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Working Paper No. 51**

**Working Time: How Do Farmers Juggle with
it and How has it Impacted their Family Total
Income**

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July 2001

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Working Time: How Do Farmers Juggle with it and How has it Impacted their Family Total Income

Abstract

Employment in agriculture has changed drastically over the last fifty years. While the share of self-employed farmers has remained relatively stable over that period, the contribution of paid workers and of unpaid family workers to agricultural employment has reversed. Fifty years ago, unpaid family workers contributed significantly to farm work while paid workers were not as common. Now, the share of paid workers is converging towards that of self-employed farmers while unpaid family workers have basically disappeared.

The increase in paid work can also be observed at the individual level. Almost half of all farmers reported another professional activity, be it paid off-farm work or a non-agricultural business.

Changes affecting farming can also be observed in the income composition of farming families. Net farm income now accounts for roughly one-fourth of the family's total income. Wages and salaries which have always contributed significantly to the farming family's income is now, and by far, the largest contributor.

Introduction

Agriculture is an important sector to the Canadian economy. In addition to producing quality food for Canadians, agriculture is also a major employer whether of self-employed farmers or of paid workers. The contribution of unpaid family workers needs also to be pointed out. This paper will look at various aspects of work as it relates to agriculture. First, the evolution of agriculture employment is presented using historical trends for both men and women. This will portray some fundamental changes that have occurred in the agricultural sector in the last fifty years. Second, we will consider the on-farm/off-farm work relation of farm operators by looking at the relationship between average weekly on-farm work hours, average weekly off-farm work hours and the management of non-agricultural businesses. As a result, we will be able to see how farmers manage their time amongst their various professional activities. This will enable us to present on-farm and off-farm work patterns that has resulted from the long run trends in agriculture employment. Finally, by analysing the income evolution of farming families, it will be possible to determine the association between these changes and the evolution of farming family total income. This association can be measured and analysed by looking at each income component of farming family income.

1.0 Direct employment in the agriculture sector

In 1997, Statistics Canada's Labour Force Survey counted slightly more than 420,000 persons directly employed in the Canadian agricultural sector. Although 1997

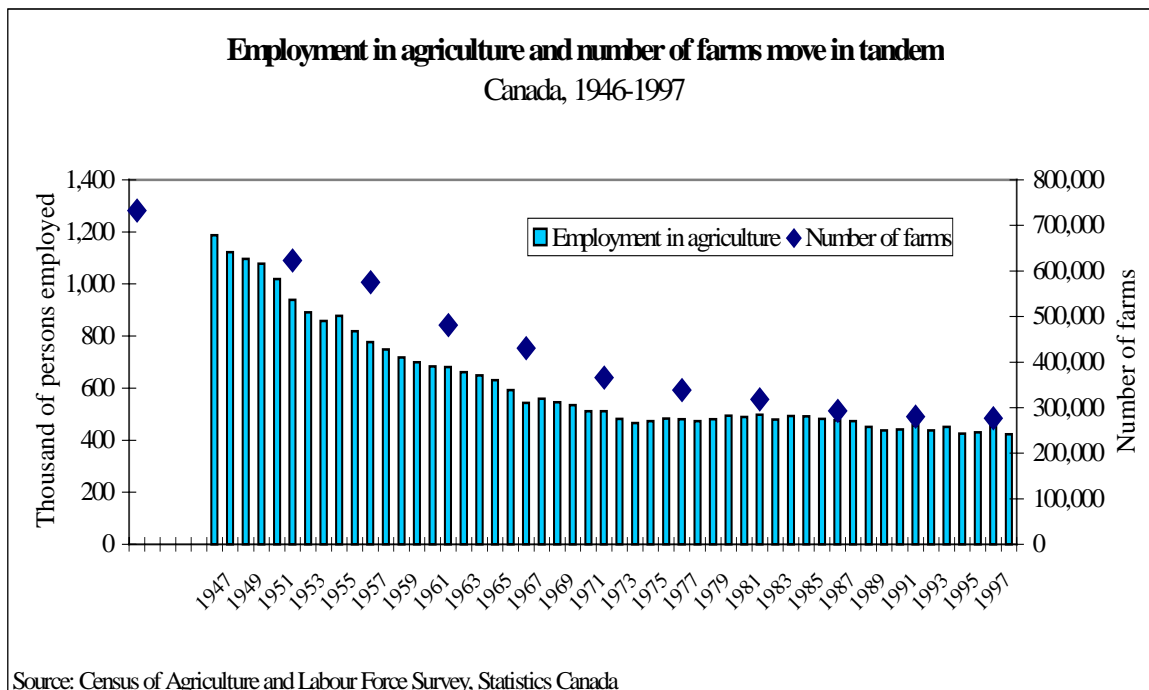
employment in agriculture was lower than in 1996, the number of persons employed in agriculture has been relatively stable in the last ten years, fluctuating between 423 and 457 thousand (see Figure 1).

Historically, the drop in employment compares to that of the number of farms. From 1946 to 1997, the number of persons employed in agriculture decreased from 1,187,000 to 423,000, a decline of 64%. During the period 1941-1996, the number of farms dropped by 62%, from 732,832 to 276,548.

Agriculture has traditionally been a male-dominated sector of the economy. However, the presence of women has been growing since the 1950s. In 1954, women represented one out of 24 persons of the working force in agriculture. That share had doubled by 1961 and doubled again by 1975. In 1997, women accounted for one out of three persons employed in agriculture.

In 1997, self-employed farmers without paid help were slightly more common in agriculture than paid workers (43% and 42% respectively). The relatively high proportion of paid workers may be partly due to the inclusion of farmers who operate an incorporated farm business.¹ The remaining persons employed in agriculture are almost equally divided between self-employed farmers with paid help (8%) and unpaid family workers (7%).

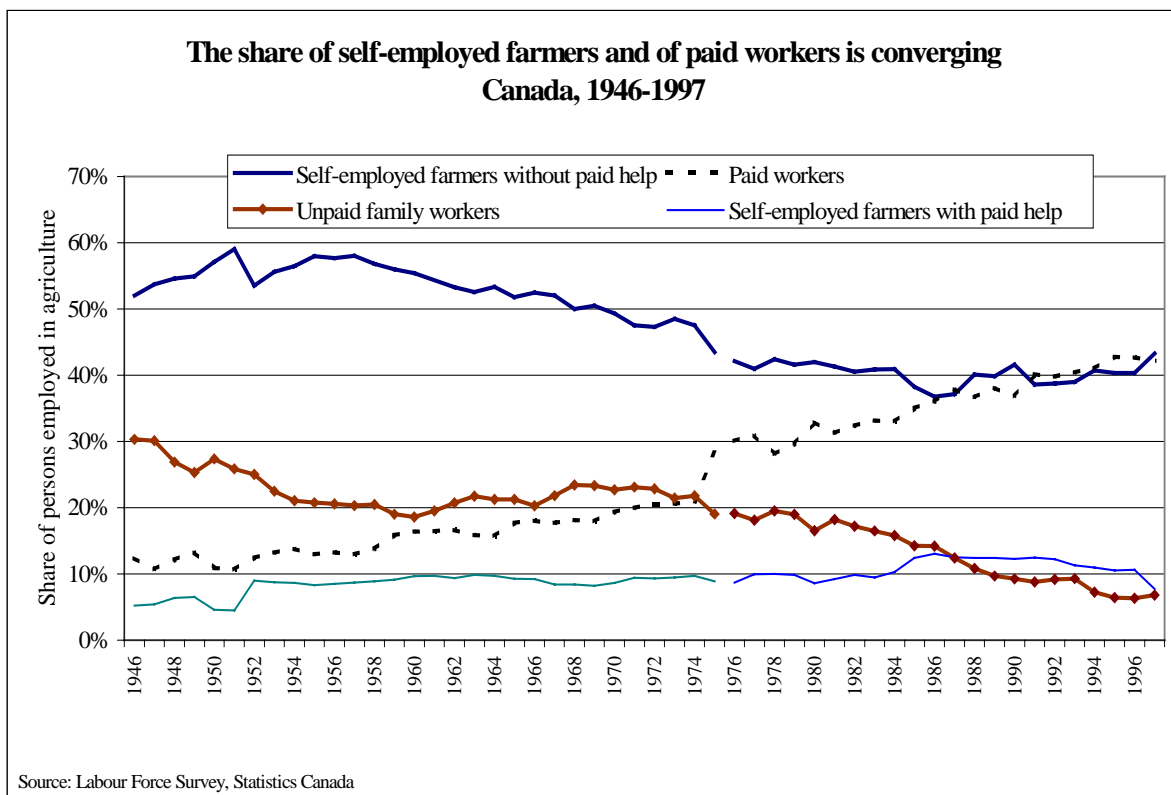
Figure 1. Employment in agriculture and number of farms



¹ It is a standard practice of the Labour Force Survey and of the Census of Population to allocate all workers of incorporated businesses including all the owners as “paid workers”, even though the owners appear or are self-employed entrepreneurs.

Compared to 1946, the present distribution of workers amongst the four categories (self-employed farmers without paid help, self-employed farmers with paid help, paid workers and unpaid family workers) differs considerably (see Figure 2). More than 50 years ago, self-employed farmers without paid help accounted for the largest group of workers in agriculture, representing more than half of the total. Although their share has declined from 1946 to 1997, that decline is limited. When comparing 1946 and 1997, the share they represent remains similar, especially when considering the fifty-one year period separating those two dates. The same can be said of self-employed farmers with paid help. In their case, their share has roughly fluctuated between 5% and 13% during that period. The current level (8%) is only slightly higher than that observed in 1946. Thus, there is no dramatic trend towards self-employed farmers with paid help.²

Figure 2. Employment in agriculture



Unpaid family workers and paid workers present the largest changes. While the share of unpaid family workers declined, the share of paid workers rose. In 1946, unpaid family workers were the second largest group and represented 30% of all employment in agriculture. In 1997, that group was the smallest. In the case of paid workers, their share jumped from 12% to 42% during the same period. Both movements can be explained in part by the decline in the average size of farming families. With larger families in the

² However, some apparent self-employed farmers with paid help in fact operate incorporated farms and they themselves are counted as paid workers, not as self-employed with paid help.

first half of this century, each family member contributed to the daily operation of the farm. As the size of families declined and family members sought opportunities outside of the farm, farm activities that used to be accomplished by a family member had to be performed by someone else; in some cases, that “someone else” became an hired hand and in other cases, that “someone else” became a labour-saving machine. In addition, women, who are commonly involved with unpaid work, also sought opportunities outside the farm. Furthermore, both children and spouses may now be paid a wage whereas they were truly “unpaid family workers” decades ago.

In each work group, the share of women has increased during the period studied. The increasing importance of women in each category reflects, in large part, the massive entry of women into all types of jobs. As was mentioned previously, nowadays, women account for one out of three persons employed in agriculture. For each class of worker mentioned, we would expect a similar ratio. This is almost true for both “self-employed farmers with paid help” and “self-employed farmers without paid help”. In each of these categories, women represent one out of four persons, slightly less than that of the sector as a whole. Significant differences are noted for “unpaid family workers”. In that group, women represent two out of three persons while men account for one out of three, the reverse of what is posted by the agriculture sector as a whole. This simply confirms that, in general, women are more likely to be unpaid workers than are men (e.g. wives of farm operators). In the case of paid workers, the ratio measured corresponds to that of the sector as a whole.

To summarize, the number of persons employed in agriculture has drastically declined in the past 50 years. The proportion of self-employed farmers (both with and without paid help) peaked in the mid-1950’s to decline and stabilize in the mid-1970’s. During the same fifty-year period, the share of paid workers increased significantly and now is equivalent to that of all self-employed persons. Unpaid family workers have almost disappeared during that period (or perhaps they are now being paid a wage).

Employment has evolved dramatically in the last fifty years. While fifty years ago, a typical family would have the father “earning the bread for the whole family” and the other family members contributing through unpaid work, it is not as easy to characterize a “typical family” today. For instance, a wife might be running her greenhouse operation while at the same time operating a small accounting practice. Her husband could be raising cattle, being a partner in a corn operation and working full-time at the local plant. The son and daughter, while going to school, could hold part-time jobs at the grocery store or the gas station and giving a hand to their parents. (For a detailed analysis based on a typology of the nature of the individual’s attachment to agriculture, see Harrison and Cloutier, *People in Canadian Agriculture*.³)

The following section will focus on farm operators and how they divide their time between various professional activities. We would expect that the changes which have

³ Harrison, Rick and Sylvain Cloutier, **People in Canadian Agriculture**, Statistics Canada, catalogue number 21-523.

affected agriculture in the last fifty years would be reflected in the time farmers devote to each professional activity they are involved in.

2.0 Time devoted to professional activities, from agricultural businesses to paid work to non-agricultural businesses

For the first time in 1996, the Census of Agriculture questionnaire included questions on the average weekly hours farmers devoted to both their on-farm and off-farm professional activities. Furthermore, farmers were also questioned on whether or not they operated a non-agricultural business in addition to their farm. These questions were enumerated for each of the three potential operators that could be listed on the questionnaire. Although historical comparisons are not possible, the data available provide valuable information. They quantify the number of operators who work full time on their farm and those who do so on a “part-time” basis. Collected data also provide information on the way farmers use their time and how they divide it between various professional activities.

In 1996, the Census of Agriculture enumerated 386,000 operators on 277,000 farms. Male operators represented three out of four operators while women accounted for one out of four operators. Farms run by one operator were the most common, representing six out of every ten farms. Farms operated by two operators comprised three out of ten farms while three-operator farms represented less than one out of ten farms.

The majority of farmers work long hours on their farm. In fact, half of them indicated that they averaged at least 40 hours per week of on-farm work. One-fourth of operators reported between 20 and 40 hours while the remaining one-fourth worked less than 20 hours on their farm (see Table 1). As could be anticipated, differences exist between men and women. Men are more likely to average longer hours of on-farm work hours than women. For instance, almost twice as many men than women worked at least 40 hours on their farm. On the other hand, women were twice as likely as men to report less than 20 hours of on-farm work.

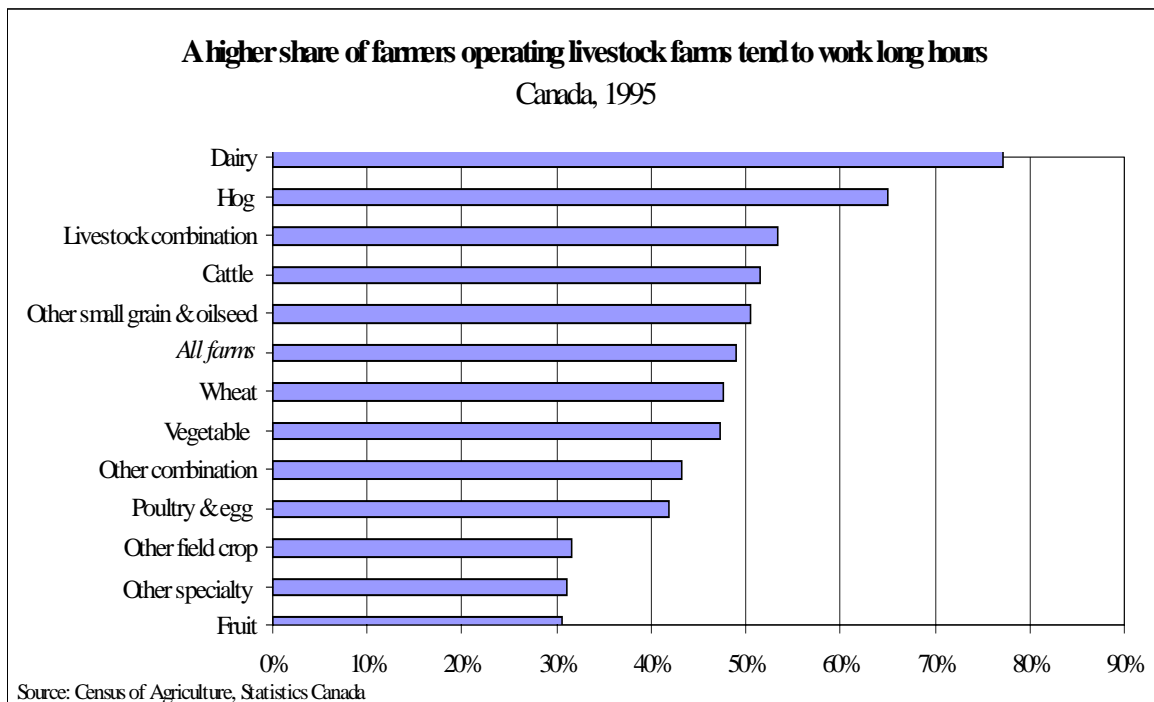
Table 1. Farm operators classified by the number of weekly hours worked off the farm

	Total number of operators		Average number of weekly work hours on the farm					
			Less than 20 hours per week		Between 20 and 40 hours per week		More than 40 hours per week	
	Number	Share	Number	Share	Number	Share	Number	Share
All farm operators	385,605	100%	98,975	26%	98,045	25%	188,580	49%
Male operators	288,260	100%	61,515	21%	68,100	24%	158,645	55%
Female operators	97,345	100%	37,460	38%	29,945	31%	29,935	31%

Many factors will affect the number of hours a farmer will spend operating his or her farm. One of the most important is the type of farm being operated (see Figure 3). Livestock operations tend to demand longer hours compared to crop, fruit or vegetable farming. Numbers support that statement. Dairy farmers are the most likely to report long farming days. In fact, eight out of ten dairy farmers averaged at least 40 hours of work on their farm. They were followed by hog farmers (seven out of ten with more than 40 hours of on-farm work) and, livestock combination farmers (five out of ten). Amongst farmers who reported shorter hours on their farm, that is less than 20, those on other field crop, fruit and other specialty farms had the highest proportion of such operators (four out of ten each).

The operational structure is another important factor which impacts on the average time an operator will devote to his or her operation. There are many ways to perceive the average number of hours an operator will work on his farm. Some believe that the more operators associated to one farm, the greater the opportunity of reporting professional activities other than agriculture and thus, of shorter on-farm work hours. Others state that the lower the number of operators, the lesser the possibility of having a professional activity and thus, of longer on-farm work hours as the operator will concentrate on that sole activity. What do the numbers tell us?

Figure 3. Percent of all operators averaging more than 40 hours per week on the farm



Three-operator farms were those where the share of operators working at least 40 hours was the largest. For that group, 56% of operators mentioned that they worked at least 40 hours on their farm. By comparison, 51% of farmers on one-operator farms and 45% on two-operator farms averaged at least 40 hours on their farm. The lower proportion for

two-operator farms can be explained in part by the important presence of women on two-operator farms. On these farms, women account for more than four out of ten operators; on three-operator farms, women represent just under three out of ten operators while on one-operator farms, women account for less than one out of each ten operator. Since women tend to work less on the farm than men and that they account for a large share of two-operator farms, the combined result is a lower share of operators working at least 40 hours on their farm. Proportions for the two other on-farm work hour categories, less than 20 hours and between 20 and 40 hours, are similar regardless of the number of hours.

Dividing their time between two or more professional activities is common for farmers. In fact, 46% of them reported professional activities, either working off their farm for pay or running a non-agricultural business or both, in addition to operating their farm (see Table 2). Female operators were as likely as their male counterparts to work off the farm. For each gender, the proportion of operators involved with non-farm work was hovering around that of all operators, that is 46%.

Table 2. Farm operators classified by their involvement in professional activities other than their farm (either working off their farm for pay or running a non-agricultural business)

Professional activities other than their farm	Total number of operators		Average number of weekly work hours on the farm					
			Less than 20 hours per week		Between 20 and 40 hours per week		More than 40 hours per week	
	Number	Share	Number	Share	Number	Share	Number	Share
All farm operators	385,605	100%	98,975	100%	98,045	100%	188,580	100%
No professional activities other than their farm	209,390	54%	30,300	31%	39,620	40%	139,470	74%
At least one professional activity other than their farm	176,215	46%	68,680	69%	58,430	60%	49,110	26%

Note: because some operators report both working off their farm for pay or running a non-agricultural business, the addition of the separate corresponding tables will differ than that provided by the table above.

Significant differences are noted when looking at the distribution of operators with non-farm work to the time they spend working on their farm. Farmers averaging less than 20 hours of farm work showed the highest share of operators with some non-farm work activity, at 69%. This is not surprising since these farmers, who do not devote most of their time to their farm, can engage in non-farm activities. The proportion of farm operators reporting between 20 and 40 hours of weekly on-farm work and engaged in some non-farm work is similar, standing at 60%. Farmers working at least 40 hours on their farm were not as likely to report any non-farm work. Within this group, 26% of farmers reported off-farm work or running a non-agricultural business. This is not surprising since these operators are concentrating their time on their main activity, that is, farming.

The overall picture is the same for male and female operators, the more time they devote to the farm, the lower the share of them reporting a non-farm activity. However, men working less than 40 hours on the farm are less likely to solely work on the farm than women. In fact, the proportion of men working only on the farm was two-third that of women. This means that when farmers are working less than 40 hours on their farm, men are more likely than women to be involved in two professional activities, one being farming while the other is non-farming.

“Professional activities other than their farm” is composed of paid off-farm work and of operating a business other than the farm. In 1995, 31% of farmers reported a paid off-farm job. As was mentioned previously, holding a job in addition to running the farm is more common amongst farmers who work shorter hours on their farm. In fact, 46% of farmers spending less than 20 hours on their farm held a paid job. This compares to 42% for those who averaged between 20 and 40 hours of on-farm work. A marked difference was noted for operators with at least 40 hours of on-farm work with 17% of them also bearing the status of paid employees. As for any other sector of the Canadian economy, farmers have their share of work horses: 2% of them reported working at least 40 hours on their farm and 40 hours off the farm at a paid job and some of these operators also reported operating a non-agricultural business (see Table 3).

Table 3. Farm operators classified by the number of weekly hours worked on and off the farm

Average number of weekly work hours off the farm	Total number of operators		Average number of weekly work hours on the farm					
			Less than 20 hours per week		Between 20 and 40 hours per week		More than 40 hours per week	
	Number	Share	Number	Share	Number	Share	Number	Share
All farm operators	385,605	100%	98,975	100%	98,045	100%	188,580	100%
No off-farm work hours	267,405	69%	53,645	54%	57,055	58%	156,705	83%
Less than 20 hours per week	28,000	7%	6,760	7%	7,195	7%	14,055	7%
Between 20 and 40 hours per week	51,855	13%	21,315	22%	20,220	21%	10,320	5%
More than 40 hours per week	38,350	10%	17,260	17%	13,580	14%	7,510	4%

The proportion of men to women showed the largest difference when farmers work less than 40 hours on their farm and devote more than 40 hours to non-farm work. In this situation, men are two to three times more likely to combine full-time work off their farm and “part-time” on their farm.

The opposite situation is observed for women who are working “part-time” on both the farm and off the farm. When women are working less than 40 hours on the farm and less than 20 hours off the farm, their proportion is two to three times higher than that of men. This suggests that women devote less of their time to pursuing professional activities than men.

Within the group of male and female operators, we find 15% are operating a non-agricultural business. This varies from a low of 9% of operators working at least 40 hours on the farm up to 24% of operators working less than 20 hours per week on the farm (see Table 4).

Table 4. Farm operators classified by the number of non-agricultural business they operate

Number of non-agricultural businesses other than their farm	Total number of operators		Average number of weekly work hours on the farm					
			Less than 20 hours per week		Between 20 and 40 hours per week		More than 40 hours per week	
	Number	Share	Number	Share	Number	Share	Number	Share
All farm operators	385,605	100%	98,975	100%	98,045	100%	188,580	100%
No non-agricultural businesses	327,595	85%	75,635	76%	80,615	82%	171,350	91%
One non-agricultural business	54,640	14%	21,860	22%	16,440	17%	16,340	9%
More than one non-agricultural business	3,370	1%	1,485	2%	1,000	1%	890	0.5%

Again we find differences between the genders, men are more likely than women to report running a non-agricultural business. Depending on the time spent working on the farm, the ratio of men operating a non-agricultural business to that of women will vary from 1.36 to 1.93. The largest difference was measured in the less than 20 hours category where men were almost twice as likely as women to report a non-agricultural business.

Given this discussion on the on-farm and off-farm work patterns of operator of census farms, it is possible to postulate what has happened to the composition of income of a family farm. As the share of self-employed persons in agriculture has decreased, it may be expected that within farm families, the time allocated to farming has decreased. Thus, we might expect that the share of income from farming, namely net farm income, is also likely decreasing. In the same vein, income from paid work off the farm is likely becoming more important thus representing a higher share of the family's total income.

3.0 Changes in the level and composition of the income of farming families

The level of total income of farming families has been relatively stable since the mid-1970's if we factor in inflation as measured by the Consumer Price Index. In addition, the share of net farm income to the total income of farming families has been generally declining since the Survey of Consumer Finances first started, that is since 1965 (see Figure 4). The actual value of net farm income (in constant dollars⁴) has also been generally declining since 1974 (with a slightly upward trend since 1991).

The Survey of Consumer Finance estimated the 1996 total income of a farming family to be \$54,635. This total is the highest ever measured by the survey and has been rising since 1993. By comparison, a farming family's total income stood at \$22,413 in 1965 (in constant dollars). An increase in income should be perceived positively, especially if it has more than doubled during that period. In the case of farming families, a note of caution should be added.

In 1965, net farm income was the main source of earnings representing 46% of the farming family total income, followed by wages and salaries at 36%. Positions were reversed by 1996 with wages and salaries representing 49% of the farming family total income while net farm income came in as a distant second with 23%. The year 1977 was a key year as wages and salaries became the most important source of income for farming families. Since then, wages and salaries have always been contributing more to total income than net farm income. A second key year is 1988: at that time, net farm income became half that of wages and salaries. This has been the case for all subsequent years except for 1993 and 1995. Other sources of income have represented between 16% (1967) and 30% (1990, 1991 and 1995) over the period studied. Government social transfers and investment income are the two most important components of "other sources of income". In 1996, government social transfers accounted for 10% of the total income reported, followed by investment income (8%), non-farm self-employment (6%) and other sources of income (4%).

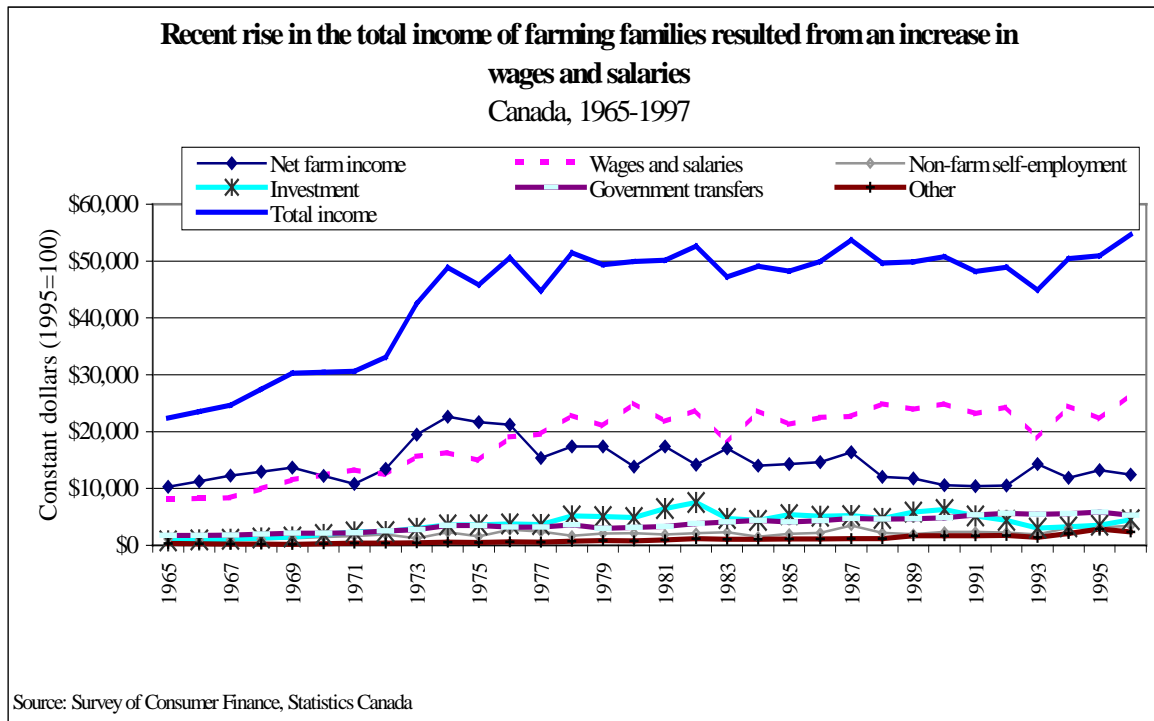
What is...

A **family unit** refers to economic families plus unattached individuals where an economic family refers to all individuals living in an household who are related by blood or marriage.

A **farm family** is defined as a "family unit" (defined above) with one individual reporting some net farm income.

⁴ All numbers pertaining to level of income are provided in constant dollars with 1995 as the base year.

Figure 4. Level and composition of income of farming families



Although the trends are generally constant across all definitions of “farming family”, the relative share of net farm income will likely be higher with a more strict definition of a farming family. For instance, if the definition were to include only families with a stronger attachment to farming, these families would show a higher share of their total income coming from their agricultural activities. This would not be the case for a professional who operates a farm as a hobby.

If we were to divide income sources into two groups, net farm income and off-farm income, our analysis would yield other interesting aspects of the evolution of income of farming families. Since the inception of the Survey of Consumers Finance, off-farm income has always represented at least 50% of the total income. The low was reached in 1967 when off-farm income accounted for exactly 50% of the total income; the high, in 1990, when off-farm income represented 79% of the total. A significant shift between net farm and off-farm income occurred in 1979-1980. During that two-year period, off-farm income jumped by seven percentage points, from 65% to 72%. Concurrently, net farm income posted a decline of seven percentage points, from 35% to 28%. Nineteen-eighty also marked the first year for which net farm income represented less than 30% of the farming family’s total income.

4.0 Concluding observations

Employment in agriculture has changed drastically over the last fifty years. While the share of self-employed farmers has remained relatively stable over that period, the

contribution of paid workers and of unpaid family workers to agricultural employment has reversed. Fifty years ago, unpaid family workers contributed significantly to farm work while paid workers were not as common. The latest numbers from the Labour Force Survey shows a totally different role for these two groups. The share of paid workers is converging towards that of self-employed farmers while unpaid family workers have basically disappeared.

The increase in paid work can also be observed at the individual level. According to the last Census of Agriculture, almost half of all farmers reported another professional activity, be it paid off-farm work or a non-agricultural business. These activities can be necessary for certain farmers to supplement their income derived from farming. In other cases, the time devoted to the farm may be limited; thus, farmers will have the opportunity to engage in professional activities outside of farming.

Changes affecting farming can also be observed in the income composition of farming families. While net farm income was the largest component of the family's total income in the years up to 1972, this is not true anymore. According to the latest results of that survey, net farm income now accounts for roughly one-fourth of the family's total income. Wages and salaries which have always contributed significantly to the farming family's income is now, and by far, the largest contributor. Recently, wages and salaries have represented five out of every ten dollars earned by a farming family.

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