make the proper adjustments to reported farm incomes, separate the returns to labour, management and capital, and to report adjusted returns to farmers for various farm sizes, not just an aggregate average. To

address the severity of the farm income crisis, adjusted farm income and net worth will be compared to average Canadian family incomes and net worth. To assess the impact of management skills on farm incomes, both income and wealth levels will be compared across various farm sizes; small farms that tend to require less management and large farms that require a significant amount of management.

The changing roles of labour, management and capital on Canadian farms

It used to be that the most important attributes of a farmer were a strong back and a green thumb. Labour and knowing how to grow crops were very important. If the farmer worked hard, got the crop seeded and harvested at the right times, he/she could make a good living for the family. Farming businesses are much different today. Technological and economic changes have occurred to make labour far less important and management far more important than in the past. Being able to manage large acreage farms and being efficient with marketing, operations, finances and risk management can provide a good farm family income. But the focus needs to be on *Management*; marketing for the best prices and grades for outputs, marketing for the best prices on inputs, choices of the most cost and yield-efficient commodities, fertiliser and chemical technologies, efficient selection of equipment technologies and efficient size to match acreage, proper financial management associated with debt financing, leasing versus buying of land and equipment, cost/benefit analysis of technologies, capital assets, inputs and so on. Today it takes more management education, training and effort than labour.

A farm enterprise is no different from any other business in that it must be managed efficiently to be profitable and economically viable. As well, like any other business in any other industry, farm enterprises must grow or die. Growing the enterprise means not only growing the size of the operation but also includes continuous improvement in marketing, operations, financial and risk management - consistently improving management skills and practices. If any business decides to sit back and coast, not re-invest and not grow to keep up with competitors, it will eventually be too small and too inefficient to compete. Farm enterprises that do not keep up with changing technologies, do not continuously improve management skills, and do not grow, will suffer the same fate.

In recent publications, Painter (2005a and 2005b) analysed farm incomes in Canada and specifically, returns to farm labour and management. He found that average farm labour and management incomes have been lower than average provincial employment incomes (non-farm incomes) over the past 30 years, in all provinces studied except Quebec. All provinces have positive growth in average farm size, which offsets the low and negative growth in labour and management income per acre. When negative growth in labour and management income per acre is combined with positive growth in average farm size, there is positive net real growth in farm labour and management incomes in all provinces, with the lowest growth in Saskatchewan and the highest in Quebec. The papers also show that the once large gap between farm family and non-farm family incomes has been mostly eliminated. Canadian farm families have achieved this by increasing average farm size and by significantly increasing their off-farm incomes. However, all of the conclusions were drawn based on aggregated average data for each province, which did not separate farms by size, and included all types of farms, not just grain and oilseed as in this study. In this paper, grain and oilseed farms are separated by size to assess the impact of management on farm incomes.

Several recent *AFBM Journal* papers discuss the importance of farm management skills and practices for farm profitability. Malcolm (2004) suggests that farm managers must use a whole-farm approach, considering all aspects of the farm business in their planning and decision making. Being able to adapt and apply whole-farm financial models is important for assessing economic viability of the business plan (or changes to it) and for managing risk. He correctly points out that risk management is not about risk minimization (put your money in T-bills if you want minimum risk) but rather about knowing what the critical variables are and looking for ways to manage those variables to achieve the outcome desired. Financial models can be used to assess risk with break-even or sensitivity analysis, which allows managers to adjust marketing, operations and financial plans accordingly. Kemp *et al* (2004) suggests there is a great need for continuing development of higher level management skills among farmers. Farm management skills must include the science aspect (agronomy) as well as the business skills (marketing, operations, finance) and must be integrated to be successful. Banks (2004) discusses the city:bush divide and the long-term decline of farm incomes in Australia. He indicates that

in the Australian farm sector, about 20% of farms generate profits and capital returns that are quite acceptable. And, it is not only the large farms that are profitable but also those that can achieve precise cost control. He suggests two factors for farm financial success: first, produce what the customer wants at the lowest unit cost possible, always seeking cost efficiency improvements, and second, successful farm managers are involved in some form of continuous learning and education. He concludes by saying that declining farm profitability is not inevitable and that enhancing farm management skills is key to future farm financial success.

Figure 1 illustrates the current management environment for farmers in Canada. The main risks facing grain and oilseed farmers are yields (often weather related, but also affected by technologies and farming practices), commodity prices (average prices are out of farmers' control but good farm managers seek out and achieve volume and quality based premiums), and input prices (average input prices are out of farmers' control, but good managers will seek volume pricing discounts on fertilisers, fuel, chemicals, etc.). Many of the benefits of managing the various risk factors are dependent upon farm size; the farm must be of a size where the farm manager can take advantage of economies of scale and use purchasing and selling volumes to take advantage of price discounts (inputs) and premiums (outputs). So farming a leisurely number of acres so as to minimize stress is not an option for economic viability. However, even good farm managers who take advantage of economies of scale can have poor income years due to uncontrollable factors, but they can also mitigate/diversify the uncontrollable risks by managing well those factors that they can control.

Methodology and data

Most of the data employed in this study are from The Farm Financial Survey (Statistics Canada 2005), which gathers revenue, expense, asset, liability, off-farm income and other data from Canadian farmers on a yearly basis. The first year of the survey was 1995 and the other years for which data are available are 1997, 1999, 2001, 2002, 2003 and 2004¹. In this study, only grain and oilseed farms are included. Other data were derived from provincial departments of agriculture; Alberta Agriculture, Food and Rural Development, Saskatchewan Agriculture and Food, Manitoba Agriculture and Food, Ontario Agriculture and Food, and Ministère de l'Agriculture in Quebecⁱⁱ. The main part of the methodology is in disaggregating adjusted net farm income into

two components; labour and management income, and returns to capital investedⁱⁱⁱ.

Return on invested farm capital (ROI)

The return on investment^{iv} to farmland ownership^v is based on a standard crop share lease agreement which provides between 15% and 25% (depending on the province) of the gross grain and oilseed receipts to the lessor (farmland owner). The lessor^{vi} is then responsible for paying property taxes, interest on land and building debts and depreciation on farm buildings.

The Net Lessor Income/acre (NLI) in each province is calculated as follows:

$$NLI_t = CS_t - PT_t - BD_t \quad (1)$$

where,

NLI_t = net lessor income/acre in year t;

CS_t = average lessor crop share \$/acre in year t;

PT_t = average property tax/acre in year t; and

BD_t = average building depreciation/acre in year t.

Then, the return on investment, or yield, is calculated as:

$$ROI_t = \frac{NLI_t}{V_{t-1}} + \frac{V_t - V_{t-1}}{V_{t-1}} \quad (2)$$

where,

ROI_t = average return on farmland and buildings investment/acre in year t;

V_t, V_{t-1} = average value of farmland and buildings/acre in year t and t-1;

$\frac{NLI_t}{V_{t-1}}$ = farmland owner's

operating return on farmland investment in year t; and

$\frac{V_t - V_{t-1}}{V_{t-1}}$ = farmland owner's capital gain return in year t.

Farmer labour and management income (L&M)

With this approach, the farmer's labour and management income is the residual left after all other expenses and returns to capital have been paid. For those acres that the farmer leases, the rent is an actual cash expense and for those acres that the farmer owns, the rent is the revenue that could otherwise be obtained by leasing out the land. The residual return to labour and management is the net

income left after paying all cash *operating* expenses and deducting the rent paid to the lessor.

The accounting for net farm income does not provide an indication of returns available to labour, management or capital. Adjustments need to be made to arrive at the total net income each year that is available to pay a return to labour and management and a return to capital. The expenses that need to be adjusted in the calculation (added back to arrive at *adjusted net farm income*) are: 1) property taxes, building depreciation and interest expenses associated with land and buildings, as all of these expenses are paid out of the return to capital, and 2) paid family labour expenses (often paid to family members for tax purposes) as they are part of the overall farm labour and management income. Although there are other acceptable methods of disaggregating total farm returns into returns to labour, management and capital, this method has been employed in a number of cases: Painter and Schoney (1994), Painter (2000), and Painter (2005a,b). The net dollar return to labour and management per acre (L&M) is calculated for each year in the study period and for each province, as follows.

$$L\&M_t = ANFI_t - CS_t \quad (3)$$

where,

$ANFI_t$ = adjusted net farm income/acre in year t ; and

CS_t = lessor crop share \$/acre in year t .

Results and analysis

Table 1 shows the revenues, expenses and net income on a per acre basis for small, average and large grain and oilseed farms in each province. In the western provinces, Alberta, Saskatchewan and Manitoba, average and large sized farms are profitable while small farms are not. The large farms are earning higher profits while the average sized farms are close to break-even. In eastern Canada (Ontario and Quebec) where farm sizes are smaller than in the west, even the large farms are not profitable. In these provinces farms have not grown in size as they have in the west, with large farms averaging 1,806 and 1,211 acres in Ontario and Quebec, while large farms in Alberta, Saskatchewan and Manitoba are 4,625, 5,482, and 3,610 acres, respectively. The smaller grain and oilseed farms in eastern Canada might explain the lower levels of profitability.

Two significant differences can be seen across farm sizes in Table 1; large farms produce higher revenues per acre and achieve economies of scale on expenses,

where operating expenses, interest and depreciation are all lower as a percentage of gross receipts. This implies that with larger farms, farm managers are achieving better prices for their products, achieving better yields, minimizing costs by using the newest and most efficient technologies, spreading those costs over many acres, and achieving cost discounts on technologies such as fertilisers, chemicals, seed varieties, etc., often because of volume purchases. To achieve the profit results in Table 1, farmers must be willing to expand to a farm size that allows for product price premiums and cost discounts, and they must be skilled farm managers to be able to manage larger farms and successfully obtain those discounts and premiums. The higher profits associated with large farms can be considered returns to good farm management.

Tables 2 and 3 show the results of splitting net farm income into returns to capital and returns to labour and management. Table 2 compares average return on investment in farmland to investment average returns in stock and bond markets. Operating returns on farmland are similar to dividend returns on stock markets, but slightly higher. Farmland operating returns range from 1.8% (Quebec) to 3.3% (Manitoba) while dividend returns range from 0.7% (Japan) to 3.3% (UK). Capital gains returns are generally lower for farmland, ranging from 3.2% (Saskatchewan and Manitoba) to 6.4% (Quebec) while for stock markets the range is -3.0% (Japan) to 11.4% (Canada). Total returns are lower for farmland than for stock markets, but the standard deviation of returns is also lower for farmland, implying that farmland investment incurs less risk than a stock market investment. Figure 2 provides the standard risk-return comparison for assets. The Capital Market Line (CML) illustrates the portfolio investment options available to investors, representing all possible portfolio combinations ranging from investing only in risk-free bonds to investing only in risky stocks. Assets that lie below the CML have a less favourable risk-return trade-off, offering too little return for the risk, while assets that lie above the line are more favourable, offering more return for the risk. In this comparison, Canadian farmland appears to be an efficient investment, as the risk-return trade-off for three provinces is above the line and below, but relatively close, for two. Therefore, for the period 1995 – 2004, average farmland investment returns have been competitive with average returns on stocks and bonds. Unfortunately, because data are not available, differentiation in return on farmland investment cannot be

made between small and large farms so the figures reported are aggregate averages.

Table 3 reports the residual return to farm labour and management for grain and oilseed farms. This represents the amount paid to the farm managers for their time spent on labour and management efforts. For the small farms, the amount of time and effort would be significantly less than for the large farms; however, because of a lack of data, that difference in time spent has not been included in the analysis. It is assumed that for small farms, labour and management would be far less than full-time equivalency while for large farms it may exceed full-time equivalency. The results in Table 3 indicate that the larger the farm (and hence the greater the labour and management effort), the greater is the return to labour and management. But the returns are not very good. For example, in 2004 the average wage and salary earnings for each province were as follows: Alberta \$37,454, Saskatchewan \$27,927, Manitoba \$32,466, Ontario \$39,949 and Quebec \$35,869. Table 3 shows that returns to labour and management for the large farms ranges from a low of -\$14,437 in Quebec to a high of \$31,679 in Alberta. For most of the provinces, the farm labour and management returns are significantly lower than the average provincial wage and salary incomes, which make grain and oilseed farm operation and management a fairly low paid occupation. Therefore, from these results it appears that while farmland investment returns are competitive, grain and oilseed farm labour and management returns are not competitive with provincial average wages and salaries.

But how have farm families done overall, when all sources of income are included in the comparison? Table 4 and Figure 3 compare total farm family income with provincial average family income. In the three western provinces, large farm family incomes exceed average family income, but for small and average farms, incomes are lower than provincial averages. In the eastern provinces of Ontario and Quebec, even the large farms have not produced family incomes greater than (or even close to) provincial average family incomes. This implies that even with off-farm income included, many families on grain and oilseed farms in Canada are living with lower than average incomes.

Given these lower than average family incomes for grain and oilseed farms, why would families continue to operate a farm business, especially the small farms that are continuously losing money? It is worth noting

from Table 4 that small farms are producing the highest off-farm income, because they are spending less time on labour and management than the larger farms. If they discontinued farming, they probably could earn more off-farm and they wouldn't be burdened with a farm loss. There may be many reasons why farm families continue farming, even though they are losing money; the farm may have been in the family for generations, it is a good place to raise children, they enjoy the country lifestyle, and so on. A possible financial reason is that the annual appreciation in the value of the farm is greater than the income loss. Table 5 shows the average farm income plus farmland appreciation for each year of the study period. In Ontario and Quebec, average annual farmland appreciation more than offsets income losses for all farm sizes. In western Canada, this is true for large and average sized farms, but for small farms, even though average farmland appreciation is positive, it is not enough to completely offset the income losses. However, some families may regard the net losses as a small price to pay for the other lifestyle and utility enhancing factors.

Given these continuous lower than average incomes for grain and oilseed farms in Canada, one would expect that farm families are much poorer than non-farm families. In fact it is the opposite, where farm families have significantly greater wealth than non-farm families, on average. Table 6 and Figure 4 illustrate the comparison of average net worth for farm families and all families, by province. In all provinces, average and large farms have accumulated much greater wealth when compared with all families in the province^{vii}. Being a farmer has been like having a forced savings account in that a large portion of the total return is accrued appreciation in the value of farmland, which could be considered income but is not disposable. The old saying that farmers are cash poor and asset rich is certainly portrayed in the data of this study. In Ontario, Quebec and Alberta, even the small farms that are reporting negative net incomes each year have larger average net worth than the provincial average for all families. For the average and large farms, the large accumulation of wealth could be considered returns to capital farm management and labour efforts. The results show that with solid farm management skills and practices, significant family wealth can be accumulated in the grain and oilseed sector in Canada.

Conclusions

Is there a farm financial crisis in Canada? Farm family income is definitely low compared to other occupations. Therefore, farm families have less income today to spend. However, due to the nature of total farm returns, where a sizeable portion of the total return has been capital appreciation, farm families have acquired significantly higher net worth than non-farm families, on average. So, farm families have less disposable income today to spend but have considerably more wealth, which represents future disposable income. This makes it increasingly difficult, from a public policy point of view, to acknowledge that there is a crisis and to increase farm subsidies. Farm lobby groups prominently display current income figures but never show the ever growing and all-time high average farm family net worth levels. Canadian governments (politics aside) are steadily moving in the direction of treating farm businesses like any other business, telling farmers to grow and/or diversify their operations to be at an efficient economic size and continue to upgrade and expand their management skills to enhance profitability. Should the farm sector be given special consideration? That debate will continue.

Farm management skills are key to financial success in Canada's farm sector. Farm management is not just about agronomy but rather it must be multi-disciplinary, focusing on marketing, operations (of which agronomy is a significant part), human resources, accounting/finance, and risk management. Farmers today need to acquire and continuously upgrade/enhance these skills to be successful. The results in this study show that Canadian grain and oilseed farmers have lower than average incomes (in some cases negative incomes), but have been able to accumulate significantly greater wealth. To achieve these levels of wealth, farmers have had to manage all of the risk factors they face each year, periodically having to survive low or negative cash flows, carrying the farm until next year's crop. Those farm families that have managed well and survived the lower than average incomes are wealthier today than their non-farm family neighbours. This accumulation of wealth might be considered part of the return to good farm management skills and practices.

Another requirement for success in the Canadian grain and oilseed sector is growth – farms producing commodities (as opposed to differentiated niche products) have to be an efficient size to achieve economies of scale and to give them market power associated with achieving input cost discounts and output price premiums. The results in this

study clearly show that economies of scale, discounts and/or premiums are achievable from growing the farm operation.

References

- Alberta Agriculture, Food and Rural Development 2003, *Agricultural Statistics Yearbook*, Department of Agriculture, Government of Alberta, Edmonton, Alberta.
- Banks R 2004, "Rural decline and innovation: issues within issues; or what role for AFBM Journal?", *AFBM Journal*, 1(1): 93 – 99.
- Census Canada 1971, 1981, 1986, 1991, 1996, 2001,. General Census and Census of Agriculture. Government of Canada. Ottawa, Ontario.
- Kemp DR, J Girdwood, KA Parton and AA Charry 2004, "Farm management: rethinking directions?" *AFBM Journal*, 1(1): 36 – 44.
- Malcolm LR 2004, "Farm management analysis: a core discipline, simple sums, sophisticated thinking". *AFBM Journal*, 1(1): 45 – 56.
- Manitoba Agriculture and Food 2003, *Manitoba Agricultural Yearbook*, Department of Agriculture, Government of Manitoba, Winnipeg, Manitoba.
- Morgan Stanley Capital International 2006, *International Stock Indices*, San Francisco, California.
- National Farmers Union 2005, "The Farm Crisis & Corporate Profits", National Farmers Union of Canada, website, www.nfu.ca, November 30, 2005.
- Painter MJ 2000, "Should Saskatchewan farmland be part of your investment portfolio?", *Canadian Journal of Agricultural Economics*, Canadian Agricultural Economics and Farm Management Society, Volume 48, 39-50, April 2000.
- Painter MJ 2005a, "A comparison of farm incomes and wealth in Canada", *Journal of International Farm Management*, Journal of the International Farm Management Association, 3(1), (on-line journal). (<http://ifmaonline.org>).
- Painter MJ 2005b, "Returns to farmland and farm labour and management in western Canada", *Journal of Farm Management*, 12(3):123-141.
- Painter MJ 2006, "The financial benefits of a Canadian farmland mutual fund", *Journal of the American Society of Farm Managers and Rural Appraisers*, (in press for 2007 publication)
- Painter MJ and Richard Schoney 1994, "Determining the risk-adjusted earnings multiplier for farmland valuation", *Journal of the American Society of Farm Managers and Rural Appraisers*, 58(1):116-124.
- Saskatchewan Agriculture and Food 2003,. *Agricultural Statistics*. Department of Agriculture, Government of Saskatchewan, Regina, Saskatchewan.
- Statistics Canada 1999. The Assets and Debts of Canadians: An overview of the results of the Survey of Financial Security, Catalogue no. 13-595-XIE.
- Statistics Canada 2005, The Farm Financial Survey 1995, 1997, 1999, 2001, 2002, 2003, 2004, Catalogue no. 21F0008XIB

Appendix**Table 1: Average farm cash receipts, expenses and net income, by farm size
(2004\$/acre) 1995 – 2004**

	Farm size		
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Alberta			
Average acres	371	1,366	4,625
% Owned	82%	65%	61%
Cash receipts/acre			
Crops	38.09	102.63	142.14
Livestock	4.55	24.77	49.18
Programs	4.58	14.85	18.95
Total	47.22	142.25	210.27
Expenses/acre			
	Percentage of total receipts in brackets		
Net operating expenses	54.29 (114%)	107.83 (76%)	158.88 (75%)
Interest	5.27 (11%)	7.88 (6%)	8.77 (4%)
Depreciation	21.24 (45%)	23.38 (16%)	24.15 (11%)
Net income/acre	(33.59) (-71%)	3.16 (2%)	18.47 (9%)
Saskatchewan			
Average acres	399	1,496	5,482
% Owned	77%	67%	60%
Cash receipts/acre			
Crops	35.45	81.77	132.60
Livestock	2.87	10.57	18.94
Programs	6.95	11.66	11.53
Total	45.28	103.99	163.06
Expenses/acre			
	Percentage of total receipts in brackets		
Net operating expenses	44.63 (99%)	80.55 (77%)	124.85 (77%)
Interest	2.73 (6%)	5.87 (6%)	8.15 (5%)
Depreciation	13.18 (29%)	14.34 (14%)	16.32 (10%)
Net income/acre	(15.61) (-34%)	3.04 (3%)	13.60 (8%)
Manitoba			
Farm size			
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Manitoba			
Average acres	319	1,246	3,610
% Owned	78%	64%	54%
Cash receipts/acre			
Crops	28.24	144.90	205.74
Livestock	2.96	20.47	34.41

Programs	7.50	12.22	13.45
Total	54.37	177.60	253.59
Expenses/acre	Percentage of total receipts in brackets		
Net operating expenses	60.70 (111%)	142.18 (80%)	205.86 (81%)
Interest	4.30 (8%)	8.62 (5%)	10.91 (4%)
Depreciation	18.99 (35%)	22.81 (13%)	24.11 (10%)
Net Income/acre	(29.63) (-55%)	4.00 (2%)	12.71 (5%)
Ontario			
Average acres	106	353	1,806
% Owned	87%	57%	37%
Cash receipts/acre	Percentage of total receipts in brackets		
Crops	136.51	293.32	394.89
Livestock	16.31	68.17	104.46
Programs	16.83	32.49	36.24
Total	169.65	393.98	535.58
Expenses/acre	Percentage of total receipts in brackets		
Net operating expenses	156.44 (92%)	352.51 (89%)	447.20 (83%)
Interest	15.39 (9%)	25.88 (7%)	28.35 (5%)
Depreciation	74.47 (44%)	75.04 (19%)	69.49 (13%)
Net income/acre	(76.65) (-45%)	(59.45) (-15%)	(9.46) (-2%)
Farm size			
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Quebec			
Average acres	119	390	1,211
% Owned	91%	74%	64%
Cash receipts/acre	Percentage of total receipts in brackets		
Crops	111.34	319.01	441.09
Livestock	8.80	92.52	223.57
Programs	37.53	71.21	79.35
Total	157.66	482.74	744.01
Expenses/acre	Percentage of total receipts in brackets		
Net operating expenses	119.23 (75%)	378.40 (78%)	638.43 (86%)
Interest	10.71 (7%)	37.69 (8%)	57.19 (8%)
Depreciation	64.18 (41%)	75.18 (16%)	80.64 (11%)
Net income/acre	(36.45) (-23%)	(8.53) (-2%)	(32.25) (-4%)

Table 2: Average return on investment in farmland and stock markets (1995 – 2004)

	Operating/dividend return	Capital gain return	Total return on investment	Standard deviation
Farmland investment				
Alberta	2.8%	5.8%	8.6%	4.9%
Saskatchewan	2.3%	3.2%	5.5%	5.7%
Manitoba	3.3%	3.2%	6.5%	3.3%
Ontario	2.2%	4.7%	7.0%	2.8%
Quebec	1.8%	6.4%	8.2%	5.0%
Bond and stock markets				
ST Bonds			5.0%	0.0%
Australia	2.7%	7.1%	9.8%	18.5%
Canada	1.6%	11.4%	13.0%	25.6%
France	1.5%	9.2%	10.7%	22.7%
Germany	1.5%	6.4%	7.9%	28.3%
Italy	2.0%	9.2%	11.1%	24.9%
Japan	0.7%	-3.0%	-2.3%	29.6%
UK	3.3%	6.6%	9.8%	17.9%
USA	1.4%	10.2%	11.5%	21.9%
World	1.6%	6.6%	8.1%	19.1%

Table 3: Average labour and management (L&M) income by farm size (2004\$) 1995 – 2004

	Farm size		
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Average labour & management income/acre (\$/acre)			
Alberta	(32.84)	(4.86)	6.56
Saskatchewan	(17.05)	(3.81)	2.02
Manitoba	(27.46)	(0.67)	6.63
Ontario	(54.84)	(21.03)	(2.02)
Quebec	(11.58)	17.20	(11.26)
Average labour and management income/farm (\$)			
Alberta	(12,255)	(6,827)	31,679
Saskatchewan	(6,685)	(6,672)	10,645
Manitoba	(8,758)	(1,043)	24,463
Ontario	(5,942)	(9,470)	(4,048)
Quebec	(1,690)	5,780	(14,437)

**Table 4: Comparison of average total income for farm families and all families (2004\$)
1995 – 2004**

	Farm size		
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Alberta			
Net farm income	(12,465)	4,321	85,452
Off-farm income	47,099	29,846	27,306
Total farm family income	34,634	34,168	112,758
Provincial average family income		73,859	
Saskatchewan			
Net farm income	(6,233)	4,545	74,546
Off-farm income	37,963	23,037	21,841
Total farm family income	31,730	27,582	96,387
Provincial average family income		57,358	
Manitoba			
Net farm income	(9,448)	4,979	45,900
Off-farm income	30,710	21,962	21,925
Total farm family income	21,262	26,942	67,825
Provincial average family income		59,992	
Ontario			
Net farm income	(8,158)	(20,995)	(17,084)
Off-farm income	56,320	35,829	28,840
Total farm family income	48,162	14,834	11,756
Provincial average family income		75,317	
Quebec			
Net farm income	(4,343)	(3,327)	(39,060)
Off-farm income	36,518	21,396	12,830
Total farm family income	32,175	18,069	(26,230)
Provincial average family income		58,489	

Table 5: Average annual net farm income plus farmland appreciation (2004\$) 1995 – 2004

	Farm size		
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Alberta			
Net farm income	(12,465)	4,321	85,452
Farmland appreciation	11,541	35,098	111,360
Total	(924)	39,420	196,812
Saskatchewan			
Net farm income	(6,233)	4,545	74,546
Farmland appreciation	3,303	12,192	34,955
Total	(2,930)	16,737	109,501
Manitoba			
Net farm income	(9,448)	4,979	45,900
Farmland appreciation	3,998	12,315	31,735
Total	(5,450)	17,294	77,634
Ontario			
Net farm income	(8,158)	(20,995)	(17,084)
Farmland appreciation	13,449	36,119	91,712
Total	5,291	15,125	74,627
Quebec			
Net farm income	(4,343)	(3,327)	(39,060)
Farmland appreciation	11,020	29,696	81,985
Total	6,677	26,369	42,925

Table 6: Comparison of net worth for farm families and all families (2004)

	Farm size		
	Small	Average	Large
Gross annual receipts	\$10,000-\$25,000	\$100,000-\$250,000	\$500,000 plus
Alberta			
Farm families	530,853	1,022,109	3,708,089
All families		306,021	
Saskatchewan			
Farm families	174,283	683,067	2,187,907
All families		272,956	
Manitoba			
Farm families	209,552	735,028	2,086,449
All families		238,541	
Ontario			
Farm families	603,989	1,158,760	2,433,231

All families		310,632	
Quebec			
Farm families	245,991	890,354	2,088,083
All families		230,781	

Figure 1: The management environment for farmers in Canada

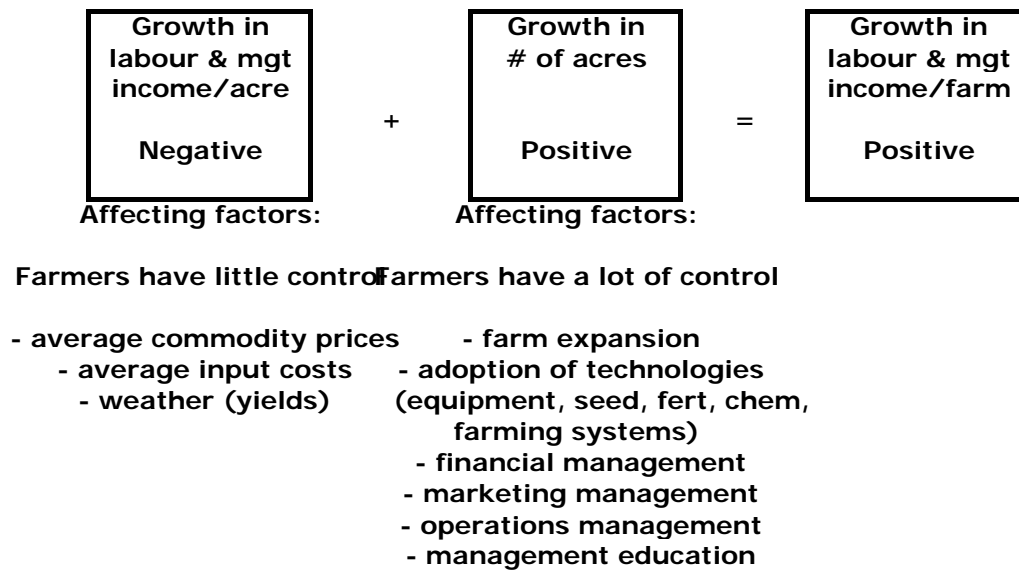


Figure 2: Comparison of return on investment for farmland, bonds and stocks (1995 – 2004)

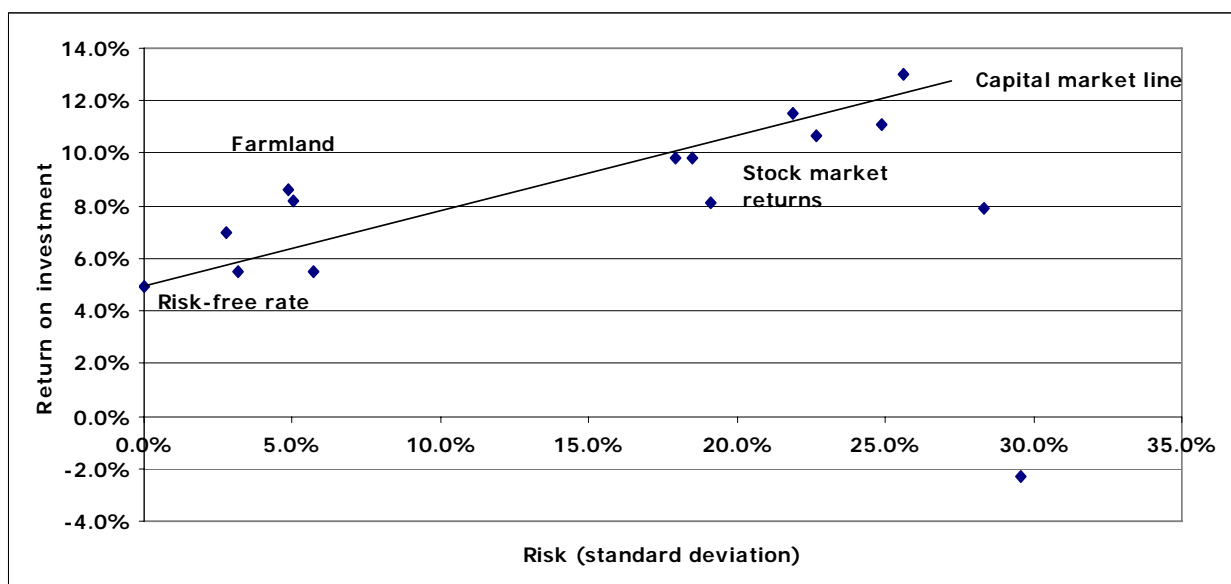


Figure 3: Comparison of average total income for farm families and all families (2004\$) 1995 – 2004

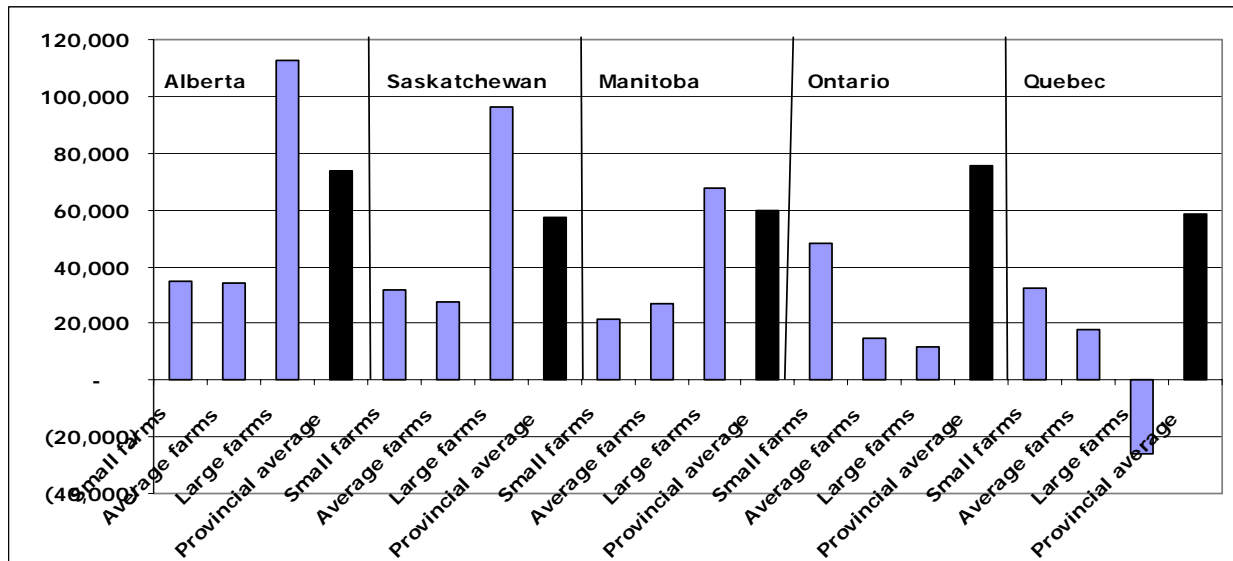
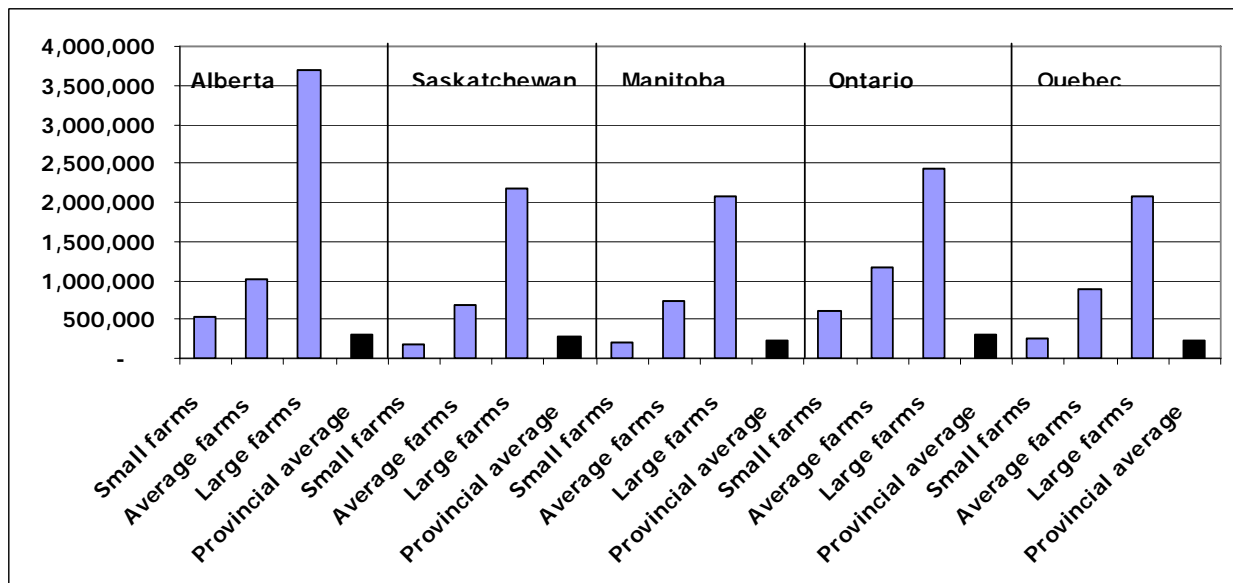


Figure 4: Comparison of net worth for farm families and all families (2004)



Endnotes

ⁱ Statistics Canada began the survey in 1995 with the intention of completing it every two years; however, starting in 2001, they began to administer the survey every year.

ⁱⁱ Other data sources that were used include Agriculture and Agri-Food Canada, Canada Grains Council, Canadian Wheat Board, Canadian Grain Commission, Canadian Transport Agency, Farm Credit Canada, and Statistics Canada.

ⁱⁱⁱ The methodology employed here is very similar to that used in Painter 2005a and Painter 2005b, although the data base here is from The Farm Financial Survey as opposed to aggregate farm statistics.

^{iv} 'Return on Investment' or 'return' is used interchangeably with 'yield'.

^v The return on invested farm capital is the return on farmland and buildings investment. The expenses associated with owning, leasing and maintaining equipment are considered operating expenses and are deducted to arrive at net income available for labour and management.

^{vi} The lessor, or farmland owner, may or may not be the farmer operator. In most cases, farmers operate a combination of owned and leased land. For this purpose, all farmland is treated as if it is leased.

^{vii} Average net worth for all families is from Statistics Canada and represents an average of all 'economic' families of two people or more.