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# Intergeneration Transfers and Retiring Farmers

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## Intergeneration Transfers and Retiring Farmers

### **Abstract**

The percentage of farmers who are approaching retirement age is increasing. The census of agriculture shows that in 2001 there were a larger percentage of farmers over 55 years of age than was the case in the previous censuses. The transferring of the assets held by these farmers to the next generation has important policy implications for the structure of Canadian agriculture. It also raises several policy questions for future research.

Using data from 2005 Farm Financial Survey this paper examines the transfer of assets for both one and multi-generation farms. We have identified 73,900 farms where the oldest operator is 55 or older. Of these farmers 18,800 are operated by more than one generation of farmers. In the case of these farms the next generation is already involved in the farm business. The remaining 55,100 farms are operated by only one generation of farmers.

The total assets based on market value for the one generation farms are estimated to be \$47 Billion. The assets which are expected to be transferred to the next generation total \$33.4 Billion. The majority of these farms are expected to be bought up by the multi-generation farms to achieve economies of scale or to be purchased by new entrants as lifestyle farms.

In the case of multi-generation farms the total assets owned are estimated to be \$40 Billion. The assets which are expected to be transferred to the next generation total \$34.1 Billion. These farms are expected to stay within the family and be purchased by the next generation. They will continue to be operated by the next generation and in some instances on a larger scale.

## Introduction

A large number of Canadians were born in the period immediately following World War II. These Canadians are fast approaching retirement age and are expected to retire over the next five to ten years. The agriculture sector is no different and it is expected that a large number of Canadian farms will retire and transfer their assets to the next generation over the next 5 to 15 years.

The percentage of farmers who are approaching retirement age is increasing. In Table 1 we show that 35% of the farmers were 55 years or older in the 2001 census. This compares to 33% in 1971 and 31% in 1981. The 2006 Census of Agriculture shows that the percentage of farms where the oldest operator was 55 years or older has increased to 41%.

The transfer of these farms to the next generation has important policy implications for Canadian agriculture. Some policy questions which it raises include whether the right policies and programs are in place to assist retiring farmers and young farmers. If some these farmers are going to be bought up by part time farmers should policies encourage this or would it simply drive up asset values for commercial farmers? Depending on the amount and value of assets involved, are the right tax policies in place to encourage farm transfers that benefit the competitiveness of Canadian agriculture?

The answer to these questions will help determine who buys these assets from those farmers who are retiring. This will in turn, have significant implications for the future of Canadian agriculture both in terms of farm numbers and the size of Canadian farms. Hence, there is a need to identify the farms which will be transferred to the next generation and the value of the assets held by these farms.

There is also a need to measure the ability of these assets to generate sufficient income to service the debt that will be required to finance the transfer to the next generation. If these assets can not generate sufficient income to service the total debt after the transfer, then it raises questions about how this transfer of assets will be financed. It also has implications as to who can afford the purchase of these assets. If the assets can not be fully financed it places significant restrictions on new entrants into the sector.

### Literature Review

The issue of farmers retiring, who is going to buy the assets, and how the assets will be transferred to a new generation is an important question for the agriculture sector in Canada. There has been a great deal of literature written on the subject of retiring farmers. However, most of this literature is directed at the issue of succession planning.

For example, in August 2007 the Canadian Farm Business Management Council is hosting an international conference on this issue. This conference is a follow up to a similar conference held in May 2002 where Larry Martin (2002) presented a paper entitled “Succession Issues in Canadian Agriculture” which showed that 32% of all farmers in the 1996 Census of Agriculture were 55 years or older. In his presentation he assumed that these farmers would all retire at age 65 so that by the year 2006 these farms would change hands.

There have been some attempts to identify the number of retiring farmers in the United States (U.S.). In the 2001 Agricultural Resource Management Survey the United States Economic service and the National Agricultural Statistics Service collected information on their retirement from farm work. In a paper presented at the National Public Policy Education Committee Mishra, Johnson and Morchart (2003) found that 13% of farm households indicated that they had already retired. There were another 14% of farm households who planned on retiring in the next five years. The final group were those farmers who were 65 years or older and who had not retired and were not planning on retiring in the next five years

(9%). If we add these three groups together you get 36% of U.S. farm households are on the verge of retirement.

There has not been much literature written on how to quantify the total assets that will be transferred. However, there has been some literature written on how farms transfer assets from one generation to the next. In an article written by Andrew Errington (2002) entitled “Handing over the reins: A comparative study of Inter-Generational farm transfers in England, France and Canada” there are four ways that the next generation can be involved in the farming operation. The most common one and which is obvious is a “partnership” where the son or daughter is involved in the farm business both as an owner and a manager. The second method is a separate enterprise where the son or daughter is responsible for a specific enterprise within the farm business. The third method is a stand-by-holding where the son or daughter has a separate farm business and they may or may not share machinery and labour. The fourth method is a “farmer’s boy” where the son or daughter works for a number of years but, with little or no involvement in the managerial decisions.

In this paper we will use the age of the operators and the value of the market value of the assets from the 2005 Farm Financial Survey to quantify the assets which will be transferred. The FFS questionnaire asks for the age of the oldest operator and the age of the youngest operator. A definition of an operator in the survey is: “an individual responsible for the day-to-day operation of the farm, who participates in the decisions to borrow money, to rent, to buy or sell assets, and to reduce debts”.

Based on the FFS questionnaire, the first two methods a partnership or a separate enterprise are identifiable in the FFS survey. However the “stand-by-holding” or the “farmer’s boy” are not readily identifiable in the survey and we can not identify those farm business where a second generation is involved. This information is important in order to differentiate between one generation farms which are likely to be sold outside the family when the present

generation retires and multi-generational farms which are likely to be transferred within the family.

### Number of Retirees

The 2005 Farm Financial Survey (FFS) collected information on the age of the oldest operator, the age of the youngest operator and the market value of the assets held by the farmer. The survey data excludes those farms with less than \$10,000 in gross sales.

In Table 2 we have broken down the 2005 FFS number of farms by the age of the oldest operator. We have then divided the number of farmers further into those farmers where the operators are from the same generation and those farms which are operated by two or more generations. The latter group is calculated by taking the difference between the oldest operator and the youngest operator. If the difference is less than 20 we assume that the operators are of the same generation - for example two brothers. If the difference is 20 or more we assume the operators are from two different generations - for example a father and son.

Table 2 shows that there are 135,800 farms with operators from the same generation and another 22,850 farms with operators from two or more generations. For this latter group we can assume that because there are two or more generations involved in the farm business that some of the assets have already been transferred to the next generation or are in the process of being transferred. The multi-generational group is of interest in a policy sense because these farms will continue to operate at least for one more generation and they will be our future farmers. The one generation farms are of interest because they are most likely to sell their assets to someone outside of the family.

**Table 1: Percentage of Farm Operators - By Age 1961 - 2006**

<b>Age Oldest Operator</b>	<b>1961</b>	<b>1971</b>	<b>1981</b>	<b>1991</b>	<b>2001</b>	<b>2006</b>
Less Than 35	17%	15%	21%	20%	12%	9%
35 to 54	51%	52%	48%	48%	54%	50%
55 and older	32%	33%	31%	32%	35%	41%

Source: Statistics Canada Census of Agriculture

**Table 2: Number of Farms - By Age of Oldest Operator**

<b>Age Oldest Operator</b>	<b>Number of Farms</b>	<b>One Generation</b>	<b>Multiple Generations</b>
Less Than 40 Years	15,678	15,674	na
40 to 49 Years	44,095	42,677	1,418
50 to 54 Years	25,006	22,408	2,598
<b>55 to 59 Years</b>	<b>22,059</b>	<b>17,891</b>	<b>4,168</b>
<b>60 to 64 Years</b>	<b>18,409</b>	<b>14,791</b>	<b>3,618</b>
<b>65 Years and Older</b>	<b>33,418</b>	<b>22,372</b>	<b>11,046</b>
Total	158,665	135,813	22,852

Source: 2005 FFS Statistics Canada

**Table 3a: One Generation Farms Oldest Operator 55 Years and Over - By Region**

<b>Atlantic</b>	<b>Ontario &amp; Quebec</b>	<b>Prairies</b>	<b>British Columbia</b>	<b>Canada</b>
1,703	19,888	30,261	3,202	<b>55,054</b>

Source: 2005 FFS Statistics Canada

**Table 3b: Multi-Generation Farms Oldest Operator 55 Years and Over - By Region**

<b>Atlantic</b>	<b>Ontario &amp; Quebec</b>	<b>Prairies</b>	<b>British Columbia</b>	<b>Canada</b>
667	7,588	9,628	949	<b>18,832</b>

Source: 2005 FFS Statistics Canada



The 22,372 farms where the oldest operator is 65 years or older will be selling their assets in the next 5 to 15 years. The same argument can be made for those 14,791 farms where the oldest operator is between 60 years and 64 years of age. The 17,891 farms with the oldest operator between 55 years and 59 years of age have been included as well. If we add these three age groups together we have 55,054 one generation farms that will transfer their assets over the next 5 to 15 years. In addition to there are another 18,832 multi-generational farms where the oldest operator is 55 years or older who also will be transferring their assets to the next generation.

If we break down the one generation farms down by region (Table 3a) we find that over 50% of these farms are located in the Prairies. Ontario and Quebec account for another 36% of these farms. There are only 3% of the farms in the Atlantic region and British Columbia accounts for the remaining 6%. Looking at these 55,054 farms by enterprise type (Table 4a) we have 21,000 grain farms and 20,000 beef farms. Together these two farm types account for 74% of the farms that will transfer their assets over the next 10 to 20 years. The other sector that is significant is horticulture - accounting for 11% of the farms.

If we break down the multi-generational farms down by region (Table 3b) we find that over 51% of these farms are located in the Prairies. Ontario and Quebec account for another 40% of these farms. There are only 4% of the farms in the Atlantic region and British Columbia accounts for the remaining 5%. Looking at the 18,832 multi-generation farms by enterprise type (Table 4b) we have 6,400 grain farms and 5,100 beef farms. Together these two farm types account for 61% of the farms that will transfer their assets over the next 5 to 15 years. The other sector that is significant is dairy farms which account for 19% of the farms.

**Table 4a: One Generation Farms Oldest Operator 55 Years and Over  
- By Enterprise**

	<b>Grain &amp; Oilseed</b>	<b>Beef</b>	<b>Dairy</b>	<b>Poultry &amp; Eggs</b>
Number of Farms	20,909	19,797	1,725	589

	<b>Hog</b>	<b>Horticulture</b>	<b>Other</b>	<b>All types</b>
Number of Farms	930	6,026	5,079	<b>55,054</b>

Source: 2005 FFS Statistics Canada

**Table 4b: Multi-Generational Farms Oldest Operator 55 Years and Over  
- By Enterprise**

	<b>Grain &amp; Oilseed</b>	<b>Beef</b>	<b>Dairy</b>	<b>Poultry &amp; Eggs</b>
Number of Farms	6,392	5,052	3,518	496

	<b>Hog</b>	<b>Horticulture</b>	<b>Other</b>	<b>All types</b>
Number of Farms	745	1,502	1,127	18,832

Source: 2005 FFS Statistics Canada

**Table 5: Selected financial indicators – 2004**

	<b>Multi-Generation Farms</b>	<b>One Generation Farms</b>
Average revenue	\$448,000	\$129,000
Average net cash income	\$72,000	\$15,700
Average assets	2,100,000	851,000
Average transferable	\$1,813,000	\$606,000

Source: 2005 FFS Statistics Canada

In Table 5 we have summarized an average multi-generation farm and a one generation farm. The average multi-generation farm has almost 2.5 times the assets of a one generation farm. In terms of transferable assets the multi-generation farm is 3 times as large. The disparity is even greater with revenue and net income with multi-generation farms having 3.5 times the amount of gross revenue and 4.6 times the net income of one generation farms.

### Farm Assets

In Table 6 we break down the sector balance sheet for those farmers where there is one generation and those farms where there is more than one generation of farmers. The 2005 FFS reported \$180 Billion for the total value of farm assets for all farms with revenue of \$10,000 and over. Of this amount 73.5% are held by those farms that are operated by one generation of farmers.

In Table 7a we show total assets and liabilities held by farms where there is only one generation of farmers. For those farms where the oldest operator is 65 years or older they have total assets of \$16.3 Billion and in 2004 they have almost \$1 Billion in debt. There is another \$12.5 Billion in assets owned by those farmers where the oldest operator is between 60 and 64 years of age. The last group is those farms where the oldest operator is 55 to 59 years old. This group owns total assets valued at \$18.1 Billion which when added to the two previous groups gives a total of \$46.9 Billion in farm assets that are expected to be transferred over the next 5 to 15 years.

**Table 6: Farm Balance Sheet – by Generation of Farmers  
(\$ Billion)**

	<b>Assets</b>	<b>Liabilities</b>	<b>Net Worth</b>
One Generation Farms	132.4	27.4	105.0
Two Generation Farms	47.6	10.2	37.4
All Farms	180.0	37.6	142.4

Source: 2005 FFS Statistics Canada

**Table 7a: Balance Sheet One Generation Farms – by Age  
(\$ Billion)**

<b>Age of Oldest Operator</b>	<b>Assets</b>	<b>Liabilities</b>	<b>Equity (%)</b>
Less Than 40 Years	15.0	4.9	67.2%
40 to 49 Years	48.2	12.3	74.5%
50 to 54 Years	22.3	4.4	80.2%
<b>55 to 59 Years</b>	<b>18.1</b>	<b>3.0</b>	<b>83.2%</b>
<b>60 to 64 Years</b>	<b>12.5</b>	<b>1.8</b>	<b>85.6%</b>
<b>65 Years and Older</b>	<b>16.3</b>	<b>1.0</b>	<b>93.9%</b>
Total	132.4	105.0	79.3%

Source: 2005 FFS Statistics Canada

**Table 7b: Multi-Generation Farms Assets – by Age  
(\$ Billion)**

<b>Age of Oldest Operator</b>	<b>Assets</b>	<b>Liabilities</b>	<b>Equity</b>
Less Than 40 Years	0	0	0
40 to 49 Years	2.6	0.7	74.1%
50 to 54 Years	5.5	1.7	69.5%
<b>55 to 59 Years</b>	<b>9.4</b>	<b>2.3</b>	<b>75.1%</b>
<b>60 to 64 Years</b>	<b>8.0</b>	<b>1.8</b>	<b>77.1%</b>
<b>65 Years and Older</b>	<b>22.1</b>	<b>3.6</b>	<b>83.6%</b>
Total	47.6	10.2	78.7%

Source: 2005 FFS Statistics Canada

In Table 7b we have broken down by age those assets and liabilities held by farms where there are multiple generations of farmers. The majority of assets (\$22.1 Billion) are held by those farms where the operator is 65 years of age or older. There is another 8.0 Billion in assets held by those farms where the oldest operator is 60 to 64 years and 9.4 Billion in assets for those farms where the oldest operator is 55 to 59 years. When you add these three groups together the assets held by multi-generation farms where the operator is 55 years or older you get a total of \$39.5 Billion.

#### Assets to be Transferred

In Table 8a we have broken down the long term assets for one generation farms. These farms will be bought by larger farms that already have their own machinery. Although they may need larger machines we would not expect them to buy the smaller machinery owned by these retiring farmers. In a similar manner investment assets will not be transferred either. The assets which will be transferred are livestock \$1.4 Billion, quota \$2.9 Billion and the land and buildings at \$29.1 Billion for a total of \$33.4 Billion.

Looking at the multi-generation farmers who are 55 years and older in Table 8b they have \$35.7 Billion in long term assets. We are assuming that none of these assets have been transferred to the next generation. These farms will transfer the same assets as the one generation farms. However, they will have to buy the machinery from their parents. This will increase the value of the assets to be transferred by \$6.3 Billion for a total of \$34.1 Billion.

**Table 8a: One Generation Farms Long Term Assets – Oldest Operator 55+**

<b>Long Term Assets</b>	<b>\$ Million</b>
<b>Breeding livestock*</b>	<b>1,409.3</b>
Machinery & equipment	7,372.4
<b>Quota*</b>	<b>2,862.9</b>
<b>Land and buildings*</b>	<b>29,096.2</b>
NISA accounts total	638.8
CSRA balance	3.0
Long term investments	1,561.0
Other long term assets	149.8
Total long term assets	43,093.4

Source: 2005 FFS Statistics Canada

**Table 8b: Multi-Generation Farms Long Term Assets – Oldest Operator 55+**

<b>Long Term Assets</b>	<b>\$ Million</b>
<b>Breeding livestock*</b>	<b>1,343.1</b>
<b>Machinery &amp; equipment*</b>	<b>6,295.0</b>
<b>Quota*</b>	<b>6,963.7</b>
<b>Land and buildings*</b>	<b>19,536.7</b>
NISA accounts total	365.9
CSRA balance	1.0
Long term investments	1,116.6
Other long term assets	59.4
Total long term assets	35,681.4

Source: 2005 FFS Statistics Canada

\* Transferable asset

### Increased in Debt

If we assume that the transfer of capital assets will occur with no down payment then the entire \$33.4 Billion would be financed. These farms already hold \$4.4 Billion (Table 9a) in long term debt which would be retired when the assets are transferred to the next generation. This would result in a net increase in debt of \$29.0 Billion from the one generation farms. For the multi-generation farms they already owe \$6.3 Billion (Table 9b) so the net increase in debt will be \$27.8 Billion for a total of \$56.8 in new debt for the sector due to the transfer of assets.

Because we have added the interest expense back into net realized income then the costs of servicing the debt must be calculated on the entire \$33.4 Billion. If we amortized this debt over 20 years at 6% the cost of servicing the \$33.4 Billion in new debt for the one generation farms is \$2.9 Billion per year. In a similar manner the cost of servicing the \$34.1 Billion in new debt for the multi- generation farms is \$3.0 Billion per year.

### Income of One Generation Farms

The next question we need to answer is how much income is generated by these farm assets to service this new debt. In Table 10 we show the current net income generated by these one generation farms. Assuming no changes in the farm operation the income generated by these farms would be the same. We can assume that most of these assets will be purchased by existing farmers who are already covering their living costs from their current operation or from non-farm income. Thus, all of the income from these assets could be used to service the new debt. The net realized income for those farms where there is one generation of farmers and the oldest operator is 55 years or older was \$0.9 Billion in 2004. There was another \$0.3 Billion paid in interest by these same farms which would also be available to service the new debt. This results in a total of \$1.2 Billion to service this new debt which is less than half of the \$2.9 Billion that was calculated previously.

**Table 9a: One Generation Farms Liabilities – by Age  
(\$ Billion)**

<b>Age of Oldest Operator</b>	<b>Total Liabilities</b>	<b>Current Liabilities</b>	<b>Long Term Liabilities</b>
Less Than 40 Years	4.9	0.7	4.2
40 to 49 Years	12.3	2.2	10.1
50 to 54 Years	4.4	1.0	3.4
<b>55 to 59 Years</b>	<b>3.0</b>	<b>0.7</b>	<b>2.3</b>
<b>60 to 64 Years</b>	<b>1.8</b>	<b>0.4</b>	<b>1.4</b>
<b>65 Years and Older</b>	<b>1.0</b>	<b>0.3</b>	<b>0.7</b>
Total	27.4	5.3	22.1

Source: 2005 FFS Statistics Canada

**Table 9b: Multi-Generation Farms Liabilities – by Age  
(\$ Billion)**

<b>Age of Oldest Operator</b>	<b>Total Liabilities</b>	<b>Current Liabilities</b>	<b>Long Term Liabilities</b>
Less Than 40 Years	na	na	na
40 to 49 Years	0.7	0.1	0.6
50 to 54 Years	1.7	0.2	1.5
<b>55 to 59 Years</b>	<b>2.3</b>	<b>0.4</b>	<b>1.9</b>
<b>60 to 64 Years</b>	<b>1.8</b>	<b>0.3</b>	<b>1.5</b>
<b>65 Years and Older</b>	<b>3.6</b>	<b>0.7</b>	<b>2.9</b>
Total	10.1	1.7	8.4

Source: 2005 FFS Statistics Canada



Looking at net income before Capital Cost Allowance (CCA) by enterprise type (Table 11), we see that the income is not shared equally by the sector. For example the beef sector earns only 8% of the net income (\$68 Million) but yet they own 29% of the assets to be transferred. However, the dairy sector has 9% of the assets to be transferred and earn 13.5% of the income. In view of this some sectors are better positioned to service the new debt compared to others.

In Table 12 we have calculated by sector the new debt required to finance the transfer of the assets held by one generation farms to the next generation. We calculate the debt servicing that will be required to amortize the value of the transferable assets over 20 years at 6%. Because interest is part of the debt servicing costs we add the interest back into the net income before CCA that is generated by these assets from Table 10. The final number which we calculate in Table 12 is the percentage of the debt will be serviced by the income generated by these assets ((Net cash income + interest) divided by Debt Servicing Costs).

The result is that all sectors have a shortfall in terms of the ability to service the debt on the assets that are going to be transferred to the next generation. The beef sector has the largest shortfall in that the assets in the beef sector can only service 16% of the new debt. However, the beef sector has historically had a large number of farmers who work off the farm. Hence some of this debt will be cash flowed by employment income from outside the sector. The grain and oilseed sector has the third largest shortfall (after other) in their ability to service this new debt. The assets in the grain and oilseed sector can only service 46% of the new debt. In the case of supply managed commodities, they can generate sufficient income (before interest) to service just over half of the new debt required to finance the transfer of these assets.

### Income of Multi-Generation Farms

The net realized income for those farms where there is more than one generation of farmers and the oldest operator is 55 years or older was \$1.4 Billion in 2004 (Table 13). There was another \$0.4 Billion currently paid in interest by these same farms which would be available to service the new debt as well. This results in a total of \$1.8 Billion to service this new debt which is sixty percent of the \$3.0 Billion that was calculated previously.

In looking at the income generated by multi-generation farms with the oldest operator 55 and over by enterprise type (Table 14) we see that there are some similarities between enterprises. Both grain & oilseed farms and dairy farms generate about \$400 Million in net cash income before CCA. In a similar manner hog farms and horticulture farms both generate about \$174 Million in net cash income.

The assets owned by multi-generation farms with the oldest operator 55 and over (Table 15) are very similar between enterprises. Both grain & oilseed farms and dairy farms own \$10.2 Billion in transferable assets. In a similar manner hog farms and horticulture farms both own \$2.6 Billion in transferable assets.

These two factors results in similar abilities to service the debt on the transferable assets. In the case of grains and oilseeds and for dairy farms for multi-generational farms where the oldest operator is 55 years or older they can service 55.7% of the debt. In the case of manner hog farms and horticulture farms both can service 87.5% of the debt which is the highest percentage for all the sectors.

**Table 10: One Generation Farms Income – by Age  
(\$ Billion)**

<b>Age of Oldest Operator</b>	<b>Total Revenue</b>	<b>Total Expenses</b>	<b>Net Income</b>	<b>Interest Expense</b>
Less Than 40 Years	3.4	3.0	0.4	0.25
40 to 49 Years	10.3	8.8	1.5	0.65
50 to 54 Years	4.9	4.3	0.6	0.23
<b>55 to 59 Years</b>	<b>3.1</b>	<b>2.7</b>	<b>0.4</b>	<b>0.16</b>
<b>60 to 64 Years</b>	<b>1.9</b>	<b>1.7</b>	<b>0.2</b>	<b>0.09</b>
<b>65 Years and Older</b>	<b>2.1</b>	<b>1.8</b>	<b>0.3</b>	<b>0.07</b>
Total	25.7	22.3	3.4	1.45

Source: 2005 FFS Statistics Canada

**Table 11: Income of One Generation Farms Oldest Operator 55 Years and Over –  
By Enterprise (\$ Million)**

	<b>Grain &amp; Oilseed</b>	<b>Horticulture</b>	<b>Dairy</b>	<b>Beef</b>
<b>Program Payments</b>	266.1	43.7	16.1	290.9
<b>Total Revenue</b>	2,404.7	1,339.0	478.7	1,758.9
<b>Total Expenses</b>	2,063.2	1,142.2	362.3	1,690.5
<b>Net Income</b>	341.5	196.8	116.4	68.4
<b>Interest Expense</b>	106.0	44.5	30.3	82.9

	<b>Hog</b>	<b>Poultry and Egg</b>	<b>Other</b>	<b>All types</b>
<b>Program Payments</b>	18.7	9.5	24.3	669.3
<b>Total Revenue</b>	329.5	370.6	439.6	7,121.1
<b>Total Expenses</b>	290.7	316.9	392.8	6,258.5
<b>Net Income</b>	38.8	53.8	46.8	862.6
<b>Interest Expense</b>	15.2	11.1	24.2	314.2

Source: 2005 FFS Statistics Canada

**Table 12: New Debt of One Generation Farms Oldest Operator 55 Years and Over  
- By Enterprise (\$ Million)**

<b>New Debt</b>	<b>Grain &amp; Oilseed</b>	<b>Horticulture</b>	<b>Dairy</b>	<b>Beef</b>
Transferable Assets	11,401.3	3,617.0	3,021.6	10,775.1
Long Term Debt	1,270.9	583.6	579.0	1,107.4
New Debt	10,130.4	3,033.4	2,442.5	9,667.7
Debt Servicing Costs	975.5	309.5	258.5	546.6
Income Before Interest	447.5	241.3	146.7	151.3
<b>Percentage</b>	<b>46%</b>	<b>78%</b>	<b>57%</b>	<b>16%</b>

	<b>Hog</b>	<b>Poultry and Egg</b>	<b>Other</b>	<b>All types</b>
Transferable Assets	800.9	1,384.0	2,368.5	33,368.4
Long Term Debt	174.0	176.1	495.1	4,386.1
New Debt	627.0	1,207.9	1,873.4	28,982.3
Debt Servicing Costs	68.5	118.4	202.7	2,855.0
Income Before Interest	54.0	64.9	71.1	1,176.7
<b>Percentage</b>	<b>79%</b>	<b>55%</b>	<b>35%</b>	<b>41%</b>

Source: 2005 FFS Statistics Canada

**Table 13: Multi-Generation Farms Income – by Age  
(\$ Million)**

<b>Age of Oldest Operator</b>	<b>Total Revenue</b>	<b>Total Expenses</b>	<b>Net Income</b>	<b>Interest Expense</b>
Less Than 40 Years	1.7	1.4	0.3	0.1
40 to 49 Years	546.5	476.3	70.2	40.4
50 to 54 Years	1,181.5	995.2	186.4	80.6
<b>55 to 59 Years</b>	<b>2,062.4</b>	<b>1,759.1</b>	<b>303.4</b>	<b>120.6</b>
<b>60 to 64 Years</b>	<b>1,935.0</b>	<b>1,631.1</b>	<b>303.8</b>	<b>96.6</b>
<b>65 Years and Older</b>	<b>4,442.3</b>	<b>3,688.5</b>	<b>753.7</b>	<b>183.2</b>
Total	10,169.4	8,551.6	1,617.8	521.5

**Table 14: Income of Multi-Generation Farms Oldest Operator 55 Years and Over**  
**- By Enterprise (\$ Million)**

	<b>Grain &amp; Oilseed</b>	<b>Horticulture</b>	<b>Dairy</b>	<b>Beef</b>
<b>Program Payments</b>	190.9	27.7	58.9	170.5
<b>Total Revenue</b>	2,301.5	1,318.8	1,557.9	1,174.4
<b>Total Expenses</b>	1,883.9	1,142.0	1,167.8	1,104.4
<b>Net Income</b>	417.7	176.9	390.1	70.0
<b>Interest Expense</b>	111.9	42.0	127.3	52.0

	<b>Hog</b>	<b>Poultry and Egg</b>	<b>Other</b>	<b>All types</b>
<b>Program Payments</b>	59.4	10.0	19.9	537.4
<b>Total Revenue</b>	1,202.2	458.8	426.0	8,439.6
<b>Total Expenses</b>	1,026.7	406.7	347.4	7,078.8
<b>Net Income</b>	175.4	52.1	78.6	1,360.8
<b>Interest Expense</b>	40.3	16.0	11.0	400.4

Source: 2005 FFS Statistics Canada

**Table 15: New Debt of Multi-Generation Farms Oldest Operator 55 Years and Over  
- By Enterprise (\$ Billion)**

<b>New Debt</b>	<b>Grain &amp; Oilseed</b>	<b>Horticulture</b>	<b>Dairy</b>	<b>Beef</b>
Transferable Assets	10.2	2.6	10.2	5.2
Long Term Debt	1.4	0.7	2.2	0.7
New Debt	8.8	1.9	8.0	4.5
Debt Servicing Costs	0.9	0.2	0.9	0.5
Income Before Interest	0.5	0.2	0.5	0.1
<b>Percentage</b>	<b>55.7%</b>	<b>87.5%</b>	<b>55.7%</b>	<b>21.9%</b>

	<b>Hog</b>	<b>Poultry and Egg</b>	<b>Other</b>	<b>All types</b>
Transferable Assets	2.6	1.9	1.4	34.1
Long Term Debt	0.7	0.4	0.2	6.3
New Debt	1.9	1.5	1.2	27.8
Debt Servicing Costs	0.2	0.2	0.1	3.0
Income Before Interest	0.2	0.1	0.1	1.8
<b>Percentage</b>	<b>87.5%</b>	<b>59.8%</b>	<b>81.2%</b>	<b>60.0%</b>

Source: 2005 FFS Statistics Canada

**Table 16: Average rate of return of Canadian grain and oilseed farms, 1992 to 2001**

	<b>Percent</b>
Farm income	4.9
Capital gains	1.2
<b>Total Return to Assets</b>	<b>6.1</b>

## Equity

In a previous paper by Caldwell and Murray (2005) the rate of return to grain & oilseeds farms was calculated at 6.1% based on historical cost (Table 16). A portion of this return (1.2%) was from capital gains and the remaining 4.9% was the current return to farming. The portion of the return due to capital gains must be financed by equity or some external source of income because it is not available to service the debt until the assets are sold. The current return to farming can be used to service the debt however, in the case of new entrants it may also be used to cover living expenses and to replace machinery. The portion that is used for living expenses and to replace machinery must either be financed by equity or some outside source of income because it is not available to service the debt.

Both of these factors are the reason that the sector has traditionally had large amounts of equity and thus, a relatively low level of debt. These two factors limits the prospective buyers to either those who have large amounts of equity in their existing farm operation or those individuals who have some external source of income such as part time farmers. The inability to service the debt from farm income puts significant limits on the number of new individuals who can enter the sector.

If the problem is lack of cash flow from farming to service the debt, the logical solution is to increase the level of equity in the sector. This often happens when the parents transfer the assets to their children. When a sale takes place at some price which is less than market value, the difference between the sale price and the actual market value becomes equity which in turn reduces the amount of new debt.

There may be some cases where the assets are inherited and then rented to a third party. This would have the effect of providing 100% equity less any debts outstanding unless the beneficiary needs the cash in which case the assets will be sold instead of rented out.

Another possibility would be investors from outside of the agriculture sector to purchase the assets with equity and either farm the assets with professional managers or rent the assets to neighbouring farms. They would do this on the assumption that the rental returns plus the capital gains on the assets would generate a sufficient large rate of return to make the investment attractive.

#### Who will buy the assets

In Table 17 we have broken down the farms from the 2005 FFS by revenue class. This Table shows that there are two potential groups who have the financial resources to finance the transfer of these assets.

The first group is those farms with revenue of \$10,000 to \$50,000 who earn 44% of the non-farm income. These farms could use their non-farm income to service the debt required to buy these assets. In order to do so we would have to assume that the off farm employment opportunities are available in the same area that the assets are for sale. There is also a new generation of individuals who are willing to be part time farmers. If the assets held by the retiring farmers are in an area that offers opportunities for work off the farm we would expect that these individuals will buy the assets. Thus, we would expect the number of part time farmers to increase over the next 10 to 15 years.

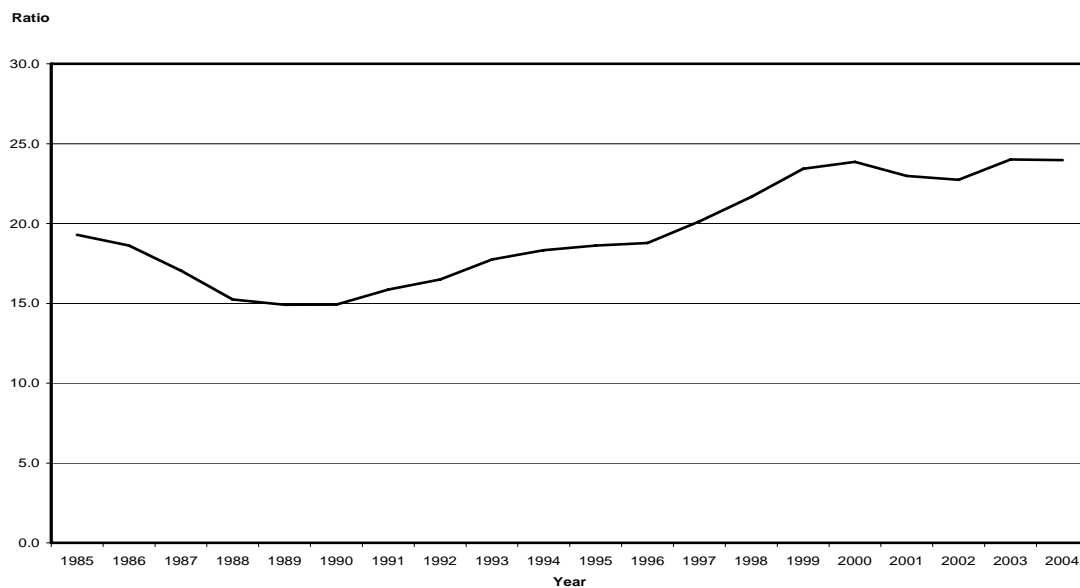


**Table 17: Canadian Farms by Revenue Class**

Revenue Class	% of Farms	% of Net Farm Income	% of Farm Sales	% of Non-farm Income
\$10,000 to \$49,999	34.3%	-4.9%	3.6%	<b>44.1%</b>
\$50,000 to \$99,999	18.5%	2.7%	5.4%	18.8%
\$100,000 to \$199,999	18.4%	11.8%	10.9%	15.4%
\$200,000 to \$499,999	19.4%	<b>32.4%</b>	26.2%	14.4%
\$500,000 to \$999,999	6.3%	<b>22.8%</b>	19.1%	4.0%
\$1,000,000 to \$1,999,999	2.1%	<b>14.7%</b>	12.6%	1.3%
\$2,000,000 and Greater	1.1%	<b>20.5%</b>	22.1%	2.0%
<b>All Farms</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: 2005 FFS Statistics Canada

**Figure 1: Agriculture Sector Price Earnings Ratio - Five Year Moving Average**



Source: Agriculture & Agri-Food Canada Calculation & Statistics Canada

The other group that is a possibility are those farms with revenue of \$200,000 and over. The farms with revenue of \$200,000 to \$499,000 earn one third of the farm income. This group is profitable and may be looking to expand. The most likely group to buy up these assets are those farms with revenue of \$500,000. These farms are positioned to buy up the assets for two reasons. First of all, they can 100% finance the purchase with debt and subsidized the debt costs with the income they earn from their existing operation. The second reason is that their living costs and the cost of replacing machinery are already covered by their existing operation which increases the amount of debt they can service with the income from the new purchase.

This clearly gives the established farmer an advantage in terms of the price they can pay compared to what the new entrant can pay. The new entrant would have to cover their living costs and replace machinery from the income generated by the purchase. This reduces the amount of debt that the new entrant can service with the income generated by the new purchased.

#### Has the situation changed

In Figure 1 we show a five year moving average of a price earnings ratio for the agriculture sector. The price is a five year moving average of the capital value of land and buildings and the earnings is a five year moving average of adjusted net realized income (net realized income + interest expense + wages & salaries to the operator or their family). A five year moving average was used, on the assumption that long term investments decisions are made based on the income for several years.

The five year moving average for the price earnings ratio declined from 19.3 in 1985 until it bottom out at 14.9 in 1989. Since 1989 it has gradually increased each year except for 2001 and 2002. It is now at 24.0 the highest ever according to the data. This shows then that the value of farm land and buildings has increased at a faster rate than adjusted net realized

income (net realized income + interest + wages & salaries to operator and family). Thus, the ability of the industry to finance from current returns, the debt required to purchase the assets of those farmers who are retiring, has declined in recent years. However, having said that one of the reasons that this ratio has increased is due to lower interest rates. Lower interest rates enables the farmer to service a larger amount of debt with the same amount of income.

To fully answer this question we completed the same analysis on the 1996 FFS. The results of this analysis shows that in 1995 there were 40% of Canadian farms had at least one operator who was 55 years or older. This compares to the 47% previously reported for 2004. The increase can probably be attributed to the effects of the baby boomer generation. The split between one generation and multi-generation is very similar to the same split in 2004.

In 1995 those farms where the oldest operator was 55 or older held 43% of all the farm assets. By 2004 this percentage had increased to 48% due for the most part to the larger percentage of farms with operators 55 or older. However during this same time period the value of the transferable assets increased significantly. The transferable assets for the one generation farms increased by 46% - from \$22.8 Billion in 1995 to \$33.4 Billion in 2004. The transferable assets held by the multi-generation farms increased even more over the ten year period (71%). In 1995 they had \$19.9 Billion in transferable assets and by 2004 their transferable assets totalled \$34.1 Billion.

The increase in the value of the transferable assets was partially due to expansion and consolidation particularly in the case of the multi-generation farms. However, at the same time a decrease in interest rates during the ten year period was certainly a contributing factor. The Chartered Banks prime lending rate was cut in half during the ten year period, averaging 9.37% in 1995 compared to 4.33% in 2004.

The industry's ability to finance the transfer of these assets has also changed over the last ten years. If we amortize the transferable assets in 1995 at 11% over 20 years, the cost of servicing the debt is \$2.8 Billion for one generation farms and \$2.4 Billion for the multi-generation farms. In 1995 the net income plus interest generated by these same farms was \$1.4 Billion for the one generation farms and \$1.4 Billion for the multi-generational farms which results in a 52% debt servicing ability for the one generation farms and a 57% debt servicing ability for the multi-generational farms.

Over the next ten years the debt servicing ability of the one generation farms decreased to 41% while at the same time the debt servicing ability of the multi-generational farms increased to 60%. The reasons for this are two fold. In 1995 the margin before interest was almost equal at 24.4% and 25.2% respectively. By 2004 the margin had declined for both groups but by a much greater amount for the one generation farms. In 2004 the one generation farms had an average margin before interest of 16.5% compared to 20.9% for the multi-generational farms. This was partly due to the fact that gross revenue increased by 20% for the one generation farms compared to an increase of 52.9% for the multi-generational farms.

### Conclusions

There are almost 74,000 farms in Canada that are currently operated by farmers who we expect to retire over the next fifteen years. These same farmers own almost half of the assets in the agriculture sector. When they retire \$67,5 Billion in assets will either be transferred or sold to the next generation.

These farms can be further sub-divided into one generation farms and multi-generation farms. The one generation farms are those farms where the oldest operator is 55 years or older and there is no second generation currently involved in the farm business. The multi-generation farms are those farms where the oldest operator is 55 years or older and there is a

second generation involved in the farm business. From the 2005 FFS data we have identified 18,832 multi-generation farms and another 55,054 farms that are one generation farms where the oldest operator is 55 or older.

The majority of the 55,000 one generation farms are expected to be purchased by larger multi-generation farms in order to expand their existing operation. These farms have an advantage in purchasing the assets. They can subsidize the debt costs with the income they earn from their existing operation and the cost of replacing machinery are already covered by their existing operation. This means that they can pay a higher price for the assets compared to someone from outside the sector.

These purchases by larger multi-generation farms are likely driven by expectations of economies of scale, more efficient production, and the expectation of long term capital gains. However, at the same time some of these one generation farms are also expected to be bought by part time farmers either for niche markets or for lifestyle choices. These farmers use income from off farm activities to service the debt. Certain sectors such as grain & oilseed farmers as well as beef farms are very conducive to working off the farm in terms of either the seasonal nature of the work or the hours required to operate the farm. We would expect that in those areas where off farm employment is available that the assets will be bought up new entrants who are going to be part time farmers for their entire career.

In the case of multi-generation farms we would expect that these farms will be bought up the children of the existing owners. Because of the size of these farms and the amount of equity required to finance the purchase it is the children of existing farmers who can raise the equity to buy the assets from the parents, when they transfer the assets at some price which is less than market value. The difference between the sale price and the actual market value then becomes equity which in turn reduces the amount of new debt required to finance the purchase. A new entrant from outside the sector would be expected to pay the market price.

In the case of a new entrant buying a commercial farm they would be forced to inject large amounts of equity in order to cash flow the purchase.

This analysis clearly has implications for the future structure of the agriculture. If the larger multi-generation farmers buy up the assets of the one generation farms the sector will continue to have fewer and larger farms in the future. Do our policies and programs need to be re-examined these policies in the context of this changing sector? The next generation of agricultural policies provides an opportunity to examine these questions in light of the ongoing trend to larger and fewer farms. This paper raises questions beyond the scope of agricultural policies which have implications for both the sector and rural communities in Canada.

Several policies areas affecting the transfer of assets are potential areas of future research. The first policy that we need to examine is tax policy. Some of these assets are going too be purchased by part time farmers who main source of income is from off farm work. In some cases these part time farmers can pay a higher price than the neighbours who depend on their farm income to finance the purchase. In some areas of the country the farm land is only suited to part time farming such as cow calf. Should policies or programs encourage or discourse part time farming?

A number of tax policies are in place to assist in the transfer of farm assets from one generation to the next generation. Are these policies adequate for a sector which has a large number of multi-generation farms? Do they provide appropriate incentives for adjustment and transition?

The trend towards fewer and bigger farms has economic and social implications for rural Canada. Fewer farm families will mean fewer customers for rural communities and fewer children in rural schools. What policies and programs are effective for supporting the future of rural Canada? However, larger farms tend to be more complete and self reliant. Should agriculture policy encourage or discourage the trends identified in this paper?

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