Industry Health Indicators -

Agriculture

Data Summary

Prepared for the
Northern Labour Market Information Clearinghouse

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Introduction

In an effort to help colleges plan for the long-term future, rather than chase the frequent fluctuations in the agricultural markets, this paper looks at a series of historical trends in order to make some broad predictions about the future training markets for agriculture in northern Alberta.

The industry health indicators used in this study fall into three basic categories:

- Markets and marketing
- Operations
- Training Needs and demands

The general picture presented by these indicators is one of a growing training market for a healthy but changing agri-food industry.

Methods

The data for this report were gathered from the 1996 Census of Agriculture and Census of Canada, as well as from Alberta Agriculture, Food and Rural Development's Agriculture Statistics Yearbook for 1996. Other information comes from interviews and from previous Clearinghouse research.

Markets and Marketing

Population Figures

The global population is growing 1.6% per year, with a total figure of six billion humans likely to be reached in the Fall of 1999. This growth rate has slowed slightly over the past decade; growth through the 1980s averaged 1.7% per year. This growth is not happening evenly. Developed countries such as Canada, the United States, Japan and most of Western Europe are growing at rates lower than the overall figure. The slow rates of growth in developed countries are balanced by much higher rates of growth in developing nations.

Population growth in the United States, Alberta's largest export market, is less than 1% per year. Still, this amounts to some 200,000 new Americans per month.

Canada's growth rate is about 1.2% per year. Alberta is growing faster than the country as a whole, at 2.7% from 1997 to 98, with much of that growth happening in Calgary (9% increase 97-98).

The world's population is becoming increasingly urban. According to the United Nations, by the year 2006, over one-half of the world's people will live in urban centres. In Alberta, the farm population declined from 1941, when 383,964 Albertans lived on farms, to 1991, when 176,940 lived on farms. That number grew to 188,510 in 1996, roughly matching the overall percentage growth rate in Alberta for that period.

Overall, population figures suggest that the market for Alberta agri-food products will continue to grow, particularly in less-developed export markets.

Transportation
Transportation developments remain difficult to predict. Farmers have to cover more of the real cost of grain transportation since the end of the Crowsnest Pass Freight Rate. While many northern producers are looking for lower cost alternatives to the current rail transport system, it is likely that the current high costs will encourage value-added production.

Government and regulatory influences
The Alberta government's push for a $20 billion value-added agriculture industry will encourage the development of many types of processing businesses. Still, the growth of the value-added sector has been slow in the North.

International trade liberalization, through the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), has already opened up many markets for Alberta agri-food products. Further liberalization would continue this trend.

The current control over grain marketing held by the Canadian Wheat Board is a significant factor in Agriculture in Alberta. If the CWB loses its marketing monopoly, toward which some in the industry are working, grain farmers will have to become much more involved in the marketing of their products.

Market Projections
Recent downturns in regional economies, such as the "Asian Flu" are expected to be short-term problems. In the longer term, population growth and eating trends such as the tendency toward higher meat consumption in Asian countries will continue to increase the market for Alberta agri-food products, subject to normal business cycles.

Continued growth in the demands for semi-prepared meals, certified organic foods and "ethnic" foods will promote the growth of the value-added sector.

The production of non-food agricultural products such as agri-pulp and cosmetics will grow, accounting for up to 50% of the value-added sector by 2010, according to one AAFRD estimate.

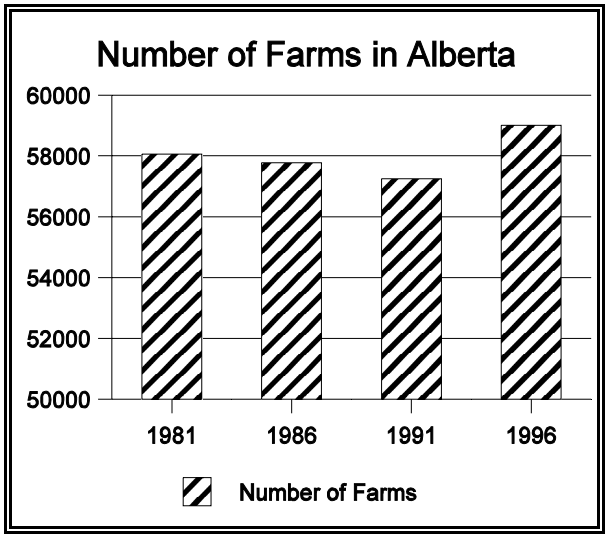
The strongest growth in global demand is for consumer-ready products, rather than commodities.

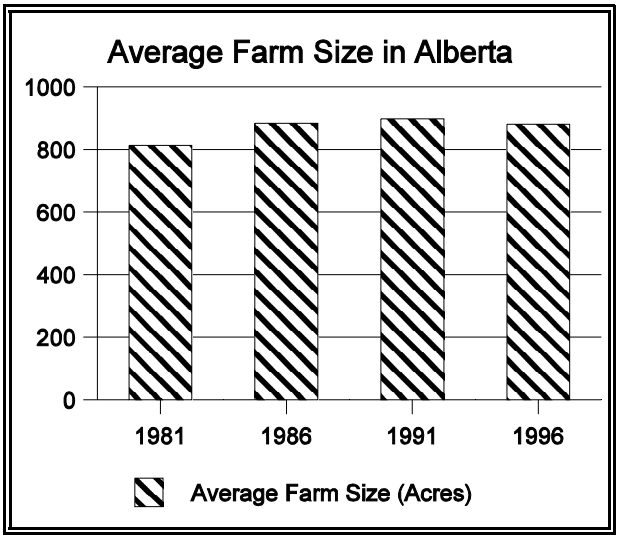
Operations

The long-term trend in Agriculture throughout Alberta is a decrease in the number of farms but an increase in the average size of those farms. Recent figures show a slowdown or even reversal in this trend though this is not conclusive.

Number and Size of Operations
The number of farms in Alberta fell from 1941, when the census counted 90,000 agricultural operations, until 1991, after which it recovered slightly, to 59,007 in 1996.

The percentage of large farms (more than 1600 acres) grew moderately from 11% in 1981 to 13% in 1996. Northern Alberta has a slightly higher percentage of farms more than 1600 acres than the province overall, but a smaller percentage of farms over 3520 acres. The average farm size in the north is close to that of all Alberta. The North (Peace, North-east and North-west regions) accounts for 24.5% of Alberta's farms and 24.1% of Alberta's total farm acreage.





Ownership
The vast majority of agricultural operations in Alberta are family-owned. It is worth noting however, that the percentage of farms that are owned by non-family corporations is growing rapidly, from 0.3% in 1986 to 1.6% in 1996.

Farm income
Farm income in Alberta is growing faster than the consumer price index. Still, net incomes are often low and the percentage of farm operations that contribute nothing to the owners' family income is quite high.

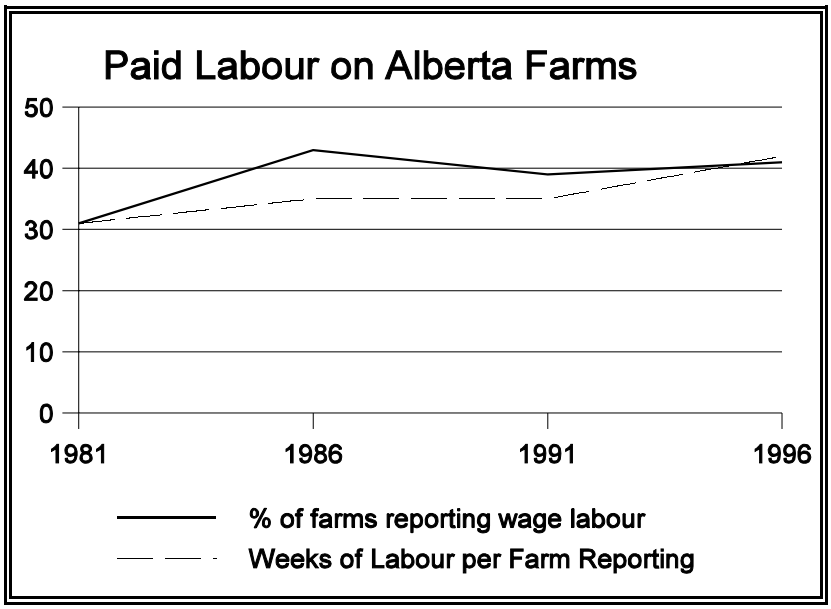
- Average gross farm receipts more than doubled between 1981 and 1996, from $56,236 to $134,071.

- Farm Operating expenses also grew during the same time period, though not as quickly. In 1986, farm costs averaged $68,248 per year. By 1996 that figure had grown to $113,029. Expenses in northern Alberta are lower on average than those elsewhere, at $69,860.
- Average net farm income more than doubled between 1986 and 1996, growing from $11,568 to $24,666. These are all straight dollar figures. The Consumer Price Index rose an average of 3.7% per year in Alberta from 1981 to 1996, or a total 73.6%.
- According to the 1996 Census of Agriculture, more than 27,000 of Alberta's 59,007 farms either lost money or made no contribution to their owners' household incomes.

Even with the number of low-income farms, the increasing farm revenues suggests a healthy industry.

Paid Labour

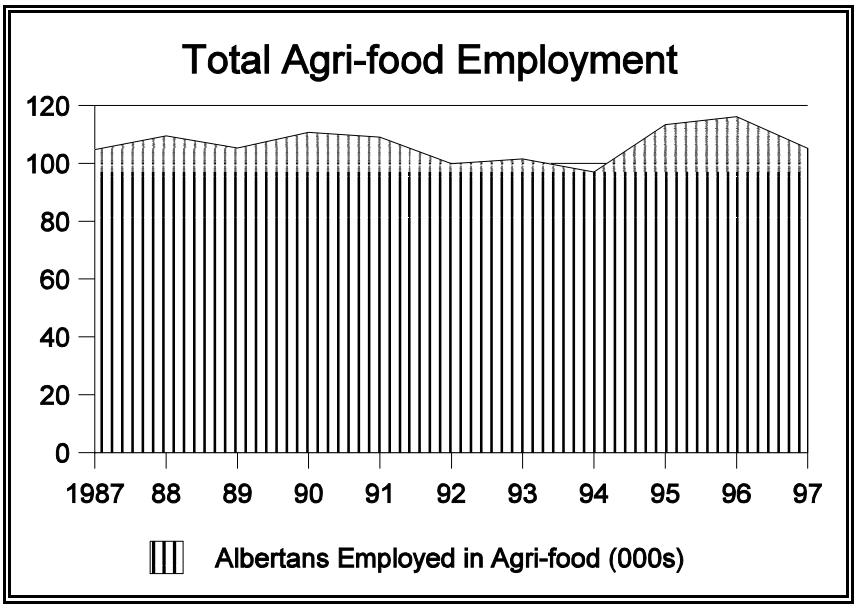
The amount of paid labour on Alberta farms is growing though it is still below the national average. Wages make up 6.1% of farm expenses both in the North and in Alberta as a whole.



Source: Alberta Agricultural Statistics Yearbook, 1996.

Training Needs and Demands

Number of People Employed in the Agri-food Industry
The total number of operators, employees, and those in the processing and agriculture service industries varied with no discernable pattern between 1987 and 1997, as the following table illustrates.

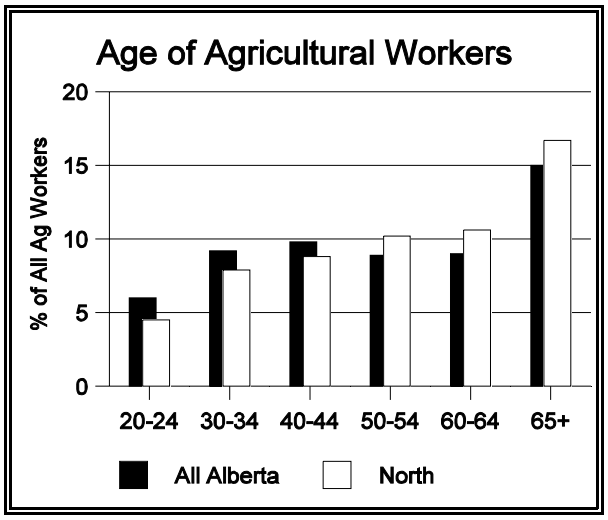


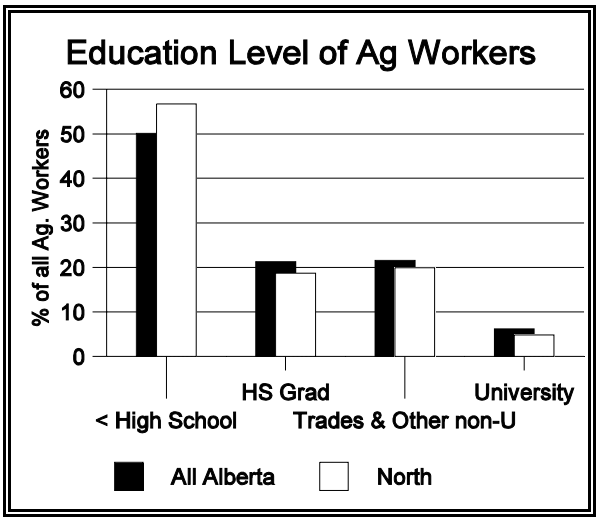
Source: Alberta Agricultural Statistics Yearbook, 1996.

Number of People Employed in Food Processing
This number has gone up and down with no particular pattern, ranging from 15.5% of the total agri-food labour force in 1991 to 18.4% in 1993.

Number of People Employed in Agricultural Services
This figure has grown significantly, from 3,000 in 1986 to 5500 in 1997 (down from a peak of 6,000 in 1996). This suggests strong growth for training in this area. This field includes a wide variety of services including pesticide and herbicide sales, mechanical services and business services, among others.

Employment by Type of Farming
In 1997, 25% of farm employment was in livestock farming; 17.8% was in grain and horticulture farming, with combination farming accounting for 50.8% of employment (services accounted for the rest). The percentage employed in livestock rose overall from 1984 to 1997 and the percentages in grain and mixed farming fell during that time.





Age and Education of Agricultural Workers
The following tables look at the age and education levels of workers in "Occupations unique to agriculture, excluding labourers" as found in Statistics Canada 1996 Census data.

Education levels are lowest for the oldest workers in this field. Seventy-seven per cent of Northern Alberta farmers over 65 years of age have less than a high school education and 12.5% have Trades or other non-university certificates. By comparison, only 36.5% of those aged 30-34 have less than high school and fully 27% have trades or other non-university certificates. There are fewer young farmers but more of them pursue higher education.

The number of farms reporting the use of computers in farm management has grown rapidly since this question was first asked on a Census in 1986. That year, some 3% of farms reported using them. In 1996, 22.9% of farms were managed with the aid of computer technology. This growth is likely to continue as farmers see the benefits and as younger, more computer literate, farmers join the workforce. This suggests that computers will be a growing segment of the agriculture training market.

Agricultural business management is likely to be a growth area. Producers are taking on more responsibility for the marketing of their products and may do so even more if the CWB monopoly ends. In addition, the increasing amount of farm labour suggests that personnel management may become a more important part of farm management.

Number of Agricultural Students in Alberta colleges

College	Measure	1994	1995	1996	1997
Fairview	FT	240.4	219.9	209.1	184.7
	Grads	107	105	105	97
Lethbridge	FT	68.2	82.6	97.4	104.8
	Grads	21	25	23	31
Lakeland	FT	239.6	268.3	297.8	248.1
	Grads	88	97	112	92
Nailed	FT	49.2	55.7	63.1	78.0
	Grads	25	22	26	32
Olds	FT	610.4	705.9	803.5	801.2
	Grads	221	240	344	338
Said	FTE	17.3	17.8	17.1	15.6
	Grads	0	0	0	0
AVC - Calgary	FTE	15.0	2.7	17.4	19.4
	Grads	11	9	10	14
Total	FTE	1240.1	1352.9	1505.4	1451.8
	Grads	473	498	618	604

Source: Alberta Advanced Education and Career Development, Common Information System. University enrollments are not available in a consistent format for this time period.

The growth in enrollments is greater than growth in farm population. This, along with the higher education levels of younger farmers seen above, suggests that the market for post-secondary training in agriculture is growing.

Alternative livestock (elk, emus, alpacas, etc.) and alternative crops are becoming more popular. This opens up a range of training possibilities, though the market for any one specific course may not be large.

Many producers are developing additional businesses on their farms, such as Bed and Breakfasts and small-scale logging. There will be some demand for training in agri-tourism and woodlot

management resulting from this but, once again, the demand may not be concentrated in any one subject or geographical area.

Summary

The future looks good for the Alberta agri-food industry but it does not look like the past. Export markets, processing and business practices will all play larger roles than they have previously. Farms are likely to be larger, with more hired labour and more computer-assisted management. More farms will be run purely as businesses rather than as family operations (though the latter will continue to dominate the industry).

The number of farmers may decline in the long-term as the large numbers of older operators retire. Even so, the number of farmers pursuing post-secondary education and training is likely to grow for the foreseeable future. There are several reasons for this:

- there is a general trend for younger agricultural workers to be better educated than older ones. A higher percentage of the next generation of farmers will have post-secondary education
- farms are becoming increasingly technical operations, requiring greater levels of knowledge on the part of operators and employees
- operators will likely be more directly involved in the transportation and marketing of their products than they have in the past. This will create demands for training in marketing and in trucking
- processing and alternative products, both growing concerns, require greater levels of knowledge than traditional operations
- knowledge of business practices is becoming crucial to the success of agricultural operations.

Several types of training will be in higher demand over the next ten years including:

- computers and other technologies
- business skills, marketing, personnel management
- food processing regulations and procedures
- agri-tourism management

Sources

Alberta Agriculture, Food and Rural Development, Agricultural Statistics Yearbook, 1997

Alberta Venture, "'99 Industry Report: Agri-foods", April, 1999

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