

**SOCIO-ECONOMIC LINKAGES BETWEEN AGRICULTURE  
AND RURAL COMMUNITIES IN WESTERN CANADA**



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**SOCIO-ECONOMIC LINKAGES BETWEEN AGRICULTURE AND RURAL COMMUNITIES  
IN WESTERN CANADA**

by

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## Executive Summary

The purpose of this paper is to begin the process of drawing together and analyzing information concerning the socio-economic interrelationships, or linkages, between the agricultural sector and rural development in Western Canada. Agriculture remains a major industry in the Prairie Region and adds to diversification in an urban dominated economy in British Columbia. Recent and rapid fundamental changes in agricultural policy have dramatically altered primary production, transportation and use of commodities. These changes are creating concomitant restructuring in not only production agriculture, but also the entire rural economy as new challenges and opportunities arise. The linkages between agriculture and rural development, therefore, are being re-evaluated. Indirect or weak linkages of the past are becoming more operative as economic restructuring filters into the social, political and cultural realms of rural society.

### Rural Populations

Although total population increased in all four Western provinces between 1991-1996, rural populations decreased in all provinces except Manitoba, where it was stable. Farm shares (1991 data) of the rural population are significant in Manitoba (26%), Alberta (33%) and Saskatchewan (41%). Overall, rural residents comprise 23% of Canada's population, but farm resident's account for only 3%. Manitoba witnessed a reversal of rural population loss in half of its rural jurisdictions. Overall, however, larger towns are increasing while smaller towns and rural areas are decreasing in population (except adjacent to CMAs/CAs). Urbanization will continue in all provinces. The number and distribution of urban centres is fundamentally important to farm survival through provision of employment opportunities for farm family members.

Rural farm populations do not deviate greatly in age-sex characteristics and labour force shares from the Canadian average. Small rural towns, however, have high shares of seniors and dependancy ratios at or below unity. Rural farm residents, therefore, provide an important source of labour for enterprises developed in urban areas, forming a significant link between development, farm families, and required labour.

The educational levels of rural residents (both farm and non-farm) are significantly lower than the general population. Rural women are better educated than rural men. Development, therefore, must recognize the skill levels of the rural labour force, and either create industries with coincident labour requirements, or provide training.

### Farm Restructuring

Manitoba and Saskatchewan both had decreases in numbers and increases in size of farms, but Alberta and British Columbia had the opposite pattern. The size distribution of farms did not change significantly between 1991 and 1996, but three shifts were apparent: 1) small farms increased in all Western provinces, 2) mid-sized farms decreased in all Western provinces, and 3) large farms increased across the Prairies. Bipolarity in farm size accentuated. The linkage with rural development occurs in that farm families near urban centres have alternative employment options and are less dependent on agriculture. Smaller farms are dominant near urban centres. Larger farms are dominant in remote areas where agricultural dependency is higher.

The Prairies continued to dominate grain and oilseed production with only minor fluctuation in crops grown. British Columbia gained significantly in share of tree fruits and nuts. More dramatic shifts occurred in livestock production as the number of farms producing chickens, turkeys, cattle and hogs all decreased, while the Western Canada share of total population increased. This reflects "industrialization" of livestock



production, resulting from policy change, global economics and cost of production efficiencies. Over time this restructuring will have dramatic effects on rural development challenges and opportunities, especially in value-added food and related industries.

Farm capitalization varied greatly between 1986-1996, with different components increasing and decreasing among provinces and years. Overall, farm component costs are significantly altering profit margins. This is reflected in that small farms control 24% of the land and hold 27% of farm capital, but receive 8% of total gross farm receipts. Conversely, 10% of farms control 25% of the land, hold 33% of farm capital, but receive 55% of total gross farm receipts. These capital-receipts relationships link directly to rural development through potential availability of local/regional capital for new development efforts.

### Farm Family Change

Farm families have traditionally adjusted to fluctuations in agricultural income by adopting diversification in labour. Off-farm income generated by any family member has become a significant source of survival, and the shares of men working full-time off-farm and women entering the non-farm labour pool are increasing. A complex relationship exists between farms, farmers, farm family members, external opportunities and the motivations for off-farm employment. Need, desire, abilities and training, viable opportunities, agricultural income and location all may play a role in farm family decision-making processes. This aspect of farm family labour distribution forms a significant, multi-dimensional link between agriculture and rural communities, and between rural development and the agricultural industry.

### Value of Agri-food Activities

Rural Western Canada has lagged behind in development of value-added agri-food processing. Agriculture policies heavily favoured production and shipment of bulk commodities to processing facilities located elsewhere in Canada, or in other nations. Changes in federal policy have profoundly affected agriculture, and has changed the focus of rural development towards recognition and development of new opportunities afforded. Transportation costs disallow former export activities, forcing restructuring of the crop-livestock relationship, and providing opportunities for processing industries. Some competitive advantages accrue to use of products near areas of production, jobs that accommodate the skill levels of the farm family labour pool and new product development from on-farm production diversification. These changes will have profound impact on the linkages between agriculture and rural development as one is crucial to the survival of the other. New partnerships and understanding will create stronger communities where development occurs.

## **Linkages in Rural Western Canada**

The rural economy is complex in itself, and because it is intricately tied to the urban economy, contains aspects of the national and international economies. The depth of these interrelationships is illustrated by the fact that the OECD and Statistics Canada define rurality by a set of criteria based on the relationship between rural areas and urban areas.

### Demographic Linkages

Agricultural restructuring has had pervasive effects on all aspects of rural economy and rural life. Displacement of people (depopulation) has left rural residents only two options – relocate or find alternative employment.

Most have relocated, bringing into question the viability of municipal government, inefficient service delivery, regionalization of once viable community institutions, loss of customers for rural businesses, and loss of human resources for development. As young people left and seniors retired, community demographics changed and dependency ratios increased. Rural farm families must adapt to change by diversifying labour, requiring the development of alternative employment opportunities in towns near enough to the farms to allow commuting. The distribution of viable communities, therefore, plays a fundamental role in farm survival, and the need for labour from farm families plays a vital role in community economic development. The old lines between farm and town are gone. Farm families located too far from centres offering alternative employment are particularly disadvantaged.

### Occupational Differentiation

The farm-urban linkage in occupational differentiation has four components. First, farm families living near major urban centres have the full range of occupational and training opportunities available. Second, the number of employment opportunities decreases rapidly as the size of urban centre decreases. Third, the increasing concentration of employment in urban centres creates virtually a one-way movement from rural to urban areas. Fourth, the progressive loss of functions by communities in depopulating areas signals loss of diversity in occupational opportunities. These changes impact rural women more than rural men.

### Community Government and Services

Population change, employment variation, decentralization of responsibilities to municipal governments without fiscal resources or expertise, growth in the third sector and new environmental regulations have dramatically changed local government in rural Canada. In metro-adjacent regions, population increase and “right-to-farm” conflicts occur. In remote areas with depopulation and decreasing tax bases, municipal governments struggle to maintain existing services. Traditional elected rural officials lack the training and experience needed to deal with many new issues as municipal government becomes an ever-increasing time burden. The relationship between senior and local government, therefore, is changing, but decisions on service delivery retained by senior governments still impact rural areas (regionalization).

Similarly, globalization of private industry, often encouraged by government policy, also impacts communities. The agri-business side of restructuring, with inland grain terminals and railway abandonment, creates few winners and many losers across the landscape. Private companies also offload social costs to local government in order to increase their own efficiency.

### Trends in Reliance on Government Support

Agriculture has a long history of significant support from government. Realizing the futility of long-term support at high levels, senior governments recently made major changes in support programs. Total support decreased by as much as 50% during the 1990-1995 period. These changes are driving a rapid restructuring in agriculture and agri-food industries, with pervasive effects on rural communities. The following aspects of federal and provincial policies are noted:

- ▶ The dependency of farm families on income from non-agricultural sectors suggests that policies in other sectors may be as important to farm sustainability as are agricultural policies.
- ▶ On-farm diversification may not be as financially rewarding as diversification of the farm family labour pool.

- ▶ Tax, social and regional policies have greater influence over restructuring than do agricultural policies.
- ▶ Contradictions between rural employment objectives and environmental imperatives are impediments to both rural and agricultural development.
- ▶ Agricultural policy processes managed by senior governments are replacing weather and markets as the greatest source of uncertainty for farming.

### Adaptation Policy Directions

It is not obvious that the new policy directions under the Canadian Adaptation and Rural Development (CARD) program will set a new direction for change. It becomes imperative, therefore, that both the differences and linkages between and among policies be viewed vis-a-vis impacts on both agriculture and rural development. Far more farm families will be positively impacted by effective rural development policies than by agricultural policies, especially those that promote non-agricultural diversification.

## TABLE OF CONTENTS

<b>SOCIO-ECONOMIC LINKAGES IN WESTERN CANADIAN RURAL COMMUNITIES</b> .....	<b>1</b>
<b>Population Trends</b> .....	<b>1</b>
<b>Sub-regional Patterns in Demographics</b> .....	<b>1</b>
<b>Occupational Differentiation - Labour Force</b> .....	<b>3</b>
<b>Labour Force Characteristics</b> .....	<b>3</b>
<b>Education, Training and Skills Level</b> .....	<b>6</b>
<b>Average Family Income</b> .....	<b>6</b>
<b>Farm Structures and Agricultural Production</b> .....	<b>6</b>
<b>Commodity Specialization and Distribution</b> .....	<b>7</b>
<b>Farm Capital</b> .....	<b>14</b>
<b>Gross Farm Receipts</b> .....	<b>14</b>
<b>Pluriactivity by Farm Families</b> .....	<b>15</b>
<b>Value of Agri-food Activities</b> .....	<b>16</b>
<b>LINKAGES IN RURAL WESTERN CANADA IN THE 1990's</b> .....	<b>17</b>
<b>Rural Community Trends 1991-2003</b> .....	<b>18</b>
<b>Demographic Linkages in Western Canada</b> .....	<b>18</b>
<b>Occupational Differentiation</b> .....	<b>19</b>
<b>Important Economic Sectors</b> .....	<b>20</b>
<b>Community Government and Services</b> .....	<b>20</b>
<b>Trends in Reliance on Government Support</b> .....	<b>21</b>
<b>Major Agricultural Structural Changes</b> .....	<b>22</b>
<b>Federal Policies</b> .....	<b>22</b>
<b>Farm Family as Provider of Labour</b> .....	<b>24</b>
<b>ADAPTATION POLICY DIRECTIONS</b> .....	<b>25</b>
<b>Literature Cited</b> .....	<b>26</b>

## LIST OF TABLES

<b>Table 1.</b>	<b>Provincial Population - Western Canada 1991, 1996</b>	<b>Page 2</b>
<b>Table 2.</b>	<b>Percent Distribution of Employment by Sector - Western Canada - 1991</b>	<b>Page 4</b>
<b>Table 3.</b>	<b>Population Distribution 15+ yrs. In Western Canada</b>	<b>Page 4</b>
<b>Table 4.</b>	<b>Selected Educational Levels of Canadians &gt;15 yrs. - Western Canada</b>	<b>Page 5</b>
<b>Table 5.</b>	<b>Average Family Income - Western Canada</b>	<b>Page 6</b>
<b>Table 6.</b>	<b>Number of Farms, Average Size and Tenure for Western Canada - 1991-96</b>	<b>Page 7</b>
<b>Table 7.</b>	<b>Size Distribution of Farms in Western Canada, 1991 and 1996</b>	<b>Page 8</b>
<b>Table 8.</b>	<b>Commodity Specialization and Distribution - Western Canada 1996</b>	<b>Page 9</b>
<b>Table 9.</b>	<b>Commodity specialization and distribution - Western Canada share, 1991, 1996</b>	<b>Page 10</b>
<b>Table 10.</b>	<b>Livestock Production and Distribution - Western Canada - 1996</b>	<b>Page 11</b>
<b>Table 11.</b>	<b>Livestock specialization distribution - Western Canada share - 1991, 1996</b>	<b>Page 12</b>
<b>Table 12.</b>	<b>Percent Change in Total Farm Capital and Components in Western Canada, 1986-91 and 1991-96</b>	<b>Page 13</b>
<b>Table 13.</b>	<b>Gross Farm Receipts and Related Factors - Canada - 1996</b>	<b>Page 14</b>
<b>Table 14.</b>	<b>Provincial Agri-food Exports in 1992 Based on the Degree of Processing (Millions of dollars)</b>	<b>Page 16</b>
<b>Table 15.</b>	<b>Manitoba Agri-food Exports from 1988 to 1992 Based on the Degree of Processing (Millions of dollars)</b>	<b>Page 17</b>



# **SOCIO-ECONOMIC LINKAGES IN WESTERN CANADIAN RURAL COMMUNITIES**

## **Population Trends**

The population of all four Western provinces increased between 1991 and 1996, but great variation occurred in the degree of increase. Manitoba (2.0%) and Saskatchewan (0.1%) show minor increases, Alberta (5.9%) increased the same as the National rate (5.7%), and British Columbia increased rapidly (13.5%) (Table 1). CMA/CA populations increased more rapidly than small urban and rural populations in Saskatchewan and British Columbia, but not in Manitoba and Alberta where increases are about equal between major urban population increase and that in other areas. Percent increases in overall growth of small urban centres suggest growth of between 15-25% in the Western provinces. Rural populations, however, decreased in all provinces except Manitoba, where a minor increase (0.3%) occurred (Table 1).

Comparative data for 1996 are not available for division of the rural population into farm and non-farm categories. In 1991, the farm population in Canada comprised only 12.6% of the rural population. British Columbia is the only Western province with a farm population below the national average for rural shares (7.8%), while Manitoba (25.5%), Alberta (33.1%) and Saskatchewan (40.5%) had significantly higher shares of farmers in their rural population (Statistics Canada, 1991a).

When viewed at the broader CD level, Manitoba and Saskatchewan have very different population changes than Alberta and British Columbia. Between 1991 and 1996, 11 of Manitoba's 18 CDs increased in population and 7 decreased. In Saskatchewan, 12 CDs decreased and 5 increased. In contrast, all of Alberta's CDs increased in population, about half by between 0-5% and half by >5%. All of British Columbia's CDs increased in population by >5%.

Overall, therefore, CMA/CA populations increased in all Western provinces, small urban populations also increased (although the 2500-4999 category decreased in Manitoba and Saskatchewan) and all rural populations decreased except in Manitoba (virtually stable). Alberta and British Columbia are more highly urbanized than Manitoba and Saskatchewan.

## **Sub-regional Patterns in Demographics**

In Manitoba, the 1991-96 period witnessed moderation in a long-term pattern of rapid decline in rural areas away from the urban fringe of Winnipeg. Between 1986 and 1991, 75% of rural jurisdictions declined in population, but between 1991 and 1996, only 50% declined. Among small cities, towns and villages, exactly 50% increased and 50% decreased in population. The difference between the two Census intervals is that only four Rural Municipalities outside of Winnipeg's influence increased between 1986-91, while 25 did so between 1991-96. Although short-term stability or gains in no way offset long-term losses, they may signal a bottoming out of rural depopulation in many areas. Much of remote agro-Manitoba, however, has lost between 50-70% of the 1961 rural population (Rounds, 1998).

Stabler and Olfert (1992a) reported similar trends in rural Saskatchewan, with 36 of 38 smaller centres and 18 of 18 larger centres declining in population between 1986-91. Rural losses, however, were even greater, as urbanization in Saskatchewan has increased steadily from 52% in 1971 to 61% in 1991, and close to 70% in 1996. Overall, larger rural towns in Manitoba, Saskatchewan and Alberta are increasing as smaller centres continue to decline (MacLean and Rounds, 1991; Stabler and Olfert, 1992a; 1992b).

Table 1. Provincial Population - Western Canada 1991, 1996

Jurisdiction	Population			CMA/CA				Small urban						Rural			
	1991	1996	% change	1991 <sup>1</sup>	1996 <sup>2</sup>	% total 96	% change	5,000-9,999		2,500-4,999		<2,500		1991		1996	
								1991	1996	1991	1996	1991	1996	No.	%	No.	%
Canada	27,296,859	28,846,761	5.7	21,067,214	22,449,855	78	7	708,355	946,935	680,334	748,677	524,721	659,684	6,389,985	23.4	6,385,551	22.1
MB	1,091,942	1,113,898	2.0	728,968	742,560	67	2	41,869	52,289	23,484	22,322	31,284	36,928	304,767	27.9	313,835	28.2
SK	988,928	990,237	0.1	558,112	572,989	57	3	5,958	20,845	37,015	35,957	59,779	61,413	365,531	37.0	363,059	36.7
AB	2,545,553	2,696,826	5.9	1,901,582	2,002,352	74	5	121,538	177,031	87,835	81,421	48,508	62,033	534,660	25.3	554,011	20.5
B.C.	3,282,061	3,724,500	13.5	2,722,766	3,147,837	85	16	81,595	91,657	70,922	99,957	36,296	45,692	641,922	19.6	667,112	17.9

Alberta's mixed economy, with lower dependency on agricultural, has promoted long-term population growth driven primarily by urban expansion. With total population greater than that of Manitoba and Saskatchewan combined, Alberta has developed not only two CMA areas, but also a number of CA's that serve as major regional centres. The urban fields around these centres contain many non-farm rural residents. Not only do rural residents comprise only 20% of the total population, but also only 1 in 4 rural residents are farmers. In the remote agricultural regions of Alberta, rural community change has followed a pattern similar to that in agro-Saskatchewan and agro-Manitoba (Stabler and Olfert, 1994).

British Columbia is one of Canada's most urbanized provinces (85%). Farm population comprises only 8% of the population. Limited arable land and concentrated populations render British Columbia unique in the urban/rural mix, in stark contrast to the Prairie region.

These demographic trends will likely continue beyond 1996. Urbanization will increase in all Western provinces, and remote rural areas will continue to decline. The fact that stabilization or slight increase occurred in some rural areas of Manitoba and Saskatchewan may signal bottoming-out, but likely does not signal significant turnaround in demographic trends. Alberta's more widespread growth throughout the Province reflects a greater number of larger widely distributed rural centres with lower agricultural dependency, but remote rural areas are likely to continue losing population, particularly in Eastern Alberta (Stabler and Olfert, 1994).

British Columbia is essentially an urban province, will continue to increase rapidly in population, and will continue to urbanize. The juxtaposition of small specialized farms with rapidly growing CMAs and CAs will continue in the Lower Fraser Valley and Okanagan regions.

### **Occupational Differentiation - Labour Force**

Employment by sector for 1991 is used to evaluate occupational structure for the Western provinces (Statistics Canada, Census of Population, 1991, Part B). Employment in primary industry is considerably higher than the Canadian average in all Prairie provinces (Table 2), but lower than the national average in British Columbia. Agriculture dominates primary industries in Manitoba and Saskatchewan, and is important in a mixed primary sector in Alberta. Saskatchewan, however, is far more agriculturally dependent than any other province, and is the only province in which primary industry employment exceeds that in the trade sector.

No Western province reaches the national average in employment in manufacturing. Manitoba and British Columbia have equal employment in this category, but Saskatchewan and Alberta have weak manufacturing sector employment with 33% and 53% of the national average, respectively. Virtually every other category does not vary among Western provinces, and is equivalent to national averages. Population growth and more rapid urbanization in Alberta and British Columbia are reflected in somewhat stronger employment in construction and "other" industries. Many of the service industries employ in proportion to population.

### **Labour Force Characteristics**

A first approximation of the labour force distribution in Western Canada is gained by looking at the 15+ year distribution of population (Table 3). In Canada, 77% of this population group is urban and 23% rural. CMAs account for 62% of the population and other urban for 15%. Among rural populations, 3% are farm and 20% non-farm residents. The share of rural population 15+ years is higher in Manitoba (27%) and Saskatchewan (36%), but lower in Alberta and British Columbia (each 19%). The farm component is 7% in

Manitoba and Alberta and 15% in Saskatchewan. In British Columbia, however, only 2% of the 15+ years population is rural farm. Saskatchewan, therefore, has a significantly higher share of rural residents in agriculture, and British Columbia a significantly lower share.

Table 2. Percent Distribution of Employment by Sector - Western Canada - 1991<sup>1</sup>

	MB	SK	AB	B.C.	Can.
Primary	10	21	13	4	6
Manufacturing	11	5	8	11	15
Construction	5	5	7	7	7
Transport/storage	6	4	5	5	4
Communication	4	3	3	3	3
Trade	16	16	17	18	17
FIRE	5	5	5	6	6
Govt. Services	9	8	7	7	8
Education Services	8	8	7	6	7
Health social services	11	10	9	9	9
Others	16	16	19	23	19

<sup>1</sup> Statistics Canada, Profile of Urban and Rural Areas - Part B, 1991

Table 3. Population Distribution 15+ yrs. in Western Canada

	Total	Urban	Rural	Farm	Rural non-farm	CMA
Canada	21,304,740	77	23	3	20	62
MB	839,890	73	27	7	20	61
SK	738,680	64	36	15	21	41
AB	1,918,285	81	19	7	13	64
B.C.	2,585,525	81	19	2	17	59

The share of seniors (65+ years) in the population is about 12% for Canada, similar in most CMAs, and higher in most rural areas. Rural areas, however, are strongly divergent in seniors between rural farm and rural community shares. Using CSD data, Manitoba rural farm populations do not deviate greatly from overall provincial data in share of seniors (slightly higher), but small rural communities (small urban) have percentages of seniors typically ranging from two to three times provincial shares. Many smaller communities on the Prairies have >30% seniors, with the average in Manitoba towns and villages being 25% seniors, and some communities having >40% seniors (Rounds, 1998). In many of these towns, dependency ratios are greater than unity, with seniors being a much larger share than children (0-14 yrs.). This puts severe limits on labour force availability (Stabler and Olfert, 1992a; MacLean and Rounds, 1991; Rounds, 1998).



Table 4. Selected Educational Levels of Canadians >15yrs. - Western Canada

Highest level	Canada			Manitoba			Saskatchewan			Alberta			British Columbia							
	Total	Rural	RF <sup>1</sup>	Total	Rural	RF	Total	Rural	RF	Total	Rural	RF	Total	Rural	RF	RNF				
<Grade 9	11	18	17	18	15	22	20	23	16	21	16	25	9	14	13	14	9	10	11	9
>Grade 9<diploma	19	28	31	28	30	35	38	34	30	34	36	33	27	33	35	32	25	29	29	30
Secondary diploma	12	14	15	14	12	11	11	10	11	11	12	9	13	13	14	12	14	14	14	14
University degree	8	6	5	6	10	5	5	6	9	4	4	5	13	6	5	7	11	7	8	7

<sup>1</sup> RF - rural farm, RNF = rural non-farm



## **Education, Training and Skills Level**

The formal educational levels of rural Canadians are noticeably lower than that for all Canadians (Table 4). Strongest contrast is revealed by the lowest (<secondary diploma) and highest categories (univ. Degree). Overall, 30% of Canadians never graduated high school, but 46% of rural Canadians never graduated. Rural residents of Saskatchewan (56%) and Manitoba (57%) exceed national rural totals, but those in Alberta (36%) and British Columbia (34%) are below national values. Rural farm and non-farm shares are not significantly different.

All four Western provinces have higher percentages of the 15+ years population with university degrees than the national average (Table 4). Rural areas, however, have about half the percentage of degreed residents as the provincial averages, and all but Alberta and British Columbia have less than national shares among rural residents. Overall, Manitoba and Saskatchewan have far lower formal educational levels in the rural population than either the national or Alberta and British Columbia shares. Bessant et al (1993) report significant variation in educational levels between rural males and females in Manitoba, with females having much stronger education and training levels than do males.

## **Average Family Income**

Average family incomes in Manitoba and Saskatchewan are below the national average, while those in Alberta and British Columbia are above average (Table 5). This holds true for both urban and rural categories, and for rural farm and non-farm income. Rural farm family income, however, is below the national average in all three Prairie provinces, but not in British Columbia. Average family income in CMAs is highest in all provinces. Differences are greatest between CMA values and rural values, ranging between \$9,000-\$12,000 among jurisdictions. Rural non-farm family incomes are higher than rural farm family incomes in Manitoba and Alberta, but not in Saskatchewan and British Columbia.

Table 5. Average Family Income - Western Canada

Category	Can.	MB	SK	AB	B.C.
Total	\$51,342	\$46,091	\$44,174	\$52,346	\$52,403
Urban	53,023	42,873	47,600	53,647	53,557
Rural	46,002	40,717	38,291	47,206	47,952
Farm	48,371	40,197	40,656	46,439	51,632
Non-farm	45,673	40,892	36,566	47,593	47,644
CMA	55,699	49,619	50,570	55,632	56,434

## **Farm Structures and Agricultural Production**

Although the long-term trends of decline in the number of farms and increase in the average size of farms continued across Canada between 1991 and 1996, the four Western provinces split between decrease and increase (Table 6). Manitoba and Saskatchewan both had decreases in numbers and increases in average size of holdings. Alberta and British Columbia, however, both had increases in the number and decreases in average size of farms. No major changes occurred in the shares of acres owned and rented in any jurisdiction.

Overall, the number of farms decreased by 1.3% and the average size increased by 1.6% in Canada between 1991 and 1996. The number of farms in Manitoba decreased by 5.2% and average size increased by 5.5%, while the number of farms in Saskatchewan decreased by 6.6% and average size increased by 5.6%. In contrast, the number of farms in Alberta increased by 3.1% and average size decreased by 2%. In British Columbia, the number of farms increased by 13.6% and average size decreased by 1.7%.

Table 6. Number of Farms, Average Size and Tenure for Western Canada - 1991-96

Jurisdiction	No. farms		Ave. farm size (ac)		Tenure			
	1991	1996	1991	1996	Owned (ac) %		Rented (ac) %	
					1991	1996	1991	1996
Canada	280,043	276,548	598	608	63	63	37	37
MB	25,706	24,383	743	784	63	64	37	36
SK	60,840	56,995	1,091	1,152	61	61	39	39
AB	57,245	59,007	898	880	59	60	41	40
Prairies	143,791	140,385	952	974	61	61	37	37
B.C.	19,225	21,835	307	286	63	62	37	38
Western Canada	163,016	162,220	876	881	63	61	37	39

Source: Statistics Canada, 1997, Agricultural Profile of Canada, Catalogue 93-356-XPB

The size distribution of farms in Western Canada did not change greatly between 1991 and 1996, but three overall shifts are apparent (Table 7). First, the number of small farms (<240 acres) increased in all Western provinces. Second, the number of mid-sized farms (240-1599 acres) decreased across the Prairies and in British Columbia, and the number of large farms (>1600 acres) increased across the Prairies and remained stable in British Columbia. Bipolarity in farm size, therefore, accentuated somewhat between 1991 and 1996.

### **Commodity Specialization and Distribution**

Although commodity specialization and distribution cannot be expected to change markedly in a 5-year period, some variation did occur between 1991 and 1996 (Tables 8 and 9). The grain and oilseeds dominance of the Prairie region remained unchanged, with minor shifts among crops. The Prairie shares of wheat and mixed grains declined slightly while the shares of oats, barley and rye increased. The Prairies retained virtually all of Canadian production in canola, flaxseed, other oilseed, canary seed, sugar beets, triticale, field peas, beans and lentils, and forage seed. The highly specialized agriculture of British Columbia gained significantly in share of all tree fruits and nuts, but dropped slightly in all berries and grapes and nursery products, and remained constant in share of field vegetables (Tables 8 and 9).

More dramatic shifts occurred in Canadian livestock farms between 1991 and 1996 (Tables 10 and 11). A 34% decline in the number of farms with hens and chicks was accompanied by an 8% increase in number of animals. Similarly, a 46% decline in farms with turkeys was coupled with a 6% increase in number of animals. This pattern occurred in Western Canada, which also had minor increases in all shares of poultry production in Canada.

Table 7. Size Distribution of Farms in Western Canada, 1991<sup>1</sup> and 1996<sup>2</sup>

Jurisdiction	<10 ac.		10-69 ac.		70-239 ac.		240-759 ac.		760 - 1119 ac.		1120 - 1599 ac.		>1600 ac.	
	1991	1996	1991	1996	1991	1996	1991	1996	1991	1996	1991	1996	1991	1996
Canada	5	6	13	14	30	29	29	29	9	8	7	6	8	9
Manitoba	2	3	7	8	18	20	38	34	14	14	10	10	10	11
Saskatchewan	<1	1	2	3	12	14	32	30	12	16	16	15	19	19
Alberta	2	3	6	8	23	24	35	32	12	11	9	8	13	14
Prairie Region	1	2	4	6	18	19	34	32	15	13	12	11	15	12
British Columbia	27	30	37	35	18	16	11	11	3	2	2	2	3	3

<sup>1</sup> Statistics Canada, Agricultural Profile of Canada, 1991, Catalogue 93-350

<sup>2</sup> Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356-XPB

Table 8. Commodity Specialization and Distribution - Western Canada 1996<sup>1</sup>

Commodity	Canada						Manitoba						Saskatchewan						Alberta						British Columbia										
	Farms		Acres		%		Farms		Acres		%		Farms		Acres		%		Farms		Acres		%		Farms		Acres		%						
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%							
All wheat	93,545	34	30.7m	18	12,480	51	4.2m	22	43,007	76	18.2m	28	19,930	34	7.3m	14	432	2	40k	<1															
Oats	57,214	21	5.1m	6	18,472	36	1.1m	6	18,472	32	2.2m	3	15,015	25	1.4m	3	1,345	6	84k	1															
Barley	76,900	28	13.0m	8	9,067	37	1.6m	8	24,967	44	4.7m	7	24,314	41	5.8m	11	862	4	0.1m	2															
Mixed grain	14,416	5	0.7m	<1	485	2	36k	<1	657	1	70k	<1	1,857	3	0.2m	<1	90	<1	6k	<1															
Grain corn	28,203	10	2.8m	2	363	1	69k	<1	7	<1k	<1	24	<1	2.5k	<1	65	<1	2k	<1																
All rye	5,831	2	0.4m	<1	758	3	80k	<1	1,876	3	0.2m	<1	1,063	2	102k	<1	210	1	7k	<1															
Silage corn	15,249	6				1	30k	<1	17	<1k	1k	<1	103	<1	13k	<1	611	3	24k	<1															
0.5m	<1	396	8.9m	5	10,352	42	1.4m	7	15,116	27	2.0m	3	22,114	37	3.0m	6	4,239	19	0.4m	6															
Tame hay/fodder	74,220	27	6.5m	4	4,103	17	0.4m	2	7,060	12	0.7m	1	14,937	25	1.8m	3	6,141	28	0.5m	7															
Canola	41,823	15	8.7m	5	7,497	31	1.6m	8	19,596	34	3.9m	6	13,573	23	3.2m	6	232	1	64k	1															
Flaxseed	10,335	4	1.5m	1	4,030	17	0.6m	3	5,952	10	0.9m	1	285	<1	34k	<1	4	<1	<1k	<1															
Other oil seeds <sup>2</sup>	4,175	1	0.7m	<1	481	2	74k	<1	3,080	5	0.5m	<1	417	<1	95k	<1	26	<1	<1k	<1															
Potatoes	4,989	2	0.4m	<1	272	1	70k	<1	232	<1	7k	<1	456	1	31k	<1	496	2	9k	<1															
All dry beans	12,459	5	2.1m	1	1,180	4	0.2m	1	8,856	16	1.6m	2	2,220	<4	0.3m	<1	81	<1	10k	<1															
Canary seed	2,962	1	0.2m	<1	396	1	68k	<1	160	<1	13k	<1	223	<1	28k	<1	37	<1	<1k	<1															
Sugar beets	3,803	1	0.6m	<1	424	2	71k	<1	3,203	6	0.5m	<1	166	<1	24k	<1	3	<1	<1k	<1															
Sugar beets	499	<1	59k	<1	162	<1	23k	<1	---	---	---	---	327	<1	36k	<1	---	---	---	---															
Triticale	764	<1	64k	<1	36	<1	2k	<1	396	<1	35k	<1	269	<1	26k	<1	6	<1	<1k	<1															
Forage seed	2,856	1	0.5m	<1	452	2	62k	<1	601	1	93k	<1	1,281	2	237k	<1	172	1	47k	1															
Other field crops	1,267	<1	73k	<1	84	<1	8k	<1	453	<1	48k	<1	80	<1	7k	<1	124	<1	2k	<1															
All tree fruits/nuts	8,282	3	103k	<1	94	<1	12k	<1	80	<1	10k	<1	61	<1	5k	<1	3,380	15	26k	<1															
All berries and grapes	8,019	3	142k	<1	306	1	1k	<1	319	<1	1k	<1	473	1	2k	<1	1,852	8	19k	<1															
All field vegetables	11,440	5	0.3m	<1	318	1	5k	<1	277	<1	1k	<1	594	1	14k	<1	1,916	9	18k	<1															
Nursery products/sod	5,266	2	107k	<1	183	<1	5k	<1	130	<1	2k	<1	610	1	12k	<1	1,531	7	10k	<1															
Christmas trees	4,077	1	126k	<1	140	<1	2k	<1	67	<1	1k	<1	112	<1	2k	<1	592	3	23k	<1															
Totals	276,548	100	168m	100	24,383	100	19m	100	56,995	100	66m	100	59,007	100	52m	100	21,835	100	6m	100															

<sup>1</sup> Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356-XPB

<sup>2</sup> Other oil seeds include mustard, sunflower and safflower



Table 9. Commodity specialization and distribution - Western Canada share, 1991, 1996

Commodity	Canada				Western Canada Share			
	①1991		②1996		1991		1996	
	No. farms	No. acres	No. farms	No. acres	% farms	% acres	% farm	% acres
All wheat	105,805	35.0m	93,545	30.7m	86	98	81	96
Oats	54,969	3.0m	57,214	5.1m	64	86	76	93
Barley	82,677	11.2m	76,900	13.0m	72	91	77	94
Mixed grain	18,688	1.0m	14,416	700k	25	51	21	45
All rye	7,878	638k	5,831	400k	75	87	67	97
Alfalfa/mixtures	89,415	8.0m	87,904	8.9m	56	73	59	76
Tame hay/fodder	80,810	6.4m	74,220	6.5m	42	52	43	52
Canola	39,437	7.8m	41,823	8.7m	98	99	98	99
Flaxseed	9,883	1.2m	10,335	1.5m	99	99	99	99
Other oilseeds <sup>1</sup>	3,224	492k	4,175	700k	96	99	96	97
Potatoes	4,692	302k	4,989	400k	26	30	29	29
Field peas/lentils	7,747	790k	12,459	2.1m	98	99	99	99
All dry beans	3,544	236k	2,962	200k	17	31	28	55
Canary seed	1,349	237k	3,803	600k	100	100	99	99
Sugar beets	650	62k	499	59k	100	100	98	99
Triticale	304	20k	764	64k	68	90	100	100
Forage seed	3,920	510k	2,856	500k	80	94	88	88
All tree fruits/nuts <sup>2</sup>	8,328	113k	8,282	103k	38	25	44	51
All berries/grapes	7,175	113k	8,019	142k	31	18	37	16
All field vegetables	10,708	303k	11,440	300k	23	12	27	13
Nursery products/sod	4,344	114k	5,266	107k	44	29	46	27
Christmas trees	---	---	4,077	126k	---	---	22	22

① Statistics Canada, Agricultural Profile of Canada, 1991, Catalogue 93-350

② Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356-XPB

<sup>1</sup> Includes sunflower, safflower and mustard

<sup>2</sup> Nuts were not included in 1991



Table 10. Livestock Production and Distribution - Western Canada - 1996<sup>1</sup>

Livestock	Canada			Manitoba			Saskatchewan			Alberta			British Columbia						
	Farms		No. Animals	Farms		Animals	Farms		Animals	Farms		Animals	Farms		Animals				
	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
Total hens/chicks	28,240	100	102.3m	1,904	6.7	6.4m	6.3	4,103	14.5	3.6m	3.4	5,610	19.9	9.5m	9.3	4,840	17.1	13.8m	13.5
Turkeys	4,603	100	8.6m	262	5.7	837k	9.7	784	17.0	296k	3.4	1,180	25.6	843k	9.8	601	13.1	851k	9.9
Other Poultry	10,851	100	3.3m	765	7.1	194k	5.9	1,311	12.1	65k	2.0	2,421	22.3	228k	6.9	1,883	17.4	485k	14.7
Total cattle/calves	142,157	100	14.9m	12,807	9.0	1.4m	9.4	25,108	17.7	2.7m	18.1	36,560	25.7	5.9m	39.6	9,185	6.5	814k	5.5
Total pigs	21,105	100	11.0m	2,064	9.8	1.8m	16.4	2,848	13.5	757k	6.9	4,173	19.8	1.7m	15.5	1,411	6.7	174k	1.6
Total sheep/lambs	11,790	100	865k	526	4.5	38k	4.4	1,297	11.0	72k	8.3	2,814	23.9	260k	30.1	1,913	16.2	72k	8.3
Horses/ponies	56,707	100	444k	4,155	7.3	69k	15.5	9,472	16.7	66k	14.9	17,951	31.7	150k	33.8	7,123	12.6	49k	11.0
Bison	745	100	45k	73	9.8	5k	11.1	175	23.5	7k	15.6	334	44.8	23k	51.1	57	7.7	6k	13.3
Deer/elk	1,076	100	70k	22	2.0	1k	1.4	258	24.0	15k	21.4	245	22.8	11k	15.7	81	7.5	20k	28.6
Llamas/alpacas	1,180	100	9k	49	4.2	0.2k	2.2	182	15.4	0.8k	8.9	482	40.8	4k	44.4	254	21.5	3k	33.3
Others	3,101	100		249	8.0			481	15.5			926	29.9			324	10.4		
Colonies of bees	3,548	100	459k <sup>2</sup>	302	8.5	68k	14.8	254	7.2	78k	17.0	425	12.0	170k	37.0	595	16.8	35k	7.6

<sup>1</sup> Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356-XPB

<sup>2</sup> Number of hives

The number of farms producing red meats and related products decreased in all categories (Tables 10 and 11). Cattle/calve operations decreased by 2.5% but the number of animals increased by 15%. Hog farms decreased dramatically (28.7%) but total pigs increased by 8%. Sheep and lambs farms declined by 10% and the number of animals declined by 8%. Farms with horses and ponies dropped by 3.5% but the number of animals increased by 25%.

Western Canada's share in cattle/calve production increased slightly. The region's share of hog farms, however, decreased dramatically, while its share of number of pigs increased by 5%. This clearly indicates a major restructuring of pig production towards fewer, larger operations. Sheep and lamb production has not restructured and the Western Canadian share decreased in number of animals. The increase in horse and pony shares probably reflects expansion of the PMU industry in Western Canada.

Honey production lost in number of producers (-16%), but remained stable in number of hives. Western Canada slightly increased its already dominant position (primarily in Alberta).

Exotic red meat production was not reported in 1991, but growth in the industry resulted in separate status in 1996 (Table 10). Western Canada dominates production in bison, elk and deer products (84%). It also dominates the llama and alpaca production in Canada (89%).

In livestock production, therefore, major restructuring is occurring in the poultry and pig sectors, with Western Canada gaining in production shares. These two agricultural sectors are rapidly industrializing in Canada.

Table 11. Livestock specialization distribution - Western Canada share - 1991, 1996

Livestock group <sup>1</sup>	Canada				Western Canada Share			
	1991 <sup>2</sup>		1996 <sup>3</sup>		1991		1996	
	No. farms	No. animals	No. farms	No. animals	% farms	% animals	% farms	% animals
Total hens/chicks	42,661	94.9m	28,240	102.3m	62	32	39	33
Turkeys	8,462	8.1m	4,603	8.6m	68	33	33	35
Other poultry	11,295	2.6m	10,851	3.3m	60	31	56	37
Total cattle/calves	145,747	13.0m	142,157	14.9m	56	69	57	72
Total pigs	29,592	10.2m	21,105	11.0m	52	39	35	44
Total sheep/lambs	13,114	936k	11,790	865k	55	57	56	51
Horses/ponies	58,509	356k	56,707	444k	66	69	68	75
Colonies of bees	4,243	459k	3,548	459k	45	72	44	76

<sup>1</sup> Bison, deer, elk, llamas and alpacas were not recorded in 1991. Western Canada dominates in production in 1996.

<sup>2</sup> Statistics Canada, Agricultural Profile of Canada, 1991, Catalogue 93-350

<sup>3</sup> Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356-XPB

<sup>1</sup> Includes sunflower, safflower and mustard

<sup>2</sup> Nuts were not included in 1991

Table 12. Percent Change in Total Farm Capital and Components in Western Canada, 1986-91 and 1991-96

Measure	Canada		Manitoba		Saskatchewan		Alberta		British Columbia	
	86-91	91-96	86-91	91-96	86-91	91-96	86-91	91-96	86-91	91-96
Total farm capital	19.6	19.3	7.4	23.2	-12.1	16.0	7.6	30.3	32.8	60.0
Capital per farm	25.2	20.8	14.2	30.3	-8.4	23.8	8.6	26.5	31.7	40.0
Land/building	20.8	20.1	3.5	24.6	-19.4	17.3	2.5	34.9	33.7	68.6
Machinery/equipment	12.2	21.9	8.8	23.5	3.5	18.7	13.0	22.8	22.8	37.7
Livestock/poultry	26.7	6.0	37.4	124.7	38.0	-5.8	39.2	14.9	37.6	6.6
Rent/leasing costs	5.9	28.7	-9.3	18.4	2.1	32.5	5.8	26.8	12.4	39.6
Cash wages	28.0	32.2	32.1	29.3	10.4	28.0	19.2	11.9	35.7	48.3
Fuel, oil etc.	-22.7	9.0	-18.2	3.7	-13.0	11.6	-22.0	16.0	-23.5	8.5
Fertilizer etc.	-10.5	55.0	-14.9	55.8	-20.5	106.8	-12.4	59.0	8.0	40.9
Herbicides etc.	3.8	52.3	3.6	60.2	-1.4	67.8	5.6	44.7	11.8	42.3
Feed etc.	7.5	32.5	17.2	51.7	-8.1	26.4	4.0	67.1	1.8	33.2
Custom, contract work etc. *	25.8	79.9	11.5	69.3	19.4	64.1	38.8	86.9	43.6	192.7

## **Farm Capital**

Overall farm capital increased by 19.6% between 1986-91 and by 19.3% between 1991-96 in Canada (Table 12). National figures, however, are misleading when considering Western Canadian agriculture. The 1986-91 period was marked by noticeable regional differences. Farm capital in Manitoba and Alberta increased, but only at about 35% of the national increase, that in Saskatchewan actually decreased by 12.1%, while that in British Columbia increased by 32.8%. Prairie farms suffered badly during the late 1980s, while the specialized agriculture in British Columbia enjoyed rapid growth.

The 1991-96 percent change in total farm capital is markedly different. Both Alberta and Manitoba increased more than the national average, Saskatchewan recovered some lost value, and British Columbia farms soared in capital value. In Manitoba and Saskatchewan, where the number of farms decreased, the percent change in capital values per farm were higher than national totals, while in Alberta and British Columbia, where the number of farms increased, per farm percent changes are lower than total provincial values.

Component costs for some farm inputs increased dramatically between 1991-96 (Table 12). Most noticeable are fertilizer, herbicides and pesticides and feed, which increased well above national values in the Prairie provinces. Some major changes occurred in individual provinces. For example, livestock and poultry capital in Manitoba increased by 124.7%, fertilizer by 106.8% in Saskatchewan, feed by 67.1% in Alberta, and custom and contract work by 192.7% in British Columbia.

## **Gross Farm Receipts**

Fifty-five percent of Canada's farms report gross farm receipts of <\$50,000 in 1996, control 24% of the land area, hold 27% of the total farm capital, but receive only 8% of total gross farm receipts (Table 13). Conversely, 10% of farms, controlling 25% of the land area and holding 33% of total farm capital, receive 55% of total gross farm receipts. Mid-sized farms account for 35% of farms and receive 36% of total gross farm receipts. The percentage of purchase capital assets suggests that mid-range and high-range farms are attempting to expand, while small-range operations are not. This bipolar structure in gross farm receipts has developed progressively in Canada and plays a significant role in linkages between farms and other aspects of rural economies.

Table 13. Gross Farm Receipts and Related Factors - Canada - 1996

Gross receipts	% farms	% land area	% capital	% total gross receipts	% operating expenses	% paid wkly. labour	% purchase capital assets
<\$50,000	55	24	27	8	12	9	15
\$50,000-250,000	35	35	40	36	33	35	41
>\$250,000	10	25	33	56	55	56	44

Statistics Canada, Agricultural Profile of Canada, 1996, Catalogue 93-356 XPB



A similar distribution of farms among the gross receipts categories occurs in all four Western provinces. In British Columbia, however, 77% of all farms report <\$50,000 gross farm receipts, and in Saskatchewan 49% of farms fall into the middle category. Of interest among sectors is the fact that 69% of total gross farm receipts for pig farms and 82% for poultry farms are reported by operators with >\$250,000 in total gross receipts (Statistics Canada, 1997, Agricultural Profile of Canada).

### **Pluriactivity by Farm Families**

Pluriactivity is an all-inclusive term that describes activities by members of farm families that effect family income. Both formal and informal economic activities are involved, including multiple job-holdings, off-farm employment, on-farm non-agricultural enterprise, agricultural income and other informal economic activities (barter etc.). Fuller (1991:41) describes multiple job-holdings as "a flexible mechanism for adjusting to changes in agriculture, family needs, and shifts in the external environment."

It is important to distinguish between off-farm work and off-farm income. Off-farm work signifies employment-related earnings while off-farm income includes not only wages, but also benefits, investments, non-farm government transfers, self-employment income from a non-farm business and other miscellaneous sources (Bessant et al, 1993).

Off-farm work (a portion of off-farm income) has been a significant aspect of farm family activities since first measured in 1941. Main farm operators (primarily men) have remained relatively consistent in off-farm employment at between 30-40% since 1941 (Bessant et al, 1993). Recently, the percentage of main operators who work full-time off-farm has increased. Fuller and Bollman (1992) report that the percentage of census farmers working full-time off-farm (>229 days/yr.) increased from 4% to 16% between 1941 and 1991 (see also Ahearn and Lee, 1991, for U.S. data).

An increase of rural women in the labour force has drawn attention to the value of their labour both on and off the farm. Recent studies suggest that the percentage of farm women in the labour force now approximates or exceeds that of urban women - between 55-65% (Dion and Welsh, 1992). For example, Bessant et al (1993) report that 35% of farm men and 55% of farm women held off-farm jobs in Manitoba in 1991. Off-farm wage income accounted for between 31-51% of total farm family income in 1989, while all off-farm income accounted for between 54-77% of total farm family income (Bollman and Fuller, 1989). When farming on the Prairies struggled through the 1980's with farm returns as low as 3% on capital, off-farm income accounted for 90% of aggregate farm family revenue on the one-third of Saskatchewan farms with revenues <\$37,000 (Rounds, 1997a).

In total, off-farm income generated from all sources by all members of the farm family plays an important role, and sometimes a dominant role in farm survival and rural quality of life. The relationship between agricultural operations and needs and off-farm employment is neither simple nor direct. Fuller (1990, 1991) Barlett (1986, 1991), Steeves (1979), Heffernan et al (1981), Bollman (1991) and Bessant et al (1993) all point out the complex relationship between the characteristics of farms, farmers, farm family members, external opportunities and the motivations for off-farm employment. Bessant et al (1993), in a detailed study of off-farm work in Manitoba, list the following points:

- ▶ Farm men are willing to take any job available, but plan to quit work as soon as the agricultural holding is secure;



- ▶ Farm men work off-farm primarily to support or expand the agricultural enterprise;
- ▶ Farm women may work off-farm to reduce agricultural risk, but many work to gain income for family and lifestyle reasons;
- ▶ Farm women are better educated and tend to accept jobs as career and personal lifestyle choices, and do not plan to quit owing to the status of agricultural operations;
- ▶ Both farm men and women enjoy the diversity offered by off-farm employment in fulfilling personal goals and supporting lifestyle choices.

The relationships between farm and off-farm employment, therefore, are more complicated than simple economic necessity. This aspect of farm family labour distribution forms a significant, multi-dimensional link between agriculture and rural communities, and between rural development and the agricultural industry.

### Value of Agri-food Activities

Canada's agri-food exports totaled \$8.9 billion in 1987, but constituted only 7.3% of all exports. Canada's major competitors had significantly higher agri-food export values of 14-34% of total exports. Value-added comprised 39% of Canada's agri-food trade, while other nations had much higher percentages (Denmark, 85%; Netherlands, 69%; Australia, 54%; U.S.A., 49%). In essence, Canada relies heavily on raw product trade (McEwen and Rounds, 1994).

Provincial foreign export trade figures reflect wide regional variations. Based on degree of processing, Saskatchewan bulk-shipped 85%, Manitoba 67% and Alberta 59% of their agri-food production in 1992 (Table 14, (McEwen and Rounds, 1994). Value-added products that are consumer-ready comprised only 2.7% of total provincial agri-food exports in Saskatchewan, 3.9% in Manitoba and 13.7% in Alberta. High value job-creating value-adding industries, therefore, are poorly developed on the Prairies. The "grow-it, box-it, ship-it" syndrome (Penner, 1990) creates little wealth beyond the farm. Olfert and Stabler (1994), for example, report multiplier effects of this system as low as 1.1 in small Saskatchewan communities. British Columbia, however, value-adds 55% of its agri-food production to consumer level products, and, by way of contrast, Ontario finish processes 61% (Table 14).

Table 14. Provincial Agri-food Exports in 1992 Based on the Degree of Processing (Millions of dollars)<sup>1</sup>

Degree of processing	B.C.	AB	SK	MB	ON
Bulk	50.3 (9.1%)	1676.9 (58.6%)	2946.5 (84.5%)	1090.2 (67.3%)	331.1 (10.9%)
Inter-mediate	199.1 (35.8%)	791.9 (27.7%)	445.9 (12.8%)	467.0 (28.8%)	858.9 (28.3%)
Consumer	306.2 (55.1%)	392.3 (13.7%)	93.0 (2.7%)	63.2 (3.9%)	1846.2 (60.8%)
Total Exports	555.6	2861.1	3485.4	1620.3	3036.3

<sup>1</sup> McEwen and Rounds, 1994

Not only are finished processing values low, but they also decreased in Manitoba between 1988-92 (Table 15). Consumer-ready products comprised 10% of agri-food exports in 1988, but declined to 3.9% in 1992. During the same years, Saskatchewan's totals increased, but only from 2% to 3%, and Alberta's increased from 9% to 14%. British Columbia, however, increased high-level value-added production from 32% to 55% (McEwen and Rounds, 1994). Manitoba's agri-food exports continued to increase, reaching \$1.75 billion in 1995, but the bulk (unprocessed) share increased more rapidly than that for semi-processed or consumer-ready products (Manitoba, 1997).

Based on key market trends, competitive advantages in some agricultural sectors and the history of poor performance in value-added agri-food industries, the Province of Manitoba targeted value-added processing as the major opportunity for provincial economic development-especially in rural areas (Manitoba, 1997).

## LINKAGES IN RURAL WESTERN CANADA IN THE 1990's

The rural economy is complex in itself, and, because it is intricately tied to the urban economy, contains aspects of the entire national economy. Any definition of the rural economy, therefore, must ultimately recognize the wide variation in definition of what is rural and what is urban. In the Prairie provinces, "rural" usually refers to anything outside of the CMA's and larger CA's. In Manitoba, for example, everything outside of Winnipeg is generally considered rural, and development issues are the mandate of Manitoba Rural Development and Manitoba Agriculture.

Table 15. Manitoba Agri-food Exports from 1988 to 1992 Based on the Degree of Processing (Millions of dollars)

Degree of processing	1988	1989	1990	1991	1992
Bulk	\$660.7 (62.3%)	\$725.7 (68.6%)	\$885.3 (67.6%)	\$945.1 (68.3%)	\$1090.2 (67.3%)
Inter-mediate	289.4 (27.3%)	226.9 (21.5%)	347.8 (26.5%)	376.8 (27.2%)	467.0 (28.8%)
Consumer	110.3 (10.4%)	104.8 (9.9%)	77.3 (5.9%)	61.9 (4.5%)	63.2 (3.9%)
Total Exports	1060.4	1057.4	1310.4	1383.8	1620.3

McEwen and Rounds, 1994

The issue of dividing rural from urban is complicated by the fact that agriculture often is practiced inside urban boundaries, that extensive rural areas occur around metropolitan areas, and that even in most obviously rural areas, non-farm populations (small urban) typically outnumber farm populations by a wide margin. This report, however, simplifies definitions because the focus is on linkages between agriculture and farm families and agri-food related and non-agricultural economic activities.

Of interest is the fact that Statistics Canada (Howatson-Leo and Earl, 1995) and the OECD (Bollman, 1992) define rural categories not by a set of rural criteria, but rather by the relationship between rural residents and urban centres. The fundamental criterion for defining rurality is that of share of the population that commutes to work in urban areas. The dominant criteria, therefore, relate to place of residence and place of work, with commuting as the link in economic activities as defined by labour market areas (LMAs). The fact that the "telecommunications highway" often is touted as allowing freedom of location for many economic activities illustrates the fact that the rural economy overlaps the dominant urban (national) economy, and really implies that where economic activities occur may be more defining of "rural" economy than what those activities actually are.

### **Rural Community Trends 1991-2003**

#### **Demographic Linkages in Western Canada**

The restructuring of agriculture, particularly in Prairie Canada, has had pervasive impact on all aspects of rural economy and rural life. Persistent depopulation of the farm population in response to restructuring has left those displaced from agriculture with only two options - relocate or find local alternative employment (Stabler and Rounds, 1997). Most have chosen to relocate, leaving the countryside with a shortage of customers for local business that progressively drops below the thresholds for various business endeavors (Shamanski and Rounds, 1993; Stabler and Olfert, 1992; Stabler, Olfert and Fulton, 1992). Because so many Prairie communities evolved as agri-service centres, those located in agriculturally-dependent areas have progressively dwindled, dropping from higher order central places to convenience centres. In Saskatchewan, Stabler and Olfert (1994) report a decrease in viable centres from 130 to 62 between the 1960's and 1990's.

Depopulation impacts all aspects of community, bringing into question the viability of municipal governments, inefficiency in service delivery, regionalization of once viable community institutions (healthcare facilities, education, etc.) and loss of human resources for alternative economic endeavors (Diamant and Pike, 1992; 1994; Rounds and MacLean, 1991; Horne et al, 1991). Although many small urban centres have maintained populations as the countryside depopulated, much of the stability is accounted for by retiring farm families moving into local towns. Although providing some economic opportunities, the percentage of seniors impacts dependency ratios, limits economic diversification by not adding to the potential labour pool, and seniors typically are low-order consumers (DeHaney, 1996). It is not unusual for small Prairie towns to have dependency ratios greater than unity (Rounds, 1998; Stabler et al, 1992) with seniors far exceeding those 0-14 years in the dependency categories. This differs from the rural and small town national data reported by Bollman and Biggs (1992).

Gender also plays a role in rural demographics. The fact that farm spouses have noticeably higher levels of education and are more involved in off-farm employment than are males (Bessant et al, 1993) greatly expands the potential labour force for rural portions of LMA's, and provides risk reduction for farm family incomes. Further, Clouthier (1997) reports gain in employment of females in an overall declining rural labour market.

Location plays a major role in determining the impact of farm restructuring and rural depopulation. First, in areas adjacent to major metropolitan areas, exurbanite settlement typically exceeds farm population resulting in rapidly increasing "rural" populations. The non-farm rural and farm rural shares, therefore, become imbalanced. Farm families near metropolitan centres also have many alternative employment options. To some degree this accounts for a concentration of small farms near cities.



Second, near mid-sized centres, farm families have greater options for off-farm employment, but intense competition occurs. Mid-sized Saskatchewan centres, for example, generated 2330 new jobs for urban residents and 4835 new jobs for commuters between 1981-91. Small centres and rural areas, conversely, lost 6736 jobs during the same period (Stabler and Rounds, 1997).

Third, farm families located too far from centres offering alternative employment are distinctly disadvantaged in terms of options for augmenting farm family incomes (Green and Meyer, 1997). In Manitoba, Winnipeg dominates the labour market with 302,905 experienced labourers in 1991. The labour force in Brandon (18,505) is about equal to that of the Province's five complete shopping centres (20,205) and that of the 21 partial shopping centres (19,805). Because so many rural residents live too far from these few centres to viably use commuting and off-farm employment, Manitoba has the lowest percentage of commuters in Canada (14%) (Stabler and Rounds, 1997). Both inter-urban and rural-to-urban opportunities that dominate Ontario (Dahms, 1980; Troughton, 1981; Green and Meyer, 1997), are precluded by the wide spacing of both CMAs/CAs and mid-sized urban centres on the Prairies. Manitoba and Saskatchewan are differently impacted in that only 15% of their total populations live in small urban centres, whereas Alberta and British Columbia have the national average of 25%. Prairie towns, then, not only are widely spaced, but also small, providing fewer opportunities for off-farm employment.

### Occupational Differentiation

The four Western provinces vary considerably in occupational differentiation. The three Prairie provinces all have employment in the primary sector that is well-above the national average, while that in British Columbia is below the national average. Manitoba's economy is diversified with 10-16% of employment in five different sectors and national values in all other sectors (see Table 2). Saskatchewan is dominated by employment in primary industries (21%), most of which is in agriculture, while Alberta's primary employment (13%) is diversified. British Columbia is basically an urban economy, with below national average employment in primary industries in spite of an increasing number of small farms and an extensive forestry industry. Trade-related employment is significant in all Western provinces. If employment in all service sectors is combined, however, services dominate the employment of all Western provinces.

The farm-urban linkage in occupational differentiation can be viewed in several ways. First, farm families living near major centres have the full range of occupational opportunities available to them, and either have or can attain the necessary training to procure employment.

Second, the number and diversity of employment opportunities decreases rapidly as the size of urban centre decreases (Stabler et al, 1992), especially in the critical service industries. This partially explains why the commuter-field is smaller around small centres because the small number of jobs available can be filled by the closest rural residents. Remote rural residents, therefore, have to travel greater distances to gain employment, and distance constitutes a "rural tax" on farm families commuting to work.

Third, the increasing concentration of employment in urban centres has created virtually a one-way movement from rural to urban areas. This increases economic leakage from rural family incomes to urban areas and dramatically reduces the multiplier effects in rural places (Stabler and Rounds, 1997). This occurs regardless of sector of employment. In addition, the lack of concomitant development in small urban places near larger centres deprives those communities of the opportunity to receive return flow of employed persons.

Fourth, the progressive loss of functions by communities in depopulating areas (50% of Manitoba's rural

communities (Rounds, 1998)) signals loss of diversity in occupational opportunities, in some cases obviating attained training by rural residents. The regionalization of essential services, with concomitant closure of schools, healthcare facilities, protective service offices etc., progressively erodes the occupational differentiation of rural regions.

Analyzing the occupational mix of current Prairie farm family members who work off-farm shows differentiation by gender. Bessant et al (1993) found that farm men in Manitoba reported 70 different types of off-farm work while spouses listed 20 types. Farm men are widely dispersed in the off-farm labour markets, partly because they are willing to take advantage of whatever opportunities are available, but concentration occurs in trucking, unskilled blue-collar work, the trades and office work. In areas where other primary industries provide employment, farmers typically work full-time or seasonally in these industries (Ruhr and Rounds, 1993; Cowan et al, 1995). Spouses are concentrated in fewer, more specialized occupations (e.g. healthcare, education, business).

### **Important Economic Sectors**

The same data used to interpret occupational mix allows perspective on the importance of various sectors in the economies of Western Canada (Table 2). Data for 1996 occupations were not available at the time of writing.

### **Community Government and Services**

A combination of population change associated with agricultural restructuring and exurbanite settlement, change in traditional employment and social services, decentralization of responsibility to municipal governments without fiscal resources or expertise, growth in the third sector and new environmental regulations have dramatically changed municipal governments in rural Canada. Responses vary depending on circumstances.

In metro-adjacent rural regions, rapid population increase often forces local governments to expand infrastructure and services. Over time, however, the greater problem of exurbanite dominance in traditional farming areas creates a variety of tensions concerning "right to farm" issues, and priorities in municipal government expenditures and policies. Farm level impacts can be significant in that urban ideals permeate councils, and non-farm rural residents may form voting majorities on councils. Normal, accepted farming practices may offend non-farm residents, whether they relate to crop production (spraying etc.) or animal production (odour etc.).

Conversely, in remote areas where depopulation is occurring and tax bases decreasing, municipal governments struggle to maintain existing services or initiate new programs necessitated by senior government decentralization (Horne et al, 1990; Diamant and Pike, 1994; 1996). Municipal amalgamation has occurred in Alberta and Saskatchewan, including two disincorporations of small centres into rural governments in Alberta, two rural municipalities with dwindling populations uniting in Saskatchewan, and three other rural municipalities uniting to provide effective planning to counter urban sprawl. Rural municipalities in Manitoba currently are seriously considering amalgamation after 100 years of stability.

A more subtle effect of agricultural restructuring (depopulation) and effective municipal government relates to traditional leadership. The RM councils of rural Manitoba, for example, have elected officials who are 90% males, 75% farmers or retired farmers, have an average age of 50 years, and 53% never finished high school



(Ripley and Rounds, 1994). Although well-suited to municipal government of the past, these leaders struggle with new mandates in service provision or responsibilities in economic development – areas in which they have no experience or expertise. Also, many rural elected positions are filled by acclamation, if candidates can be found at all. A once routine task that related directly to local interests has become onerous, time-consuming and confusing in many jurisdictions.

Effective municipal government requires effective leadership from provincial governments, not only because local governments derive their mandates from the provinces, but also because the current climate of shifting of responsibilities, partnering and fiscal restraint are impacting locally. If senior governments continue to off-load service responsibilities or reduce budgets that require increased local resources without transferring both fiscal resources and human expertise (much of which is held by the bureaucracy), municipalities will not be able to cope with rapid change. Secondly, if senior governments continue to regionalize services that remain their responsibility, without regard for local impacts of system changes, municipal governments will again be impacted negatively.

Private industry, often encouraged by government policy, also can impact municipalities. The agri-business side of restructuring, with inland grain terminals and railway abandonment, requires producers to move grain greater distances in larger trucks. A major concern of municipal governments in Western Canada is the degrading of rural roads that accompanies changes in transportation requirements. Private companies, therefore, are effectively off-loading social costs to local governments in order to increase their own efficiency in operation.

### **Trends in Reliance on Government Support**

Government support systems for agriculture were put in place for a variety of reasons over time. The financial circumstances faced by Western Canadian farmers, and the desire to protect both production capacity and export markets necessitated subsidies. Four groups of programs are involved: 1) revenue enhancing, 2) cost reducing, 3) productivity enhancing and 4) quality control. Within each group payments include direct transfers, indirect transfers and regulatory concerns (Agriculture and Agri-food Canada, 1998).

In Saskatchewan, total federal and provincial transfers ranged between \$1.2 and \$1.6 billion per year between 1986 and 1990. This translates to between \$18,000 and \$26,000 per year per farm. New generation safety nets were instituted in the early 1990's, and although payments remained high, decrease began to occur by 1995. For example, projected values per farm decreased from \$37,000 in 1991 to \$21,000 per farm in 1995 (Rounds, 1997). In many years, program payments constituted high percentages of farm income.

Realizing the futility of long-term support at these levels, senior governments made a number of program changes during the last three years. Total support remained significant, but decreased for the 1995-96 and 1996-97 periods. In Manitoba, the average per farm was \$18,800 in 1995-96 (66% direct to producers) and in 1996-97, the average was \$13,400 per farm (61% direct to producers). Equivalent figures for Saskatchewan are \$18,300 (70% direct) and \$12,800 (75% direct); for Alberta, \$12,600 (51% direct) and \$13,100 (62% direct); for British Columbia \$12,100 (21% direct) and \$11,100 (17% direct). Support programs, therefore, remain substantial, but are declining over time. Manitoba and Saskatchewan farmers remain more dependent on program monies than do Alberta and British Columbia farmers. Most observed variations in both amounts and percentage of direct payments reflect variations in the mix of types of agriculture in each province, the needs of various agricultural sectors, and the most effective government role in support of the industry. Revenue enhancing programs are universally most significant (Agriculture and Agri-food Canada, 1998).

## Major Agricultural Structural Changes

The changing number, size, specialization and distribution of farms presented earlier are responses to major changes in the entire agricultural industry. In the Prairie region, globalization of markets and private enterprise economy of sale are moving everything toward concentration. The example of inland grain terminals concentrating delivery, storage and transportation of grain, forces producers not only to alter traditional delivery routes and sites, but also to re-capitalize equipment to accommodate change.

Changes in government commodity transportation programs drastically changed, or is in the process of changing agriculture. Removal of transportation subsidies on wheat and barley, for example, increased shipping costs by as much as four-fold depending on a producer's location relative to ports (Rosaasen, 1997). The program enhanced "grow it-box it-ship it" bulk commodity marketing tradition abruptly changed into new ways of extracting better returns from grain production. It also changed the competitive position of various regions in terms of cost-of-production of various products. For example, feeding grain to livestock, rather than bulk shipment, is rapidly enhancing pig production across the Prairies, but especially in Manitoba (although all three Prairie provinces have announced goals of doubling to quadrupling pig production).

## Federal Policies

Two major works address the interrelationship of agricultural policy and restructuring and rural community sustainability. Canadian perspective is provided by ARRG (1994), and an American perspective by the U.S. National Commission on Small Farms (1998). Reimer and Shaver (1994) point out that the dependency of many farm families on income from other sectors suggests that policies in other economic sectors may be as important to farm sustainability as are agricultural policies. They also emphasize that rural communities and their formal and informal networks provide significant support for agriculture through training, improving quality of life and maximizing flexibility. They conclude (p. 5) by stating that "...interpretation of sectoral policies, the recognition of women's contributions, and support for social services and informal networks are all crucial elements for a strong agricultural sector in viable rural communities."

Stabler (1994) supports the significance of non-agricultural development in that the strengths of Prairie rural economic restructuring lie in the eclectic nature of its manufacturing and its independence from agriculture. Stabler (1994:11) also stresses that on-farm diversification, such as adding livestock production, is not nearly as financially rewarding as diversification of the family's labour resources. Apedaile (1994:27) openly states that "Diversification is exactly the opposite of the approach needed to capture gains from trade." Using this argument clearly suggests that strengthening rural communities with their diversified activities that offer alternative employment, may be more significant than diversifying agriculture. Stabler (1994:13) concludes with the following statement:

Federal and provincial policies need to take into account the interdependent and interrelated nature of rural economy. Infrastructure, natural resources, and transportation policies need to consider explicitly their potential contribution to maintaining and strengthening the remaining viable communities.

Apedaile (1994:5) is more pointed when he states that "...the sequencing and pace of change in policy harmonization will determine whether about 25,000 prairie farms adjust out of commercial food production to other agricultural and rural activities in a humane, manageable, intergenerational manner or with an adjustment crisis within one generation similar to that of east coast fisheries." He further argues that rural non-

farm endeavours are difficult because rural entrepreneurs are poorly positioned to engage in trade through alliances, and face a disproportionate impact of inter-provincial trade barriers.

Apedaile (1994:21) summaries 16 comparative studies with the following conclusions:

1. Tax, social, and regional policies have greater influence over restructuring than do agricultural policies (see also Miller, 1992);
2. Pluriactivity, or multiple income-earning activities, are now diverse and pervasive in Canadian agriculture as they are in agriculture in all OECD countries. Pluriactivity reflects a maturing of the rural economy and greater flexibility for coping with uncertainty than ever before;
3. Contradictions between rural employment objectives and environmental imperatives are impediments to rural and agricultural development. The rural economy may be viewed as the economic buffer zone between human interests in economic growth and the need for a long-term perspective on the environment. Metro waste is processed in rural places while the natural resource base of the rural economy is under tougher and tougher scrutiny for sustainable logging, farming, and fishing;
4. Agricultural policy processes managed by federal and provincial departments of agriculture are replacing weather and markets as the greatest source of uncertainty for farming. Canada has a poor record of dealing with the capriciousness of government programs and policies;
5. Harmonization of the agricultural structures of the U.S. and Canada foreshadows income problems for mid-sized Canadian farms, especially in the West, possibly approaching the scale of the east coast fisheries crisis. The rates of growth of off-farm income opportunities would not be able to cope with a rapid withdrawal of direct agricultural subsidies. Market-based net farm income in Western Canada is a structurally weak component of agricultural household earnings. Market-based net farm income was negative for about 90 percent of farms in 1991.

Apedaile (1994) has developed the concept of predator-prey relationships between rural and urban economic activities. Fundamental to understanding the analogy is the fact that urban society views rural society as a supplier of essential goods for basically urban purposes – most of the value-added is extracted beyond the rural economy (McEwen and Rounds, 1994; Bollman and Rounds, 1993; U.S.D.A., 1998). Government policies that encouraged the export of bulk commodities assisted both the concentration of value-added activities away from regions of production and farm restructuring for economy of scale. This had the dual effect of making large farmers more dependent on government subsidies (Apedaile, 1994), while discouraging the local development of agri-food processing that would have provided alternative employment for farm families and non-farm rural residents, and supported viable rural communities.

Predatory behaviour also is inherent in the current industrialization of some sectors of agricultural production and their related processing industries. Private enterprise traditionally off-loads many cost-of-production factors to rural society (eg. environmental costs, infrastructural costs) while at the same time promotes further reduction in the number of farms and net job loss in rural communities (Thu, 1995). Overwhelming evidence from the U.S. suggests that industrialization of livestock production has had negative impacts on rural communities (Thu, 1995). Even those communities that have attracted major processing



plants have faced major upheaval and restructuring (Broadway et al, 1994). In their report on small farms, the USDA (1998:8) makes the following statements:

1. There are 300,000 fewer farms in the U.S. than in 1979, and farmers receive 13% less for every consumer dollar;
2. Four firms control more than 80% of the beef market;
3. About 94% of U.S. farms are small farms, but they receive only 41% of all farm receipts;
4. Ownership and control over agricultural assets is increasingly concentrated in fewer and fewer hands;
5. Farmers have little or no control over setting prices for their products; and
6. The basic tenets of a competitive market are disappearing.

The predatory nature of modern agriculture on producers is illustrated by the fact that between 1910 and 1990, the share of the agricultural economy received by farmers dropped from 21% to 5% in the U.S. (Smith, 1992). As reported by the USDA (1998:9):

The pace of industrialization of agriculture has quickened. The dominant trend is a few, large, vertically integrated firms controlling the majority of food and fibre products in an increasingly global processing and distribution system. If we do not act now, we will no longer have a choice about the kind of agriculture we desire as a Nation.

Following this statement, the document clearly identifies the linkages between "small farms" and the "renewal of American communities."

### **Farm Family as Provider of Labour**

A number of facts from studies illustrate not only that members of farm families are significant in rural labour pools, but also that their role is increasing in importance:

1. The percentage of farm men (30-40%) has been steady and the percentage of farm women (55-60%) has been increasing in off-farm employment (Bessant et al., 1993);
2. The percentage involved full-time is increasing (Rounds, 1997a);
3. The dependency-ratio in many rural communities is less than unity, leaving a deficiency in available labour force that must be filled by rural residents (Rounds, 1998);
4. Far more new jobs in small and mid-sized communities in Saskatchewan are filled by rural residents than by urban residents (Stabler and Rounds, 1997); and
5. The location of a major potato processing plant in Carberry, Manitoba, led to stabilization of not only the town's population, but also that of the two surrounding rural municipalities that lie in a depopulating area (Rounds, 1998).

The significance of the rural farm and non-farm labour pool to urban development is illustrated by a recent example (Rounds, 1997b). Brandon, Manitoba's recent successful bid for siting of a major agri-food processing plant (2200 employees) relied heavily on the availability of a labour force. The city's experienced labour force was 18,500, but low unemployment provided an inadequate labour force for the plant. Only when the rural and small town labour force of the Brandon LMA was added, bringing the total to 44,000, was it feasible for the major plant to locate in the region.

## ADAPTATION POLICY DIRECTIONS

There has always been debate about whether or not agricultural policy is a reasonable surrogate for "rural" policy. As agricultural policy changed rapidly since 1990, the federal and provincial governments realized that new directions would require major farm/rural adjustments. Accordingly, the Canadian Adaptation and Rural Development (CARD) program was put in place. Inherent in the title is the realization that agriculture and rural development are separate realities, but are closely linked. Appropriately, most CARD initiatives are focused on agriculture, the agri-food industry and farm families, in keeping with the mandate of AAFC.

Various CARD programs are focused at the farm level, encouraging producers and their families to diversify in both agricultural and non-agricultural endeavours. Others are clearly focused on technology, research and marketing at the sector or industry level. Viewing these programs from the perspective of rural development, however, one must question whether or not a new direction has been set for agriculture-rural community linkages, or whether "new policies" will exacerbate the negative effects of agricultural restructuring on the broader rural community.

Fulton (1989) points out the following:

1. stresses in agriculture created the renewed interest in rural development and the rural community;
2. rural communities and policy analysts realized that dependence on basic agriculture weakened rural communities;
3. globalization raises fears about Canadian agriculture being able to compete in world markets; and
4. the long-term inability of agricultural restructuring to remove risk and volatility from the industry has significant repercussions for the entire rural community.

Fulton later stresses that productivity in agriculture increases faster than demand, putting downward pressure on prices, forcing farmers to increase land holdings, resulting in declining numbers of farms and negatively impacting rural communities.

It becomes imperative, therefore, that both the differences and linkages between and among policies be viewed vis-a-vis impacts on both agriculture and rural communities. Heavy emphasis on technology, research and industrialization of agriculture clearly has negative connotations for most rural communities and small farms (Thu, 1995; USDA, 1998). Conversely, emphasis on maintaining small farms is seen to threaten the "competitiveness" of the agriculture/agri-food industries in global markets. Ironically, the large farms that are favored by industrialization of agriculture are more dependent on subsidies to sustain operations, and, therefore, are more vulnerable to government policy change. The small farms, which are just as efficient in production (Peterson, 1997), but have survived by diversifying the farm family labour pool rather than agricultural operations, are less susceptible to the volatility of world markets, less dependent on government, and far more conducive to maintaining the sustainability and viability of rural communities. Stabler and Olfert (1994) warn that promotion of diversification in agriculture basically from one highly-capitalized volatile sector to another in hopes that cycles will not coincide in time, is actually counter productive when viewed from the stability of farm family income. Ehrensaft and Bollman (1990) argue that farm family income is the best value to use when assessing agricultural economies.

In total, therefore, far more farm families will be positively impacted by effective rural development policies, especially those that promote non-agricultural diversification (Stabler and Moulder, 1992; Stabler and Olfert, 1994; Bessant et al, 1993), than by agricultural policies that favour industrialization of agriculture and



vertical integration of agri-food and related production. Most studies of the social, economic and rural community impacts of industrialized agriculture point clearly to negative results for rural communities (for summary, see Thu, 1995).

Emphasis on on-farm non-agricultural diversification may be the only option for farm families in remote areas (beyond effective LMAs), but is not the most functional diversification in many cases. Remote areas generally suffer from small market potentials, and rural residents lack the entrepreneurial and marketing skills necessary to support new endeavours. Extensive promotion of agri-tourism and eco-tourism enterprises, for example, generally result in low income supplements to farm families (Glenn and Rounds, 1997; Weaver et al, 1996) and have far fewer spinoff effects in rural areas (Bontron and Lasnier, 1997). Off-farm wage income provides for better returns (Stabler and Olfert, 1994) and is utilized by most farm families (Rounds, 1997; Statistics Canada, 1997). In this light, effective rural community development and diversification may be far more functional to farm families and farm survival than agricultural policies (Freshwater, 1997). The niche market limitations recognized by Clemenson and Lane (1997) are most operative in remote rural places and small communities.

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